a classified collection of manufacturers' catalogs

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Sweet's Catalog Service
Division—F.W. Dodge Corporation
119 West 40 St., New York 18, NY

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Colonial-Hites Co. 6f/Co
Colonial Lumber Specialties Inc.
–see Colonial Hand Split Shingles, Inc.....8d/Co
Colonial Screen Co., Inc.....19a/Co
Colorado Fuel & Iron Corp., Wickwire Spencer Steel Div.....22g/Co
Columbia Acoustics & Fireproofing Co., Sub. United States Mineral Wool Co.
•*acoustical material* 11a/Co
•*fireproofing material* 12e/Co
Columbia Electric & Mfg. Co. 33a/Co
Columbia Metal Box Co.....27d/Co
Columbus Coated Fabrics Corp.
•*canvas-backed wall covering* 13k/Co
•*vinyl wall covering* 13k/CoL
Commercial Controls Corp.–see Electromode, Div. Commercial Controls Corp.....31h/El
Concord Paint Co., Inc. 7c/Co
Concrete Plank Co., Inc. 2d/Co
Concrete Products, Inc. 2d/Con
Concrete Reinforcing Steel Institute.....2a/Co
Concrete Service Co. 9/Co
Congoleum-Nair Inc. 13i/Co
–Industrial Sales Div.....23e/Co
Connor Engineering Corp. 31f/Co
Connor Lumber & Land Co. 13J/Co
Connors Steel Div., H. K. Porter Co., Inc.....2d/Cor
Consolidated General Products, Inc.
•*dome skylights* 20a/Cn
•*folding louver doors* 16e/Co
Consoweld Corp. 14a/Co
Construction Products Co. 27f/Co
Construction Specialties, Inc.
•*louvers, louvered penthouses* 20d/Con
•*sunshades* 19e/Con
•*vent brick louvers* 20d/Co
Constructional Chemicals, Inc. 9/Con
Continental Materials Corp.,–see Calsi-Crete Inc., Sub. Continental Materials Corp.....2d/Ca
Continental Nu-Steel Metal Products Co. 16i/Co
Continental Steel Corp. 22g/Con
Contrex Co. 11a/Con
Cook, Loren, Co. 20c/Co
Cookson Co.
•*doors* 16g/Co
•*partitions* 22d/Co
Corbin, P. & F., Div. American Hardware Corp...18e/Co
Corbin Wood Products Div., American Hardware Corp. 23b/Co
Cordley & Hayes 30d/Co
Cornell Iron Works, Inc. 16g/Cor
Cornice Temper Zinc Alloy Div., Chomes Co., Inc..8g/Co
Corning Glass Works 29b/Co
–Lighting Sales Dept. 33b/Co
Corrulux Div., L-O-F Glass Fibers Co.
–see Johns-Manville 7d/Jo
Corry Jamestown Corp. 22a/Co
Cox Mfg. Co. 31b/Co
Crab Orchard Stone Co., Inc.....4c/Cr
Cramer Posture Chair Co., Inc. 23i/Cr
Cramer Safe Co.,–see Mosler Dropository Corp..23b/Mo
Crane Co. 27a/Cr
Crawford Door Co. 16i/Cra
Creo-Dipt Co., Inc. 8d/Cr
Crestlyn Div., Douglas Crestlyn International, Inc...25b/Cr
Crittall Mfg. Co., Ltd.....17b/Cr
Crooks, W. D., & Sons 16c/Cr
Crossfield Products Corp. 13i/Cr
Crown Zellerbach Corp. 27e/Cr
Cummins Engine Co., Inc.....32c/Cu
Cupples Door & Frame Corp. 16a/Cu
Cupples Products Corp.
•*commercial aluminum windows* 17a/Cu
•*curtain walls* 3a/Cu
–Alumi-Coustic Div. 11b/Cu
Curon Div., Curtiss-Wright Corp.....13k/Cu
Curtis-Allbrite Lighting, Inc.....33a/Cu
Curtis Companies, Inc. 16c/Cu
Curtis Mfg. Co., Refrigeration Div. 31a/Cu
Curtiss-Wright Corp.,–see Curon Div., Curtiss-Wright Corp. 13k/Cu
Curtition Corp. 16e/Cu
Custodis Construction Co., Inc. 31k/Cu

Customusic Div.,–see Automatic Canteen Co. of America, Customusic Div. 34a/Auo
Cutler-Hammer, Inc. 32a/Cut
Cutler Mail Chute Co., Sub. Federal Equipment Co. 23b/Cu
Cutler Metal Products Co.
–Building Products Div. 22b/Cu
–Products Div. 27c/Cu
Cyanamid–see Formica Corp., Sub. Cyanamid....14a/Fo
Cyclone Fence Dept., American Steel & Wire Div., United States Steel 22g/Cy

d

Dahlstrom Metallic Door Co. 24b/Da
Dallas Ceramic Co. 13c/Da
Dalmo Continental Inc. 18b/Da
Darling, L. A., Co., Workwall Div. 22a/Da
Daryl Products Corp. 16d/Da
Davidson Enamel Products, Inc., Sub. Fenestra, Inc. 3c/Da
Davis Products Co. 25b/Da
Day-Brite Lighting, Inc. 33a/Da
Dayton Sure-Grip & Shore Co. 2i/Da
Dearborn Glass Co. 7a/De
Decatur Iron & Steel Co., Inc.
•*aluminum windows* 17a/De
•*jail equipment* 23m/De
Deer-O Paints & Chemicals, Ltd. 8a/De
Delta Faucet Corp. 27b/De
Deluxe Metal Products Co., Div. Royal Metal Mfg. Co. 23f/De
Desco Vitro Glaze Assn. of America, Inc. 13h/De
Designware Industries, Inc. 18g/De
Deslauriers Column Mold Co., Inc. 2i/De
Detrex Chemical Industries, Filter Div. 23k/De
Detroit Controls Div., American-Standard 31i/De
Detroit Hardware Mfg. Co.
•*exit devices* 18f/De
•*window hardware* 18b/De
Detroit Incinerator Corp.,
–see American Incinerator Corp. 28a/Am
DeVac, Inc. 17a/Dev
Devoe & Raynolds Co., Inc. 15/Dev
–see also Truscon Laboratories, Div. Devoe & Raynolds Co., Inc. 9/Tru
Dewey & Almy Chemical Div., W. R. Grace & Co. ..9/De
De Witt Products Co. 29a/De
Dicks-Armstrong-Pontius, Inc. 7c/Di
Diebold, Inc. 23b/Di
Diffusa-Lite Co. 33a/Di
–see also Bohem Mfg. Co., Inc. 20a/Bo
Dodge Cork Co., Inc. 13i/Do
Doherty Silentaire Co. 31e/Do
Donald, J. R., Co. 23h/Do
Donley Brothers Co.
•*fireplaces* 31L/Do
•*incinerators* 28a/Do
Donn Products Co.
•*partition studs* 12a/Do
•*suspended ceilings* 11b/Do
Dorian International Inc. 4d/Do
Dor-O-Matic, Div. Republic Industries, Inc.
•*automatic door operators* 18e/Dor
•*manual door operators* 18e/Do
Douglas Aircraft Co., Inc. 14c/Do
Douglas Crestlyn International, Inc.,–see Crestlyn Div., Douglas Crestlyn International, Inc. 25b/Cr
Douglas Fir Plywood Assn. 5b/Do
Dover Corp.
–see Rotary Lift Co., Div. Dover Corp....23g/Ro; 24a/Ro
–see Shepard Elevator Co., Div. Dover Corp....24a/Sh
Dow Chemical Co.
•*comfort insulation* 10a/Do
•*flashings* 8g/Do
•*low temperature insulation* 10a/Dow
Dow Corning Corp. 9/Dw
DoxPlank Mfrs. Assn. 2d/Do
Dravo Corp. 31c/Dr
–Machinery Div. 13a/Dr
Driwood Moulding Co. 5c/Dr
Dropository Corp.,–see Mosler Dropository Corp. 23b/Mo
Dual-Lite Co., Inc. 33a/Du
Dubuque Products, Inc. 22d/Du
Dukane Corp. 34a/Du
Duke Mfg. Co. 26d/Du
Dunham-Bush, Inc. 31a/Dun
–Brunner Div. 31a/Du
Durable Mat Co. 23p/Du
DURAflex Co. 19b/Dur
Duralab Equipment Corp. 23L/Du
Duraloom Carpet Mills, Inc. 13L/Du
Dura-Vent Corp. 31f/Du
Durham Mfg. Corp. 23i/Du
Duriron Co. Inc. 29b/Du
Dur-O-Wal Co. 4h/Du
Dusing & Hunt, Inc.
•*aluminum and vinyl-on-steel doors* 16a/Dui
•*fire doors* 16b/Du
•*sliding doors* 16h/Dus
•*wood doors* 16c/Dus
Duvinage Corp. 6h/Duv
Dwyer Products Corp. 25b/Dw
Dyfoam Corp.
•*comfort insulation* 10a/Dy
•*plastic foam insulation* 10b/Dy

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Eastern Products Corp.
•*ceiling suspension systems* 11b/Ea
•*drapery hardware* 19d/Eas
•*venetian blinds* 19d/Ea
–Acoustical Div. 11a/Ea

Eastern Quarries, Inc. 4a/Ea
Eastern Steel Rack Co. 23c/Ea
Eastern Venetian Blind Co.,–see Eastern Products Corp. 19d/Eas
Eastman Chemical Products, Inc., Sub. Eastman Kodak Co. 15/Ea
Eastman Kodak Co.,–see Eastman Chemical Products, Inc., Sub. Eastman Kodak Co. 15/Ea
Ebco Mfg. Co. 30d/Eb
Eddy Stoker Corp. 31J/Ed
Edgewood Furniture Co., Inc. 23o/Ed
Educational Equipment Co. 23e/Ed
Efron, Theodore, Mfg. Co. 27c/Ef
Eggers, F., Plywood & Veneer Co. 16c/Eg
Ehret Magnesia Mfg. Co.,–see Baldwin-Ehret-Hill, Inc. 10a/Ba; 10c/Eh; 10c/BaL
Ekco Products Co.,–see Kennatrack Corp., Sub. Ekco Products Corp. 18d/Ke
Electric Aire Engineering Corp. 27e/EL
Electric Cord Co. 33a/EL
Electric Power Door Co., Inc. 16i/EL
Electric Time Co., Inc. 34b/EL
Electromode, Div. Commercial Controls Corp. 31h/EL
Elgin-Butler Brick Co. 4f/EL
Elkay Mfg. Co. 25b/Elk
Elkhart Brass Mfg. Co., Inc. 30f/EL
Elkington Mfg. Co. 26b/EL
Ellison Bronze Co., Inc. 16a/EL
Ellison Louvre Co., Inc. 20d/EL
Emerson Electric Mfg. Co.
•*fans and blowers* 31e/Em
•*fans, ventilators, chimes* 25a/Em
•*lighting equipment* 33a/Em
Emerson-Pryne Co.,–see Emerson Mfg. Co. 25a/Em; 31e/Em; 33a/Em
Empire Varnish Co.,–see Waterlox Div., Empire Varnish Co. 15/Wa
Enamel Products Co.,–see Korok Inc., Div. Enamel Products Co. 23e/Ko
Ender Monarch Corp. 33a/En
Energy Elevator Co. 24a/En
Engineered Products Co. 18g/En
Engineering Products & Specialties, Inc.,–see Alumiline Corp., Div. Engineering Products & Specialties, Inc. 16a/ALu
Engwald Corp. 31e/En
Equal-Aire Incinerator Div.,–see Sargent Building Specialties Inc., Equal-Aire Incinerator Div. 28a/Sar
Equipment Mfg. Co., Inc. 23d/Eq
Erie Enameling Co. 3c/Er
Esco Elevators, Inc. 24a/Es
Eska Products, Inc. 23J/Es
Espro Tubing, Div. Union Asbestos & Rubber Co. 2f/Es
Estey Corp. 23f/Es
Euclid Chemical Co. 9/Eu
Evans Products Co.,–see Haskelite Mfg. Corp., sub. Evans Products Co. 3e/Ha; 16c/Has
Executone, Inc. 34a/Ex
Extruded Louver Corp. 20d/Ex

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F & A Laboratories, Inc. 2a/Fa
Fabricated Products Co. 8b/Fa
Facing Tile Institute 4f/Fa
Fair, D. L., Lumber Co. 13J/Fa
Fair-Play Scoreboard Co. 23k/Fa
Fairbanks, Morse & Co.
•*generating sets* 32c/Fa
•*pumps* 30a/Fa
Fairhurst, John T., Co., Inc.
•*folding walls* 22d/Fa
•*wardrobes* 23d/Fa
Fanon Electronic Industries, Inc. 34a/Fa
Farley & Loetscher Mfg. Co.
•*wood doors* 16c/Fa
•*wood windows* 17c/Far
Fasco Industries, Inc. 31e/Fa
Federal Cement Tile Co. 2d/Fe
Federal Equipment Co.,–see Cutler Mail Chute Co., Sub. Federal Equipment Co. 23b/Cu
Federal Seaboard Terra Cotta Corp. 4e/Fe
Federal Windows Mfg. Co., Inc. 17b/Fe
Felters Co.,–see Woolsuede, Div., Felters Co. 13k/Wo
Fenestra, Inc.
•*aluminum windows* 17a/Fe
•*curtain wall systems* 3a/Fe
•*floor and roof panels systems* 2c/Fe
•*hollow metal door units* 16b/Fe
•*wall panels* 3b/Fe
–see also Davidson Enamel Products, Inc., sub. Fenestra, Inc. 3c/Da
Fentron Industries, Inc. 17a/Fen
Fenwal Inc. 34a/Fe
Ferrometal Div., Milwaukee Stamping Co. 22b/Fe
Fiat Metal Mfg. Co.
•*shower stalls* 27c/Fi
•*toilet partitions* 22b/Fi
Fiberesin Plastics Co. 14b/Fi
Fibreboard Paper Products Corp.,–see Pabco Floor Covering Div., Fibreboard Paper Products Corp. 13i/Pa
Filon Plastics Corp. 7d/Fi
Filtrine Mfg. Co. 30d/Fi
Finishing Lime Assn. of Ohio 12e/Fi
Firebar Door Div., Rysdon Products Co. 16m/Fi
Fireproof Products, Inc. 2d/Fi
Fisher Scientific 23L/Fi
Fisher Skylights, Inc. 20b/Fi
Fiske, J. W., Architectural Metals, Inc. 6e/Fi
Fleet of America, Inc.
•*aluminum windows* 17a/FLA
•*monumental, commercial aluminum windows* 17a/FL
•*sliding glass doors* 16d/FL
Fleming Steel Co. 16h/FL
Fletcher, H. E., Co.
•*granite* 4a/FLe
•*granite highway products* 4a/FL
Flexicore Co., Inc. 2d/FL

Flexotile Floor Co. 13h/FL
Flintkote Co.
–Building Materials Div. 8a/FL
–Flooring & Adhesive Div. 13i/FL
–Industrial Products Div. 9/FL
–Insulrock Div. 2d/FLi
–see also Orangeburg Mfg. Co., Div. Flintkote Co. 29a/Or; 32b/Or; 32b/Ora
–see also Van-Packer Co., Div. Flintkote Co. 31k/Va
Flintridge Corp. 17a/FLi
Flockhart Foundry Co.
–Armored Concrete Div., Flockhart Foundry Co. 6i/FL
–Construction Castings Div., Flockhart Foundry Co. 6i/FL
Florence Mfg. Co., Inc. 34a/FL
Flour City Ornamental Iron Co.
•*curtain walls* 3a/FLo
•*doors* 16a/FL
•*windows* 17a/FLo
Fluor Products Co.
•*arches, trusses, lamella roofs* 2e/FL
•*cooling towers* 30b/FL
Flush-Metal Partition Corp. 22b/FL
Flynn, Michael, Mfg. Co.
•*air conditioning* 31a/FL
•*aluminum curtain walls* 3a/FLy
•*aluminum windows* 17a/FLy
•*steel windows* 17b/FL
Follansbee Steel Corp. 8b/Fo
Folmar, R. H., Co. 17a/Fo
Food Warming Equipment Co. Inc. 26d/Foo
Formica Corp., Sub. Cyanamid 14a/Fo
Fort Howard Paper Co. 27e/Fo
Forty-Eight Insulations, Inc.
•*acoustical ceiling board* 11a/Fo
•*insulating materials* 10a/Fo
•*panel insulations* 3f/Fo
Fourco Glass Co. 7a/Fo
Franklin Research Corp.,–see Wheeler-Fullerton Lighting Div., Franklin Research Corp. 33a/Wh
Frantz Mfg. Co. 16i/Fr
French Creek Granite Co., Inc. 4a/Fr
Frick Co. 31a/Fr
Friedrich, E. H., Co. 16b/Fr
Frigidaire Div., General Motors Corp. 25a/Fr
Frontier Fence Co.,–see Dorian International Inc. 4d/Do
Fry, Lloyd A., Roofing Co. 8a/Fr
Fuller, H. B., Co. 3f/Fu
Fyr-Fyter Co. 30f/Fy

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G R Products Inc., Steel Div. 22a/Ga
Garnett Church Furniture & Mfg. Co. 23h/Ga
Gates & Sons, Inc. 2i/Ga
Gates Rubber Co. 2i/Gas
Gateway Engineering Co.
•*construction accessories* 2i/Gat
•*electrical underfloor duct system* 32b/Ga
Gateway Erectors, Inc., Sub. Gateway Engineering Co. 2a/Ga
Gauff Corp.–see New York Silicate Book Slate Co., Inc. 23a/Ne
General Air Conditioning Corp. 25b/Ge
General Bronze Corp.
•*curtain walls, ornamental metalwork* 3a/Ge
•*revolving doors* 16f/Ge
•*windows* 17a/Ge
–see also Alwintite Div., General Bronze Corp. 16d/AL; 17a/ALw
General Electric Co.
–Air Conditioning Dept. 31a/Gen
–Air Conditioning Dept., Major Appliance Div. 31a/Ge
–Appliance and Television Receiver Div. 25a/Gen
–Commercial Equipment Dept. 30d/Ge
–Laminated Products Dept. 14a/Ge
–X-Ray Dept. 23L/Ge
see also Hotpoint, Div. General Electric Co. 25a/Hot; 26c/Hot
General Foam Plastics Corp. 10a/Ge
General Lead Construction Corp. 22e/Ge
General Lighting Co. 33a/Ge
General Motors Corp.,
–see Frigidaire Div., General Motors Corp. 25a/Fr
General Plywood Corp. 16c/Ge
General Portland Cement Co., Trinity White Dept. 4i/Ge
General Tire & Rubber Co., Building Materials Div.
•*flooring* 13i/Ge
•*vinyl wall coverings* 13k/Ge
General Welding & Fabricating Co. 22b/Ge
General Woodcraft Co.,–see Woodco Corp. Div. 17c/Wo
Geneva Hospital Casework, Div. Acme Steel Co. 23L/Gen
Geneva Modern Kitchens, Div. Acme Steel Co.
•*kitchen cabinets and sinks* 25b/Gev
•*steel cabinets* 23i/Ge
Georgia Granite Co. 4a/Ge
Georgia-Pacific Corp.
•*hardboards* 14d/Geo
•*overlaid plywood* 5b/Ger
•*prefinished plywood* 5b/Geo
•*sheathing, siding* 8b/Ge
•*wood products reference guide* 5a/Ge
Gering Plastics Div., Studebaker-Packard Corp. 9/Ger
Gerwin Industries, Inc., Thermo-Base Div. 31f/Ge
Getty, H. S., & Co., Inc. 18b/Ge
Geyser, E. K., & Co. 3a/Gey
Gillespie, Robert, Co. 24d/Gi
Gillis & Geoghegan Hoist Corp. 24d/GiL
Glass Shower Door Co., Inc.
•*shower enclosures* 27c/GL
•*sliding glass walls* 16d/GL
Glidden Co.
•*paint* 15/GLi
•*plastic tile finish* 15/GL
Glide Windows, Inc.
•*aluminum rolling windows* 17a/GL
•*aluminum sliding doors* 16d/GLi
Glidorama Div., Whizzer Industries, Inc. 17a/GLi
Globe Hoist Co. 24a/GL

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Globe Marble & Granite Corp. 4a/Gl
Globe-Wernicke Co. 23f/Gl
Glynn-Johnson Corp. 18e/Gl
Goder, Joseph, Inc. 28a/Go
Goder Incinerator Corp.,
–see Brulé Incinerator Corp. 28a/Br
Goldsmith Metal Lath Co. 2c/Go
Goodrich, B. F., Co., Flooring Products 13i/Go
Goodrich, B. F., Coated Fabrics Dept. 13k/Go
–Sponge Products Div. 13l/Go
Goodyear Tire & Rubber Co. 13i/Goo
Gotham Chalkboard & Trim Co., Inc. 23e/Go
–see also Gotham Materials, sub. Gotham Chalkboard & Trim Co., Inc. 13i/Got
Gotham Lighting Corp. 33a/Go
Gotham Materials, sub. Gotham Chalkboard & Trim Co., Inc. 13i/Got
Gould-Mersereau Co., Inc. 19d/Go
Gow Div.,–see Raymond Concrete Pile Co., Div. Raymond International Inc. 1a/Ra
Grace, W. R., & Co.,–see Dewey & Almy Chemical Div., W. R. Grace & Co. 9/De
Grade-Aid Corp., sub. Maine Mfg. Co. 23i/Gr
Granco Steel Products Co., Sub. Granite City Steel Co.
•*reinforcement forms* 2c/Gr
•*roof decks* 2c/Gra
•*steel forms* 2a/Gr
•*steel roof decking* 2c/Grn
Grand Rapids Hardware Co. 18a/Gr
Grand Rapids Sectional Equipment Co. 23l/Gr
Granite City Steel Co.,–see Granco Steel Products Co., Sub. Granite City Steel Co. 2a/Gr; 2c/Gr; 2c/Gra; 2c/Grn
Grant Pulley & Hardware Corp. 18d/Gr
Granux Corp. 4d/Gra
–see also Modur Co., Div. Granux Corp. 4d/Mod
Great American Industries, Inc.,–see Rubatex Div., Great American Industries, Inc. 8b/Ru; 10b/Ru
Great Lakes Carbon Corp., Perlite Dept.
•*insulating concrete* 10a/Gr
•*plaster aggregates* 12d/Gr
Grid Flat Slab Corp. 2a/Gri
Gridwall Co. 3a/Gr
Grinnell Co., Inc. 30e/Gr
Grossman Steel Stair Corp. 6h/Gr
Guardian Chemical Co. 9/Gu
Guastavino, R., Co. 2e/Gu
Guilbert, Inc. 24c/Gu
Guild Hall Studios, Inc. 23h/Gu
Gustin-Bacon Mfg. Co.
•*acoustical ceiling board* 11a/Gu
•*duct insulation* 10a/Gu
•*pipe insulation* 10c/Gu
Guth, Edwin F., Co. 33a/Gu

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H. & B. Enterprise Corp. 22a/Ha
Hachmeister-Inc., see Hako Building Products, Div. Mastic Tile Corp. of America 13i/Hak
Haertel, W. J., & Co. 11b/Ha
Hako Building Products Div., Mastic Tile Corp. of America 13i/Hak
Haldeman-Homme Mfg. Co. 23i/Ha
Hall-Mack Co. 27d/Ha
Hankins & Johann, Inc.
•*aluminum doors* 16a/Ha
•*architectural aluminum* 6e/Ha
•*curtain walls* 3a/Ha
Hanley Co. 4f/Ha
Hanna Paint Mfg. Co. Inc. 15/Ha
Hansson, Elof, Inc., Acoustical Div. 11a/Ha
Hardwood Products Corp. 16c/Ha
Harnischfeger Corp. 32c/Ha
Harper, H. M., Co.,–see Harrison-Weise Div., H. M. Harper Co. 18c/Ha
Harrington & King Perforating Co., Inc. 31f/Ha
Harris, D. C., Co. 9/Ha
Harris Barrier, Inc. 23p/Ha
Harris Mfg. Co. 13J/Har
Harrison-Weise Div., H. M. Harper Co. 18c/Ha
Hart & Cooley Mfg. Co. 31f/Har
Harter Corp.
•*office chairs* 23o/Har
•*stack chairs* 23o/Ha
Hartmann-Sanders Co. 5c/Ha
Haskelite Mfg. Corp., sub. Evans Products Co.
•*curtain walls* 3e/Ha
•*institutional doors* 16c/Has
Hastings Pavement Co., Inc. 13i/Has
Hatco Corp. 26b/Ha
Haughton Elevator Co. 24a/Ha
Hauserman, E. F., Co. 22a/Hau
Hausman Steel Co.
–see Capitol Battens, Div. Hausman Steel Co. 22a/Ca
–see McMillan Products Div., Hausman Steel Co. 9/Mc
Haven-Busch Co. 2f/Ha
Haws Drinking Faucet Co. 30d/Ha
Hazen Metal Products, Inc. 16g/Ha
Heat-X, Inc.,–see Dunham-Bush Inc., Brunner Div. 31a/Du
Helio-Therm Control Corp. 19c/He
Hendrick Mfg. Co. 31f/He
Henges Co., Inc. 22a/He
Herrick Refrigerator Co. 26a/He
Herring-Hall-Marvin Safe Co. 23b/He
Hersey Mfg. Co. 30i/He
Hexcel Products Inc. 33a/He
Hillyard Chemical Co. 13m/Hi
Himmel Brothers Co.
•*entrances* 16a/Hi
•*store fronts* 21/Hi
Hirschman-Pohle Co., Inc. 20c/Hi
Hobart Mfg. Co. 26b/Ho
Hoe Corp. 5c/Ho
Hogan, C. T., & Co.,
–see Alumiseal Corp. 10b/AL; 10b/ALi; 10b/ALm; 10b/ALu; 10b/ALw
Hohmann & Barnard, Inc. 2i/Ho
Hohmann & Barnard of Alabama, Inc. 4h/Ho

Holcomb & Hoke Mfg. Co., Inc.
•*folding partitions, doors* 16e/Ho
•*folding partitions* 22d/Ho
•*interior decorative screens, grillework* 22h/Ho
Hollingshead, R. M., Corp. 9/HL
Homasote Co. 10a/Ho
–see also Nova Sales Co., Sub. Homasote Co. 8d/No
Hope's Windows, Inc.
•*aluminum windows* 17a/Ho
•*steel windows* 17b/Ho
Horn, A. C., Cos., Subs. & Divs. Sun Chemical Corp. 9/Ho
Horn Div., Brunswick-Balke-Collender Co.
•*basketball backstops* 23k/Ho
•*folding gym seats* 23J/Ho
•*folding partitions* 22d/Hor
•*folding stages and steps* 23g/Ho
Horner Flooring Co. 13J/Ho
Hotpoint, Div. General Electric Co.
•*commercial cooking equipment* 26c/Hot
•*kitchen and laundry equipment* 25a/Hot
Houze Glass Corp. 7a/Ho
Hubbell, Harvey, Inc. 32b/Hu
Hubbellite Corp. 13h/Hu
Hunter Div., Robbins & Meyers, Inc. 31h/Hu
Hunter Douglas Div.,–see Bridgeport Brass Co., Hunter Douglas Div. 19d/Br; 19e/Bi
Huntington Furniture Corp. 23o/Hu
Huntington Laboratories, Inc. 13m/Hu
Hussey Mfg. Co., Inc. 23J/Hu
Hyde-Murphy Co. 16c/Hy
Hydrometals, Inc. 6b/Hy
–see also Illinois Zinc Co., Div. Hydrometals, Inc. 8g/IL
Hydrotherm Inc. 31g/Hy

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Ickes-Braun Greenhouse Mfg. Co. 2J/Ic
Ideal Indstries, Inc. 32b/Id
Ilg Electric Ventilating Co. 31e/IL
Illinois Zinc Co., Div. Hydrometals, Inc. 8g/IL
–see also Hydrometals, Inc. 6b/Hy
Imperial Brass Mfg. Co. 27e/Im
Impervitex Dept.,–see Chase Bag Co., Impervitex Dept. 8a/Ch
In-Sink-Erator Mfg. Co. 25a/In
Incinerator Products Co. 28a/In
Inclinator Co. of America 24a/In
Independent Nail & Packing Co. 18a/In
Independent Register Co. 31f/In
Indiana Limestone Institute 4c/Ind
Industrial Acoustics Co., Inc. 11c/In
Industrial Chemical Laboratories, Inc. 13m/In
Industrial Corp. of America–see Atlas Overhead Door Co., Div., Industrial Corp. of America 16i/At
Industrial Engineering & Equipment Co. 31h/In
Industrial Engineering Works 17a/In
Ingram-Richardson Mfg. Co. 3c/Ing
Inland Steel Products Co.
•*access doors* 16J/In
•*acoustical roof deck* 11a/In
•*curtain walls* 3b/In
•*floor panels* 2b/In
•*metal lath* 12a/In
•*steel forms* 2a/In
•*steel roof decks* 2c/InL
Insinger Machine Co. 26b/In
In-Sink-Erator Mfg. Co. 25a/In
Insulite Div., Minnesota & Ontario Paper Co.
•*building products* 10a/Ins
•*construction accessories* 2i/Ins
Insulrock Div.,–see Flintkote Co., Insulrock Div. 2d/FLi
Integro, Inc. 13g/In
Interior Steel Equipment Co. 23d/In
International Bronze Tablet Co., Inc. 6f/In
International Molded Plastics, Inc., Structoglas Div. 7d/In
International Steel Co. 16h/Int
–Revolving Door & Entrance Div. 16f/In
International Swimming Pool Corp., Commercial Pool Div. 23k/In
International Telephone & Telegraph Corp.,–see Kellogg Switchboard & Supply Co., Communications Div. International Telephone & Telegraph Corp. 34a/Ke
Ipik Door Co., Inc. 16c/Ip
Iron Fireman Mfg. Co. 31J/Ir
Irving Subway Grating Co., Inc. 13a/Ir
Isenhour Brick & Tile Co. 4f/Is

J

Jamestown Metal Products, Inc. 23L/Ja
Jamestown Veneer & Plywood Corp. 16c/Ja
Jamison Cold Storage Door Co. 23c/Ja
–Sound Reduction Door Div. 16m/Ja
Janitrol Heating & Air Conditioning Div., Surface Combustion Corp. 31b/Ja
Jenn-Air Products Co., Inc. 20c/Je
Jennison-Wright Corp. 13J/Je
Jewett Refrigerator Co., Inc. 23L/Je
Jiffy Join, Inc. 22c/Ji
Joanna Western Mills Co.
•*wall coverings* 13k/Jo
•*window shades* 19c/Jo
Johns-Manville
•*acoustical materials* 11a/Jo
•*asbestos-cement shingles* 8c/Jo
•*asbestos Transitop* 8b/Jo
•*asphalt-asbestos floor tile* 13i/Joh
•*building insulation* 10a/Jo
•*built-up roofing* 8a/Jo
•*cement additives* 9/Jo
•*corrugated asbestos Transite* 8b/Joh
•*fiber glass panels* 7d/Jo
•*partitions, walls* 22a/Jo
•*plastic tile flooring* 13i/Jo
Johnson Plastic Tops, Inc. 14a/Jo
Johnson Rubber Co., Special Products Div. 13i/Jon

Jordan Commercial Refrigerator Co. 26a/Jo
Josam Mfg. Co. 30g/Jo
Joy Mfg. Co. 31e/Jo
Just Mfg. Co.
•*hospital equipment* 23l/Ju
•*residential sinks* 25b/Ju

k

K-M Building Products Co. 12a/Ka
Kaiser Aluminum & Chemical Sales, Inc.
•*aluminum products* 6a/Ka
•*copings and gravel stops* 8g/Kai
•*industrial building products* 8b/Ka
•*ornamental extrusions* 6a/Kai
•*thresholds and window sills* 19b/Ka
Kaiser Mfg. Co. 13c/Ka
Kaiserhof Industries, Inc. 16d/Ka
Kalman Floor Co., Inc. 13h/Ka
Kalwall Corp.
•*plastic building panels* 3e/Ka
•*skylight* 20b/Ka
Kane Mfg. Corp. 19a/Kan
Katolight Corp. 32c/Ka
Kaustine Furnace & Tank Corp. 30h/Ka
Kawneer Co.
•*aluminum windows* 17a/Ka
•*doors and entrances* 16a/Kaw
•*store front construction* 21/Kaw
•*sun control products* 19e/Ka
•*wall facings* 6d/Ka
•*wall systems* 3a/Ka
Keasbey & Mattison Co.
•*asbestos-cement* 8c/Ke
•*asbestos insulation* 10a/Ke
Keflex Mfg. Div., U.S. Flexible Metallic Tubing Co..29a/Ke
Kellogg-Mann Corp. 28a/Ke
Kellogg Switchboard & Supply Co., Communications Div. International Telephone & Telegraph Corp..34a/Ke
Kennatrack Corp., Sub. Ekco Products Co. 18d/Ke
Kennecott Copper Corp.,
–see Chase Brass & Copper Co., Inc., Sub. Kennecott Copper Corp. 8g/Ch; 19a/Cha; 29a/Ch
Kennedy, David E., Inc.,–see Kentile, Inc. 13i/Ke
Kent-Moore Organization, Inc. 31e/Ke
Kentile, Inc. 13i/Ke
Kentucky Metal Products Co. 22f/Ke
Kerrigan Iron Works, Inc. 13a/Ker
Ketcham, G. M., Mfg. Corp.
•*bathroom equipment* 27d/Ke
•*rolling glass walls* 16d/Ke
Kewanee Boiler Div.,–see American-Standard Industrial Div. 31a/Ame
Keyless Lock Co. 23b/Ke
Keystone Shower Door Co. 27c/Ke
Keystone Steel & Wire Co.
•*masonry reinforcing* 4h/Ke
•*reinforcing lath* 12a/Ke
•*roofing reinforcing* 2d/Ke
Kiefer, Adolph & Co. 23k/Ki
Kimberly-Clark Corp. 27e/Ki
Kinnear Mfg. Co. 16g/Ki
Kirsch Co. 19d/Ki
Kitchen Maid Corp. 25b/Ki
Klemp International 6e/Kl
Klemp Metal Grating Corp. 13a/Kl
Klip-Lock Fastening Devices Inc. 13J/Kl
Knape & Vogt Mfg. Co. 18g/Kn
Knickerbocker Steel Partition Co., Inc. 22b/Kn
Knight, H. W., & Son, Inc. 6f/Kn
Knight Mfg. Co. 6f/Kni
Knight, Stanley, Corp. 26d/Kn
Knoll Associates, Inc. 23o/Kn
Knoxville Scenic Studios Inc. 23g/Kn
Koch Refrigerators, Inc. 26a/Ko
Koffler Sales Corp. 13i/Ko
Koppers Co., Inc.
–Tar Products Div. 8a/Ko
–Wolman Preservative Dept. 5d/Kop
–Wood Preserving Div. 5d/Ko
Korok Inc., Div. Enamel Products Co. 23e/Ko
Koven, L. O., & Bro., Inc. 31g/Ko
Kraloy Plastic Pipe Co. 29a/Kr
Kuhls, H. B. Fred 9/Ku
Kurdon, Inc. 19d/Ku

L

LCN Closers, Inc. 18e/La
Laclede Steel Co. 2f/La
La Crosse Cooler Co. 26a/La
Lake Shore Markers Inc. 6f/La
Lake States Engineering Corp. 1a/La
Lally Bros. Co. 2g/LaL
Lally Column Co. 2g/Lay
Lambert Corp. 9/La
Lamella Roof Associates 2e/La
Lamont & Riley Co. 8g/La
Lamson Corp. 24a/La
Landon Inc. 23k/La
Larsen Products Corp.
•*concrete bonding agent* 4i/La
•*plaster bonding agent* 12e/La
Lastik Products Div., Wampum Products Inc. 2d/Lc
Laverne, Inc. 23o/La
Lawrence Metal Products, Inc. 6e/La
Lawrence Steel Co. 16g/La
Lawson, F. H., Co. 27d/La
Lead Industries Assn.
•*roofing and flashing* 8b/Le
•*sheet lead for plumbing* 29a/Le
Lees, James, & Sons Co. 13L/Le
LeFebure Corp. 23b/Le
Lemlar Corp.–see Lemlar Mfg. Co., Div. Lemlar Corp. 19e/Le
Lemlar Mfg. Co., Div. Lemlar Corp. 19e/Le
Lenawee Peerless, Inc. 4h/Le
Levolor Lorentzen, Inc. 19d/Lo
Levow, David 8g/le
Lewin-Mathes Co., Div. Cerro de Pasco Corp. 29a/Lew

Lewis Asphalt Engineering Corp. 9/Le
Lexsuco Inc.
•*built-up roofing* 8a/Le
•*waterstops* 9/Lex
Libbey-Owens-Ford Glass Co.
•*glass* 7a/Li
•*glass curtain wall material* 3e/Li
•*glass doors* 16d/Lib
Lightning Protection Institute 32d/Li
Lightolier 33a/Lia
Limbach Co. 8b/Li
–Curtain Wall Dept. 3a/Li
Lincoln Mfg. Co. Inc. 26d/Li
Lindsay Co. 30b/Li
Line Material Industries, McGraw-Edison Co. 33c/Li
Linen Supply Assn. of America 27e/Li
Ling-Altec Electronics, Inc.,–see Altec Lansing Corp., sub. Ling-Altec Electronics, Inc. 34a/AL
Lingo, John E., & Son, Inc.
–see Acme Flagpole Div., John E. Lingo & Son, Inc. 6g/Ac
Litecontrol Corp. 33a/Lie
Litecraft Mfg. Corp. 33a/Lin
Livers Bronze Co. 6e/Li
Lockwood Hardware Mfg. Co. 18e/Lo
Logan-Long Co. 8a/Lo
Lone Star Ceramics Co. 13c/Lo
Lord & Burnham, Div. Burnham Corp. 2J/Lo
Louisville Cement Co., Inc. 4i/Lo
Louver-Lite Corp.
•*louvers* 20d/Lo
•*sun control devices* 19e/Lo
Lowell Mfg. Co. 34a/Lo
Loxit Systems, Inc.
•*chalkboard mounting system* 23e/Lo
•*floor laying systems* 13J/Lo
Ludlow Papers, Inc. 8h/Lu
Ludowici-Celadon Co.
•*floor tile* 13c/Lu
•*tile roofing* 8f/Lu
Luminous Ceilings Inc. 33a/Lum
Lund, Thor, Co. Inc. 24a/Lu
Lynch Asbestos Co. 7d/Ly
Lynn-Sign Moulded Plastic Co., Inc. 23a/Ly
Lyon Metal Products, Inc. 23d/Ly

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MacArthur Co. 3c/Ma
Macomber Inc. 2f/Ma
Macton Machinery Co., Inc. 23g/Ma
Mahon, R. C., Co.
•*acoustical and troffer forms* 2a/Ma
•*cellular steel sub-floors* 2b/Mah
•*long-span structural roof decks* 2c/Ma
•*metal curtain walls, fire walls* 3a/Ma
•*rolling steel doors* 16g/Ma
•*steel roof decks* 2c/Mah
Maine Mfg. Co., –see Grade-Aid Corp., sub. Maine Mfg. Co. 23i/Gr
Maintenance Inc. 9/Ma
Majestic Co., Inc. 31L/Ma
Major Industries, Inc. 25a/MaJ
Manhattan Terrazzo Brass Strip Co., Inc. 13g/Ma
Mankato Stone Co. 4c/Ma
Mapes Industries, Inc. 19e/Ma
Maple Flooring Mfrs. Assn. 13J/Ma
Marble Institute of America, Inc. 13f/Ma
Marco Co. 20a/Ma
Marietta Concrete Div., American-Marietta Co. 3e/Mar
Marker Forge Co.
•*pressure cookers* 26c/Ma
•*shelving* 23c/Ma
–Hospital Equipment Div. 23L/Ma
Marley Co. 30b/Ma
Marlo Coil Co. 31a/Mar
Marmet Corp.
•*aluminum windows* 17a/Ma
•*doors and entrances* 16a/Mar
Marsh Products Corp. 2e/Ma
Marsh Wall Products, Inc. Sub. Masonite Corp. 14b/Ma
Marshall-McMurray Co. 19d/Ma
Martin-Fireproofing Corp.
•*concrete roof, floor deck* 2d/Mar
•*insulating roof deck* 2d/Mat
Martin-Senour Co. 15/Ma
Masonite Corp.
•*concrete forms* 2i/Ma
•*panel products for exterior applications* 8b/Ma
•*panel products for interior applications* 14d/Mas
•*technical data* 8b/Mas
–see also Marsh Wall Products, Inc., Sub. Masonite Corp. 14b/Ma
Master Builders Co., Div. American-Marietta Co. 9/Mas
Mastic Tile Corp. of America
•*Matico floor tile* 13i/Ma
•*rubber and vinyl floor tile* 13i/Mas
–see also Hako Building Products Div., Mastic Tile Corp. of America 13i/Hak
–see also Wright Mfg. Co., Div. Mastic Tile Corp. of America 13i/Wr
Matot, D. A., Inc. 24a/Ma
Matthews, Jas. H., & Co. 6f/Ma
Matthiessen & Hegeler Zinc Co. 8g/Mat
Maysteel Products, Inc. 23L/May
Maytag Co. 25a/May
McGraw-Edison Co.
–see Line Material Industries, McGraw-Edison Co. 33c/Li
–see Toastmaster Div., McGraw-Edison Co. 26c/To
McIntire, F. N., Brass Works, Inc. 30f/Mc
McKee Door Co. 16i/Mc
McKinley, O. O., Co., Inc. 19e/Mc
McKinley Designs 6e/Mc
McKinley Iron Works
•*abrasive castings* 13b/Mc
•*construction castings* 6i/Mc
•*grilles and ventilators* 20d/Mc
McMillan Products Div., Hausman Steel Co. 9/Mc

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McNaulin Inc. 28a/Mc
McPhilben Lighting Inc. 33a/Mc
McShane Bell Foundry Co., Inc. 23h/Mc
Meadow Steel Products, Inc.
•*construction accessories* 2i/Me
•*masonry wall reinforcing* 4h/Me
Meadows, W. R., Inc. 9/Me
Medart, Fred, Products, Inc. 23J/Me
Medart Lockers, Inc. 23d/Med
Medusa Portland Cement Co. 4i/Me
Mengel Co. 16c/Me
Merchant & Evans Co. 16h/Me
Mesker Brothers
•*aluminum windows and doors* 17a/Me
•*curtain walls* 3a/Me
•*hollow metal doors* 16b/Me
•*steel windows* 17b/Me
Met-L-Wood Corp. 14a/Me
Metal Lath Mfrs. Assn. 12a/Me
Metal Roof Deck Technical Institute 2c/Me
Metpar Steel Products Corp. 22b/Me
Metropolitan Brick, Inc. 4f/Me
Miami Cabinet Div., Philip Carey Mfg. Co.
•*access doors* 16J/Mi
•*bathroom accessories* 27d/Mi
•*fans* 31e/Mi
Miami Window Corp. 17a/Mi
Michaels Art Bronze Co.
•*exhibit cases* 3a/Mi
•*metal wall systems* 3a/Mic
Michel & Pfeffer Iron Works, Inc. 6e/Mi
Mid-West Chandelier Co. 33a/Mi
Miller Co. 33a/MiL
Miller Sliding Glass Door Co., Inc. 16d/Mi
Mills Co.
•*office partitions* 22a/Mi
•*toilet partitions* 22b/Mi
Milwaukee Stamping Co. 18e/Mi
–see also Ferrometal Div., Milwaukee Stamping Co. 22b/Fe
Minneapolis-Honeywell Regulator Co.
•*air cleaners* 31d/Mi
•*controls* 31i/Mi
•*hotel/motel master systems* 34b/Mi
Minnesota Mining & Mfg. Co., Adhesives, Coatings & Sealers Div.
•*adhesives, flooring and wall covering* 13i/Mi
•*curtain wall sealers* 3f/Mi
Minnesota & Ontario Paper Co.,
–see Insulite Div., Minnesota & Ontario Paper Co. 2i/Ins; 10a/Ins
Minwax Co. Inc.
•*masonry treatments* 9/Mi
•*wood finishes* 15/Min
Miracle Adhesives Corp.
•*adhesives for tile setting* 13c/Mir
•*building insulation* 10a/Mir
Mirawal Div., Birdsboro Steel Foundry & Machine Co.
•*curtain walls* 3c/Mi
•*porcelain enamel* 6d/Mi
Mississippi Glass Co. 7a/Mi
Mitchell Engineering Co. 2J/Mi
Mitchell, Lloyd E., Inc.,–see Air Path Products Co., Div. Lloyd E. Mitchell, Inc. 20d/Ai
Mitchell Mfg. Corp. 23i/Mi
Mitchell Rand Mfg. Corp. 8g/Mi
Modern Venetian Blinds, Div. Rodney Metals, Inc. 19d/Mo
Modernwood Co., Div. Standard Plywoods, Inc. 13J/Mo
Modu-Wall, Inc. 3a/ML
Modur Co., Div. Granux Corp. 4d/Mod
Moe Light Div., Thomas Industries, Inc. 33a/Mo
Moeschl-Edwards Corrugating Co., Inc. 16g/Mo
Monarch Elevator & Machine Co. 24a/Mo
Monarch Tile Mfg. Co. 13c/Mo
Monsanto Chemical Co., Organic Chemicals Div. 5d/Mo
Monteath, J. H., Co. 5b/Mo
Montgomery Elevator Co. 24a/Mon
Moore, Benjamin & Co. 15/Moo
Moore, Goodloe E., Inc. 10a/Mo
Moore Brothers Co. 27e/Mo
Moore, P. O., Inc., Sub. Sunroc Corp. 18e/Moo
Morgan-Francis Co., Inc.,–see Aabec Pole Div., Morgan-Francis, Inc. 6g/Aa
Morrison Steel Products, Inc. 16i/Mo
Morse Boulger Inc. 28a/Mo
Mo-Sai Associates, Inc. 4d/Mos
Mosaic Tile Co. 13c/Mos
Mosher Mfg. Co., Inc. 16h/Mo
Mosler Dropository Corp. 23b/Mo
Mosler Safe Co. 23b/Mos
Moultile, Inc. 13i/Mo
Moynahan Bronze Co. 3a/Mo
Mueller Brass Co. 29a/Mu
–see also Valley Metal Products Co., Sub. Mueller Brass Co. 3a/Va; 16a/Va; 17a/Va
Mueller Climatrol, Div. Worthington Corp. 31b/Mu
Mueller Steam Specialty Co., Inc. 29a/Mue
Muellermist Irrigation Co. 30e/Mu
Multi-Clean Products, Inc. 13m/Mu
Multi Electric Mfg., Inc. 33a/Mu
Munchhausen Soundproofing Co., Inc. 16m/Mu
Munro Waterproofings, Inc. 9/Mu
Murals Inc. 13c/Mu
Murray Tile Co. Inc. 13c/Mur
Musson, R. C., Rubber Co. 13i/Mu
Muzak Corp. 34a/Mu

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Narragansett Gymnasium Equipment Co. 23k/Na
Nash, Cadmus & Voelker Inc. 28a/Na
Natco Corp. 4f/Na
National Building Granite Quarries Assn., Inc. 4a/Na
National Chemical & Mfg. Co. 15/Na
National Cotton Council
–see Canvas Awning Institute Inc. 19e/Ca
National Dryers,–see World Dryer Corp. 27e/Wo
National Electric Div., H. K. Porter Co. 32b/Na
National Folding Wall Corp. 22d/Na

National Gypsum Co.
•*asbestos-cement roofing, shingles, siding*.....8c/Na
•*gypsum plasters and lime*.....12e/Na
•*gypsum roof decks*.....2d/Na
•*gypsum wallboard*.....12c/Nat
•*insulation products*.....10a/Na
•*metal lath, gypsum lath*.....12a/Na
•*paint*.....15/Nat
•*panels, roofing, siding*.....8b/Na
•*sound control*.....11a/Na
National Lime Assn.....4i/Na
National Mfg. Co.....18d/Nat
National Metallic Sash Co.....17b/Na
National Oak Flooring Mfrs.' Assn.....13J/Na
National Plastic Products Co.....14a/Na
National Rubber Machinery Co., Plumbing Equipment Div.....26b/Na
National Slag Assn.....4i/Nat
National Steel Corp.,–see Stran-Steel Corp., Div. National Steel Corp.....2f/Str
National Steel Partition Co., Inc.....22a/Na
National Store Fronts Co. Inc.....16a/Nat
National Supply Co.,–see Spang Underfloor Duct Dept., National Supply Co.....32b/Sp
National System of Garage Ventilation, Inc.....31e/Na
National Terrazzo & Mosaic Assn., Inc.....13g/Na
National Tile & Mfg. Co.....13c/Na
National-U.S. Radiator Corp.,–see Pacific Steel Boiler Div., National-U.S. Radiator Corp.....31g/Pa
Natural Slate Blackboard Co.....23e/Na
Naturalite, Inc. Marketing Agency of Plastic Products of Texas.....20a/Na
Neenah Foundry Co.....6i/Ne
Nelco Metalcraft, Inc.....6f/Ne
Nelson, A. R., Co., Inc.....23d/Ne
–Hospital Div.....22c/Ne
Nelson-Harkins Industries
–see ABC Bulletin & Directory Co., Assoc. Nelson-Harkins Industries.....23a/Ab
–see ABC Letter Co., Affil. Nelson-Harkins Industries.....6f/Ab
Nelson Metalcraft Co.,–see Nelco Metalcraft, Inc. 6f/Ne
Neo-Ray Products, Inc.....33a/Ne
New Castle Products, Inc.
•*doors*.....16e/Ne
•*sound retardant folding partitions*.....22d/Ne
–Coated Fabric Div.....13k/Ne
–see also Air Door, Inc., Div. New Castle Products, Inc.....16L/Ai
New England Lead Burning Co., Inc.....22e/Ne
New York Air Brake Co.,–see Aurora Pump Div., New York Air Brake Co.....30a/Au
New York Silicate Book Slate Co., Inc.
•*bulletin boards*.....23a/Ne
•*chalkboards*.....23e/Ne
Newman Brothers, Inc.
•*aluminum railings*.....6e/New
•*curtain walls*.....3a/Ne
•*doors*.....16a/Ne
•*tablets and letters*.....6f/New
Nicholson, W. H., & Co.,–see Robart Partitions, Inc.....22b/Ro
Nik-O-Lok Co.....22b/Nik
Norman Products Co.....31h/No
North American Aviation, Inc.....3a/No
North American Cement Corp.....4i/No
North American Iron & Steel Co., Inc.....6g/No
North Bangor Slate Co.....8e/No
North Carolina Granite Corp.....4a/No
Norton Co.....13g/No
Norton Door Closer Co., Div. Yale & Towne Mfg. Co.
•*interior door closers*.....18e/No
•*overhead electric door operators*.....18e/Nor
Norwalk Door Closer Co., Inc.....18e/Now
Notifier Corp.....34a/No
Nova Sales Co., Sub. Homasote Co.....8d/No
NuTone, Inc.....25a/Nu

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O'Connor, Thomas, & Co., Inc.....35/Oc
Octagon Ventilator Co.....20c/Oc
O'Hara Incinerator Co.....28a/Oh
Olin Mathieson Chemical Corp., Metals Div.....6a/Ol
–see also Ramset Fastening System, Winchester-Western Div., Olin Mathieson Chemical Corp...2i/Ram
Olson, Samuel, Mfg. Co., Inc., Div. Cherry-Burrell Corp.....26d/Ol
Omark Industries, Inc.....2i/Om
Omnia Construction Corp.....2d/Om
Onan, D. W., & Sons Inc.....32c/On
Orangeburg Mfg. Co., Div. Flintkote Co.
•*conduit*.....32b/Or
•*pipe and fittings*.....29a/Or
•*underfloor duct system*.....32b/Ora
Oregon Brass Works.....6f/Or
Otis Elevator Co.....24a/Ot
Overdoors Inc.....16i/Ov
Overhead Door Corp.....16i/Ove
Overly Mfg. Co.
•*architectural metal products*.....8b/Ov
•*doors and frames*.....16b/Ov
Owens-Corning Fiberglas Corp.
•*built-up roofing*.....8a/Ow
•*curtain wall insulation*.....3f/Ow
•*fenestration fabrics*.....19d/Ow
•*form board*.....2d/Ow
•*high and low temperature insulations*.....10c/Ow
•*insect screening*.....19a/Ow
•*noise control products*.....11a/Ow
•*polarized light panels*.....33b/Ow
•*roof insulation*.....10a/Ow
Owens-Illinois
•*curtain walls*.....3e/Ow
•*glass blocks*.....7b/Ow
Owens-Illinois Plywood Co.
•*flush doors*.....16c/Ow
•*movable partitions*.....22a/Ow

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Pabco Floor Covering Div., Fibreboard Paper Products Corp. 13i/Pa
Pacific Lumber Co. 5a/Pa
Pacific Rolling Door Co. 16g/Pa
Pacific Steel Boiler Div., National-U.S. Radiator Corp. 31g/Pa
Packard-Bell,–see Bellwood Co. of California, Div. Packard-Bell 16c/Be
Page Fence Assn. 22g/Pa
Paine Lumber Co., Ltd. 16c/Pa
Pam Co. 20a/Pa
Panaview Window Co., Inc. 17a/Pa
Panel-Matic Inc. 22a/Pan
Panel Structures, Inc. 3e/Pa
Panelfab Products, Inc. 16a/Pan
Panelfold Doors, Inc. 16e/Pa
Panelyte Div., St. Regis Paper Co. 14a/Pa
Paragon Electric Co. 32a/Pa
Paragon Swimming Pool Co., Inc. 23k/Par
Pardee, C. G., Co., Inc. 9/Pa
Parkay Div.,–see Wood-Mosaic Corp., Parkay Div. 13J/Wo
Parker, Charles, Co. 27d/Pa
Parkersburg-Aetna Corp.,–see Parkersburg Rig & Reel Co., Div. Parkersburg-Aetna Corp. 2J/Pa
Parkersburg Rig & Reel Co., Div. Parkersburg-Aetna Corp. 2J/Pa
Parkwood Laminates, Inc. 14a/Par
Parr Paint & Color Co., Compound Div. 3f/Pa
Partitions, Inc. 22a/Par
Paulding, John I., Inc. 32b/Pau
Pauly Jail Building Co. 23m/Pa
Pawling Rubber Corp.
•*curtain wall sealants* 3f/Paw
•*rubber mats* 13i/Paw
Pecora, Inc.
•*ceramic tile adhesives* 13c/Pe
•*products for building* 3f/Pe
Peelle Co.
•*elevator doors* 24c/Pe
•*hangar doors* 16h/Pe
•*nuclear doors* 16m/Pee
•*pass windows, conveyor doors* 26d/Pe
–see also Richmond Fireproof Door Co. 16g/Ri
Peelle Co., Peelle Motorstair Div. 24a/Pee
Peerless Electric Co. 31e/Pe
Peerless Mfg. Div., Dover Corp.,–see Dura-Vent Corp. 31f/Du
Pellerin Milnor Corp. 27g/Pe
Penco Div., Alan Wood Steel Co. 23d/Pe
Penn Metal Co., Inc.
•*gratings* 13a/Pe
•*metal lath* 12a/Pe
•*movable partitions* 22a/Pe
•*structural sections* 2f/Pe
Penn Ventilator Co., Inc. 20c/Pe
Pennsylvania Wire Glass Co. 7a/Pe
Penokee Veneer Co.,
–see Splicedwood Corp. 5b/Sp; 16c/Sp
Perlite Institute
•*concrete aggregates* 12d/Pe
•*plaster aggregates* 12d/Pe
Perma-Top Co. 28a/Pe
Permaglas Div.,–see Smith, A. O., Corp., Permaglas Div. 30c/Sm
Perry-Briggs Co. 34a/Pe
Peterson Window Corp. 17a/Per
–see also Sapphire Div., Peterson Window Corp. ..17a/Sa
Pfaff & Kendall 33c/Pf
Philipp Mfg. Co. 16b/Ph
Phillips Drill Co. 2i/Ph
Phoenix Building Products, Inc. 8g/Ph
Pinecrest, Inc. 19d/Pi
Pinnacle Products Co. Inc. 8a/Pi
Pinner, L. A., Steel Forms,–see Steel Forms, Inc. 2a/St
Pioneer Fireproof Door Corp.
•*fire doors* 16b/Pi
•*soundproof doors* 16m/Pi
Pioneer Plastics Corp. 14a/Pi
Pioneer Products Div.,–see Witco Chemical Co. Pioneer Products Div. 10d/Wi
Pi-Plank Div., Prestressing, Inc. 2d/Pi
Pistol, A. W., Inc. 33a/Pi
Pittsburgh Corning Corp.
•*building insulation* 10a/Pi
•*glass block curtain walls* 3e/Pi
•*glass blocks* 7b/Pi
Pittsburgh-Des Moines Steel Co. 23J/Pi
Pittsburgh Plate Glass Co.
•*door operators* 18e/Pi
•*glass-clad curtain wall systems* 3e/Pit
•*glass doors and frame assemblies* 16d/Pi
•*glass products* 7a/Pi
•*paint* 15/Pi
•*store fronts* 21/Pi
•*structural glass* 13e/Pi
•*tubular doors* 16a/Pi
Pittsburgh Steel Co.,–see Pittsburgh Steel Products, Div. Pittsburgh Steel Co. 2a/Pi; 12a/Pi
Pittsburgh Steel Products, Div. Pittsburgh Steel Co.
•*metal lath* 12a/Pi
•*permanent steel forms* 2a/Pi
•*reinforcing mesh* 2a/Pit
Plasteco, Inc. 20a/PLa
Plasteel Products Corp. 8b/PL
Plastic Products of Texas,–see Naturalite, Inc., Marketing Agency of Plastic Products of Texas. 20a/Na
Plibrico Co. 28a/PL
Plywall Products Co., Inc. 14b/PL
Plywood Co. 5b/PL
Poblocki & Sons Co. 23e/Po
Pomeroy, S. H., Co.
•*air conditioner, radiator enclosures* 31h/Po
•*aluminum windows* 17a/Po
•*steel windows* 17b/Po
–see also Unique Balance Div., S. H. Pomeroy Co. 18a/Un; 23e/Un

Pomona Tile 13c/Po
POrete Mfg. Co. 2d/Po
Porter Athletic Equipment Co., Div. Waco Mfg. Co. 23k/Por
Porter, H. K., Co., Inc.
–see Connors Steel Div., H. K. Porter Co., Inc. 2d/Cor
–see National Electric Div., H. K. Porter Co. 32b/Na
Porterfield Industries Inc. 17a/Por
Portland Cement Assn. 4i/Po
Potter Fire Escape Co. 6h/Po
Potts Ash Hoist Corp. 24d/Po
Powell Steel Lath Corp. 12a/Po
Powers Regulator Co. 27b/Po
Pratt & Lambert-Inc. 15/Pr
Precision Hardware, Inc. 18f/Pr
Precision Parts Corp.
•*electric boilers* 31g/Pr
•*electric stairway* 23n/Pr
Preco Chemical Corp., Building Products Div. 13h/Pr
Premier Panels, Inc. 3e/Pr
Premium Brand Insulation Group 10a/Pr
Prescolite Mfg. Corp. 33a/Pr
Prescon Corp. 2d/Pr
Presstite Div. American Marietta Co. 3f/Pre
Prestressing, Inc.,–see Pi-Plank Div., Prestressing, Inc. 2d/Pi
Preway, Inc. 25a/Pr
Price Brothers Co.,–see Flexicore Co., Inc. 2d/Fl
Pricemetal Corp. 22b/Pri
Products Research Co. 3f/Pro
Progressive Metal Equipment Co. 26d/Pr
Providence Granite Co., Inc. 4a/Pr
Pruden Products Co. 2e/Pr
Puffer Hubbard Refrigerator Co. 26a/Pu
Pyro Incinerator & Supply Co. 28a/Py

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R.C.A. Rubber Co. 13i/Ra
R. O. W. Sales Co. 17c/Ro
Rackle, George, & Sons Co. 2d/Ra
Radio Corp. of America 34a/Ra
Rambusch
•*design service* 23h/Ra
•*lighting fixtures* 33a/Ra
Ramset Fastening System, Winchester-Western Div., Olin Mathieson Chemical Corp. 2i/Ram
Ray Proof Corp. 22e/Ra
Raymond Concrete Pile Co., Div. Raymond International Inc. 1a/Ra
Raymond International Inc.,–see Raymond Concrete Pile Co., Div. Raymond International Inc. 1a/Ra
Raynor Mfg. Co. 16i/Ray
Rebco, Inc. 21/Re
Recreation Equipment Corp. 23k/Re
Rector Mineral Trading Corp. 10b/Re
Red Cedar Shingle Bureau
•*handsplit red cedar shakes* 8d/Red
•*red cedar shingles and shakes* 8d/Re
Redondo Tile Co.,–see Stylon Corp. 13c/Sty
Reflectal Corp., sub. Borg-Warner Corp.
•*reflective insulation* 10a/Re
•*sunscreen* 19e/Re
Reflecto-Barrier Sales Co., Inc. 8a/Re
Reilly Tar & Chemical Corp. 8a/Re
Reliance Steel Products Co. 13a/Re
Reliance Window Corp.
–see Williams & Williams Products Corp. 3a/Wi; 17b/Wi
Remington Rand, Div. Sperry Rand Corp.
•*library equipment* 23f/Re
•*office furniture* 23o/Re
Republic Industries, Inc.,–see Dor-O-Matic, Div. Republic Industries, Inc. 18e/Do; 18f/Dor
Republic Steel Corp.
•*pipe* 29a/Rep
•*sheet metal* 6c/Re
–see also Truscon Steel Div., Republic Steel Corp. 2f/Tr; 3d/Tr; 12a/Tr; 16b/Trs; 16h/Tr; 17a/Tru; 17b/Tr
–Berger Div.
•*gutters, leaders* 8g/Re
•*lockers* 23d/Re
–Steel & Tubes Div.
•*conduits* 32b/Re
•*structural steel tubing* 2f/Re
Resolite Corp. 7d/Re
Restoration Co., Inc.,–see Western Waterproofing Co., Inc. 9/Wet
Reuten, Fred, Inc. 17c/Re
Reuter, M., & Sons 16b/Re
Revco Inc. 25a/Rev
Revere Copper & Brass Inc.
•*aluminum shapes* 6a/Ra
•*gravel stops* 8g/Rea
•*pipe and tube* 29a/Rev
•*roofing and flashing* 8b/Re
Reynolds Metals Co.
•*acoustical systems* 11a/Re
•*aluminum curtain walls* 3a/Rey
•*aluminum rigid conduit* 32b/Rey
•*aluminum wall systems* 3a/Rez
•*aluminum windows* 17a/Rey
•*architectural shapes* 6a/Re
•*commercial roof deck* 8b/Ree
•*copings, gravel stops* 8g/Rez
•*corrugated roofing and siding* 8b/Rey
•*insulated curtain wall systems* 3a/Re
•*ribbed siding* 8b/Reo
•*V-beam roofing and siding* 8b/Ren
Rez Wood-Tones, Inc. 15/Re
Reznor Mfg. Co. 31c/Rez
Rheem Mfg. Co.,–see Richmond Plumbing Fixtures Div., Rheem Mfg. Co. 27a/Ri
Rice, Chas. W., & Co., Inc. 19c/Ri
Richards, J. Merrill 7a/Ri

firms

Richards-Wilcox Mfg. Co.
•*folding partitions* 22d/Ri
•*hardware and doors* 16h/Ri
–School Equipment Div. 23d/Ri
Richmond Fireproof Door Co.
•*doors* 16b/Ri
•*pass windows* 16g/Ri
Richmond Plumbing Fixtures Div., Rheem Mfg. Co. ..27a/Ri
Richmond Screw Anchor Co., Inc. 2i/Ri
Ridge Door Co. 16i/Rid
Riesner Vent Brick Corp. 20d/Ri
Rigid Metal Products Inc. 21/Ri
Rigidized Metals Corp. 6c/Ri
Rilco Laminated Products, Inc. 2e/Ri
Rising & Nelson Slate Co., Inc. 8e/Ri
Rixson, Oscar C., Co. 18e/Ri
Roanoke Iron & Bridge Works, Inc. 23m/Ro
Robart Partitions, Inc. 22b/Ro
Robberson Steel Co. 35/Ro
Robbins & Myers, Inc.
–see Hunter Div., Robbins & Myers, Inc. 31h/Hu
–see Trade Wind Div., Robbins & Myers, Inc. 31e/Tr
Robbins Floor Products, Inc. 13i/Ro
Robbins Flooring Co.
•*gymnasium floors* 13J/Rob
•*hardwood floors* 13J/Ro
Robertson, H. H., Co.
•*curtain walls, panels* 3c/Ro
•*Q-Deck, Q-Floor* 2b/Ro
Robertson Mfg. Co., Tile Div. 13c/Ro
Robinson, J. G., Inc. 4c/Ro
Rochester Germicide Co. 27e/Ro
Rockwell-Standard Corp., Grating Div. 13a/Ro
Roddis Plywood Corp.
•*doors* 16c/Ro
•*plywoods* 5b/Ro
–see also Owens-Illinois Plywood Co. 16c/Ow; 22a/Ow
Rodney Metals, Inc.,–see Modern Venetian Blinds, Div. Rodney Metals, Inc. 19d/Mo
Rogers Insulating & Roofing Co., Inc.,–see Aaer-Sprayed Insulations Inc., Div. Rogers Insulating & Roofing Co., Inc. 10a/Aa
Rohm & Haas Co. 7d/Roh
Rol-Fol-Table Inc. 23i/Ro
Rollform Inc. 11a/Ro
Rolscreen Co.
•*folding doors* 16e/Ro
•*windows* 17c/Rol
Roman Metal Products, Inc. 16d/Ro
Ross Heat Exchanger Div.,–see American-Standard Industrial Div. 31a/Ame
Rossbach & Sons, Inc. 17a/Ro
Rotary Lift Co., Div. Dover Corp.
•*freight and passenger elevators* 24a/Ro
•*rising stages* 23g/Ro
Rowe Mfg. Co. 16i/Ro
Royal Metal Mfg. Co.,–see Deluxe Metal Products Co., Div. Royal Metal Mfg. Co. 23f/De
Royal Tile Mfg. Co. 13c/Roy
Rubatex Div., Great American Industries, Inc.
•*building insulation* 10b/Ru
•*closure strips* 8b/Ru
Rubber & Plastics Compound Co., Inc. 8g/Ru
Ruberoid Co.
•*asbestos and asphalt shingles* 8c/Ru
•*built-up roofing* 8a/Ru
Rudel Floor Strip Co., Inc. 13g/Ru
Russell, Burdsall & Ward Bolt & Nut Co. 2h/Ru
Russell, F. C., Co. 17a/Ru
Rust-Oleum Corp. 15/Ru
Ruud Mfg. Co. 30c/Ru
Ryerson, Jos. T., & Son, Inc. 2d/Ry
Rysdon Products Co.,–see Firebar Door Div. Rysdon Products Co. 16m/Fi
Ryther-Purdy Lumber Co., Inc. 33c/Ry

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Safway Steel Products, Inc. 23J/Sa
Saino, F. L., Mfg. Co. 16b/Sa
St. Charles Mfg. Co.
•*hospital casework* 23L/Sa
•*kitchen cabinets* 25b/Sa
•*school storage furniture* 23i/Sa
St. Louis Fire Door Co. 16h/Sa
St. Paul & Tacoma Lumber Co. 2i/Sai
St. Regis Paper Co.,–see Panelyte Div., St. Regis Paper Co. 14a/Pa
Samson Window Corp. 3a/Sa
Sandell Mfg. Co., Inc. 8g/Sa
Sandura Co. 13i/Sa
Sanymetal Products Co., Inc. 22b/Sa
Sapphire Div., Peterson Window Corp. 17a/Sa
Sargent Building Specialties Inc., Equal-Aire Incinerator Div. 28a/Sar
Sargent & Co. 18e/Sa
Sargent & Greenleaf, Inc. 18f/Sa
Saxe Welded Connections 2h/Sa
Sayre & Fisher Co., Brick Div. 4f/Sa
Schacht Associates, Inc. 16d/Sc
Schenectady Concrete Products Co., Inc. 2d/Sc
Schieber Sales Co. 23i/Sc
Schlage Lock Co. 18e/Sc
Schlegel Mfg. Co.
•*door weatherstripping* 16a/Sc
•*window weatherstripping* 17a/Sc
Schless, Robert A., & Co., Inc. 23c/Sc
School Equipment Mfg. Corp.,–see Grade-Aid Corp., sub. Maine Mfg. Co. 23i/Gr
School Supply Co. 23d/Sc
Schulmerich Carillons Inc. 23h/Sc
Schundler, F. E., & Co., Inc. 10a/Sc
Schwab Jalousie & Awning Co., Inc. 17d/Sc
Schwerd, A. F., Mfg. Co. 5c/Sc
Scott Paper Co. 27e/Sc
Seamloc Carpet Co. 13L/Se
Seaporcel Metals, Inc. 3c/Se

Seco Mfg., Inc. 30f/Se
Security Fire Door Co.
•doors 16h/Se
•elevator doors 24c/Se
Security Metal Products Corp. 16b/Se
Security Products Co. 17a/Se
Sedgwick Machine Works 24a/Se
Selby, Battersby & Co. 13i/Se
Select-O-Phone Div.,
–see Kellogg Switchboard & Supply Co. 34a/Ke
Self Storing Window Co., Inc.,
–see DeVAC, Inc. 17a/Dev
Sellers Engineering Co. 30c/Se
Servicised Products Corp. 2i/Se
Shampaine Co. 23l/Sh
Shaw-Walker 23b/Sh
Sheffield Div., Armco Steel Corp. 2f/Sh
Shell Chemical Corp., Agricultural Chemical Sales Div. 5d/Sh
Shepard Elevator Co., Div. Dover Corp. 24a/Sh
Sherron Metallic Corp. 34a/Sh
Sherwin-Williams Co. 15/Sh
Shlagro Steel Products Corp. 2f/ShL
Siegler Corp.,–see Bogen-Presto Co., Div. Siegler Corp. 34a/Bo
Siems Bros., Inc.,
–see Trussbilt Div. Siems Bros. Inc. 16b/Tru
Sika Chemical Corp. 9/Si
Simes Co., Inc. 33a/Sim
Simix Co. 27b/Si
Simmons Co. 23i/Sim
Simplex Ceiling Corp.
•*acoustical ceiling systems* 11a/Si
•*radiant heating panels* 31b/Si
Simplex Time Recorder Co. 34b/Si
Simpson Co. 2i/Si
Simpson Logging Co.
•*acoustical materials* 11a/Sim
•*flush doors* 16c/Si
•*plywood products* 5b/Si
Sinko Mfg. & Tool Co. 33a/Sin
Sloan Valve Co. 27b/SL
Smith, A. O., Corp., Permaglas Div. 30c/Sm
Smith, Elwin G., & Co., Inc.
•*corrugated sheets* 8b/Sm
•*curtain walls* 3a/Sm
•*forms for concrete* 2a/Sm
•*insulated curtain walls and roofs* 8b/Smi
•*roof decking* 2c/Sm
Smith & Kanzler Corp.
•*fireproofing* 16e/Sm
•*insulation* 10a/Sm
Smithcraft Lighting 33a/Sm
Smyser-Royer Co.,–see J. W. Fiske Architectural Metals, Inc. 6e/Fi
Solux Corp. 33a/So
Son-Nel Products Co.
•*chalkboards* 23e/So
•*folding tables and benches* 23i/So
Sonneborn, L., Sons, Inc. 9/So
Sonoco Construction Products, Sonoco Products Co.
•*concrete column forms* 2i/Son
•*fibre ducts* 31f/Son
•*hollow concrete deck forms* 2d/Son
Sonoco Products Co.,–see Sonoco Construction Products, Sonoco Products Co. ..2d/Son; 2i/Son; 31f/Son
Soss Mfg. Co. 18e/So
Soulé Steel Co.
•*aluminum and steel curtain walls* 3a/So
•*aluminum windows* 17a/So
Southern Coatings and Chemical Co. 15/So
Southern Equipment Co. 26d/So
Southern Sash Sales & Supply Co., Inc.
•*aluminum curtain walls* 3a/Sou
•*aluminum windows* 17a/Sou
Southern Steel Co. 23m/So
Southern Wood Preserving Co. 13J/Sou
Southwell Co. 6f/So
Spang Underfloor Duct Dept., National Supply Co. 32b/Sp
Spanjer Bros., Inc. 6f/Sp
Sparta Ceramic Co.–see United States Ceramic Tile Co. 13c/Un
Speakman Co. 27b/Sp
Spencer Industries, Inc.
•*bulletin boards* 23a/Sp
•*metal letters* 6f/Spe
Sperry Rand Corp.,–see Remington Rand, Div. Sperry Rand Corp. 23f/Re; 23o/Re
Splendor Corp. 16e/Sp
Splicedwood Corp.
•*doors* 16c/Sp
•*plywood* 5b/Sp
Sprayon Insulation & Acoustics, Inc. 11a/Sp
Springwood Floor System 13J/Sp
Spronz Incinerator Corp. 28a/Sp
Standard Coated Products, Inc. 13k/St
Standard Conveyor Co. 24d/St
Standard Dry Wall Products, Inc. 9/St
Standard Fire Hose Co. 30f/St
Standard Plywoods, Inc.,–see Modernwood Co., Div. Standard Plywoods, Inc. 13J/Mo
Standard Pressed Steel Co. 23i/St
Standard Products Co. 3f/St
–see also Clark Div., Standard Products Co. 17b/Cla
Standard Tile Co., Inc. 13c/San
Standard-Toch Chemicals Inc.,
–see Toch Brothers, Div. Standard-Toch Chemicals, Inc. 9/To
Stanley Electric Mfg. Co. 33a/St
Stanley Hardware, Div. Stanley Works 18e/Sta
Stanley Works,–see Stanley Hardware, Div. Stanley Works 18e/Sta
Stark Ceramics, Inc. 4f/St
Steel City Electric Co. 32b/St
Steel Door Corp.,–see Berry Door Corp. 16i/Be
Steel Forms, Inc. 2a/St
Steel Joist Institute 2f/St

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Steel Partitions Inc. 22a/St
Steel Window Institute 17b/St
Steelcraft Mfg. Co. 16b/Ste
Steele, Oliver C., Mfg. Co. 19c/St
Steiner Co. 27e/St
Sterling, John, Corp. 18d/Ste
Stero Dishwashing Machine Mfg. Co. 26b/St
Stevens & Thompson Paper Co., Inc. 27e/Ste
Stewart Iron Works Co., Inc. 23m/St
Stic-Klip Mfg. Co., Inc. 16k/St
Stiles-Karlsonite Corp. 30b/St
Stillwater Clay Products Co. 29a/Sti
Stonco Electric Products Co. 33a/Sto
Storagewall 23i/Sto
Straits Products, Inc. 16e/St
Stran-Steel Corp., Div. National Steel Corp. 2f/Str
Stromberg-Carlson Co. 34a/Str
Structural Clay Products Institute,
–see Facing Tile Institute 4f/Fa
Structural Products, Inc. 23c/St
Structural Slate Co. 4c/St
Structoglas Div.,–see International Molded Plastics, Inc., Structoglas Div. 7d/In
Structural Clay Products Institute,–see Architectural Terra Cotta Institute 4e/Ar
Struthers Wells Corp.,–see Titusville Iron Works Co., Div. Struthers Wells Corp. 31g/Ti
Studebaker-Packard Corp.–see Gering Plastics Div., Studebaker-Packard Corp. 9/Ger
Sturtevant Div.,–see Westinghouse Electric Corp., Sturtevant Div. 31a/We
Stylon Corp. 13c/Sty
Sulzer Bros. Ltd. 16L/Su
Summitville Tiles, Inc. 13c/Sum
Sun Chemical Corp.,–see A. C. Horn Cos., Subs. & Divs. Sun Chemical Corp. 9/Ho
Sun-Tron Corp. 31h/Su
Sun Valley Industries, Inc. 16d/Su
Sun Vertikal Blind Co. 19d/Su
Sunbeam Lighting Co. 33a/Sun
Sunlight Metal Products Co.
• *aluminum windows* 17a/Su
• *curtain walls* 3a/Su
Sunroc Corp. 30d/Su
-see also Moore, P. O., Inc., sub. Sunroc Corp. 18e/Moo
Super Sky Products Co., Div. Super Steel Products Co. 20b/Su
Super Steel Products Co.,–see Super Sky Products Co., Div. Super Steel Products Co. 20b/Su
Superior Concrete Accessories, Inc. 2i/Su
Superior Fireplace Co. 31L/Su
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
Superior Rubber Mfg. Co. 13i/Su
Superior Window Co.
• *aluminum awning windows* 17a/Sup
• *aluminum windows* 17a/Sur
Superior Wire & Iron Products, Inc. 22f/Su
Superior Woodwork Co. 16c/Su
Supersine Co. 6f/Su
Surface Combustion Corp.,–see Janitrol Heating & Air Conditioning Div., Surface Combustion Corp. 31b/Ja
Surface Engineering Co., Inc. 15/Su
Sussman, J. 17a/Sus
Suttle Equipment Corp. 34a/Su
Swartzbaugh Mfg. Co. 26d/Sw
Swedish Crucible Steel Co., Plastics Div. 27a/Sw
Sylvania Electric Products, Inc. 33a/Sy
Symmons Engineering Co. 27b/Sy
Symons Clamp & Mfg. Co. 2i/Sy

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T & S Brass & Bronze Works Inc. 27b/Ta
Tablet & Ticket Co.
• *building directories* 23a/Ta
• *changeable letter signs and letters* 23a/Tab
Taylor, Halsey W., Co. 30d/Ta
Taylor Clay Products, Inc.,–see Isenhour Brick & Tile Co. 4f/Is
Teco-Tested Plywood 5b/Te
Tectum Corp.
• *acoustical ceilings* 11a/Te
• *form plank* 2a/Te
• *roof planks* 2d/Te
Teleflex Inc. 18b/Te
Tempo Valve Co. 27b/Te
Temprite Products Corp. 30d/Te
Tennessee Stone Co., Inc. 4c/Ten
Textron Metals Co. 17a/Te
Thermo-Base Div.–see Gerwin Industries, Inc. 31f/Ge
Ther-Mo Roof, Inc. 8a/Th
Thiokol Chemical Corp. 7e/Th
Thomas Industries, Inc.
–see Moe Light Div., Thomas Industries, Inc. 33a/Mo
Thompson, E. A., Co., Inc. 9/Th
Thru-Vu Vertical Blind Corp. 19d/Th
Thrush, H. A., & Co. 31i/Th
Tiger Brands Inc., Div. Basic Inc. 11a/Tig
Tile Contractors' Assn. of America 13c/Ti
Tile Council of America, Inc. 13c/TiL
Tile-Tex Div.,–see Flintkote Co., Flooring & Adhesive Div. 13i/FL
Timber Structures, Inc. 2e/Tim
Titus Mfg. Corp.
• *air conditioning outlets* 31f/Ti
• *grilles and louvers* 31f/Tit
Titusville Iron Works Co., Div. Struthers Wells Corp. 31g/Ti
Tnemec Co., Inc. 15/Tn
Toastmaster Div., McGraw-Edison Co. 26c/To
Toch Brothers, Div. Standard-Toch Chemicals, Inc. 9/To
Toledo Desk & Fixture Co. 25b/To
Toledo Scale Corp. 26b/To
Torjesen, Inc. 22d/To
–see also Bar-Ray Products, Inc. 22e/Ba
–see also Capitol Cubicle Co., Inc. 22c/Ca
Townsend Co., Engineered Fasteners Div. 8b/To

Trade-Wind Div., Robbins & Myers, Inc. 31e/Tr
TransWall Coated Products, Div. Waco Mfg. Co..16e/Tr
Treadway Corp. 18e/Tr
Tremco Mfg. Co.
•*flooring products* 9/Tr
•*sealants for curtain walls* 3f/Tr
Tretol Inc. 9/Tre
Triangle Millwork & Supply Corp. 22a/Tr
Trinity White Dept.,–see General Portland Cement Co., Trinity White Dept. 4i/Ge
Trio Industries Inc. 17a/Tr
Tropicraft of San Francisco 19d/Tro
Troy Laundry Machinery Div., American Machine & Metals, Inc. 27g/Tr
Truscon Laboratories, Div. Devoe & Raynolds Co., Inc. 9/Tru
Truscon Steel Div., Republic Steel Corp.
•*aluminum windows* 17a/Tru
•*industrial doors* 16h/Tr
•*interior doors* 16b/Trs
•*metal lath* 12a/Tr
•*steel windows* 17b/Tr
•*structural products* 2f/Tr
•*window walls* 3d/Tr
Trussbilt Div., Siems Bros., Inc.....16b/Tru
Tubular Products, Inc. 2g/Tu
Twenty Mule Team Products Div., United States Borax & Chemical Corp.....27e/Ty
Tyler Refrigeration Corp. 26a/Ty

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Uni-Crest Div., United Cork Cos. 10a/Un
Union Asbestos & Rubber Co.,–see Espro Tubing, Div. Union Asbestos & Rubber Co.....2f/Es
Union Carbide Corp.,–see Visking Co., Div. Union Carbide Corp.....9/Vi
Union Metal Mfg. Co.
•*lighting standards* 33c/Un
•*piling* 1b/Un
Unique Balance Div., S. H. Pomeroy Co.
•*chalkboards* 23e/Un
•*sash balances* 18a/Un
Unique Window Balance Corp.,–see Unique Balance Div., S. H. Pomeroy Co. 18a/Un
Unistrut Products Co. 22a/Ui
Unit Structures, Inc. 2e/Un
United Cork Cos.,–see Uni-Crest Div., United Cork Cos. 10a/Un
United States Borax & Chemical Corp.,–see Twenty Mule Team Products Div., United States Borax & Chemical Corp. 27e/Ty
United States Bronze Sign Co., Inc. 6f/Un
United States Ceramic Tile Co. 13c/Un
–see also Ceramic Tile Panels, Inc., Sub. United States Ceramic Tile Co. 3e/Ce
United States Flagpole & Equipment Co., Inc.....6g/Un
U.S. Flexible Metallic Tubing Co.,–see Keflex Mfg. Div., U.S. Flexible Metallic Tubing Co. 29a/Ke
United States Gypsum
•*acoustical plasters* 11a/Uni
•*expanded metal* 6e/Un
•*expanded metal grating* 13a/Un
•*gypsum lath, metal lath*.....12a/Un
•*gypsum partition tile* 12c/Un
•*gypsum plasters and finishing limes*.....12e/Un
•*gypsum roof deck* 2d/Un
•*gypsum wallboard* 12c/Uni
•*insulations* 10a/Uni
•*masonry lime* 4i/Un
•*metal edge gypsum roof plank*.....2d/Uni
•*movable partitions* 22a/Un
•*paints* 15/Un
•*sound control products* 11a/Un
•*steel roof deck* 2c/Uni
United States Incinerator Corp.....28a/Un
U.S. Louver Corp. 20d/Un
United States Mineral Wool Co.,
–see Columbia Acoustics & Fireproofing Co., Sub. United States Mineral Wool Co. 11a/Co; 12e/Co
United States Plywood Corp.
•*chalkboards* 23e/Uni
•*fillers, stains* 15/Uni
•*partitions* 22a/Uni
•*plastic wall coverings* 13k/Un
•*plywood* 5b/Un
•*wood doors* 16c/Un
•*wood paneling* 13k/Uni
United States Register Co. .....31f Un
United States Rubber Co.....13L/Un
–see also Naugatuck Chemical Div., US Rubber Co. 14b/Na
United States Steel
–see American Bridge Div., United States Steel Corp. 2f/Am
–see Cyclone Fence Dept., American Steel & Wire Div., United States Steel 22g/Cy
–see Universal Atlas Cement, Div. United States Steel 4i/Uni; 4i/Unv; 13g/Un
United Steel Fabricators, Inc. 16b/Un
Universal Atlas Cement, Div. United States Steel
•*masonry cement* 4i/Uni
•*portland cements* 4i/Unv
•*terrazzo* 13g/Un
Universal Bleacher Co. 23J/Un
Universal Chemical Corp. 13h/Un
Universal Diffuser Corp. 31f/Uni
University Loudspeakers, Inc. 34a/Un
Upco Co.
•*clay tile mortar, grout, sealer* 13c/Upc
•*joint fillers, ceramic tile grout* 13c/Up
•*masonry treatments* 9/Up
Uvalde Rock Asphalt Co.,–see Azrock Floor Products Div., Uvalde Rock Asphalt Co.....13i/Az

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Vacu-Master Corp. of America 28b/Va
Vacumite, Inc. 23k/Va

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Valley Metal Products Co., Sub. Mueller Brass Co.
•*aluminum doors* 16a/Va
•*curtain walls* 3a/Va
•*windows* 17a/Va
Van Dorn Iron Works Co. 23m/Va
Van Noorden, E., Co.
•*aluminum and steel skylights* 20b/Va
•*plastic dome skylights* 20a/Van
•*plastic skylights* 20a/Va
•*ventilators* 20c/Va
•*wall louvers, louver penthouses, sun shades* 20d/Va
Van-Packer Co., Div. Flintkote Co. 31k/Va
Van Range, John, Co. 26d/Va
Variety Fire Door Co., Inc. 16b/Va
Vasconcellos, Joseph, Inc. 23g/Va
Ventilouvre Co., Inc. 20d/Ve
Vento Steel Products Co., Inc.
•*aluminum windows* 17a/Ven
•*steel windows* 17b/Ven
Vermont Marble Co.
•*curtain walls* 3e/Ve
•*exterior marble* 4b/Ve
•*interior marble* 13f/Ver
•*wall tile* 13f/Ve
Vermont Structural Slate Co., Inc. 4c/Ve
Versen, Kurt, Co. 33a/Ve
Vertical Blinds Corp. of America 19d/Ve
Victor Oolitic Stone Co. 4c/Vi
Victor Steel Products Corp. 2f/Vi
Victory Metal Mfg. Corp. 26a/Vi
Viking Corp. 30e/Vi
Viking Superior Corp. 30c/Vi
Vinyl Plastics, Inc. 13i/Vi
Virden, John C., Co. 33a/Vir
Virginia Metal Products, Inc. 22a/Vi
Visking Co., Div. Union Carbide Corp. 9/Vi
Visumatic Corp. 18e/Vi
Vogel-Peterson Co. 23d/Vo
Von Duprin Div.,–see Vonnegut Hardware Co., Von Duprin Div. 18f/Vo
Vonnegut Hardware Co., Von Duprin Div. 18f/Vo
Voorhis-Tiebout Co., Inc. 27e/Vo
Vulcan Radiator Co. 31h/Vu

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Waco Mfg. Co.,
–see Porter Athletic Equipment Co., Div. Waco Mfg. Co. 23k/Por
–see TransWall Coated Products, Div. Waco Mfg. Co. 16e/Tr
Walcon Corp. 3a/Wa
Walker Cement Products Co.,
–see Walker Poroswall Pipe Co. 29a/Wa
Walker Poroswall Pipe Co. 29a/Wa
Walsh-Hannon-Gladwin, Inc. 16J/Wa
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emergency
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gas
hangers and supports for
incandescent
incandescent—adjustable
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board
pipe or tank
powdered, granulated or shredded
pre-assembled insulated pipe
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reflective
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corrugated—filler strips for
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ALPRO (acoustical panels) 11a/AL
ALROK (aluminum
finish) 3a/ALu; 6a/ALu; 8b/AL
ALSTEEL (elevator doors) 24c/Gu
ALSTEEL-DOR (sheet metol doors) 16h/So
ALSTELE (sound-retarding doors) 16m/Fi
ALSYNITE (plastic panels) 7d/AL
ALTEC (sound systems) 34a/AL
ALTEX (carpet cushion) 13L/AL
ALUMA-SHIELD (plastic coating) 11a/Ac
ALUMAFLEX (weatherstripping) 17c/Si
ALUMALUN (aluminum treads) 13b/Am
ALUMAR (aluminum windows, sliding
doors) 17a/Fo
ALUMCO (flashing) 9/Mu
ALUMI-COUSTIC (suspension systems).11b/Cu
ALUMIFOAM (insulation, vapor
barriers) 10b/ALw; 10b/ALu
ALUMILASTIC (elastic metallic
compounds) 3f/Po
ALUMILINE (entrances) 16a/ALu
ALUMILITE (aluminum sheet, finish) ..3o/ALu
ALUMILITE (aluminum sheet, finish) ..6o/ALu
ALUMINAIRES (lighting fixtures) 33a/Mc
ALUMINITE (metal finish) 6f/Co
ALUMINIZED STEEL (steel building
ponels) 2J/Ar
ALUMINUM-CHAMP (aluminum
flashings) 8h/Lu
ALUMINUS OXIDE (non-slip oggregates) 9/La
ALUMISATIN (aluminum
finish) 10b/AL; 10b/ALi; 10b/ALw
ALUMISEAL (reflective
insulation) 10b/AL; 10b/ALi; 10b/ALw
ALUMOGRIT (thresholds, treads)....13b/Wo
ALUNDUM (abrasive aggregate) 13g/No
ALWIN-TILT (tilt-type window sosh) 17a/ALw
ALWINTITE (aluminum windows) ...17a/ALw
ALWINTITE (sliding glass doors) 16d/AL
ALWINTITE (windows) 17a/Ge
ALZAC (aluminum reflector) 33a/Mo
ALZAK (lighting fixtures) 33a/Ce
AMARLITE (aluminum entrances) 16a/Am
AMARLITE (aluminum store fronts) ...21/Am
AMBALLOY (steel) 29a/By
AMBASSADOR (cigarette dispensers)..26a/Au
AMBASSADOR (electric
door operators) 16g/La
AMBASSADOR (food warming
cabinets) 26d/Foo
AMBLER (sidewall tile) 8c/Ke
AMBOY (service sinks) 27a/Ri
AMBRIDGE (service sinks) 27a/Ri
AMBRIDGE (steel joists) 2f/Am
AMERAY (x-ray protective materials)..22e/Am
AMERICA (locksets) 18e/Co
AMERICAN (aluminum windows and
doors) 17a/Ame
AMERICAN (louvers, metal doors)...16b/Am
AMERICAN (vermiculite) 12d/Am
AMERICAN (wood doors) 16c/Cu
AMERICAN COLONIAL (shingles) 8c/Jo
AMERICAN-STANDARD (air conditioning
equipment) 31a/Amr
AMERICAN-STANDARD (heating and oir
conditioning equipment) 31o/Ame
AMERICAN THATCH (asbestos-cement
shingles) 8c/Ru
AMERICAN WAY (fan shutters,
dampers, louvers) 20d/Ame
AMES (steel library equipment) 23f/Am
AMTI-SEPTIC (germicide) 13i/Am
AMTICO (rubber, plastic flooring)...13i/Am
AMURSEAL (osphaltic paint) 9/An
AMVENT (ventilators) 20c/We
AMVERCO (vermiculite) 12d/Am
AMWELD (steel doors) 16b/Amw
ANACONDA (architectural metals) ...6b/Am
ANACONDA (bronze curtain walls)...3e/Am
ANACONDA (copper sheets) 8b/Am
ANACONDA (pipe, tube) 29a/Am
ANCHOR (roofing coatings) 8a/Ba
ANCHOR-WELD (fencing) 22g/An
ANCHORBOND (roofing) 8a/Ba
ANCHORFAST (nails) 18a/In
ANCOR (wood framing accessories)...2e/Mo
ANDCO (metal, plastic letters) 6f/An
ANDERSEN (wood windows) 17c/An
ANEMOSTAT (air diffusers) 31f/An
ANEMOTHERM (air meter) 31f/An
ANKER-IN (bathroom accessories) 27d/Ke
ANKOR-FIL (points) 15/Ma
ANKOR-KOTE (paints) 15/Mo
ANNULITE (recessed lights) 33o/Ra
ANOCLAD (aluminum sheets,
extrusions) 3a/ALu; 6a/ALu
ANOTEC (onodized oluminum
grating) 6e/KL; 13a/KL
ANTICIDOL (hardeners) 9/Up
ANTI-HYDRO (hardeners, densifiers) ...9/An
ANYSTREAM (shower fixtures) 27b/Sp
AP (dome skylights) 20a/Ar
APAC (asbestos sheets) 8c/Ke
APCO (pumps) 30o/Au
APCO-MATIC (condensate pumps) ...30a/Au
APEX (corkboords) 23e/Ne
AQUA-CHROME (lavatories) 27a/Ca
AQUA REPEL (woterproof coating) 9/Le
AQUACIDE (water repellent coating)..15/So
AQUACONE (transparent masonry
coating) 9/Aq
AQUACOOLERS (cooling towers)....30b/Ma
AQUADAM (built-up roofing) 8a/Jo
AQUAKLEER (swimming pool filters)...23k/In
AQUARIUS (drinking fountains) 27a/Bri
AQUASIL (water repellent) 9/Ce
AQUATEX (caulking compound) 9/Aq
AQUATILT (porting compound) 9/Aq
AQUATITE (densifier, hardener) 9/Aq
AQUATOWER (cooling towers) 30b/Ma
ARCADIA (sliding glass doors) 16d/Ar
ARCADIA-WALL (aluminum window wall
system) 3d/Ar
ARCH BEAD (corner beads) 12a/In
ARCHITECT (asphalt shingles) 8c/Bi
ARCHITECTURAL (letter boxes) 23b/Cu
ARDMORE (toilet comportments) 22b/Ac
AREA-LITER (lighting fixtures) 33a/Cu
AREX (roof ventilators) 20c/Ar
AREX-AUSTOR (roof ventilotors) 20c/Ar
ARGOSY (residential doors) 16i/At
ARGUS (glass blocks) 3e/Pi; 7b/Pi
ARID-MIX (masonry treatments) 9/Am
ARIDCLEAR (masonry treatments) 9/An
ARIDSIL (masonry treatment) 9/An
ARIDTITE (plaster bond) 9/An
ARIDTONE (masonry treatment) 9/An
ARIN (wall louvers) 20c/Ar
ARISTO (toilet partitions) 22b/Fi
ARISTOCRAFT (institutional doors) ..16c/Has
ARISTOCRAT (glazed concrete masonry
units) 4g/Ari
ARISTOCRAT (key wall cobinets) ...18e/Moo
ARISTOCRAT (office furniture) 23o/Re
ARISTOCRAT (refrigerator-ronge
combination) 25b/Ac
ARISTOCROME (bathroom
accessories) 27d/Ha
ARISTOFLEX (asphalt floor tile) 13i/Mo
ARISTON (hand rail brackets, metal
railing) 6e/Mi
ARKELITE (ceramic tile) 4f/Ark
ARKETEX (ceramic tile) 4f/Ark
ARKLA (gas lights) 31a/Ar
ARKLA-SERVEL (air conditioners,
water chillers) 31o/Ar
ARM-R-LITE (aluminum overhead
doors) 16i/Ar
ARMAFLEX (pipe insulation) 10b/Ar
ARMALITE (aluminum curtain walls)...3a/Am
ARMALITE (board insulation) 10b/Ar
ARMCO (foundotion pipe) 1b/Ar
ARMCO (steel, stainless steel,
steel products) 6c/Ar
ARMCO (steel joists) 2f/Sh
ARMCO (steel buildings) 2J/Ar
ARMGLAZE (glazing compound) 7c/Di
ARMOLAC (cootings) 9/So
ARMOR (chalkboards) 23e/Ne
ARMOR-CRETE (resurfacer) 13h/Pr
ARMOR-TILE (landing tile) 13i/Ama
ARMOR-TREDS (treads) 13i/Ama
ARMORGRID (armoring grids) 31f/He
ARMORPLY (metal bonded plywood) ..5b/Un
ARMORTOP (hardeners, densifiers) .....9 An
ARMORWEAVE (expanded metal) 6e/Un
ARNCO (coat, hat racks, wardrobes).23d/Ne
ARNCO (curtain cubicles) 22c/Ne
ARRESTONE (acoustical materials) ...11a/Ar
ARROWHEAD (wallboard) 11a/Wor
ART-ROC (aggregates) 9/Tru
ARTEX (windows) 17a/Art
ARTHUR (locks) 18e/So
ARTISAN (wing or arch bead) 12a/Pe
ARTWALL (paint) 15/Ame
ARVINYL (vinyl-metal laminated
panels) 14a/Ar
ASBESTILE (flashing system) 8a/Jo
ASBESTOCITE (chalkboards) 23e/CL
ASBESTONE (corrugated asbestos—cement
roofing, siding) 8c/Na
ASBESTONE (ponels, roofing, siding)..8b/Na
ASBESTOSPRAY (sprayed-on fireproofing,
acoustical moterials) 11a/As
ASIDBAR (treated lumber) 5d/Ko

ASPHALTUM (paint) 15/Na
ASTRA (carpets and rugs) 13L/Du
ASTRA (locks) 18e/Sc
ASTRA TWEED (carpets and rugs) ..13L/Du
ASTRA-DOME (phone booth domes)...34a/Sh
ASTRANLITE (lighting fixtures) 33a/Cu
ASTRALOUVRE (lighting fixtures) 33a/Cu
ASYLUM (detention door hinges) 18e/Do
ATLAS (builder's adhesives) 9/FL
ATLAS (extractors) 27g/Tr
ATLAS (mortar cement) 4i/Uni
ATLAS WHITE (white portland cement) 4i/Unv
AUDICOTE (acoustical plaster) 11a/Uni
AUDIO-VISUAL (paging systems) 34a/Ex
AUDICOTE (acoustical plaster) 12e/Un
AUDITONE (acoustical tile) 11a/Un
AURA-LITES (lighting fixtures).....33a/Ce
AURORA (pumps) 30a/Au
AUT-O-DOR (door operators) 16h/Ri
AUTO-CLOSE (freezer doors) 23c/Ja
AUTO-CLOSE (swinging doors) 23c/Bu
AUTO-DIAL (intercommunicating systems) 34a/Ra
AUTO-PLY (refrigerator doors) 23c/But
AUTO-PLY (vestibule door) 23c/Bu
AUTO-SEAL (acoustic doors) 11a/Fir
AUTO-SEAL (threshold closers) 16m/Fi
AUTO SIGNAMATIC (elevator control system) 24a/Ha
AUTO-VENT (aluminum windows) ...17a/Me
AUTO-VENT (steel windows) 17b/Me
AUTOCALL (fire alarm systems) 34a/Au
AUTOCALL-HOWE (plant protection & supervisory systems) 34a/Au
AUTODRAPE (curtain machinery) 23g/Au
AUTOFLO (water flow control).....27b/Sp
AUTOLENE (concrete additives, sealers).9/Au
AUTOTRONIC (elevators) 24a/Ot
AUTO-VENT (steel windows) 17b/Me
AVC (vermaculite) 12d/Am
AVON (lavatories) 27a/Ca
AVONCRAFT (porcelain enamel) 2J/Av
AXIVANE (blowers) 31e/Jo
AYR-TRAP (admixtures) 9/Ho
AZPHLEX (plastic tile) 13i/Az
AZROCK (asphalt tile) 13i/Az

b

B&G (aluminum awning windows)....17a/Br
B&G (aluminum window walls) 3a/Br
B&G (heating systems) 31i/Be
BC-100 (ceramic tile adhesives).....13i/Cr
BCI (Bituminous Coal Institute) 31J/Bi
B-D (flagpoles) 6g/Bab
B-D (hatchways) 16J/Ba
B-E-H (insulation) 10c/BaL
B-H (spun-blanket insulation) 10a/Ba
BM (sun control devices) 19e/Ba
BMH (pipe connectors) 29a/Ke
B-W (building insulation) 10a/Re
BW (parquet flooring).....13J/Har
B-W (screens) 19e/Re
BALCOPLY (plywood doors) 16c/Ja
BALSAM-WOOL (blanket insulation)..10a/Wo
BANC-LOK (nuts) 16b/Amw
BANDLITE (glass) 7a/Mi
BANGOR CERTIFICATE SLATE (slate shingles) 8e/No
BANTAM (sliding door hardware) 18d/Gr
BAR-GRILLE (area wall covers) 2i/Ho
BAR-RAY (x-ray protective products)...22e/Ba
BAR-X (metal lath) 12a/Wh
BAR-Z (steel stud partition systems)..12a/Wh
BARCLAY (bathtubs) 27a/Ri
BARCOL COUNTERDOOR (counter doors) 23d/Ba
BARCOL DOORMAN (door operators).16i/Ba
BARCOL OVERDOOR (overhead doors) 16i/Ba
BARCOL WARDROBEDOOR (wardrobe doors) 23d/Ba
BARNHIDE (paint) 15/Pi
BARRELED SUNLIGHT (paints) 15/Ba
BARRETONE (ceiling tile) 10a/Bar
BARRETT (built-up roofing) 8a/Ba
BARRETT (damproofing and waterproofing) 9/Ba
BARRETT (insulating board) 10a/Bar
BARRETT-HOLT (roof connections) 8a/Ba
BARRINGTON (locks) 18e/Sc
BARTON (urinals) 27a/Bri
BASE FLO (furnaces) 31a/Ame
BASEAL (joint fillers) 2i/Se
BASEDUCT (raceway systems) 32b/Na
BATHMASTER (tub enclosures) 27c/GL
BAXBOARD (gypsum wallboard) 12c/Uni
BAXCO (fire-retardant treated wood) .5a/Ba
BAYPORT (toilet compartments) 22b/Ac
B-E-H (insulation) 10a/Ba; 11a/Ba
BEADEX (pattern glass) 7a/Am
BEAUFORD (rolling grilles) 16g/Ab
BEAUTY-LINE (wood windows) 17c/An
BEAUTY-LOK (paint products) 15/Sh
BEAUTY QUEEN (kitchen equipment)..25b/To
BEAUTYWARE (plumbing fixtures) 27a/Bri
BECO (louvers) 20d/Be
BEE-CLAWS (anchor slots).....2i/Gat
BEE-CLIPS (anchor slots) 2i/Gat
BEE-HIVE (anchor slots) 2i/Gat
BEE-NUTS (nuts) 2i/Gat
BEE-SNAPS (anchors) 2i/Gat
BEL-AIRE (ventilating hoods) 25a/Em
BEL-CRAFT (waterproofing system) 9/Be
BEL-TEL (concrete inserts) 2i/Ho
BELL (wiring devices) 32b/Be
BELMAR (lighting fixtures) 33a/Be
BELT-VEYOR (conveyors) 24d/St
BELTOR (curtain cubicles) 22c/Be
BENNING (water closets) 27a/Ca
BENWOOD (stains, fillers) 15/Moo
BENWOOD HILUSTRE (varnish) 15/Moo
BENWOOD LOLUSTRE (varnish) 15/Moo
BERESFORD (rolling grilles) 16g/Ab
BERGER (steel lockers) 23d/Re
BERKLEY (lavatories) 27a/Ri
BERKO (heaters, heating systems)....31h/Ber
BERKO-MATIC (thermostats) 31h/Ber
BERMICO (conduit, tubing) 32b/Br
BERMICO (sewer pipe and fittings)..29a/Bro
BERMIDRAIN (drainage pipe) 29a/Bro
BERMIGATION (irrigation pipe) 29a/Bro
BERMIROAD (drainage pipe) 29a/Bro
BERMISEPTIC (sewer pipe) 29a/Bro
BERMISLEEVE (gas pipe) 29a/Bro
BERMUDA (ceramic tile) 13c/Ro
BERRY (garage doors) 16i/Be
BERTCO (permanent concrete forms)....2i/Bur
BERYLSTONE (plastic floor covering) ..13i/Co
BEST (signs) 23a/Be
BESTEEL (curtain tracks) 23g/Au
BESTWALL (gypsum products) 2d/Be; 12c/Be; 12c/Bes
BETH-CO-WELD (piping) 2f/Bet
BETH-CU-LOY (steel sheet) 2f/Bet
BETHCON (steel sheet) 2f/Bet
BEVELITE (glass) 7a/Mi
BEVERAGE-AIR (refrigerated display cases) 26a/Be
BEVERLY (lavatories) 27a/Cr
BI-ACOUSTIC (horns) 34a/AL
BI-POST (downlights) 33a/Ra
BIARRITZ (plastic floor tile) 13i/Bo
BIFOLD (doors, operators) 16h/CL
BILCO (doors, hatchways) 16J/Bi
BILDRITE (sheathing) 2i/Ins; 10a/Ins
BILT-IN (storm and screen window units) 17a/Dev
BILT-IN (water coolers) 30d/We
BILT-WELL (wood cabinets) 25b/Car
BILT-WELL (wood windows) 17c/Car
BILTIN (window subframes) 17b/Ho
BIRCHFACE (partitions) 22a/Wh
BITUMASTIC (coatings) 8a/Ko
BLACK-TITE (caulking compound) 7c/Di
BLACK DIAMOND (roofing) 8a/Ba
BLACKTEX (window shade fabric).....19c/St
BLACK SHIELD (roofing) 8a/Ba
BLAKE (bathtubs) 27a/Ri
BLAKESLEE-BUILT (food service equipment) 26b/BL
BLASCRETE (radiation doors) 16m/Fi
BLAST COILS (electric duct space heaters) 31h/In
BLASTELE (blast resistant doors) 16m/Fi
BLASTITE (aluminum oxide grain)....13h/Car
BLAZE-SHIELD (fireproofing) 12e/Co
BLENDWOOD (wood blocks) 13J/Bru
BLENDTEX (tile and plank finish) ..10a/Uni
BLISS (windows) 17b/BL
BLO-FAN (fans, ventilators) 25a/Em
BLOCKBED (asphalt emulsion) 13i/Has
BLOCKMASTIC (mastic) 13i/Has
BLODGETT (ovens) 26c/BLo
BLOK-JOINT (joints) 4h/Car
BLOK-LOK (masonry reinforcement) ...4h/Aa
BLOK-MESH (masonry reinforcement) .4h/Car
BLOWER-LITE (blowers) 25a/Em
BLUEBIRD (bottle coolers) 26a/La
BLUE BOND (cement) 4i/No
BLUE-LAKE (pool equipment) 23k/La
BLUE RIDGE (glass, glass doors, spandrel glass) 7a/Am; 16d/Am
BLUE RIDGE (spandrel glass) 3e/Ame
BLUE STREAK (cement) 4i/No
BLUE STREAK (dispenser cards for pipe markers) 29a/Br
BLUMCRAFT (ornamental metal) 6e/BLu
BOBRICK (soap, lotion dispensers) ...27e/Bo
BOCA (steel doors, windows) 17b/Bo
BOLTA-FLOOR (floor, wall coverings) 13i/Ge
BOLTA-WALL (vinyl wall covering)...13k/Ge
BOMMER (hinges, mail boxes) 18e/Bo
BOND-CRETE (cement bonding adhesive) 9/Co
BONDCOTE (bonding agent) 13h/Ac
BONDCOTE (tile adhesive) 13i/FL
BONDCRETE (gypsum plaster) 12e/Un
BONDSETT (carpets) 13L/Le
BONDTITE (insulation adhesives) 10c/BaL
BONDWOOD (parquet flooring) 13J/Har
BONTEX (shade cloth) 13k/Co
BOOKVEYOR (book conveyors) 24a/La
BORAXO (soap dispensers, soap) 27e/Ty
BORDEN (floor gratings) 13a/Bo
BORG-WARNER (building insulation) 10a/Re
BORG-WARNER (screens) 19e/Re
BOSTON (autopsy tables) 23L/Ma
BOSTON (sinks) 27a/Bri
BOSTWICK (sheet lath) 12a/Na
BOUQUET (lighting fixtures) 33a/Lia
BOX-MESH-LOCK (reinforcing) 4h/Ho
BRACE-TITE (lathing system) 12a/Un
BRADFORD (rolling grilles) 16g/Ab
BRANDING-GARD (steak branders) ..26c/To

trade names

BRASCO (entrances, store fronts, window walls) 16a/Br
BRASCO WALL (window wall) 16a/Br
BREAK-BACK (concrete accessories) 2i/Su
BRESLIN (bathtubs) 27a/Ri
BRICTILE (brick, tile) 4f/St
BRIDJOINT (lathing system) 12a/Un
BRIGHT-GLAZE (tile) 13c/Mos
BRIKETTE (floor tile) 13i/Ro
BRIKRON (plasticizers) 9/Mas
BRIKSET (portland cement) 4i/Me
BRISK (waterproofing) 9/Br
BRISTOL (glass blocks) 3e/Pi; 7b/Pi
BRISTOL (locks) 18e/Sa
BRISTOL (lockset) 16b/Ce
BRISTOLITE (floor wax) 13m/Hu
BRIXMENT (masonry cement) 4i/Lo
BROADLITE (glass) 7a/Mi
BROADVIEW (mirrors) 27d/Mi
BROADWAY (bronze castings) 6e/Li
BROADWOOD (flooring) 13J/Ci
BROAN (blowers, fans, hoods, etc.)..31e/Br
BRODY (commercial and institutional seating) 23o/Br
BRONZALUN (bronze treads) 13b/Am
BRONZOGRIT (thresholds, treads)...13b/Wo
BROWN (sun control devices) 19e/Br
BRUCE (flooring) 13J/Bru
BRUCE-WAY (floor finish) 13J/Bru
BRUNNER (air compressors) 31a/Du
BRUNNER-METRIC (condensing units) 31a/Du
BUBBELET (water coolers) 30d/Eb
BUCKINGHAM (slate flooring and flagstones) 4c/Bu
BUCKINGHAM (slate roofing).....8e/Bu
BUDDY (towels, dispensers) 27e/Ste
BUDGETEER (sinks) 27a/Cr
BUDGEX (movable wall partitions)....22a/Ga
BUFF-BRITE (floor wax) 13m/In
BUFFALO BETTER-BUILT (extinguishers).30f/Fy
BUILT-IN THINLINE (air conditioners) 31a/Ge
BULATOR (grilles) 31f/He
BURKAY (gas water heater) 30c/Sm
BURNS (extruded aluminum walkway covers) 19e/Bu
BURNZIT (incinerators) 28a/Sp
BUSDUCT (conduits, bushbar systems) 32a/Ad
BUSTIN (gratings) 13a/Bu
BUTAFLEX (sealer) 13h/Pr
BUTCHER BOY (cold storage room doors) 23c/Bu
BUTLER (prefabricated steel buildings) 2J/Bu
BUTLERIB (corrugated panels) 2J/Bu
BUTT-WAY (store fronts) 16a/Nat
BUTTERFLY (damper regulator) 31f/Yo
BYERS 4D (wrought iron) 29a/By
BYLOY (steel) 29a/By
BYRNAPERTURE (hangar doors) 16h/By
BYRON (lavatories) 27a/Bri
BYZANTILE (tile) 13c/Mos
BYZANTINE (floor tile) 13i/Ro

C

CFI (lighting fixtures) 33a/Da
CF&I (fencing) 22g/Co
CHF (tables, chairs, stools) 23o/Ch
C-H-S (floor treatment) 9/Co
CM (piping and tubing) 29a/Lew
C-M (shower cabinets and receptors) 27c/Cu
CMC (adhesives) 13c/Ch
C-O-TWO (fire protection systems)....30f/Fy
CPC (laundry, rubbish chutes, brick size vents) 27f/Co
CRA (redwood) 5a/Ca
CWG (corrugated wire glass) 7a/Pe
C-S (brick size vents) 20d/Co
C-S (louvers, louvered penthouses)..20d/Con
C-S (sun shades) 19e/Con
C-S-C SHRINKPROOFER (masonary treatments) 9/Co
CABINETEER (sink tops) 25b/Ju
CAD (access doors) 16J/Bi
CADET (water coolers) 30d/Te
CADILLAC (signs, nameplates) 23a/Ca
CAFCO BLAZE-SHIELD 12e/Co
CAFCO SOUND-SHIELD (acoustical insulation) 11a/Co
CALAIS (plastic floor tile) 13i/Bo
CALCORE (porcelain enamel panels)..3c/Ca
CALCULITE (lighting fixtures) 33a/Lia
CALROD (dishwasher heater) 25a/Hot
CALROD (heating units) ...23a/Hot; 26c/Hot
CALROD (ranges) 25a/Gen
CALROK (accelerators, densifiers, waterproofing) 13h/Pr
CALSI-CRETE (roof planks) 2d/Ca
CALSLATE (chalkboards) 23e/So
CAMARGO (ceramic tile) 13c/Ca
CAMBRIDGE (autopsy tables) 23L/Ma
CAMBRIDGE (bathroom cabinets) ...27d/Mi
CAMBRIDGE (toilet compartments)...22b/Cu
CAMBRIDGE (ventilating hoods).....31e/Tr
CAMEL (water closets) 27a/Ca
CANOPY (lighting fixtures) 33a/Da
CANTEEN (background music system).34a/Auo
CANTEEN (food vendor units) 26a/Au
CANVASTEELE (window shade fabric).19c/St
CANTILITE (concrete planks) 2d/Co
CAP'N RAIL (ceramic tile trim).....13c/Roy
CAPITOL (key wall cabinets) 18e/Moo
CAPRI (mosaic tile) 13c/San
CAR-MON (garage ventilators) 31e/Ca
CARADCO (wood windows) 17c/Car
CARBO-JET (dispersed carbon black) ...9/So
CARBORUNDUM (abrasive grain for surfacing) 13h/Car
CARBOSOTA (creosote oil) 9/Ba
CARBOSOTA (wood preservatives) 8a/Ba
CARE-FREE (plastic flooring) 13i/Am
CAREY (expansion joints) 2i/Ca
CAREY (insulating panels) 8b/Car
CAREY (shingles) 8c/Ca
CAREY SUPER EBONTEX (masonry coatings, asphalt planks) 2i/Ca
CAREYLASTIC (sealing compounds)....2i/Ca
CAREYSEAL (tarred felt) 8a/Ca
CAREYSTONE (roofing, siding) 8b/Ca
CARLSTADT (railing system) 6e/BL
CARLTON (water closets) 27a/Bri
CARLYLE (tile) 13c/Mos
CARMASTER (electric elevator door operators) 24c/Gu
CARMEN (bidets) 27a/Bri
CAR-MON (garage ventilators) 31e/Ca
CARNIVAL (floor tile) 13i/Ke
CAROUSEL (lighting fixtures) 33a/We
CARRARA (structural glass) 3e/Pit; 7a/Pi; 13e/Pi
CARREL (desks) 23f/De
CASCADE (drinking fountains) 27a/Ca
CASCO (urinals) 27a/Ca
CASCOOL (drinking fountains) 27a/Ca
CASE (plumbing fixtures) 27a/Ca
CASETTE (water closets) 27a/Ca
CASHGARD (cash boxes) 23b/Di
CASTLE (carpet cushions) 13L/Am
CASTLITE (insulating roof tile) 2d/Fe
CASUAL (ceramic tile) 13c/We
CASWELL (drinking fountains) 27a/Ca
CAT (stand-by generators) 32c/Ca
CATA-COTE (concrete floor finish) ...13m/In
CATERPILLER (stand-by generators) ..32c/Ca
CATHEDRAL (expanded metal) 6e/Un
CAULKTITE (caulking compounds) 9/La
CAVALIER (bathroom cabinets,) accessories) 27d/Mi
CAVITATOR (sewage treatment systems) 30a/Ye
CAVITETTE (package home sewage disposers) 30a/Ye
CAVITY (acoustical tile) 11a/Ce
CAVITY-BOX-MESH-LOCK (reinforcing) 4h/Ho
CAVITY-LOK (masonry reinforcement) 4h/Aa
CAVITY-MESH-LOCK (mortar joint reinforcement) 4h/Ho
CECO (aluminum windows) 17a/Ce
CECO (curtain walls) 3a/Ce
CECO-MEYER STEELFORM (concrete forms) 2a/Ce
CECONOMY (basement windows) 17b/Ce
CEIL-N-WALL (fans) 31e/Fa
CEILINGLITE (plastic skylight ceiling panels) 20a/Va; 20a/Van
CEL-BEAM (floor systems) 2b/Mah
CELESTIAL (plastic flooring) 13i/Am
CELL-U-BLANKET (blanket insulation) 10a/Wo
CELLINI (floor tile) 13i/Ro
CELLU-TONE (paint) 15/Pr
CELLUDECK (roof decks) 2c/InL
CELLUFLOR (steel floor panels) 2b/In
CELO-ROK (gypsum products).2d/Ce; 10a/Ce
CELOTEX (acoustical materials) 11a/Ce
CELOTEX (cant strips, insulation, etc.) 10a/Ce
CELOTONE (mineral fiber tile) 11a/Ce
CEM-SEAL (floor sealers, finishes) 13m/Hi
CEMENT ENAMEL (cement enamel) ...13h/Ce
CEMENTHIDE (paint) 15/Pi
CEMENTICO (cement base paint).....15/Un
CEMENTONE (joint fillers) 2i/Se
CEMESTO (insulating panels) 10a/Ce
CENTRIFLOW (roof ventilators) 20c/Bu
CENTRI-PAC (pumps) 30a/Au
CENTRILATOR (roof ventilators) 31a/CL
CENTRILINE (pipe linings) 1a/Ra
CENTURY (locks) 18e/Sc
CENTURY (toilet, shower compartments) 22b/Sa
CENTURY-LARCO (automatic bubblers) 30d/Ce
CERAMICA VENEZIA (ceramic mosaic tiles) 13c/Mu
CERAMIX (tile and ceramic substitute) 13h/Pr
CERAMO STEEL (chalkboards) 23e/Go
CERCO (sealers) 9/Ce
CEREFLUX (masonry treatments) 9/Ce
CEREPEL (inorganic paint) 9/Ce
CERESIT (water repellents) 9/Ce
CERETINT (cement colors) 9/Ce
CEROMASTIC (patching cement) 9/Ce
CEROPHALT (crack or joint fillers) 9/Ce
CERTAGLAS (built-up roofing) 8a/Ce
CERTAIN-TEED (building insulation) 10a/Cer; 10a/Cet
CERTAIN-TEED (built-up roofing) 8a/Ce
CERTAIN-TEED (gypsum roof decks)....2d/Be
CHALICE (locksels) 18eCo
CHALKROBE (portable chalkboard) ..23d/Vo
CHALLENGE (porcelain enamel curtain walls, panels) 3c/Ch
CHALLENGER (furnaces) 31a/Yk
CHALLENGER (locks) 18e/Ch

CHAMBERLIN (detention screens) 19a/Ch
CHAMBERLIN (weather strips) 19b/Ch
CHAMPION (air conditioners) 31a/Yk
CHAMPION (bathtubs) 27a/Cr
CHAMPION (gauging plaster) 12e/Un
CHAMPION (metal bathroom accessories) 27d/La
CHAMPION (overhead doors) 16i/At
CHAMPION (overhead doors) 16i/Co
CHAMPIONSHIP (diving boards) 23k/Ki
CHAN-L-FORM (steel studs) 12a/Bo
CHANCELLOR (key drawer files) 18e/Moo
CHANNEL (lighting fixtures) 33a/Mi
CHANNEL-LAP (hardboard siding panels) 10a/Ce
CHANNEL-RIB (roofing) 2c/Sm
CHAR-GRILL (barbecue grilles).....31L/Ma
CHARGOMATIC (emergency lighting units) 33a/EL
CHARLOTTE (lavatories) 27a/Cr
CHASE (flashings) 8g/Ch
CHASE (wire screening) 19a/Cha
CHAUCER (lavatories) 27a/Bri
CHECKER (coat and hat racks).....23d/Vo
CHECKERTONE (matting) 13i/Ar
CHELDUOGEAR (dumbwaiters) 24a/Ch
CHELGEAR (dumbwaiters) 24a/Ch
CHELMSFORD (granite) 4a/FL
CHELNOGEAR (dumbwaiters) 24a/Ch
CHELWINDLASS (dumbwaiters) 24a/Ch
CHEM-CHECK (valves) 29a/Kr
CHEM-COCK (valves) 29a/Kr
CHEM-FI (roofing process) 8a/Ba
CHEMCLAD (plastic-clad doors) 16c/Bou
CHEMCORE (fire door cores) 16c/Bou
CHEMIGLAZE (plastic panel protection) 7d/AL
CHEMTROL (valves) 29a/Kr
CHENEY (metal flashing, reglets, gravel stops, siding) 8g/Che
CHEVRON-TREDS (treads) 13i/Ama
CHEROKEE (tile) 13c/Mos
CHESHIRE (finishing lime) 12e/Un
CHI-TEN (lock protective material) ..23b/He
CHICAGO (spring hinges) 18e/Chi
CHILDERS (carports, walkway covers) 19e/Ch
CHIME-MATIC (signal systems) 34a/Ex
CHINALINE (enamel) 15/Ba
CHINAVOGUE (bathroom accessories) 27d/Ha
CHINC (metal flashing, reglets, gravel stops, siding) 8g/Che
CHIPSTONE (floor tile) 13i/Ro
CHORE BOY (incinerators) 28a/In
CHROMA-SHAKE (asbestos-cement siding) 8c/Na
CHROMA-TEX (asbestos-cement siding) 8c/Na
CHROMALOX (heaters) 26b/Ha
CHROMATE (primer) 15/GLi
CHRYSTEX (clay floor tile) 13c/Na
CIRCLAIR (film driers) 23L/Ge
CIRCLELUX (outdoor flourescent lighting) 33c/Pf
CLARCO (unit heaters) 31a/CL
CLAREMONT (locks, lock escutcheons) 18e/Sc
CLARIDGE (chalkboards, tackboards, etc.) 23e/CL
CLARITONE (acoustical tile) 11a/Ba
CLARK (doors, operators) 16h/CL
CLARK GLIDE (nylon shoes) 17b/CLa
CLARK SEAL (stainless steel windows).17b/CLa
CLASSIC (bathroom accessories) 27d/Pa
CLASSIC (mail chutes) 23b/Cu
CLASSIC-SHAKE (asbestos-cement siding shingles) 8c/Na
CLAY-BURN (ceramic glazed tile) 13c/CL
CLAYCRAFT (brick, tile) 4f/CL
CLAYMORE (water closets) 27a/Ri
CLAYTON (water closets) 27a/Ri
CLEAR BOND (curing, hardening, sealing compound) 9/Gu
CLEAR-COAT (masonry treatments).....9/Am
CLEAR-CRETE (concrete floor sealer)..13m/In
CLEAR-SELE (sealers) 15/Ru
CLEARLITE (sheet glass) 7a/Fo
CLEARTEX (lighting louvers) 33a/Da
CLEARTONE (sealers) 15/Moo
CLEARVIEW telephone booths) 34a/Sh
CLEAVER-BROOKS (boilers) 31g/CL
CLERESPAN (steel joists) 2f/Tr
CLEVELAND (steel products) 2i/CL
CLIMASTER (furnaces) 31a/Yk
CLIMATROL (heating, cooling units) 31b/Mu
CLIMAX (ventilating fans) 31e/Mi
CLIPPER (dishwashers) 26b/In
CLOCKMASTER (time systems) 34b/Mi
CLOISONNE (vinyl flooring) 13i/Goo
CLOS-RIB (roof decking) 2c/Sm; 3a/Sm
CLOSNOS (nosings) 13a/KL
COADOR (doors) 16i/Co
COAST LINE (metal doors, frames)....16b/Co
COBBLETEX (ceramic tile) 13c/Sum
COCO (laminated beams and arches)..2e/Co
COCOON (sprayable vinyl coating).....9/HL
CODLER-TOT (child's water cooler)..30d/Su
COFAR (forms, reinforcement).....2c/Gr
COILDOR (truck doors) 16g/WiL
COIL-WAL (automatic partitions) ...22d/Du
COL-ITF (letters and signs) 6f/Co
COLCAP (roofing felt) 8a/Ca
COLD-STIK (mastic cement) 13J/Bru
COLDPOINT (drink dispensers) 26d/Ba
COLLOPAKE (paint) 15/Ca
COLONEL (flush wood doors) 16c/Ge
COLONIAL (bathroom cabinets, accessories) 27d/Mi
COLONIAL (custom built screens) 19a/Co
COLONIAL PLANK (hardwood flooring) 13J/Har
COLONIAL-HITES (letters) 6f/Co
COLOR BRITE (masonry coating) 13h/Pr
COLOR-CEIL (indirect luminous ceilings) 33a/Si
COLOR-CORK (bulletin boards).....23e/Go
COLOR-CORK (burlap-backed, vinyl-topped cork) 13i/Got
COLOR COTE (concrete floor finish) .13m/In
COLOR-CRETE (concrete floor finish)..13m/In
COLOR GLO (lighting fixtures).....33a/Ge
COLOR-LITE (doors) 16a/Ha
COLOR-RITE (metal lath) 12a/Un
COLOR-TEX (siding) 8c/Ru
COLORAMICS (ceramic facing tile) ...4f/CL
COLORBESTOS (asbestos sidewalls) ..10a/Jo
COLORBESTOS (shingles) 8c/Jo
COLORBLEND (clay tile) 13c/Mo
COLORBRITE (floor hardeners) 9/La
COLORCLAD (entrance units) 16b/Ov
COLORCRON (hardeners, colorers) ...9/Mas
COLORCURE (curing compounds) 9/Ce
COLORFLOOR (concrete floor paint)....9/Tr
COLORLINE (partitions) 22a/Ui
COLORMIX (colors) 9/Mas
COLOROBOT (color mixing device)..15/Ma
COLOROIL (floor finishes) 9/Mas
COLOROLD (stainless steel) 17b/CLa
COLORSLIP (hardeners) 9/Pa
COLORSOL (masonry sealers) 15/Ma
COLORTAK (vinyl textured tackboard) 23e/Be
COLORTONE (floor finishes) 13m/Hi
COLORUNDUM (colors, hardeners) 9/Ho
COLORWAX (floor wax) 9/Mas
COLUMBIA (bathroom cabinets) 27d/Co
COLUMBIA-HALLOWELL (school shop furniture) 23i/St
COM-PAC-CASE (book storage units)...23f/Ar
COMBINATION (toilet tissue holders) 27e/Cr
COMET (lockset) 16b/Ce
COMFORT CONDITIONING (air conditioning systems) 31a/FL
COMFORTMAKER (air conditioners) 31a/Ame
COMFORTORC (upholstered furniture) 23i/Sim
COMMANDER (shade cloth) 19c/Jo
COMMANDER (shower fixtures) 27b/Sp
COMMODITY LINE (door frames) ..16b/Amw
COMMODORE (dishwashers) 26b/In
COMPAC-FOLD (folding tables, benches) 23i/Sc
CON-GLAZE (glazing compounds) 7c/Co
CON-O-GUM (mastic compound) 7c/Co
CON-O-SEAL (curtain wall sealant)....7c/Co
CON-O-TAPE (tape) 7c/Co
CONCEPT 70 (plastic floor covering)..13i/Co
CONCORD (metal bathroom accessories) 27d/La
CONCORD (toilet compartments) ...22b/Ac
CONCORD (ventilating hoods) 31e/Tr
COND-A-PAC (pumps) 30a/Au
CONDUCT-O-TILE (conductive tile) ..13c/Am
CONDUCTILE (non-sparking tile) 13i/Vi
CONDUCTITE (conductive tile mortar) 13c/Ka
CONE-FAST (concrete accessories) 2i/Su
CONFETTI (asphalt floor tile) 13i/Ma
CONI-VANE (ventilators) 20c/AL
CONQUEROR (overhead doors) 16i/At
CONQUISTADOR (overhead doors) ..16i/Co
CONSOLITE (dome skylights) 20a/Co
CONSOWELD (plastic panels) 14a/Co
CONTEMPO (vertical louvered shutters) 19d/Pi
CONTEMPO-LITE (plastic diffusers) ...33a/Lin
CONTEMPORARY (display cases) 23e/Po
CONTINENTAL (carports) 19e/Ch
CONTINENTAL (lock escutcheons)....18e/Sc
CONTINENTAL (steel fencing) 22g/Con
CONTINUOUS STRIP (wood flooring) 13J/Ro
CONTROLITE (venetian blinds) 19d/Mo
CONVASEAL (asphalt hardboard) 9/Me
CONVERSION (folding wood doors)..16e/Ne
CONVEY-ALL (conveyor belts) 22g/Cy
COOK (ventilators) 20c/Co
COOKSON (wood partitions).....22d/Co
COOL-R-FRIG (refrigerator compartment hot and cold water cooler).....30d/Su
COOLER-HOT (hot water accessory)..30d/Su
COOLERET (water cooler) 30d/We
COOLERO (ridge ventilators) 20c/Hi
COOLITE (glass) 7a/Mi
COP-O-TOP (flashings) 8g/Ch
COP-R-CIDE (masonry treatments).....9/We
COP-R-FLASH (flashing) 8g/Ph
COP-R-TEX (flashings) 8g/Wa
COPPER-CHAMP (flashings, damproofing) 8h/Lu
COPPERSEAL (flashings) 8g/Wa
COPPERWELD (reinforcing) 4h/Ho
COPR-FIBRE (building, roof insulation) 10a/Fo
COPR-FIBRE (roof insulation) 3f/Fo
COPYFLEX (reproduction machines) ..23b/Br
CORAL (tub or shower enclosures)....27c/CL
CORBIN (door hardware) 18e/Co

trade names

CORDLEY (coolers, water fountains) .30d/Co
CORDLEYAC (cooler racks) 30d/Co
CORDWALL (water coolers) 30d/Co
CORINTHIAN (vinyl tile) 13i/Go
CORK-GLO (floor tile) 13i/Bon
CORKATILE (asphalt floor tile).....13i/Hak
CORKROBE (portable bulletin boards) 23d/Vo
CORKSTYLE (asphalt tile) 13i/Arm
CORKTITE (perimeter insulation) 9/Me
CORKTONE (floor tile) 13i/Ke
CORKUSHION (flooring mastic) 13J/Ro
CORLON (plastic floor covering) 13i/Arm
CORNALATH (lath) 12a/AL
CORNER-CLIPT (wood block flooring) 13J/Sou
CORNER-EX (corner beads) 12a/In
CORNER-LOK (masonry reinforcement) 4h/Aa
CORNERITE (corner beads) 12a/Bo
CORNERITE (corner reinforcement) 2c/Tr
CORNERITE (metal lath) 12a/Un
CORNERITE (wing arch bead) 12a/Pe
CORNICE TEMPER (zinc alloy flashing) 8g/Co
CORONADO (bathroom accessories).27d/Ha
CORONET (sliding glass doors) 16d/AL
COROTOP (fibrous glass mats) 8a/FL
COROX (oven heaters) 25a/We
CORRALINE (lighting fixtures) 33a/Da
CORRALOUVER (lighting fixtures) 33a/Da
CORRALUME (lighting fixtures) 33a/Da
CORRELATION (desks) 22a/Co
CORRI-LATOR (lighting fixtures) 33a/Mi
CORR-I-LIER (lighting fixtures) 33a/Mi
CORRUCOTE (liquid plastic) 7d/Jo
CORRUFORM (steel forms) 2a/Gr
CORRU-LUMINUS (luminous ceilings) 33a/Lum
CORRULUX (translucent panels) 7d/Jo
CORRUMASTIC (sealers) 7d/Jo
CORRUTONE (acoustical panel) 11a/Un
COSMETTE (lavatories) 27a/Ca
COSMIC (lockset) 16b/Co
COSMICOAT (asphalt sealer) 9/Ha
COSMILASTIC (tar-rubber emulsion)...9/Ha
COSMIPATCH (asphalt patchings for floors, pavement) 9/Ha
COSMO-DOMES (plexiglas dome skylights) 20a/Bo
COSMOLITE (floor wax) 13m/Hu
COTSWOLD (casement windows) 17b/Ho
COUNSELOR (lighting fixtures) 33a/Mi
COUNTER-FLO (furnaces) 31a/Ame
COUNTER-FLOW (cooling towers) ..30b/Ma
COUNTERCHEF (surface units) 25a/Pr
COUNTERFLO (space heaters) 31c/Dr
COUNTERFLOW (cooling towers) 30b/Ma
COUNTERFLOW (heating, cooling units) 27a/Cr
COUNTERFLOW (winter air conditioners) 31a/Ai; 31a/Air
COVER CRETE (finish plaster) 12e/Na
COYLAN (water closets) 27a/Ri
CRAB ORCHARD (quartzite) 4c/Cr
CRAFTCO (cement paint) 15/Nat
CRAFTEX (paint) 15/Nat
CRAFTITE (wall coating, sealer) 15/Nat
CRAFTLINE (linoleum) 13i/Arm
CRAFTONE (resin-emulsion) 15/Nat
CRAFTWALL (plywood panels) 5b/Ro
CRANE-LINE (boilers, cabinets) 27a/Cr
CRAXEMENT (patching cement) 9/Ce
CREO-DIPT (shingles, stains) 8d/Cr
CREO-PINE (wood block flooring)...13J/Sou
CRESCRETE (hardeners) 9/Ce
CRESMIX (floor resurfacers) 9/Ce
CRESOLAC (water repellents) 9/Ce
CREST (ceramic tile grout, mortar)....13c/Ka
CREST (wood doors) 16c/Su
CRESTLINE (wood windows and doors).17c/Si
CRESTLYN (kitchen units) 25b/Cr
CRESTMONT (fixtures, sinks) 27a/Cr
CRESTONE (acoustical materials) 11a/Ar
CRESTOPANE (insulating glass) 17c/Si
CRESTWOOD (flooring) 13J/Bru
CRESTWOOD (locksets) 18e/Co
CRETEMIX (concrete accelerator, densifier) 9/Tr
CRETEPLANK (concrete slab) 2d/Mar
CRITERION (bathtubs, lavatories, water closets) 27a/Cr
CRITERION (steel chairs) 23o/Ha
CRITTALL (steel windows) 17b/Cr
CROSS-FLOW (cooling towers) 30b/Ma
CROWN (chalkboards) 23e/We
CROWN (flush valves) 27b/SL
CROWN (lavatories) 27a/Cr
CROWN (lighting fixtures) 33a/MiL
CROWN PRINCE (paper towel holders) 27e/Cr
CROWN RECESS (towel cabinets) 27e/Cr
CROWN VINYL (vinyl flooring) 13i/Sa
CRYSCOAT (phosphate undercoat) ...23d/Pe
CRYSTAL (roofing asphalt) 8a/Ba
CRYSTAL-GLAZE (floor, wall tile)....13c/Sty
CRYSTALETTES (floor, wall tile).....13c/Sty
CRYSTALITE (vinyl floor tile) 13i/Ke
CRYSTALLINE (ceramic tile) 13c/We
CRYSTALLINE (glazed tile) 13c/Ro
CRYSTALOID (masonry treatments) ...9/Co
CRYSTEEL (chalkboards) 23e/Ed
CRYSTO-GLAZE (ceramic floor tile)...13c/CL
CRYSTOLON (sidewalk abrasive) 13g/No
CRYSTOPAL (lighting glass) 33b/Co
CU LOUVRES (louvered ceilings, lighting fixtures) 33a/Ne
CUBER-COOLER (beverage coolers)...26a/Jo
CUBI-TRAC (cubicle curtain track)....22c/Ad
CUMMINS (diesel generator units) ..32c/Cu
CUPPLES (aluminum windows) 17a/Cu
CUPPLES (curtain walls) 3a/Cu
CUPPLES (grid ceiling systems) 11b/Cu
CUPRA (locks) 18e/Sc
CURB-SIDE (depositories) 23b/Mo
CURE-IT (concrete curing compound)..13h/Pr
CURE-N-SEAL (concrete floor curing agent, sealer) 9/Tr
CURE-SEAL (masonry treatments) 9/Co
CURECOTE (curing compounds) 9/Up
CURON (acoustical, insulating wall and ceiling coverings) 13k/Cu
CURTISTRIP (raceways) 33a/Cu
CURTITION (accordion doors, partitions) 16e/Cu
CURVIT-SURE (curtain tracks) 23g/Au
CUSH-N-CLIP (gypsum wallboard acoustical fastening system) 12c/Nat
CUSHION-PLY (laminated block floor system) 13J/Mo
CUSHION-SEAL (lampholders) 33a/Sto
CUSHIONER (secretaries' chairs) 23o/Re
CUSHIONTONE (acoustical materials).11a/Ar
CUSHIONTONE (fireproof formboard) 2d/Ar
CUSTOM CLOUD (floor tile) 13i/Ro
CUSTOMFOLD (sliding doors) 16e/Am
CUSTOM LINE (bathroom cabinets, accessories) 27d/Pa
CUSTOM-LINE (coat and hat racks) ..23d/Vo
CUSTOM-LINE (curtain walls) 3a/Ne
CUSTOM LINE (movable partitions) ...22a/Ar
CUSTOM LINE (skylights) 20a/Ma
CUSTOM ROYAL (doors) 16c/Un
CUSTOM-TINT (paint colors) 15/Nat
CUSTOMLINE (flush overhead doors) 16i/Mc
CUSTOMLINE (dishwashers, refrigerator-freezers) 25a/Hot
CUSTOMLINE QUIKONECT (refrigerator racks) 25a/Hot
CUSTOMUSIC (background music system) 34a/Auo
CUTLER (mail and communication chutes) 23b/Cu
CUTLER (mail and letter boxes) 23b/Cu
CUTLER (mail handling equipment)..23b/Cu
CUTLER-HAMMER (controls, control centers) 32a/Cut
CYCLONE (fencing) 22g/Cy
CYCLORAMA (curtain tracks) 23g/Kn

d

DFPA (Douglas Fir Plywood Assn.)....5b/Do
D & H (aluminum and vinyl-on-steel doors) 16a/Dui
D&H (fire doors) 16b/Du
D & H (wood fire doors) 16c/Dus
D-J (mortar) 9/St
D-S (fire resistant doors) 16c/Ow
D-S (partition studs) 12a/Do
DA-NITE (heating controls) 31i/Mi
DAIRY-STOR (refrigerator racks) 25a/Hot
DAL-DECA (glazed tile) 13c/Da
DAL-DURA (glazed tile) 13c/Da
DAL-TILE (glazed tile) 13c/Da
DALMATIAN (vinyl floor tile).....13i/Do
DALMO (wood window hardware)....18b/Da
DANA (urinals) 27a/Ri
DANBY (marble) 4b/Ve
DARACONE (masonry water repellent).9/De
DARATARD (concrete retarder) 9/De
DARAWELD (concrete bonding agent)..9/De
DAREX AEA (air-entraining admixture).9/De
DARI-O-MATIC (milk dispensers) 26a/Au
DARIEN (locks) 18e/Sa
DARIEN (lock escutcheons) 18e/Sc
DARK-O-MATIC (lightproof window shades) 22e/Ra
DARKO (window shades) 19c/Jo
DATACENTER (controls) 31i/Mi
DATA-LENS (lighting glass) 33b/Co
DAVARLINE (metal protection coating)..9/Ha
DAVIS (efficiency kitchens) 25b/Da
DAWES (urinals) 27a/Ri
DAY-BRITE (lighting fixtures) 33a/Da
DAY-LITE (enamel) 15/GLi
DAYLUME (lighting fixtures) 33a/Da
DAY-TEX (lighting louvers) 33a/Da
DAYTON (fire protection equipment)..30f/Fy
DE LUXE (medicine cabinets) 27d/Ke
DE LUXE (water closets) 27a/Ca
DE WITT (sealing and caulking compounds) 29a/De
DEAN (incinerators) 28a/Wa
DEBONAIR (refrigerator-range-sink combination) 25b/Ac
DECOR (insulating tile) 10a/Na
DECOR-A-LITE (lighting fixtures) ...33a/MiL
DECORA (glass blocks) 3e/Pi; 7b/Pi
DECORAIL (plastic handrail) 6e/BL
DECORALT (decorative coatings) 9/FL
DECORATOR (ceramic tile) 13c/We
DECORAY (linoleum) 13i/Arm
DECORDER (aluminum and vinyl-on-steel doors) 16a/Dui
DECORDER (wood fire doors) 16c/Dus
DECORFOLD (accordion doors) 16e/Cu

DECOTILE (tile) 13c/Mos
DECROBORD (ceiling panels and wall plank) 10a/Jo
DECROTONE (ceiling panels) 10a/Jo
DED-LEVL (bitumen) 8a/Fr
DEEP SET (terrazzo seal) 9/Gu
DEEP-TEX (asbestos-cement siding shingles) 8c-Na
DEEPTEX (asbestos shingles) 8c/Ke
DEFENDER (locksets) 18e/Co
DEHYDRATINE (accelerator, water repellent, hardeners) 9/Ho
DEKORON-COATED (conduit) 32b/Re
DE-LUXE (toilet partitions) 22b/AL
DELCO-MATIC (door operator) 16i/Cra
DELFAIR (wood flooring) 13J/Fa
DELIA (door slats) 16g/Ba
DELTA (ball faucets) 27b/De
DELUXE (bathroom cabinets) 27d/Mi
DELUXE (chalkboard trim) 23e/Go
DELUXE (display cases) 23e/Po
DELUXE (shower doors and enclosures, tub enclosures) 27c/Ke
DEMICON CURE-HARD (concrete coating) 9/Mc
DENSE-TOP (surface hardener) 13h/Pr
DENSET (accelerators) 9/Pa
DENTYN (lavatories) 27a/Ri
DENVER (sinks) 27a/Bri
DERBY (lighting fixtures) 33a/Da
DESIGN X (linoleum) 13i/Co
DETECT-A-FIRE (fire detectors) 34a/Fe
DETECTEDGE (safety devices) 22d/Co
DETREX POWER FLOW (swimming pool filters) 23k/De
DETROITER (garage doors) 16i/Be
DEVAC (glass walls) 17a/Dev
DEVOPAKE (paint) 15/Dev
DEVRON (epoxy resins) 9/Tru
DEWEY (urinals) 27a/Ri
DEWK (plastic sealers).....29a/De
DEX-O-KOTE (vinyl coatings) 13i/Cr
DEX-O-TEX (flooring and roof deck coverings) 13i/Cr
DIAFLO (air conditioners).31a/Am; 31a/Ame
DIAL-A-DRINK (bubblers) 30d/Eb
DIAL-A-FOOD (food warming controls) 26b/Ba
DIAL-ESE (plumbing, fittings) 27a/Cr
DIAL-O-VENT (garage ventilation)...31e/Na
DIAL X (telephone systems).....34a/Str
DIAMOND (flush valves) 27b/Sp
DIAMOND-CRETE (masonry treatments) 9/Co
DIAMOND LUSTRE (wood floor finish) 13J/Wo
DIANA (cabinet sinks) 25b/Yo
DIANA (lavatories) 27a/Cr
DIATOMITE (pool filters) 23k/La
DIEBOLD (bank equipment) 23b/Di
DIELDRIN (termite control) 5d/Sh
DIELUX (lighting fixture frames) 33a/Pr
DIFFAXIAL (loudspeakers) 34a/Un
DIFFUSA-LITE (hung ceiling units) 33a/Di
DIFFUSAIRES (air diffusers) 31f/Har
DIFFUSEX (pattern glass) 7a/Am
DIFFUSICONE (loudspeakers) 34a/Un
DILATO (joint fillers) 9/Wet
DIPLOMA (window shades) 19c/Jo
DIPLOMAT (electric door operators)..16g/La
DIPLOMAT (key wall cabinets) 18e/Moo
DIPPERWELL (counter sanitation units) 26d/Ba
DIRECT-A-CALL (private telephone system) 34a/Ke
DIRECTILATOR (roof ventilators) 31a/CL
DIRECTOR (lighting fixtures) 33a/Sm
DIRECTOR LINE (office desks, files)....23o/Ar
DIRECTORY (telephone booths) 34a/Sh
DISCO (aluminum windows, curtain walls) 17a/De
DISCO (prison equipment) 23m/De
DISH-O-LATER (dishwashers) 26d/Ba
DISPOSALL (food waste disposers) 24a/Gen; 25a/Hot
DISPOSALL (incinerators) 28a/Go
DIVIDER-WALL (partitions) 22a/Hau
DIXIE (floor hinges) 18e/Bo
DOHERTY SILENTAIRE (roof ventilators) 31e/Do
DOME-AIR (ventilating skylights) ..20a/Van
DOMELITE (plastic dome skylights)..20a/Van
DOMETTE (small capacity fans) 20c/Pe
DOMEX (roof ventilators) 20c/Pe
DONN (ceiling suspension systems) ..11b/Do
DONORA (urinals) 27a/Ri
DONOVAN (windows) 17b/Tr
DOORMASTER (garage doors) 16i/Cra
DOORNAMENTS (door panel designs)16i/Ba
DOR-GARDS (hinge covers) 18e/Do; 18e/Dor
DOR-LESS-DOR (air curtain doors) ..16L/Su
DOR-O-MATIC (door controls) 18e/Do; 18e/Dor
DOR-SEAL (weatherstripping) 19b/Ch
DORCEL (garage doors) 16i/Ove
DORCHESTER (locksets) 18e/Sc
DOREX (air recovery equipment) 31f/Co
DORM LINE (dormitory furniture) 23i/Sim
DORWALL (aluminum sliding glass doors) 16d/Ac
DOUBLE-FLOW (cooling towers) 30b/Ma
DOUBLEX (pattern glass) 7a/Am
DOUBLE WHITE (paint) 15/Ca
DOWNLITE (lighting fixtures) 33a/Ce
DOXPLANK (reinforced concrete slab) 2d/Do
DRAFTITE (weatherstripping) 3f/St
DRAFTITE (wool pile weatherstrip)...17b/CLa
DRAIN-DRI (pumps) 30a/Ye
DRAINTRED (matting) 13i/Ar
DRAMALITE (lighting fixtures) 33a/Ce
DRAVO WELDED (gratings) 13a/Dr
DRAVO PRESSURE-LOCKED (gratings).13a/Dr
DREXEL (junior toilet compartments).22b/Ac
DREXEL (lavatories, water closets)....27a/Cr
DRI-COOLER (cooling towers) 30b/Ma
DRI-GLOSS (finishing wax).....15/Min
DRI MASTER (towel dispensers) 27e/St
DRI-RITE (enamel) 15/Na
DRI-SEAL (masonry treatments) 9/Co
DRI-SET (grouting) 13c/Ch
DRI-SPEEDWALL (tile) 4f/Na
DRI-VAC (wood flooring treatment) 13J/Ro; 13J/Rob
DRIFTONE (acoustical materials).....11a/Ba
DRIVE-ANCHOR (fencing posts) 22g/An
DRIVE-DUCT (fans) 31e/Pe
DRIVE-RITE (nails) 18a/In
DRIWAL (limestone coatings) 15/GLi
DROPOSITORY (depositories) 23b/Mo
DRUM N'HALF (incinerators) 28a/Br
DRYCOLOR (cement colors) 9/Pa
DRYCRETE (densifiers) 9/Pa
DRYDEN (lavatories) 27a/Bri
DRYFOL (building insulation) 10a/Re
DRYJOINT (pointing mortar) 9/St
DRYSEAL (cooper tube) 29a/Rev
DRYWAY (draingctes) 13a/Ir
DUAL-BLOWER (ventilating hoods)...31e/Br
DUAL DUCT (air diffusers) 31f/An
DUAL-LITE (emergency lights) 33a/Du
DUAL SEAL (rubber closures) 8b/Fa
DUALVENT (roof ventilators) 20c/Oc
DUAMESH (rib lath) 12a/Pe
DUBL-COVERAGE (asphalt shingles)...8c/Ru
DUBL-DOME (plastic skylights) 20a/Pa
DUBLECOTE (shingles) 8a/Ba
DUBUQUE (partitions) 22d/Du
DUCHESS (bathroom cabinets) 27d/Mi
DUETTE (bathroom cabinets) 27d/Mi
DUKE (water closets) 27a/Bri
DULAMEL (paints, enamels) 15/Moo
DUNBAR (urinals) 27a/Ri
DUO (group washing equipment) ...27a/Br
DUO-BASE (cove bases) 13g/In
DUO BLO (furnaces) 31a/Ame
DUO-CHECK (door checks) 18e/Ri
DUO-JOBMASTER (fastening tools) ..2i/Ram
DUO-TEX (tile finish) 11a/Ce
DUOLITE (safety glass) 7a/Pi
DUOLUX (hardboard panels)...8b/Ma; 8b/Mas; 14b/Ma; 14d/Mas
DUPLATE (plate glass) 7a/Pi
DUPLEX (corkboards) 23e/Be
DUPLEX (gratings) 13a/Ir
DUPLEX (loudspeakers) 34a/AL
DUPLEX (underlayment lining felt) ...13i/Co
DUPLEX (wallboard) 10a/Uni
DUR-A-BEAD (corner beads) 12c/Uni
DURA-DRI (masonry coatings) 15/Un
DUR-A-FLEX (sectional units).....23L/Du
DUR-O-LASTIC (caulking compounds)...9/We
DUR-O-WAL (masonry reinforcement) 4h/Du
DURA-STOP (hydraulic cement) 15/Un
DURA-TOPP (roofing) 8a/Ca
DURA-TUBE (heat exchangers) 31b/Ja
DURA-VENT (gas vent pipe and fittings) 31f/Du
DURA-WOOD (block, strip flooring)..13J/Bru
DURABILT (wood columns) 5c/Ha
DURACITE (chalkboards) 23e/CL
DURACLAD (gas water heaters) 30c/Sm
DURACO (greaseproof tile) 13i/Az
DURAFAX (hardeners) 9/Ho
DURAFLEX (thresholds) 19b/Dur
DURAFLOR (floor tile) 13c/Roy
DURAFLOR (rubber base coating) 13h/Pr
DURALAB (laboratory equipment, furniture) 23L/Du
DURALITE (aluminum windows) 17a/Am
DURALITE (wood floor sealer) 13m/In
DURAMIC (glazed brick) 4f/Ha
DURAPLASTIC (white portland cement) 4i/Unv
DURAPLY (doors) 16c/Un
DURAPLY (plywood panels) 5b/Un
DURASAN (vinyl-surfaced gypsum wallboard) 12c/Nat
DURASPEED (fire protection equipment) 30e/Gr
DURASPEED (sprinklers) 30e/Gr
DURASTEEL (chalkboards) 23e/CL
DURATACH (lighting fixtures).....33a/Wh
DURATITE (aluminum and steel skylights) 20b/Va
DURATONE (counter, sink tops) 25b/ELk
DURATREM (concrete floor topping)....9/Tr
DURAVAL (paint) 15/Un
DURCO (rope packing) 29b/Du
DURCON (laboratory sinks) 29b/Du
DUREX (lighting fixtures) 33a/Wh
DURHAM (public seating equipment).23i/Du
DURIRON (pipe, drains) 29b/Du
DUR-O-LASTIC (caulking compounds) ..9/We
DURO (toilet partitions) 22b/Fi
DURO-MIX (hardener, densifier) 9/Aq
DURO-SEAL (floor treatment) 9/Aq
DURO-TILE (spark arresters) 28a/Sar

trade names

DUROC (finish) 8c/Ru
DUROCON (metallic hardener) 9/Aq
DUROLITE (tileboard) 2i/Ins; 10a/Ins
DURON (hardboard) 10a/Uni
DUROPLATE (metallic aggregate) 9/Aq
DUROTRED (matting) 13i/Ar
DURUNDUM (non-metallic aggregate) ..9/Aq
DUSPOSAL (vacuum cleaning systems).28b/Va
DUSTITE (panelboards) 32a/Ad
DUSTON COLORTOP (masonry paint)...9/Ce
DUVINAGE (spiral stairs) 6h/Duv
DUX-BAK (masonry treatments) 9/Pa
DYFOAM (plastic foam insulation) 10a/Dy; 10b/Dy
DYNACURVE (fans) 31a/CL
DYNASEAL (door hardware) 16i/At

e

EH (noise reduction panels, sound barriers, sound-insulating doors) ...11a/Ha
ESR (racks) 23c/Ea
E-Z GLIDE (sliding door track) 18g/En
E-Z-OPEN (freezer door fasteners) 23c/Ja
E-Z SOAK (finish lime) 12e/Na
E-Z WALL (movable partitions) 22a/Un
E-ZEE LOC (wood awning windows)..17c/Wo
E-Z-S (ceiling suspension systems)...11a/Un
EZ-A-WAY (bleachers) 23J/Ber
EZY-CLEAN (rubber stairtreads) 13i/Ro
EARLY AMERICAN BRAND (shingles, fencing) 8d/Co
EASTERN'S STAR (venetian blinds) 19d/Ea
EASY ACCESS (flagpoles) 6g/Bab
EASY ACCESS (hatchways) 16J/Ba
EASY-FIT (steam supply headers) 31g/We
EASY MOLD (fiber tubes) 2a/Ap
EASY-ONE-COAT (cement base coating) 9/Tru
EBONITE (masonry treatments) 9/Co
ECLIPSE (compressors) 31a/Fr
ECON (display cases) 23e/Po
ECON-O-CLAMP (concrete forms).....2i/De
ECON-O-MOLD (concrete forms) 2i/De
ECONACOUSTIC (formboard) 2d/Na
ECONACOUSTIC (wood fiber tile) ...11a/Na
ECONO-FLAP (towel holders) 27e/Bro
ECONO-LINE (curtain walls) 3a/Ne
ECONO-LOK (masonry reinforcement) 4h/Aa
ECONO-RAIL (railings) 6e/New
ECONODOR (flush doors) 16m/Fi
ECONOLAST (plastic tile) 13i/Vi
ECONOMY (copper roofing) 8b/Am
ECONOMY (door frames) 16b/Wi
ECONOMY 250 (corrugated asbestos-cement roofing, siding) 8c/Na
ECONOMY WALL (curtain wall systems) 3a/Rey; 3a/Reg
ECONORIB (roof decking) 2c/Fe
ECONOSTOP (door frames and seals) 16m/Fi
ECONOVENT (ventilators) 20c/We
EDDY (stokers) 31J/Ed
EDEN (water closets) 27a/Ri
EDGE-GLO (lighting fixtures) 33a/Cu
EDGE-LINE (curtain walls) 3a/Ne
EDISON-HEATUBE (electic range heating elements) 26c/To
EFFECTO (enamel) 15/Pr
EFFICIENCY (waterstops) 9/Wi
EFFICO (roof ventilators) 20c/Hi
EFROLITE (shower doors) 27c/Ef
EG-SHEL (paint products) 15/Sh
EGSCO (corrugated sheets) 8b/Sm
EGSCO (curtain walls) 3a/Sm
EGSCO (curtain walls, roofing, siding) 8b/Smi
EGSCO (roof deck) 2c/Sm
EGSCO (steel forms for concrete)....2a/Sm
EL DORADO (shower doors, tub enclosures) 27c/Ef
ELASTIC (caulking, glazing, etc.) 9/Ku
ELASTICSEAL (curtain wall caulking, sealing compound) 9/Ku
ELASTIGUM (cement) 8a/Ba
ELASTIGUM (liquid asphalt coatings, cement) 9/Ba
ELASTITE (asphalt, expansion joints) ...2i/Ca
ELASTITE (flashing block) 8a/Ca
ELAYNE (lavatories) 27a/Cr
EL CAPITAN (doors) 16i/Co
ELDORADO (bidets) 27a/Ca
ELECTRIC AIRE (electric dryers) 27e/EL
ELECTRIC DOORMAN (electric door operators) 16i/EL
ELECTRIC-LUMINUS (luminous ceilings) 33a/Lum
ELECTRICTUBE (electrical metallic tubing) 32b/CL
ELECTRIFLOOR (floor decking) 2c/Fe
ELECTRO-COLOR (electrochemical process) 17a/Fen
ELECTRO-DYNAMETER (elevator controls) 24c/Se
ELECTRO-FYRE (pilot ignitor).....31b/Ja
ELECTRO-LOADER (loading platform) 24a/GL
ELECTRO PAINTLOK (steel for painting) 6c/Re
ELECTRO-SHEET (cooper foil) 8b/Am
ELECTRIC-TRAVERSE (drapery hardware) 19d/Ma
ELECTRO-WELD (kalamein doors) 16b/Du
ELECTRO-WIND (ventilators) 20c/AL
ELECTROGLIDE (freezer door tracks)..23c/Ja
ELECTROMATIC (sprinkling system valves, controls) 30e/Mu
ELECTROMODE (electric heating systems) 31h/EL
ELECTRUNITE (conduit) 32b/Re
ELECTRUNITE (stainless steel tubing) ...6c/Re
ELECTRUNITE (structural tubing) 2f/Re
ELEGANCE (incandescent lighting fixtures) 33a/Pi
ELEVETTE (elevators) 24a/In
ELGO (louvers, shutters) 20c/AL
ELK-AIR (fire extinguishers) 30f/EL
ELKALOY (fire extinguishers) 30f/EL
ELKHART (extinguishers, extinguisher cabinets) 30f/EL
ELKINGTON GATIC (covers and frames) 6i/FL
ELLISON (louvers) 20d/EL
ELTIMECO (skeleton dial cocks) 34b/EL
EMBASSY (air conditioners) 31a/Yk
EMBASSY (key index trays) 18e/Moo
EMBECO (mortar) 9/Mas
EMERSON-ELECTRIC (fans, blowers)..31e/Em
EMERSON-ELECTRIC (fans, ventilators, chimes) 25a/Em
EMERSON-PRYNE (fans, blowers) 31e/Em
EMERSON-PRYNE (fans, ventilators, chimes) 25a/Em
EMCO (wardrobes, chalkboards) 23d/Eq
EMERITEX (emery hardener) 9/Aq
EMPEROR (water closets) 27a/Bri
EMPRESS (water closets) 27a/Ri
ENAMELITE (conduit) 32b/Re
ENAMELITE (sealing, caulking compounds) 3f/Pre
ENAMELKOTE (electrical metallic tubing) 32b/CL
ENAMELOID (paint products) 15/Sh
ENDFORM (concrete forms) 2a/Ce
ENDURANCE (ceramic tile) 13c/We
ENDURANCE (house paint) 15/GLi
ENDURO (block or pipe insulation)...10c/BaL
ENDURO (stainless steel) 6c/Re; 8g/Re
ENDUROSIGN (letters, signs) 23a/Sp
ENERGY (dumbwaiters) 24a/En
ENSIGN (diswashers) 26b/In
EPCO (magnetic cabinet hardware, sliding door track) 18g/En
EPO-TOX (epoxy resin) 9/To
EPOLITH (veneer) 9/So
E-POXITE (concrete surface treatments) 9/Tre
EQUAL-AIRE (incinerators) 28a/Sar
EQUAL-FLOW (water heater systems).30c/Ru
EQUIDEPTH (column construction systems) 2g/Lay
EQUITEMP (diffusers) 31a/Am; 31a/Ame
ERAYDO (zinc alloy) 8g/IL
ERAYDO (zinc sheet) 2i/Ho
ERDALITH (wood preservatives) 5d/Ko
ERECTO-FRAMING (store fronts) 16d/Sc
ERECTOMATIC (closed shelving).....23 /St
ERICKSON (folding tables) 23i/Ha
ESCALIFT (staircase elevators) 24a/Sh
ESCO (hydraulic elevators) 24a/Es
ESKA (bleachers and grandstands)...23J/Es
ESPRO (steel tubing) 2f/Es
ESR (racks) 23c/Ea
ESSEX (locks) 18e/Sa
ESSEX (glass blocks) 3e/Pi; 7b/Pi
ESTEY (toilet tissue, dispensers) 27e/Ste
EUCALK (caulking) 9/Eu
EUCO (masonry treatment) 9/Eu
EUCO WELD (bonding agents) 9/Eu
EUREKA (metal clad fire doors) 16b/Va
EVANS (hardware, wardrobes) 23d/Ca
EVECTAIRE (range hoods—fan and light combination) 25a/Pr
EVENGLO (plastic louvers) 33a/Sin
EVER GLO (lighting fixtures) 33a/Pr
EVERBOND (mastic cement) 13J/Bru
EVERGLAZE (tile) 13c/Mos
EVERJET (paint) 8a/Ba; 9/Ba
EVERLASTIC (masonry gaskets) 4J/Wi
EVERTEX (tile) 13c/Mos
EX-TRAND CORNERITE (corner lath) 12a/Wh
EXCEL-FRAMING (glass door frames).16d/Sc
EXCELLO (pre-fabricated chalkboards).23e/Lo
EXCELON (plastic tile) 13i/Arm
EXCELSIOR (shade cloth) 19c/Jo
EXCEPTIONAL (diving boards) 23k/Ki
EXECUTIVE (food warming cabinets).26d/Foo
EXECUTIVE (partitions) 22a/Mi
EXECUTIVE (steel chairs) 23o/Ha
EXECUTIVE (telephone booths) 34a/Sh
EXECUTONE (communication systems) 34a/Ex
EXHAUST-O-VENT (fume exhaust system) 31e/En
EXHAUST/MASTER (roof ventilators)..20c/Va
EXLITE (shade cloth) 19c/Jo
EXPAND-O-FLASH (waterstrops, flashings) 8g/La
EXPAND-X (expanded metal).6e/Un; 13a/Un
EXPELSOR (pneumatic ejectors) 30a/Ye
EXPLOSION RELIEF (ventilators) 20c/Va
EXT-DFPA (plywood) 5b/Do
EXTENDO-BAR (towel bars) 27d/Ha
EXTRU-SEAL (tape) 3f/Pe

EXTRUD-A-LUME (lighting fixtures)...33a/So
EXTRUDED LOUVER (louvers, penthouses, solar canopies) 20d/Ex
EYE-COMFORT (lighting fixtures) ...33a/Cu
EYEBROW (sunshade louvers) 20d/Air
EZ-A-WAY (bleachers and chair stands) 23J/Ber
EZEGLAZE (metal glazing bead).....17b/Ho
EZY-CLEAN (rubber stairtreads) 13i/Ro
EZY-FOLD (folding door assemblies) 18g/Kn
EXY-ROLL (sliding door track) 18g/Kn

f

FA (electrical products) 32a/Ad
F & A (floor construction systems) 2a/Fa
F/C (black granite) 4a/Fr
FAB-FORM (permanent steel forms)....2a/Pi
FABCO (rubber closures) 8b/Fa
FABRICORK (bulletin boards) 23e/CL
FABRICOTE (waterproofing membrane) 8g/Wa
FABRIGLASS (lighting fixture shades) 33a/Pr
FABRIKATED (registers) 31f/In
FABROID (water barrier fabric) 9/We
FACITE (aluminum facing) 21/Hi
FACTROLITE (glass) 7a/Mi
FAIENTEX (tile) 13c/Mos
FAIRBANKS-MORSE (emergency generating sets) 32c/Fa
FAIRHURST (folding walls) 22d/Fa
FAIRHURST (wardrobes) 23d/Fa
FAIRLAWN (carpet cushions) 13L/Go
FANJET (roof cooling systems) 30e/Mu
FANTOM GRIL (fan grilles).....31e/Br
FARLODOR (flush doors) 16c/Fa
FAST-SERV (soda fountains) 26d/Ba
FAST-SET (tile adhesive) 13i/FL
FEATHER-TOUCH (exit devices) 18f/Sa
FEATHERFLEX (venetian blinds) 19d/Mo
FEDERAL (letter boxes) 23b/Cu
FEDERAL (lighting fixtures) 33a/Sm
FELTEX (roofing felt) 8a/Ca
FEMIGENE (urinals) 27a/Ri
FEN-AIR (hollow metal doors) 16b/Fe
FENACOUSTIC (acoustical plates) 2c/Fe
FENESTEEL (curtain tracks) 23g/Au
FENESTRA (aluminum windows) 17a/Fe
FENESTRA (floor, roof panels) 2c/Fe
FENESTRA (hollow metal door units)..16b/Fe
FENESTRA (wall panels) 3b/Fe
FENESTRAWALL (curtain wall systems).3a/Fe
FENLITE (metal finish) 17a/Fe
FENMARK (steel curtain wall systems).3a/Fe
FENWALL (aluminum curtain wall systems) 3a/Fe
FERA-FLOW (non-slip paint) 13b/Am
FERA-MAT (non-slip flooring) 13b/Am
FERALUN (iron treads) 13b/Am
FEREM (hardeners) 9/Ho
FERON-METALLIC (floor hardeners) 9/La
FERRICON (hardeners) 9/Tru
FERRO-BAR (masonry treatments) 9/Co
FERRO-FAX (colors, hardeners) 9/Ho
FERROBORD (steel deck) 2f/Tr
FERROCON (iron waterproofing) 9/Aq
FERROGRIT (floor plates, treads) ...13b/Wo
FERROKOTE (masonry treatments) 9/Ce
FERROLITH (grouting, hardener, colorer, dampproofing) 9/So
FERROLUX (shower cabinets) 22b/Fe
FERROMETAL (toilet, shower partitions) 22b/Fe
FERROSO G (metallic grout) 9/Tre
FERROSO W (metallic waterproofer)..9/Tre
FERROX (abrasive surfacers) 13b/Am
FESCO BOARD (roof-deck insulation) 10a/Sc
FESTOON (expanded metal) 6e/Un
FEUREX (borosilicate glass) 7a/Am
FIBER KING (mats) 13i/Ko
FIBERCOTE (insulation protection) ...10c/BaL
FIBERESIN (plastic panels) 14b/Fi
FIBERGLAS (built-up roofing) 8a/Ow
FIBERGLAS (ceiling board) 11a/Ow
FIBERGLAS (fenestration fabrics) 19d/Ow
FIBERGLAS (form board) 2d/Ow
FIBERGLAS (high and low temperature insulation) 10c/Ow
FIBERGLAS (insect screening) 19a/Ow
FIBERGLAS (polarized light panels)...33b/Ow
FIBERGLAS (roof insulation) 10a/Ow
FIBERGLAS (wall insulation) 3f/Ow
FIBERLITE (tileboard) 10a/Ins
FIBEROCK (roofing sheet) 8a/Ca
FIBERPLANK (insulating roof deck)....2d/Mat
FIBRASLATE (chalkboards) 23e/So
FIBRETONE (acoustical ceiling panels) 10a/Jo
FIBRETONE (fiber tile) 11a/Jo
FIBREX (felts, roofing cement) 8a/FL
FIBERGLASS (lighting fixture shades)..33a/Pa
FIELD-FAB (insulated curtain walls) ...3a/Sm
FIGURGRAM (electric scoreboard)....23k/Fa
FILIGRILLE (interior decorative screens, grillework) 22h/Ho
FILLMORE (locks) 18e/Sa
FILON (plastic panels) 7d/Fi
FILTER-FLO (washers) 25a/Gen
FILTER-PAK (filter/purifiers) 30d/Su
FILTEX (paint) 15/Pr
FILTRINE (coolers, filters, etc.) 30d/Fi
FILTRON (light, heat control panels) 7d/AL
FIN-VECTOR (radiation) 31a/Dun
FINE-FYBER (insulating felt) 10c/BaL
FINETEX (pattern glass) 7a/Am
FING-R-GARD (safety door edges)..16b/Ov
FIRE-CHEX (shingles) 8c/Ca
FIRE-CHEX (vapor barriers, joint fillers, adhesives) 8a/Ca
FIRE-FIGHTER (formboard) 2d/Na
FIRE GARD (acoustical plaster) 12d/Gr
FIRE GARD (thermostats) 26c/To
FIRE-SHIELD (fireproof wallboard) ..12c/Nat
FIRE-SHIELD (fireproofing plaster)...12e/Na
FIRE-SNUF (plastic panels) 7d/Re
FIRE-TROL (steel columns) 2g/LaL
FIRE VALVE (roof ventilator) 20c/Sw
FIRE VENT (roof ventilators) 20c/Va
FIREBLOCK (fire resistant panels) 7d/Ly
FIREBOX (boilers) 31a/Ame
FIRECODE (fire-resistant wallboard)..12c/Uni
FIREPROOFER (tile) 4f/Na
FIRESTOP BESTWALL (gypsum wallboard) 12c/Be
FIRESTOPPER (poured-in-place gypsum roof decks) 2d/Be
FIRM-GRIP (gratings) 13a/Bu
FIRMA (roof ventilators) 20c/Hi
FIRZITE (fillers, stains) 15/Uni
FIRZITE (plywood finish) 5b/Un
FITRITE (leader bands, snow guards, roof strainers) 8g/Le
5-STAR (bank vault entrances, depositories, depository windows) 23b/He
FIXT-AIRE (registers and grilles) 31f/Har
FLAKE KING (ice flakers) 26a/La
FLARE (lockset) 16b/Ce
FLASHTITE (flashings) 8a/Ru
FLAT DECK (fire hatches) 20c/Va
FLAT-RITE (paint products) 15/Sh
FLAT-TONE (paint products) 15/Sh
FLATSLAT (counter shutters) 16g/Cor
FLEETLITE (aluminum windows) 17a/FL; 17a/FLa
FLEETLITE (sliding glass doors) 16d/FL
FLEETWOOD (garage doors) 16i/Cra
FLEETWOOD (tellers counters) 23b/Mos
FLEETWOOD (wood doors) 25b/To
FLETCHER (granite) 4a/FL; 4a/FLe
FLEX-BAR (registers) 31f/Un
FLEX-CLIP (gypsum wallboard acoustical fastening system) 12c/Nat
FLEX-GRID (conveyor belts) 22g/Cy
FLEX-I-TRAC (curtain tracks) 23g/Au
FLEX-KRETE (masonry treatments) 9/Co
FLEX-O-BOND (rubber bond coat)....13h/FL
FLEX-WALL (interchangeable partitions) 22b/Am
FLEX-WALL (steel partitions) 22a/Am
FLEXACHROME (vinyl-asbestos floor tile) 13i/FL
FLEXALUM (aluminum awnings) 19e/Bi
FLEXALUM (venetian blinds) 19d/Br
FLEXBEAD (corner bead) 12a/Wh
FLEXBOARD (asbestos insulating sheets) 8b/Jo
FLEXBOARD (chalkboard) 23e/Go
FLEXCELL (joint fillers) 10a/Ce
FLEXGOLD (vinly-asbestos floor tile)..13i/FL
FLEXHARD (epoxy coatings) 15/So
FLEXI (steel shelving) 23f/Bo
FLEXI-BINS (bins) 23f/Bo
FLEXI-FLOR (rubber flooring) 13i/Ra
FLEXICORE (concrete slabs) 2d/FL
FLEXIDOR (rubber doors) 23c/Ja
FLEXIFLO (air diffusers) 31f/Uni
FLEXIPHONE (intercommunicating systems) 34a/Du
FLEXIMATIC AIR JET (clothes folders) 27g/Tr
FLEXIVENT (window vents) 17c/An
FLEXIVENT-FLEXIVIEW (wood windows) 17c/An
FLEXIVIEW (picture windows) 17c/An
FLEXLINK (rolling grilles) 16g/Ab
FLEXO-FOLD (folding tables, benches).23i/Sc
FLEXOTILE (flooring) 13h/FL
FLEXSTEEL (conduit system) 32b/Na
FLEXSTONE (asbestos roofing) 8a/Jo
FLEXTITE (removable window operative hardware) 18a/Gr
FLEXTOP (roofing coatings) 8a/Ca
FLEXWEAVE (vinly-asbestos floor tile).13i/FL
FLEXWOOD (veneers) 5b/Un
FLEXWOOD (wood veneers) 13k/Uni
FLINTAR (sealers) 9/FL
FLINTDEK (anti-slip coatings) 9/FL
FLINTGLAS (roofing sheets) 8a/FL
FLINTKOTE (asphalt flooring) 13i/FL
FLINTKOTE (asphalt flooring, waterproofing compounds) 9/FL
FLINTKOTE (built-up roofing) 8a/FL
FLINTKOTE (insulation products) 10a/FL
FLINTKOTE (masonry treatments) 9/FL
FLINTKOTE (roof decking) 2d/FLi
FLINTMASTIC (asphalt floor surfacing) ..9/FL
FLINTOX (hardeners) 9/To
FLINTRIDGE (aluminum windows) ...17a/Fli
FLITE-CHECK JOBMASTER (fastening tools) 2i/Ram
FLO-CONTROL (control valves) 31i/Be
FLO-FAN (fans, ventilators) 25a/Em
FLOATING CROSS (foot control mechanism) 27a/Br
FLOOD-LITE (lighting fixtures) 33a/Wh
FLOODLITER (service station lighting) 33a/Co
FLOOR-SHINE (floor wax) 13m/Hu

trade names

FLOORSTEEL (surface armor) 13a/KL
FLOR-CLEAR (toilet partitions) 22b/AL
FLOR-TREAT (floor treatments) 13m/Mu
FLORENAMEL (enamel) 15/GLi
FLORENTINE (glass) 7a/Mi
FLOREX (pattern glass) 7a/Am
FLORHIDE (enamel) 15/Pi
FLOROK (chemical hardener) 13h/Pr
FLORTEX (glazed floor tile) 13c/Ro
FLOUR CITY (windows) 17a/FLo
FLUAT (hardeners and densifiers).....9/Tre
FLUE-FED (incinerators) 28a/Sar
FLUOR-SOLAR (stainless steel fans) ..30b/FL
FLUOR-WESTERN (spiral bevel gears).30b/FL
FLUSH-METAL (hospital cubicles) 22b/FL
FLUSHART (toilet compartments) 22b/FL
FLUSHDUCT (duct systems) 32b/Na
FLUSHIELD (urinal shields) 22b/FL
FLUSHITE (toilet compartments) 22b/FL
FLUSHMETAL (toilet compartments) ...22b/FL
FLUSHOWER (shower cabinets) 22b/FL
FLUSHSCREEN (urinal shields) 22b/FL
FLUSHUNG (toilet compartments) 22b/FL
FLUSHWALHUNG (toilet compartments) 22b/FL
FLUSHWING (urinal shields) 22b/FL
FLUTEX (pattern glass) 7a/Am
FOAM FILL (air-entrained concrete)..2d/Co
FOAM-LITE (refrigerator doors) 23c/Bu; 23c/But
FOAMGLAS (cellular glass insulation)..10a/Pi
FOAMGLAS (glass) 7a/Pi
FOAMGLAS (insulation) 3e/Pit
FOLD-A-DOOR (tub enclosures) 27c/Ke
FOLD-FAST (clothes folders) 27g/Tr
FOLD-O-LEG DOUBLER (portable tables and benches) 23i/Mi
FOLDER-WAY (folding partitions) 22d/Ri
FOLDOOR (folding doors) 16e/Ho
FOLDOOR (folding partitions) 22d/Ho
FOLLANSBEE (terne) 8b/Fo
FOOD FILE (refrigerators) 26a/Ko
FORBES (roof ventilators) 20c/We
FORDHAM (toilet compartments) 22b/Cu
FORESTONE (acoustical tile) 11a/Sim
FORM-COAT (masonry treatments) 9/Co
FORM-COTE (alkali-resistant coating).13h/Pr
FORM-SAVER (plywood form coatings) 9/So
FORMCEL (concrete form coatings) 9/La
FORMFILM (form coating) 9/Ho
FORMFREE (tile) 13c/Mos
FORMICA (laminated plastic) 14a/Fo
FORMTEX (concrete form panels) 5b/Un
FORUM (lighting fixtures) 33a/Sm
FORTY-SIXTY (lighting fixtures) 33a/Cu
FOTA-LITE (lighting glass) 33b/Co
FOURCO (sheet glass) 7a/Fo
4-WAY (wood windows).....17c/Far
FRANTZ (garage doors) 16i/Fr
FREE-FLOW (vertical blinds) 19d/Ve
FRESCOR (acoustical tile) 11a/Ow
FRESNELITE (lighting fixtures) 33a/Ce
FRIARS LIGHT (church lighting) 33a/En
FRICK (air conditioning units, refrigeration equipment, compressors, etc.) 31a/Fr
FRICTEX (non-slip aggregate) 9/So
FRIGIDAIRE (kitchen equipment) 25a/Fr
FROST-AWAY (automatic defrosting).25a/Hot
FROST-CAP (vinyl roof coating) 8a/De
FROSTOP (freezer door accessories) ..23c/Ja
FRY (concrete inserts) 2i/Ho
FRY (roofing asphalt) 8a/Fr
FULITE (glass doors and frames) 16d/Sc
FULLMATIC (clothes washer controls).27g/Tr
FULLVIEW (telephone booths) 34a/Sh
FURAMIC (design service) 22a/Vi
FURLATH (lath) 12a/In
FURNAFLEX (wood veneer) 14b/Wi
FUSE-O-LINK (doors, operators) 16h/CL
FUTURA (bronze castings) 6e/Li
FUTURA (lavatories) 27a/Ri
FUTURA (letter boxes) 23b/Cu
FUTURLITER (lighting fixtures) 33a/Gu
FYER-WALL (fire doors) 16h/Ri
FYER-WARD (fire doors) 16h/Ri
FYNAL-KOTE (shingle coatings) 8d/Cr
FYR-FYTER (fire protection equipment) 30f/Fy
FYRGARD (fire doors) 16b/Ri

g

G&G (ash hoists, sidewalk elevators, doors) 24d/GiL
G-B (acoustical ceiling board) 11a/Gu
G-B (curtain walls, ornamental metalwork) 3a/Ge
GB (revolving doors) 16f/Ge
GB (windows) 17a/Ge
G-B SNAP-ON (pipe insulation) 10c/Gu
G-E (coolers, fountains) 30d/Ge
G-E (kitchen equipment) 25a/Gen
G-E (laminated plastic surfacing) ...14a/Ge
GER-PAK (polyethylene film) 9/Ger
GJ (door controls) 18e/GL
G-P (hardboard panels) 14d/Geo
G-P (lumber, sheathing, siding) 8b/Ge
G-P (plywood, plywood products) 5a/Ge; 5b/Ger
G-P (wood finish) 5b/Geo
G-P RIPPLEWOOD (wood panels) ..5b/Geo
G-P STRIATED (wood panels) 5b/Geo
GR (metal partitions) 22a/Ga
GSD (glass sliding doors) 16d/GL
G-26 UNDERLAYMENT (latex floor underlayment) 13i/Cr
G-W (library equipment) 23f/GL
GALACEE (interior shutters) 19d/Pi
GALBESTOS (protected metal)..2b/Ro; 3c/Ro
GALOK (aluminum gratings) 13a/Ro
GALV-AFTER (chain link steel wire) 22g/Cy
GALV-KROM (pipe finish) 32b/St
GALVAKOTE (electrical metallic tubing) 32b/CL
GALVINOLEUM (metal coating) 15/Ru
GALVITE (conduit) 32b/Re
GALVITE (galvanized iron primer) 15/Sh
GARBAGE-HOG (incinerators) 28a/Br
GARFIELD (locks) 18e/Sa
GARNETT (church furniture) 23h/Gh
GARY (gratings, treads) 13a/Ro
GASLITE (gas lighting fixtures) 31a/Ar
GATES (concrete forming systems) 2i/Ga
GATES (waterstops) 2i/Gas
GATEWAY (building specialties) 2a/Ga; 2i/Gat
GATEWAY (electrical underfloor distribution system) 32b/Ga
GATEWAYDUCT (electrical underfloor ducts) 32b/Ga
GEARMOTOR (door operators) 16i/At
GEELOCK (crematories) 28a/KE
GEM FOAM (board or pipe insulation) 10c/BaL
GEMCO (hangers) 10a/Mo
GEMFIL (fitting or valve insulation).10c/BaL
GENAFOAM (insulation) 10a/Ge
GENERAL (plastics) 13k/Ge
GENERAL CHEF (kitchenette units) ...25b/Ge
GENERAL EXECUTIVE (refrigerators)..25b/Ge
GENEVA (steel hospital equipment).23L/Gen
GENEVA (steel kitchen equipment) 23i/Ge; 25b/Gev
GENUWOOD (plastic laminates) ...14a/Par
GEOMETILE (floor tile) 13i/Ro
GEORAMA (plastic tile) 13i/Ge
GER-PAK (polyethylene film) 9/Ger
GIANT JAMB (hinges) 18e/Mi
GIBRALTAR (flush wood doors) 16c/Ge
GIBRALTAR (shower receptors) 27c/Fi
GILCO (cranes, hoists, lifts) 24d/Gi
GIRAFFE (corrugated mats) 13i/Ar
GLAMOURLINE (commerical cooking equipment) 26c/Hot
GLAS-WICH (laminated safety glass) .7a/De
GLASIRON (porcelain enamel) 3c/Wo
GLASSEAL (glass) 7a/Li
GLASSTEEL (diffusers) 33a/Mu
GLASSTEEL (lighting fixtures) 33a/Wh
GLAZE-COAT (masonry treatments) ...9/Co
GLAZECOAT (building boards) 10a/Jo
GLAZETEX (floor wax) 9/Aq
GLID-ON (mixing liquid) 15/GLi
GLID-TILE (plastic tile finish) 15/GL
GLID-TONE (stain, varnish, wood filler) 15/GLi
GLIDE (aluminum curtain walls) 3a/Gr
GLIDE (sliding doors) 16d/GLi
GLIDE-ALL (sliding doors) 16c/Woo
GLIDE-ON (paints) 15/GLi
GLIDORAMA (gliding windows) 17a/GLi
GLO-DULL (chalkboard trim) 23e/Lo
GLOBE (fire detectors, sprinklers) ...30f/Fy
GLOBE (materials handling equipment) 24a/GL
GLOS-TONE (interior house paints)..15/Ma
GLOSS TONE (wall tile) 13c/Roy
GLOW-LITE (illuminated signs) 23a/Sp
GLOW TONE (paint) 15/Ame
GOLD BOND (asbestos-cement roofing, shingles, siding) 8c/Na
GOLD BOND (gypsum plaster) 12e/Na
GOLD BOND (gypsum roof deck) 2d/Na
GOLD BOND (insulation) 10a/Na
GOLD BOND (metal lath) 12a/Na
GOLD BOND (paint) 15/Nat
GOLD BOND (panels, roofing, siding).8b/Na
GOLD BOND (sound control products) 11a/Na
GOLD BOND (wallboard) 12c/Nat
GOLD-N-CHEF (backbars) 26d/Pr
GOLD SEAL (cork bulletin boards) ...23e/Co
GOLD SEAL (floor, wall coverings) ...13i/Co
GOLDEN DOWEL (wood doors) 16c/Ro
GOLDEN GRIDDLE (griddles) 25a/Hot
GOLDEN RUB-TEX (carpet cushion)...13L/AL
GOLDEN TONE (sandstone) 4c/Br
GOLIATH (rolling grilles) 16g/Ki
GOTHAM (lighting fixtures) 33a/Go
GOULD (curtain, drapery hardware) 19d/Go
GOURMET (refrigerators) 25a/Rev
GOVERNAIR (registers) 31f/Un
GPX (overlaid plywood) 5a/Ge; 5b/Ger
GPX (sheathing, lumber) 8b/Ge
GRADE-AID (classroom cabinets, counters, sinks) 23i/Gr
GRADE-ROBE (lockers, wardrobes) .23d/Med
GRAINBOARD (gypsum board) 12c/Nat
GRANADA (lever handles) 18e/Sc
GRANCO (steel roof deck)..2c/Gra; 2c/Grn
GRAND PRIZE (finish) 15/Un
GRAND PRIZE (finishing line) 12e/Un
GRAND PRIZE (hydrated limes) 12e/Un
GRANDVIEW (mirrors) 27d/Mi
GRANITEX (hardeners) 9/Tru
GRANITEX (tile) 13c/Mos
GRANOLITH (rubber base paint) 15/Ba

GRANT (locks) 18e/Sa
GRANUX (fabricated stone) 4d/Gra
GRAPHOLITE (chalkboards) 23e/CL
GRATE-X (metal grating) ...6e/Un; 13a/Un
GRATELITE (light control louver) 33a/Gu
GRAVITY DRAIN (automatic dish-washer) 25a/Hot
GRAYLITE (insulating board, sheathing) 2i/Ins
GRAYLITE (sheathing) 10a/Ins
GRAYLITE-INS-LITE (formboard) 2i/Ins
GRAYLITE-FIBERLITE (formboard) 2i/Ins
GREEK KEY (floor tile) 13i/Ke
GREEN SEAL (paint) 15/Ha
GREEN STREAK (corner formers) 2i/Se
GREENHAVEN (prison lavatories) 27a/Ri
GRID SYSTEM (steel grid domes) 2a/Gri
GRIDSTEEL (armor grids) 13a/Ir
GRIDTONE (ascoustical materials) ..11a/Ar
GRIDWALL (aluminum curtain walls)..3a/Gr
GRIF-HO (toilet paper holders) 22b/We
GRILL-O-METRICS (grilles) 6a/BLu
GRILLINE (grilles) 31f/Uni
GRIP-CRETE (swimming pool paint)..15/Wa
GRIP-DEK (abrasive flooring) 13i/Pa
GRIP-LOK (incinerator corners) 28a/Un
GRIP-TITE (timber framing anchors) ...2i/Ha
GRIP-TREAD (abrasive flooring) 13i/Pa
GRIPSTAY (concrete inserts) 2i/Ho
GRIPWELD (gratings, treads) 13a/Ir
GUARD (vinyl wall coverings) 13k/CoL
GUARDIAN (curing, hardening, sealing compound) 9/Gu
GUARDIAN (toilet partitions) 22b/Pri
GUEST (lavatories) 27a/Bri
GUIDE-LINED (electrical tubing) 2f/Re
GUILDSET (clay tile contractors) 13c/Ti
GUMDROP (sealers) 20a/By
GUTHLITE (lighting fixtures) 33a/Gu
GYMLIFE (gloss finish) 15/Moo
GYMSTAND (bleachers, grandstands) 23J/Wa
GYPSOLITE (gypsum plaster) 12e/Na
GYROL (fluid drives) 31a/Ame

h

HB (building construction accessories).2i/Ho
H & B (movable partitions) 22a/Ha
H & J (aluminum curtain walls) 3a/Ha
H & J (doors) 16a/Ha
H & J (metalwork) 6e/Ha
H & K (architectural grilles) 31f/Ha
HCS (heating acoustical ceiling) 11a/Jo
H-H-M (bank vaults) 23b/He
HKP (sub-purlin sections) 2d/Cor
H-P (roof ventilators) 20c/Hi
HADDAM (lockset) 16b/Ce
HADES (aluminum paint) 15/Wa
HAKO (floor tile) 13i/Hak
HAKO-SERT (tile inserts) 13i/Hak
HAKOCOVE (cove base) 13i/Hak
HALL-MACK (bathroom accessories) ..27d/Ha
HALLOWELL (school shop furniture) ..23i/St
HALO-OF-HEAT (dryers) 24a/May
HALSEY TAYLOR (coolers, drinking fountains) 30d/Ta
HAMMERED (pattern glass) 7a/Am
HAND-PAK (insulation) 10a/Pr
HANDEE ANDEE (bins) 23f/Bo
HANDI-BOOTH (telephone booths) ..34a/Su
HANDI-DRIVE (conveyors) 24d/St
HANOVER (locks) 18e/Sc
HANSOLUX (acoustical tiles) 11a/Ha
HANSONITE (acoustical tiles) 11a/Ha
HANSOPAN (metal pans) 11a/Ha
HANSOSTAR (acoustical tiles) 11a/Ha
HANSOTEX (acoustical ceiling panels) 11a/Ha
HANSOTONE (acoustical form-board, acoustical systems) 11a/Ha
HAR-BAR (parking barriers) 23p/Ha
HARCOL REDI-MIXED (concrete hardener, colorer) 9/So
HARDING (locks) 18e/Sa
HARDWEAR (floor treatments) 9/Pa
HARMONITONE (tile) 13c/Mos
HARMONY (locksets) 18e/Co
HARRIS (hardboard flooring) 13J/Har
HARTER (stack chairs) 23o/Har
HARTFORD (incinerators) 28a/Na
HASKELITE (curtain wall panels) 3e/Ha
HASKELITE (institutional doors) 16c/Has
HASKO-PREG (laminated plywood)....3e/Ha
HASKO-STRUCT (plastic foam panel cores) 3e/Ha
HATCO (electric booster heaters).....26b/Ha
HAWS (coolers, fountains, faucets) ..30d/Ha
HAWS-KRAMER (flush valves) 30d/Ha
HAZEN (rolling doors) 16g/Ha
HEADERDUCT (underfloor wiring systems) 32b/Na
HEAT-A-LITE (heaters) 25a/Nu
HEAT-A-VENT (heaters) 25a/Nu
HEAT-O-MAT (heating mats) 13i/Ar
HEAT-X (heating, cooling equipment) 31a/Du
HEATFORM (fireplace heating units) ..31L/Su
HEATMASTER (water heaters).....31g/Ko
HEATSAVER (fireplaces) 31L/Do
HELIO-THERM (triple-wall shade fabric) 19c/He
HELIX (sash balances) 18a/Ca
HERCULES (curtain machinery) 23g/Au
HERCULITE (glass doors, frames) 16d/Pi
HERCULITE (plate glass) 3e/Pit
HERCULITE (tempered glass, doors, door frames) 7a/Pi
HERITAGE (tile flooring) 13i/Wr
HERRINGBONE (metal lath) 12a/Tr
HEX 'A-HE' DRAL (septic tanks) 30h/Ka
HEX-A-LUME (lighting fixtures. 33a/So
HEX-O-LUME (lighting fixtures) 33a/Wh
HEXTEEL (surface armor) 13a/KL
HI BOY (heaters) 31b/Cam
HI-BUILD (plastic coatings) 15/Su
HI-CON (floor cleaner) 13m/In
HI-CONE (aerators) 30a/Ye
HI-DUTY (spring hinges) 18e/Chi
HI-FORM (fireplace dampers) 31L/Su
HI-GLOSS (panel finish) 14b/Ma
HI-HEAT (aluminum paint) 15/Ame
HI-HEAT (paint products) 15/Sh
HI-LIFT (garage doors) 16i/Cra
HI-LIFT (overhead door tracks) 16i/Win
HI-LINE (toilet partitions) 22b/AL
HI-LITE (acoustical plaster) 11a/Uni; 12e/Un
HI-LITE (tile and plank finish) 10a/Uni
HI-RIB (rib mats) 13i/Paw
HI-SCOOLER (water coolers) 30d/Fi
HI-SPEED (dryers) 25a/Gen
HI-STILE (toilet, shower compartments) 22b/We
HI-TEMP (chalkboards) 23e/Go
HID-N-RAIL (door closers) 18e/Co
HIDE-A-WAY (kitchen units) 25b/Ac
HIFILITE (baffles) 34a/Lo
HIGH-BAY (mercury and incandescent reflectors) 33a/Sy
HIGH-LITE (sliding windows) 17c/Ro
HIGHLANDER (washers, dryers) 25a/May
HIL-TEX (floor sealers) 13m/Hi
HILTON (urinals) 27a/Bri
HIMCO (aluminum entrances) 16a/Hi
HIMCO (store fronts) 21/Hi
HISTORIC (paint) 15/Pi
HIWALK (gratings) 13a/Pe
HOAL (louvers) 16b/Am
HOBART (kitchen machines) 26b/Ho
HOEGGER (bathroom accessories) ...27d/Ke
HOEGGERLITE (medicine cabints) ...27d/Ke
HOHMANN (clothesline poles) 2i/Ho
HOLD-FAST (shade rollers) 19c/Ri
HOLFORD (casement windows) 17b/Ho
HOLIDAY (asphalt, vinyl-asbestos floor tile) 13i/FL
HOLLOKORE (acoustical tile) 11a/Sim
HOLLYWOOD (bathroom cabinets) ..27d/Mi
HOLORIB (roof decking) 2c/Fe
HOLOSTUD (partition systems) 12a/Na; 12c/Nat
HOMASOTE (building products) 10a/Ho
HOMELIFTS (home elevators) 24a/Sh
HOMEMAKER (sinks) 27a/Cr
HONEYLITE (luminous ceiling panels).33a/He
HONEYWELL (alarm systems, panel-board controls) 34b/Mi
HONEYWELL (panelboard controls) ..31i/Mi
HOOSIER (fire extinguishers) 30f/EL
HOPKINS (combination windows) 17b/Ho
HORIFOLD (bi-folding doors) 16h/Se
HORIZON (wall systems) 22a/Hau
HORNOLITH (hardeners) 9/Ho
HORNSTONE (hardeners) 9/Ho
HOT-SERVE (food warming cabinets).26d/Foo
HOTEL/MOTEL MASTER (communicating systems) 34b/Mi
HOTKOTE (electrical metallic tubing) 32b/CL
HOT'N'COLD (water fountains) 30d/Eb
HOTPOINT (kitchen, laundry appliances) 25a/Hot
HOTPOINT CUSTOMLINE (kitchen centers) 25a/Hot
HOUSEMART (wood doors) 16c/Ro
HOUZE (glass) 7a/Ho
HOZEGARD (fire hose cabinets, reels and connections) 30f/AL
HUB CITY (shade cloth) 19c/Ri
HUBBELL (wiring devices) 32b/Hu
HUBBELLITE (terrazzo cement) 13h/Hu
HUBBELLOCK (connectors) 32b/Hu
HUETEX (spandrel and pattern glass) 3e/Ame; 7a/Am
HUEWHITE (glare reducing glass) 7a/Am
HUMID-I-MAKER (humidifiers) 31i/Ar
HUMMER (partition systems).12c/Be; 12c/Bes
HUMPHREY (gas unit heaters).....31a/Ar
HUNTINGTON (floor wax, finish) ..13m/Hu
HURUNDUM (hardeners) 9/Tru
HUSH CLIP (partition systems) 12a/Pe
HUSH-TONE (ceiling tile) 10a/Ce
HUSH-TONE (insulating coating) 13h/Pr
HYDAPIPE (showers) 27b/Sy
HYDRATITE (water repellent) 9/Ho
HYDRO-BAR (flashing) 9/Mu
HYDRO-CHECK (water-repellent coating) 15/Nat
HYDRO-DENZ (accelerators) 9/We
HYDRO-FLO (heating, cooling systems) 31i/Be
HYDRO-GLIDE (folding bleachers)....23J/Ba
HYDRO-MAGIC (door operators) 18e/Sta
HYDRO-T-METAL (zinc alloy sheet metal) 6b/Hy
HYDROSHIELD (waterproofing admixture) 9/Tre

trade names

HYDRO-TWIN (water heaters) 30c/Vi
HYDROCEL (integral water-repellents)...9/La
HYDROCIDE (masonry treatment) 9/So
HYDROFOLD (folding bleachers) 23J/Ba
HYDROGUARD (shower regulators) ..27b/Po
HYDROLIFT (folding basketball backstops) 23J/Ba
HYDROMETALS (zinc alloy sheet metal) 6b/Hy
HYDROMENT (floor treatments) 9/Up
HYDROMENT (joint fillers, ceramic tile grout) 13c/Up
HYDRONON (foundation coatings) 8a/Ba; 9/Ba
HYDROPAKE (masonry coatings) 9/Up
HYDROTHERM (gas hot water heating boilers) 31g/Hy
HYLITE (glass) 7a/Mi
HYLOPLATE (chalkboards) 23e/We
HYLOPREST (chalkboards) 23e/We

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I-BEAM (flush doors) 16c/Fa
ICL (floor finishing, maintenance products) 13m/In
ICEMAGIC (ice cube maker) 25a/Wh
IDEAL (conveyors, sterilizers, warming cabinets) 26d/Sw
IDEAL (wire connectors) 32b/Id
IDOR (aluminum sliding glass doors) 16d/Ado
ILG (ventilating equipment) 31e/IL
I-LINE (roof fans) 20c/AL
IPC (incinerators) 28a/In
IGAS (joint sealers) 9/Si
ILE-LITE (reflectors) 33a/Mu
IMPENTRA (screens) 16d/Su
IMPERIAL (air conditioners) 31a/Ai
IMPERIAL (sliding glass doors) 16d/Su
IMPERIAL (bathroom cabinets) 27d/Mi
IMPERIAL (display cases) 23e/Po
IMPERIAL (folding doors) 16e/Ne; 16e/St
IMPERIAL (freezers, ranges) 25a/Fr
IMPERIAL (furnaces) 31a/Gen
IMPERIAL (lighting fixtures) 33a/MiL
IMPERIAL (lock escutcheons) 18e/Sc
IMPERIAL (overhead doors) 16i/At
IMPERIAL (paint) 15/Un
IMPERIAL (partitions, walls) 22a/Jo
IMPERIAL VENETIAN (bathroom cabinets) 27d/Co
IMPERVITEX (waterproofing membrane) 8a/Ch
IMPERVO (paints, enamel) 15/Moo
IN-A-GROUP (showers) 27a/Br
IN-A-WALL (classroom wardrobes)....23d/Ri
IN-A-WALL (folding tables, benches).23i/Sc
IN-A-WALL (incinerators) 28a/In
IN-DOR-SEAL (weatherstripping) 19b/Ch
IN-SINK-ERATOR (garbage disposers) 25a/In
INADOR (door checks, closers).....18e/No
INCH-MARKED (conduit) 32b/Re
INCH-MARKED (electrical tubing) 2f/Re
INCINERETTE (incinerators) 28a/Am
INCLIN-ATOR (elevators) 24a/In
INDEECO (electric duct/space heaters) 31h/In
INDESTRUCT (wall fountains) 30d/Fi
INDURITE (hardeners) 9/Ce
INDUSTREX (pattern glass) 7a/Am
INDUSTRI-BOOTH (telephone booths) 34a/Su
INDUSTRIAL (lighting fixtures) 33a/MiL
INDUSTRIALIST (lighting fixtures) ...33a/Cu
INFAL (cork insulation) 10b/Re
INFRABLOCK (heat blocking ingredient) 7d/Ba
ING-RICH (porcelain enamel panels) 3c/Ing
INNER-FIN (condensers, cooling coils, water chillers) 31a/Du
INS-LITE (insulating board) ..2i/Ins; 10a/Ins
INSALUM (roof renewer) 13h/Pr
INSIDLINE (internal pipe insulation).10c/BaL
INSTAPAK (inverter power unit) 32c/On
INSTRUCTOR (lighting fixtures) 33a/Mi
INSUL-COUSTIC (insulating roof tile).2d/Fe
INSUL-FIL (insulation) 10a/Mir
INSULCAP (insulation coating) 15/GLi
INSULCOLOR (insulation finish) 10b/Ar
INSULCORE (door panels) 16e/CL
INSULITE (building insulation) 2i/Ins; 10a/Ins
INSULPRENE TWIST-LOCK (connectors) 32b/Hu
INSULROCK (roof decking) 2d/FLi
INT-DFPA (plywood) 5b/Do
INTEGRALOCK (locks) 18e/Sa
INTEGRO (treads) 13g/In
INTER-LOK (door frames) 16b/Amw
INTER-LOK (wall coping) 29a/Sti
INTERNATIONAL (industrial, aviation doors) 16h/Int
INTERNATIONAL (revolving doors) ...16f/In
INTEX (wood stains) 15/Ame
INTRAPLAST (masonry treatment).....9/Si
INVINCIBLE (fencing) 22g/Cy
INVINCIBLE (fire hose nozzles) 30f/Mc
INVISIBLE DOR-MAN (door controls) 18e/Dor
INVIZIBLE (sash balance) 18a/Gr
IPIK (wood doors) 16c/Ip
IRON-CLAD (armored flooring) 9/Mas
IRON CLAD (floor treatment) 9/Aq
IRON FIREMAN (heating equipment)..31J/Ir
IRONBOUND (wood flooring) 13J/Ro
IRONCO (grouting compounds) 9/Aq
IRONHIDE (paint) 15/Pi
IRONITE (concrete waterproofing) 9/Wet
IRONTOX (masonry treatments) 9/To
IRVICO (gratings) 13a/Ir
ISENHOUR-TAYLOR (brick) 4f/Is
ISLAND HOOD (ventilating hoods)...31e/Br
ISO-VOL (grouting cement) 9/Tru
IVORY (finishing lime) 12e/Un

J

J-M (acoustical material) 11a/Jo
J-M (asphalt-asbestos floor tile and accessories) 13i/Joh
J-M (insulating products) 10a/Jo
J-M (partitions, walls) 22a/Jo
J-M (roofing) 8a/Jo
J-M (shingles) 8c/Jo
J-M (tile floors) 13i/Jo
J-M TRANSITOP (insulating panels) 8b/Jo
JMP (hospital, laboratory equipment) 23L/Ja
JACKSON (locks) 18e/Sa
JACKSON SYSTEM (ceiling fasteners) 11b/Ha
JAL-O-VENT (louver jalousies) 17a/Sup
JAMESTOWNER (cabinet doors) 16c/Ja
JAMISON (sound reduction doors)...16m/Ja
JAMOLITE (plastic freezer doors)....23c/Ja
JANITOR (service sinks) 27a/Bri
JANITROL (heating and cooling equipment) 31b/Ja
JAPALAC (enamel) 15/GLi
JEFFERSON (locks) 18e/Sa
JENN-AIR (roof ventilators) 20c/Je
JENNITE (wood fillers) 13J/Je
JENNITE J-16 (surface sealers) 9/Ma
JET-ACOUSTIC (acoustic insulation)..10a/Ai
JET-FLO (range hood-fans) 25a/Nu
JET-SULATION (sprayed insulation) ..10a/Ai
JET-TOWER (dishwashers) 25b/Yo
JIFFY-JOIN (curtain hardware) 22c/Ji
JOANNA (shade cloth) 19c/Jo
JOANNA (vinyl wall fabrics) 13k/Jo
JOHNSON (lavatories) 27a/Bri
JOHNSONITE (rubber nosings, treads, tile guards, bases and edgings) 13i/Jon
JOISTILE (tile for joists) 4f/EL
JORD-O-MATIC (refrigerator blower coil) 26a/Jo
JUBILEE (tile flooring) 13i/Mo
JUMBO (window hardware) 18b/Wh
JUMBODUCT (underfloor raceways) ..32b/Na
JUNE-AIRE (air conditioners, furnaces, unit heaters) 31b/Am
JUNIOR (sliding glass doors) 16d/Su
JUPITOR (drinking fountains) 27a/Bri
JUST LINE (sink tops).....23L/Ju; 25b/Ju

k

K&M (asbestos-cement pipe, sheets, shingles, etc) 8c/Ke
K-LOUVER (louvered awnings) 19e/Ka
K-M (adjustable wall furring anchors) 12a/Ka
KM (crematories, destructors, incinerators) 28e/Ke
KM (fume exhaust systems) 31e/Ke
KMP (gates, partitions) 22f/Ke
KM TIDY MANN (incinerators) 28e/Ke
KSC (mats, matting) 13i/Ko
K-V (cabinet hardware) 18g/Kn
KAISERHOF (sliding glass doors) 16d/Ka
KALISTRON (plastic sheeting) 13k/Un
KALISTRON (vinyl material) 5b/Un
KALITEX (plastic sheeting) 13k/Un
KALKTITE (sealing, caulking compounds) 3f/Pre
KALMAN (concrete flooring) 13h/Ka
KALSI-KOTER (paint) 15/Nat
KALWALL (plastic building panels) ...3e/Ka
KALWALL (plastic skylights) 20b/Ka
KALWOOD (moldings) 14a/Pa
KAMKLAMP (fuseholders) 32a/Ad
KANE QUALITY (screens) 19a/Kan
KAPCORK (sealing, caulking compounds) 3f/Pre
KARIBE (carpets and rugs) 13L/Du
KARLSONITE (water conditioner) 30b/St
KARNAK (asphalt) 9/Le
KARRI-MORE (square columns) 2f/ShL
KATOLIGHT (stand-by generators) ...32c/Ka
KAUKIT (caulking compound) 9/So
KAUSTINE (sewage disposal equipment) 30h/Ka
KAWANEE (steel boilers) 31a/Ame
KAYLO (fire door cores) 16c/Bou
KAYLO (pipe insulation) 10c/Ow
KEFLEX (expansion joints) 29a/Ke
KEFLEX-KETROL (expansion joints) 29a/Ke
KEFLEX-MAVE (pipe guides) 29a/Ke
KEM-GLO (paint products) 15/Sh
KEMOX (iron compounds) 9/Si
KEMP (ceiling fastening systems) 11a/Ac
KEMPTHORNE (dust control process).11a/Sp
KEN-CLEANER (floor cleaner) 13i/Ke
KENBASE (asphalt cove base) 13i/Ke
KENCORK (cork floor, wall tile) 13i/Ke

KENCOVE (wall base) 13i/Ke
KENFAST (adhesives) 13i/Ke
KENFLEX (vinly floor tile) 13i/Ke
KENGRADE (adhesives) 13i/Ke
KENGRIP (floor wax) 13i/Ke
KENNA-RAMA (folding doors and hardware) 18d/Ke
KENNAFRAME (gliding door framing) 18d/Ke
KENNAGUIDE (wardrobe headers) ...18d/Ke
KENNALOCK (gliding door locks)....18d/Ke
KENNALOY (sound-proof, corrosion resistant steel) 18d/Ke
KENNATRACK (gliding door hardware) 18d/Ke
KENPASTE (adhesives) 13i/Ke
KENPATCH (patching) 13i/Ke
KENSERTS (tile inserts) 13i/Ke
KENSINGTON (lighting fixtures) 33a/Wh
KENSWEEP (cleaners) 13i/Ke
KENT (water closets) 27a/Ri
KENTILE (floor tile) 13i/Ke
KENWAX (floor wax) 13i/Ke
KENWOOD (locksets, lever handles) 18e/Sc
KERF (ceiling suspension systems) 11b/Do
KERFED (acoustical tile) 11b/Do
KERNER (incinerators) 28a/Mo
KERNERATOR (incinerators) 28a/Mo
KETTLE KADDY (pot filling, rinsing)...27b/Ta
KEY (shower doors and enclosures, tub enclosures) 27c/Ke
KEY-MUNICATOR (loudspeaking intercom) 34a/Str
KEY-SEAL (joint sealers) 4J/Wi
KEY-Z-BEAD (masonry reinforcing) 4h/Ke
KEYBEAD (masonry reinforcing) 4h/Ke
KEYCORNER (masonry reinforcing) 4h/Ke; 12a/Ke
KEYDECK (roofing reinforcing).2d/Ke; 12a/Ke
KEYLESS (automatic keyless lock boxes) 23b/Ke
KEYLINE (partitions) 22a/Ca
KEYMESH (masonry reinforcing) 4h/Ke; 12a/Ke
KEYSTONE (masonry reinforcing) 4h/Ke; 12a/Ke
KEYSTONE (shower doors and enclosures, tub enclosures) 27c/Ke
KEYSTRIP (masonry reinforcing) 12a/Ke
KEYWALL (masonry reinforcing) 4h/Ke; 12a/Ke
KEYWELD (masonry reinforcing) 4h/Ke
KID-PROOF (locks) 18/Sa
KIFS (mechanical bond) 2i/Ho
KIFS (rubber inserts) 2h/Bu
KIK-STEP (step ladder) 23i/Cr
KILMER (lavatories) 27a/Bri
KILNOISE (acoustic plaster) 11a/Tig
KINDORF (steel conduit clamps) 32b/St
KING (water closets) 27a/Bri
KING-TAB (asphalt shingles) 8c/Bi
KINNEAR (rolling doors) 16g/Ki
KITCHEN MAID (kitchen cabinets) ...25b/Ki
KITCHEN PRIDE (sinks) 27a/Cr
KITCHEN QUEEN (sinks) 27a/Cr
KITCHENAID (dishwashers) 26b/Ho
KLAMPSWITCHFUZ (switchboards) ..32a/Ad
KLEENEX (facial tissues, dispensers)..27e/Ki
KLEERLITE (service station doors) ...16i/Win
KLEFTONE (acoustical ceiling panels).10a/Jo
KLEFTONE (wood fiber acoustical panels) 11a/Jo
KLERESEAL (sealers) 3f/Pe
KLIMATON (windows) 17a/Tr
KLIP-LOCK (subflooring system) 13J/KL
KMP (gates, partitions) 22f/Ke
KNEE-WALL (jalousie porch enclosures) 17d/Ai
KNIGHTFRAMES (name plate frames).6f/Kni
KNIGHTPLATES (name plates).....6f/Kni
KNO-DRAFT (air diffusers) 31f/Co
KNOLLWOOD (locksets) 18e/Co
KOLDBOARD (insulating board) 10c/BaL
KOLDBOND (aluminum ceiling louvers) 33a/Co
KOLL'S PATENT (wood columns) 5c/Ha
KOLOR-BRITE (enamels) 15/Ma
KOLORPINS (nails) 18a/In
KOMPO-CITE (chalkboards) 23e/Lo
KOMPO-LUX (chalkboards) 23e/Lo
KONDUCTOKURE (curing compounds)..9/Mas
KONDUCTOWAX (floor wax) 9/Mas
KONIK (steel fencing) 22g/Con
KOOL-DOME (plastic dome skylights) 20a/Van
KOOL 'KLOSET (cooling cabinets) 26a/La
KOOLFRAME (screen frames) 19e/Re
KOOLSHADE (louvered screens) 19e/Re
KOPPERS (build-up roofing) 8a/Ko
KOPPERS (treated lumber) ...5d/Ko; 5d/Kop
KORELOCK (hollow core panels) 14b/Ma
KORK-PAK (closure strips) 2i/Se
KORINA (plywood panels) 5b/Un
KORKOLOR (asphalt, vinyl-asbestos floor tile) 13i/FL
KORKPHALT (asphalt) 9/Le
KORKRETE (concrete primers) 9/Le
KORKSEAL (asphalt) 9/Le
KOROK (chalkboards) 23e/Ko
KOROSEAL (vinyl asbestos tile) 13i/Go
KOROSEAL (vinyl coverings) 13k/Go
KORUNDUM (abrasive grits) 9/Co
KOTEX (sanitary napkins, dispensers)..27e/Ki
KOUNTERSUNK (wood blocks) 13J/Je
KOVEN (water heaters, boilers) 31g/Ko
KRALOY (plastic pipe) 29a/Kr
KREOLITE (flooring) 13J/Je
KRODEPROOF (water-repellent coatings) 9/Le
KROMIK (paint products) 15/Sh
KUBE KING (ice machines) 26a/La
KUHLCOTE (masonry treatment) 9/Ku
KUHLSEAL (masonry treatment) 9/Ku
KURASEAL (curing compound) 9/Aq
KURE-N-SEAL (floor hardeners and sealers) 9/So
KUREZ (curing compound) 9/Eu
KURLICUE (nails) 18a/In
KUROKROME (curing compounds) 9/Mas
KWIK-KLIP (batten strips) 22a/Pe
KWIK-SEAL (waterstops) 2i/Gas

L

L&B (greenhouses) 2J/Lo
LCN (door closers) 18e/La
L-M (lighting equipment) 33c/Li
L-O-F (glass) 7a/Li
L-O-F (glass doors) 16d/Lib
LNP (panelboards) 32a/Ad
LA CROSSE (cooling equipment).....26a/La
LA-X (cooling equipment) 26a/La
LAB-FLO (laboratory service fittings)..27b/Ta
LABOR-SAVER (closet fronts) 23n/Pr
LACLEDE (joists, reinforcing) 2f/La
LACROSSE (water closets) 27a/Ri
LACTIC (floor topping, grouting) 9/La
LAGSTUD (anchors) 2i/Ri
LAHOMA (bathtubs) 27a/Cr
LAL-BRO (concrete filled columns) 2g/LaL
LAMBCO (water-repellent compounds)...9/La
LAMBRITE (colored paste wax) 9/La
LAMELLA (roof system) 2e/La
LAMINALL (laminated panels) 3c/Er
LANCER (overhead doors) 16i/At
LANDON SKIM-FILTER (water skimmers and filters) 23k/La
LANIER (lavatories) 27a/Bri
LAPEER (lavatories) 27a/Ri
LAPIDOLITH (concrete hardener) 9/So
LARCHMONT (water closets) 27a/Ri
LARCO (water coolers) 30d/Ce
LARCO KOOL-PAC (water coolers) ..30d/Ce
LARSON (waterproofing) 9/Br
LASALLE (bathtubs) 27a/Bri
LASALLE (lighting fixtures) 33a/Wh
LASCOLITE (fiber glass building panels) 7d/Ly
LASCOPIPE (plastic pipe and fittings) 7d/Ly
LASTIK (concrete slabs) 2d/La
LASTILE (roofing sheet) 8a/Ca
LASTINCOTE (floor sealers) 9/Wes
LASTO-MERIC (adhesives, sealers)....3f/Tr
LATCH-TRACK (thresholds) 18f/Vo
LATHERFLO (soap dispensers) 27e/Mo
LATHURN (soap dispensers) 27d/Ar
LATHURSHELF (shelf and soap dispensers) 27e/Am
LATHURVALV (soap dispensers, valves) 27e/Am
LAUNDRAY (laundry sinks) 27a/Ri
LAUNDRITE (clothes washers) 27g/Tr
LAVAX (enamel) 15/Pi
LAWSON (medicine cabinets, metal bathroom accessories) 27d/La
LAWTON (urinals) 27a/Bri
LAYTITE (wood flooring) 13J/Co
LEAF-LITE (luminous ceilings) 33a/Lum
LEATHERWOOD (hardboard panels) 8b/Mas; 14d/Mas
LEBANEX (plywood panels) 5b/Un
LECTRO-LIFT (residential elevators)..24a/Se
LEES (carpets) 13L/Le
LEKOLITE (lighting fixtures) 33a/Ce
LEKTRO-TEKTOR (corrosion preventive) 31a/Mar
LELAND (lavatories) 27a/Ri
LEMLAR (sun control jalousies) 19e/Le
LENCOR (lavatories) 27a/Ri
LENSLITE (lighting glass) 33b/Co
LEPTYNE (paint thinner) 15/Pi
LEROY (roof ventilators) 20c/Hi
LEV-R-LATCH (door latches) 18e/So
LEVELATOR (freight lifts) 24g/Ro
LEVELCOTE (floor leveler) 13h/Ac
LEVELKOTE (roof coatings) 8a/FL
LEVELEZE (drains) 30g/Jo
LEVELIFT (freight lifts) 24a/Es
LEVELSEAL (sash locks, lifts) 18a/Gr
LEVOLOR (venetian blinds) 19d/Lo
LEX (liquid floor dressing) 9/Up
LEXINGTON (lighting fixtures) 33a/MiL
LEXSUCO (roofing products) 8a/Le
LIBERATOR (ranges) 25a/Gen
LIBERTY (roof ventilators) 20c/Pe
LIBRARY BUREAU (library furniture) ...23f/Re
LIF-T-LOX (window balance) 17c/Ro
LIFE-TIME (dry beverage cooler) 26a/Pu
LIFEBOND (floating floors) 13J/Ho
LIFETIME (aluminum building products) 3a/Re
LIFETIME (aluminum ceiling panels)..11a/Re
LIFETIME (aluminum roof deck) 8b/Ree
LIFETIME (aluminum roofing, siding).8b/Ren
LIFETIME (clay tile) 13c/Na
LIFETIME (corrugated roofing, siding) 8b/Rey; 8b/Ren

trade names

LIFETIME (penthouses for ventilators) 20d/Ame
LIFETIME (ribbed siding) 8b/Reo
LIFETIME (wood fire doors) 16c/Dus
LIFT-TABLE (hydraulic tables) 24a/GL
LIGHT SAVER (controlled lighting) ..34b/Mi
LIGHT WARDEN (emergency lighting units) 33a/EL
LIGHTNING LIFT (door operators) 16i/At
LIGHTOLIER (lighting fixtures) 33a/Lia
LIGHTSTEEL (structural sections) 2f/Pe; 12a/Pe
LIGNOPHOL (wood treatment, sealer, preservative, finish) 9/So
LIKWIDURN (soap dispensers) 27d/Ar
LIKWIDVALV (soap dispensers, valves) 27e/Am
LIMINETTE (fixtures) 33a/Ne
LIMPET (acoustical material, insulation) 10a/Ke
LINABESTOS (asbestos sheets) 8c/Ke
LINCOLN (food storing, conveying, serving units; hydraulic lifts) 26d/Li
LINCOLN (locks) 18e/Sa
LINDSAY (lavatories) 27a/Bri
LINDSAY (water softeners) 30b/Li
LINE-AIR (air diffusers) 31f/Uni
LINEFLOW (fan units) 31a/Am; 31a/Ame
LINEX (pattern glass) 7a/Am
LINGO (flagpoles) 6g/Ac
LINK (bonding agent) 9/Am
LINKPLATE (key link plates) 22a/Vi
LINOTILE (floor covering) 13i/Arm
LINOVECTOR (convectors and covers).31h/Vu
LINOVENTILATOR (heating-ventilating systems) 31h/Vu
LIPSTIK (microphones) 34a/AL
LIQUA-SHINE (floor wax) 13m/Hu
LIQUI-STEEL (plastic coating) 13h/Pr
LIQUIDFLO (soap dispensers) 27e/Mo
LITCHFIELD (locks) 18e/Sa
LITE-A-VENT (ventilators) 6e/Fi
LITE-BLOX (troffers) 33a/Gu
LITE-LIFT (unique balanced chalkboards) 23e/Un
LITE-MIX (plaster) 12c/Bes
LITE-O-LET (lighting fixtures) 33a/Wh
LITE-PANL (translucent building panels) 2J/Bu
LITECONTROL (lighting fixtures) 33a/Lie
LITECRAFT (lighting fixtures) 33a/Lin
LITEGREEN (chalkboards) 23e/Be
LITESITE (chalkboards) 23e/We
LITESTRIP (shade hardware) 19c/Ri
LITETRIM (chalkboard mouldings) ...23e/We
LITEWATE (conveyors) 24d/St
LLENROC (rolling steel fire doors) ...16g/Cor
LO BOY (heaters) 31b/Cam
LO-LIMIT (heating controls) 31h/No
LO-NOIZ-LEVEL (ventilators) 20c/AL
LO-TEMP (freezer doors and gaskets) 23c/Ja
LO-TRAN (glass) 7a/Ho
LOCK-JOINT (wood columns) 5c/Ha
LOCK'N ROLL (latches) 18e/Lo
LOCK-ON (base and clips) 12a/Bo
LOCK-RIB (waterstops) 9/Lex
LOCKERETTE (lockers) 23d/Vo
LOCKEROBE (lockers) 23d/Med
LOCKWOOD (locks, locksets) 18e/Lo
LOK-TABS (asphalt shingles) 8c/Ru
LOK-TITE (door hinges) 16b/Pi
LOK-TEX (venetian blind tape) 19d/Ea
LOK'D BAR (projected windows) 17b/Ho
LOKSAFE (kitchen cabinets) 25b/Ki
LO-LINE (self-edged counter tops) ..25b/Yo
LONDO (lavatories) 27a/Ri
LONG-LIFE (asphalt roofing products)..8a/Lo
LONG-SLOT (concrete inserts) 2i/Ho
LONGSPAN (open web steel joists) 2f/St
LORAIN (lavatories) 27a/Ri
LOSEAT (bathtubs) 27a/Ri
LOSET (boilers) 31g/Pa
LOUVENT (roof ventilators) 20c/Oc
LOUVER-FOLD (folding louver doors).16e/Co
LOUVER-VENT (skylight louvers) 20a/Van
LOUVER LINE (lighting fixtures) 33a/Pr
LOUVER-LITE (louvers, solar canopies, sun control devices, vent housings, jalousies) 19e/Lo; 20d/Lo
LOUVERALL (packaged louvered ceilings) 33a/Co
LOUVERDRAPE (vertical blinds) 19d/Ve
LOUVERLUX (louver panels) 33a/Di
LOUVREX (glass door louvers) 22a/Vi
LOUVREX (pattern glass) 7a/Am
LOW BOY (radiant heater) 31h/Ber
LOW-VANE (louvers) 19e/Lo
LOWELL (baffles, enclosures) 34a/Lo
LOWELL (lavatories) 27a/Bri
LOWELL (lighting fixtures) 33a/Wh
LOXIKORK (tackboards) 23e/Lo
LOXIT (bulletin boards, chalkboards)..23e/Lo
LOXIT (floor laying systems) 13J/Lo
LOXIT VICTORY (bulletin boards, display cases, chalkboards) 23e/Lo
LOXIT WONDER (adjustable shelving system) 23e/Lo
LOXITEX (tackboards) 23e/Lo
LOXON (paint, coatings) 15/Sh
LUMASKIN (reflective insulation) 8h/Lu
LUMI-PLASTIC (ceiling diffusers) ..33a/Lum
LUMI-VEE (steel V-moulding) 33a/Sy
LUMINAIR (lighting fixtures) 33a/En
LUMINALL (paint) 15/Na
LUMINETTE (lighting fixtures) 33a/Ne
LUMINEX (pattern glass) 7a/Am
LUMIPLEX (plastic diffusers) 33a/Lin
LUMISHADE (marquees) 19e/Ma
LUMNOX (abrasive aggregates) 9/Ce
LUPTON (air conditioning systems) ...31a/FL
LUPTON (aluminum windows) 17a/FLy
LUPTON (curtain walls) 3a/Fly
LUPTON (doors, windows) 17b/FL
LURON (soap dispensers, soap).....27e/Ty
LUSTERTONE (sinks) 25b/ELk
LUSTRAL (paint products) 15/Sh
LUSTRACRYSTAL (sheet glass) 7a/Am
LUSTRAGRAM (glare reducing glass) ..7a/Am
LUSTRAVIEW (mirrors) 27d/Mi
LUSTRAWHITE (glass) 7a/Am
LUSTRE-TRIM (custom counter tops)..25b/Yo
LUSTREWOOD (hardboard panels) 8b/Ma; 8b/Mas; 14d/Mas
LUVEX (lighting fixtures) 33a/Da
LUVR-LUMINOUS (luminous ceilings) 33a/Lum
LUXAIRE (outdoor fluorescent lighting) 33c/Pf
LUXLITE (glass) 7a/Mi
LUXSTAR (cement paint) 9/Ce
LYNN (directories, letters and signs).23a/Ly
LYON (steel lockers) 23d/Ly
LYRIC (locksets) 18e/Be
LYT-ALL (interior paint) 15/Pr
LYTELINE (lighting fixtures) 33a/Lia

m

M-DECK (long-span structural roof decks) 2c/Ma
M-FLOOR (floor decking) 2b/Mah
M & E (fire doors) 16h/Me
M-W (lighting fixtures) 33a/Mi
MA (adhesives, coatings, insulation, paints) 10a/Mir
MA (adhesives) 1a/Mir; 13c/Mir
MFMA (wood flooring) 13J/Ma
MG (glass) 7a/Mi
MRDTI (metal roof deck technical institute) 2c/Me
MS (locks, bolts) 18e/Ad
MADISON (locks) 18e/Sa
MAESTRO (paint) 15/Pi
MAGI-COTE (door treatments) 16i/Cra
MAGIC CARPET (door operators) 18e/Sta
MAGIC CIRCLE (water heaters) 25a/Hot
MAGIC DOOR (door operators) 18e/Sta
MAGIC-FOLD (folding doors) 16e/CL
MAGIC MOLE (door operators) 18e/Sta
MAGIC STAR (door operators) 18e/Sta
MAGICLEAN (glass block finish) 7b/Ow
MAGNA-LUMINUS (luminous ceilings) 33a/Lum
MAGNA-TITE (magnetic cabinet catch) 18g/En
MAGNABOND (cement bonding agent) 13i/Cr
MAGNALOCK (locks) 18e/Sa
MAGNE-GRIP (door operator) 24c/Se
MAG-PLY (concrete forms) 2i/Sy
MAIN-LINER (lighting fixtures) 33a/We
MAINLINER (office desks) 23o/Ar
MAINLINER (partitions) 22a/Mi
MAINTAINEERS (trained floor experts) 13m/Hi
MAKE-SET (accelerators) 9/La
MANHATTAN (lock escutcheons) 18e/Sc
MANHATTANITE (terrazzo dividers).13g/Ma
MANIPULATION-PROOF (locks) 18f/Sa
MANU-TOWL (paper towels, holders) 27e/Cr
MAR-FREE (cabinet door pulls) 27c/GL
MAR-NOT (paint products) 15/Sh
MARACON (water-reducing admixture) 9/Mar
MARACONCRETE (cement) 9/Mar
MARB-L-COTE (paint, cement, tape) ..15/Na
MARBELETTE (flooring materials) 13h/Ma
MARBELLA VENEZIA (marble chip wall coverings) 13c/Mu
MARBLMETAL (toilet partitions) 22b/Mi
MARCIA (lavatories) 27a/Cr
MARCOLITE (scuttles, skylights) 20a/Ma
MARIETTA MARZIAC (concrete precast building panels) 3e/Mar
MARINE CEMENT (water-repellent).....9/To
MARINE SEALER (sealer) 15/Wa
MARINITE (panels) 22a/Jo
MARK-FORE (pressure cookers) 26c/Ma
MARK-2 (shelving) 23c/Ma
MARKETTE (pressure cookers) 26c/Ma
MARKWA (marble tile) 13f/Ve
MARLEY (cooling towers) 30b/Ma
MARLITE (panels) 14b/Ma
MARS (drinking fountains) 27a/Bri
MARSH (packages trussed rafters) 2e/Ma
MARTRACK (ceiling, floor runners) ...12a/In
MARVEL-LIFT (garage doors) 16i/Cra
MARVEL-LITE (garage doors) 16i/Cra
MARVEL-LUCENT (garage doors) 16i/Cra
MASON (treads floor plates, nosings, etc.) 13b/Ame
MASONCO (safety treads) 13b/Ame
MASONITE (concrete forms) 2i/Ma
MASONITE (hardboard panels)...8b/Ma; 8b/Mas; 14b/Ma; 14d/Mas

MASTER (aluminum windows) 17a/FLy
MASTER (dishwashers) 26b/In
MASTER (furnaces) 31a/Ame
MASTER BUILDERS (concrete products).9/Mas
MASTER-BUILT (asphalt shingles) 8c/Bi
MASTER-FLUSH (wood doors) 16c/Ha
MASTER MIX (hardeners) 9/Mas
MASTERIB (rib lath) 12a/Pe
MASTERKURE (curing compounds) 9/Mas
MASTERPLATE (flooring aggregates) ..9/Mas
MASTERQUICK (resurfacers) 9/Mas
MASTIPAVE (bituminous flooring).....13i/Pa
MATH-MASTER (chalkboard graph systems) 23e/CL
MATICO (floor tile) 13i/Ma
MATICORK (asphalt, vinyl-asbestos floor tile) 13i/Ma
MATICOVE (cove base) 13i/Ma
MATTE BEADEX (pattern glass) 7a/Am
MAXIM-AIR (detention windows) 17b/Tr
MAYSTEEL (hospital cabinets and casework) 23L/May
McINTIRE (automatic shutter-sliding pole unit) 30f/Mc
McKEE (overhead doors, operators) 16i/Mc
McKINLEY (abrasive castings) 13b/Mc
McKINLEY (construction castings).....6i/Mc
McKINLEY (grilles, ventilators) 20d/Mc
McKINLEY (locks) 18e/Sa
McKINLEY (ornamental designs).....6e/Mc
McKINLEY (sun control and metal products) 19e/Mc
McPHILBEN (lighting fixtures) 33a/Mc
McSHANE (bells and chimes) 23h/Mc
MECCO (rolling doors) 16g/Mo
MEDALLION (bathtubs) 27a/Bri
MEDALLION (desks) 22a/Co
MEDALLION (hollow metal doors)...16b/Ce
MEDART (gym seats, backstops).....23J/Me
MEDCO (construction specialties) 2i/Me
MEDCO-WALL (masonry wall reinforcing) 2i/Me; 4h/Me
MEDI-PREP (medicine stations) 23L/Ma
MEDLEY (tile) 13c/Mos
MELLOTONE (tile) 13c/Mos
MELODY (locksets) 18e/Co
MELT-O-MAT (snow melting mats)....13i/Ar
MEND-A-FLOOR (cement) 13h/Ac
MENGEL "700" (doors) 16c/Me
MERCHANT (lighting fixtures) 33a/MiL
MERCURY (drinking fountains) 27a/Bri
MERCURY (locks) 18e/Sc
MEREDITH (lavatories) 27a/Bri
MERRY-GO-ROUND (kitchen cabinets) 23i/Ge; 25b/Gev
MESHTEX (diamond lath) 12a/Pe
MET-CRO (bridging) 2i/Ho
MET-L-VIN (vinyl-metal laminate) ...14a/Me
MET-L-WOOD (metal faced plywood).14a/Me
METAL-ROK (metallic pore sealer)....13h/Pr
METALASTIC (paint products) 15/Sh
METALEAF (paint) 15/Pi
METALICRON (floor treatments) 9/Mas
METALOID (masonry treatments) 9/Co
METALOX (admixtures) 9/Ce
METALSITE (chalkboards) 23e/We
METALSIUM (metallic hardeners) 9/Ce
METEOR (drinking fountains) 27a/Bri
METL-CAP (vent pipe fittings) 31f/Har
METLVENT (vent pipe and fittings)..31f/Har
METLWAL, JR. (partitions) 22a/Vi
METPAR (metal partitions) 22b/Me
METRO-MIX (poured-in-place gypsum) 2d/Be
METRODECK (floor, roof deck) 2c/Go
MI-T-LITE (service station lighting) ..33a/Co
MIA (marble) 13f/Ma
MIAMI (aluminum windows) 17a/Mi
MIAMI (autopsy tables) 23L/Ma
MIAMI (sinks) 27a/Bri
MIAMI-CAREY (bathroom cabinets, acessories) 27d/Mi
MIAMI CAREY (steel access doors)....16J/Mi
MIAMI-CAREY (ventilators, fans) 31e/Mi
MICRO (elevator controls) 24a/Ot
MICRO-FLOW (valves) 29a/Kr
MICRO-METER (valves) 29a/Kr
MICROFIL (water-repellent coating)..15/Nat
MICROLITE (blanket insulation).....10c/La
MICROLITE (fiber glass blankets) 11a/Jo
MICROMIST (burners) 31J/Ir
MICROROLD (stainless steel) 6c/Wa
MICROTEX (duct liners) 10c/La
MIDAL (lavatories) 27a/Ri
MIDGET (louvers) 2i/Ho
MIDGET (slat closures) 16g/WiL
MIDGET (steel enclosures) 16g/WiL
MIDGET (towel cabinets) 27e/St
MIDLINER (towel dispensers) 27e/St
MIKADO (incandescent lighting fixture) 33a/Pi
MILCOR (acoustical roof deck) 11a/In
MILCOR (lath) 12a/In
MILCOR (roof decks) 2c/InL
MILCOR (steel access doors) 16J/In
MILCOR (steel base) 2a/In
MILCOR (steel floor panels) 2b/In
MILCOR (wall panels) 3b/In
MILLBROCK (locks) 18e/Sa
MILLER (lighting fixtures) 33a/MiL
MILMARK (adhesives, waxes) 13i/Hak
MILNOR (washers, extractors) 27g/Pe
MILTON (lavatories) 27a/Bri
MILTROL (washer timer) 27g/Pe
MIN-X (expanded metal) 6e/Un
MINABORD (acoustical materials) ...11a/Ar
MINALITH (treated lumber) 5d/Ko
MINATONE (acoustical materials) ...11a/Ar
MINATONE (fireproof formboard) 2d/Ar
MINUTE MAN (extractors, tumblers).27g/Tr
MINWAX (masonry treatments) 9/Mi
MINWAX (wood finishes) 15/Min
MIRACLE (adhesives) 10a/Mir; 13c/Mir
MIRACLE (chalkboard-tackboard setting system) 23e/Lo
MIRACLE WEDGE (overhead doors) .16i/Ove
MIRACOIL (porcelain enamel facings) 3c/Mi; 6d/Mi
MIRADHESIVE (curtain wall adhesive) 3c/Mi; 6d/Mi
MIRAFLEX (flexible porcelain enameled panels) 3c/Mi; 6d/Mi
MIRAKOTE (curtain wall primer) 3c/Mi; 6d/Mi
MIRALASTIC (curtain wall caulking compounds) 3c/Mi; 6d/Mi
MIRAMASTIC (curtain wall adhesive) 3c/Mi; 6d/Mi
MIRAMOLD (aluminum mouldings) 3c/Mi; 6d/Mi
MIRASPAN (curtain wall panels).....3c/Mi
MIRAWAL (porcelain-enameled panels) 3c/Mi; 6d/Mi
MIRAWAL PORCELOX (porcelain steel chalkboards) 23e/Lo
MIROFLECTOR (reflectors) 33a/Ge
MIRRO-GLIDE (bathroom cabinets)..27d/Ha
MIRRO-SLIDE (bathroom cabinets)....27d/Ha
MIRRO-TUF (wood floor finish) 13J/Mo
MIRROPANE (mirrors) 7a/Li
MISCO (glass) 7a/Mi
MISTY-WALNUT (hardboard panels) 8b/Mas; 14d/Mas
MITCO (grating) 31f/He
MIX-EX (paint) 15/Ma
MIX-EZE (cement dispersing agent) ...13h/Pr
MIX-OR-MATCH (ceramic wall tile)..13a/CL
MIXCRETE (hardeners) 9/Pa
MIXOMETER (shower fixtures) 27b/Sp
ML LOUVRES (louvered ceiling, lighting fixtures) 33a/Ne
MO-SAI (fabricated stone) 4d/Mos
MOBIL-FIRE WALL (fire retardant partitions) 22a/Vi
MOBIL-LAB-WALL (laboratory partitions) 22a/Vi
MOBILE FOOD FILE (refrigerators) ..26a/Ko
MOBILE-MAID (dish-washer) 25a/Gen
MOBILAIRE (air conditioners).....25a/We
MOBILEX (lighting fixtures) 33a/Da
MOBILRAIL (movable rails) 22a/Vi
MOBILSCREEN (movable screens) 22a/Vi
MOBILWALL (interchangeable partitions) 22a/Vi
MOBILWALL, JR. (partitions) 22a/Vi
MODERN AIR (furnaces) 31a/Ame
MODERN-COTE (wall coverings) 13k/Ne
MODERNE (mail chutes) 23b/Cu
MODERNFOLD (doors) 16L/Ai
MODERNFOLD (folding doors) 16e/Ne; 22d/Ne
MODERNWOOD (flooring) 13J/Ci
MODU-WALL (aluminum curtain walls) 3a/ML
MODULAR (commercial cooking equipment) 26c/Hot
MODULAR MULTI-UNITS (chalkboard, corkboard, displayboard units) 23e/We
MODULAR STRIALUX (lighting fixtures) 33a/Lia
MODULITE (plastic diffusers) 33a/Lin
MODUR (fabricated stone).....4d/Mod
MODU-LUMINUS (luminous ceilings) 33a/Lum
MODULUX (vinyl diffusers) 33a/Di
MODUWALL (wall equipment) 23e/Br
MOGUL (downlights) 33a/Ra
MOHAWK (lighting fixtures) 33a/Sy
MOISTURE-MATIC (sprinkling system controls 30e/Mu
MOISTURE MINDER (dryers) 25a/Wh
MOLTEX (toilet seats) 27a/Chu
MOMENT CONTOUR (beams, girders) 2f/ShL
MON-O-MIXER (plumbing valves) 27b/Sy
MON-U-MENTAL (awning windows)..17a/Sup
MONARCH (clay tile) 13c/Mo
MONARCH (downlights) 33a/Ra
MONARCH (folding doors) 16e/St
MONARCH (house paints) 15/Ma
MONARCH WALL (porcelain enamel veneer panels) 3c/Da
MONCO (asphalt) 8a/Ca
MONITOR (lighting fixtures) 33a/Sm
MONITOR (skylights) 20a/Ma
MONO-BLOCK (block insulation) 10c/BaL
MONO-KOVER (block insulation) 10c/BaL
MONO-LASTO-MERIC (liquid sealant)..3f/Tr
MONO-VANE (pumps) 30a/Au
MONOFLO (fittings) 31i/Be
MONOLINE (single-line partition) 22a/Vi
MONOPANL (insulated wall panels) 2J/Bu; 8b/Bu

trade names

MONOPLAST (insulation finish) 10b/Ar
MONOSEAL-(glass block screen insert) 7b/Ow
MONOTUBE (light and sign poles) ...33c/Un
MONOTUBE (steel piles) 1b/Un
MONOVENT (roof ventilators) 20c/Bu
MONOXIVENT (fume exhaust systems) 31e/Ke
MONOXO-FLEX (neoprene hose adaptors) 31e/Ke
MONRO SYSTEM (waterproofing) 9/Mu
MONSANO (wood preservatives) ...5d/Mo
MONTECITO (ventilating hoods) 31e/Tr
MONTEREY (kitchens) 25b/Yo
MONTEREY (shower receptors) 27c/Fi
MONTGOMERY (elevator equipment) 24a/Mon
MONUMEN-TILT (double hung aluminum windows) 17a/FL
MOONGLOW (plastic tile) 13i/Vi
MOORE (lavatories) 27a/Bri
MOORE (paints, enamels) 15/Moo
MOORGARD (house paint).....15/Moo
MOORWHITE (paints, enamels) 15/Moo
MORFLEK (primers) 15/Moo
MORFLEX (primers) 15/Moo
MORTA-MIX (water-reducing admixture) 9/Tre
MORTAR-TITE (mortar admixtures) 9/La
MORTARON (mortars) 9/Aq
MORTASEAL (masonry lime) 4i/Un
MORTITE (concrete curings) 9/Tru
MOSAIC (tile) 13c/Mos
MOTIF'D ACOUSTONE (acoustical tile) 11a/Uni
MOTO-FOLDER (operators for bleachers) 23J/Ho
MOTORDOR (wall fans) 31e/Br
MOTORSTAIR (moving stairways) ..24a/Pee
MOTOR-VATOR (gym seat operators) 23J/Me
MOULCORK (tile flooring) 13i/Mo
MOULCOVE (cove base) 13i/Mo
MOULFLEX (tile flooring) 13i/Mo
MOULTILE (tile flooring) 13i/Mo
MOUNT AIRY (granite) 4a/No
MOVA-WALL (partitions) 22a/He
MUELLERMIST (lawn sprinkler systems) 30e/Mu
MUESSCO (pipe line strainers)....29a/Mue
MUFFLETONE (mineral ceiling panel) 11a/Ce
MULSAMASTIC (mastic flooring).....9/Tr
MULTI (lighting fixtures) 33a/Mu
MULTI-AONE (air conditioners) 31a/We
MULTI-CLEAN (floor treatments) 13m/Mu
MULTI-COIL (water heaters) 30c/Ru
MULTI-COLOR (paints) 15/Sh
MULTI FIN (water heaters) 30c/Ru
MULTI-FLEX (grilles, registers) 31f/Un
MULTI-FLOW (grilles, registers) 31f/Un
MULTI-LEAF (chalkboards) 23e/Go
MULTI-PUNCH (display boards) 23e/CL
MULTI-SHINGLE (asphalt shingles) 8a/Ba
MULTI-SLIDE (glass door units).....16d/Ar
MULTI-STOP (window shade rollers) ..19c/Jo
MULTI-THERMEX (heat exchangers)...31b/Ja
MULTI-TIER (library bookstacks) 23f/Am
MULTI-USE (easel boards) 23e/Uni
MULTI-V (folding doors) 16e/Ho
MULTI-X (folding doors) 16e/Ho
MULTI-ZONE (air conditioning) 31a/Mar
MULTITEMP (commercial, industrial gas hot water heating boilers) 31g/Hy
MULTITHERM (air conditioning units).31a/CL
MULTITROL (sprinkler system) 30e/Gr
MULTIZONE (air conditioners) 31a/Du
MUNCHHAUSEN (soundproof doors) 16m/Mu
MUNOLITHIC (cement waterproofing)..9/Mu
MUNRO SYSTEM (waterproofing) 9/Mu
MURALEX (pattern glass) 7a/Am
MURALS (decorative wall coverings).13c/Mu
MUREX (masonry cleaner) 9/Eu
MUSI-TALK (public address systems)...34a/Fa
MUSIC BY MUZAK (planned music service) 34a/Mu
MUZAK (scientifically planned background music) 34a/Mu
MYSTIC (locks) 18e/Sa

n

NCP (shingles) 8c/Jo
NAIL-DOWN (steel tile) 2f/Bet
NAIL-TITE (channel system) 11a/Na
NAILCRETE (cant strips) 8a/Ko
NAILFILL (nailing concrete) 2d/Po
NAILON (brick siding) 8f/Lu; 13c/Lu
NAIRN (floor, wall coverings) 13i/Co
NAIRON (plastic floor covering) 13i/Co
NAIRONTOP (counter, sink tops) 13i/Co
NAISCO (flagpoles) 6g/No
NASSAU LINE (bathroom accessories) 27d/Ke
NATCO (clay products) 4f/Na
NATIONAL (commercial disposers)..26b/Na
NATIONAL (garage ventilation).....31e/Na
NATIONAL (sliding door hardware) ..18d/Nat
NATURALITE (plastic skylights) 20a/Na
NAUTILUS (range hoods) 25a/MaJ
NAVAL (flush valves) 27b/SL
NEATAGEAR (remote controls for windows) 18b/Te
NEATSNAP (chalkboard trim) 23e/Ne
NELCO (x-ray protective materials)...22e/Ne
NEO-DRY (concrete floor treatments) 13m/Mu
NEO-FLECK (enamel) 15/Un
NEO-SEAL (joint sealers) 4J/Wi
NEO-SHINE (floor wax) 13m/Hu
NEOTEX (flooring) 13i/Cr
NEOTEX (matting) 13i/Ar
NERVA-KOTE (adhesive) 8g/Ru
NERVA-PLAST (setting cement) 8g/Ru
NERVASTRAL (waterproofing sheets)..8g/Ru
NERVASTRAL J. F. (joint fillers).....8g/Ru
NERVASTRAL P. E. T. (plastic film)...8g/Ru
NERVASTRAL RIGID (waterproofing sheets) 8g/Ru
NERVASTRAL SEAL-PRUF H-D (waterproofing) 8g/Ru
NERVATAPE (plastic tape) 8g/Ru
NEUDAY (baths, water closets, lavatories) 27a/Cr
NEU-SANIX (water closets) 27a/Cr
NEU-STAIN (wood stains) 15/Ma
NEU-TONE (enamels) 15/Ma
NEUTONE (floor treatments) 13m/Hi
NEUVOGUE (bathtubs) 27a/Cr
NEV-A-RUST (paints) 15/GLi
NEVAMAR (decorative laminates) ..14a/Na
NEW DEAN (lighting fixtures) 33a/Cu
NEW EASE (bathtubs) 27a/Ri
NEW ERA (paints) 15/Ac
NEW LONDONER (flush and folding doors) 16c/Cu
NEW YORK (dissecting tables) 23L/Ma
NEWARK (sink cabinets) 27a/Bri
NEWART (locksets, lever handles) 18e/Sc
NEWMAN (bronze entrances) 16a/Ne
NEWPORT (ventilating hoods) 31e/Tr
NIBROC (towel cabinets) 27e/Bro
NICALUN (nickel treads) 13b/Am
NIK-O-LOK (coin-operated locks)...22b/Nik
NO DIAGNAL VERTICAL MEMBER (longspan joists) 2f/ShL
NO-DRAFT (window sills) 17a/Fe
NO-DUCT HOOD (range hoods) ...25a/MaJ
NO-FROST (refrigerator freezers) 25a/Wh
NO-GEAR (potato peelers) 26b/BL
NO-LITE (grilles) 31f/Yo
NO-METAL-SHOW (fixture holders) ...33a/Pi
NO-SCRUB (plastic flooring) 13i/Goo
NO-SHOK (safety electrical outlets).32b/Be
NO-SITE (grille core) 31f/Wa
NO-SITE (grilles) 31f/Yo
NO-TRAX (floor mats) 13i/Su
NO-VENT (dryers) 25a/May
NO-VISION (grilles) 31f/Yo
NO-WARP (wood doors) 16c/Hy
NOBLE (toilet bowls) 27a/Bri
NOCRETE (fibre conduits) 32b/Or
NOFMA (wood flooring) 13J/Na
NOISE-LOCK (sound proof panels and rooms) 11c/In
NOISE-STOP (acoustical baffles) 11a/Ow
NON-CLIMBABLE (fencing) 22g/Cy
NON-FLEX (grilles, registers) 31f/Un
NORFE (tub enclosures) 27c/Ef
NORMAN (casement windows) 17b/Fe
NORMAN (heating, ventilating systems) 31h/No
NORMAN (steel windows) 17b/Cr
NORMANDIE (toilet, shower compartments) 22b/Sa
NORTH AMERICAN (cement) 4i/No
NORTHERN LIGHTS (wood stain) 15/Ca
NORTON (door checks, closers) 18e/No
NORTON (overhead electric door operators) 18e/Nor
NORWALK (door closers) 18e/Now
NORWICH (lavatories) 27a/Cr
NOTIFIER (fire protection systems) ...34a/No
NOVACRETE (masonry point) 8d/No
NOVAFILL (masonry treatments) 8d/No
NOVAFOLD (folding doors, room dividers) 8d/No
NOVAGRADE (shakes) 8d/No
NOVALASTIC (joint fillers) 8d/No
NOVAMIX (admixtures) 8d/No
NOVAPLY (plywood) 5b/Un
NOVAPRIME (caulking compounds) ...8d/No
NOVAPROOFING (masonry treatments) 8d/No
NOVASEP (nylon anchors) 8d/No
NOVATREZ (terrazzo flooring) 13i/Se
NOVO (locks, lock escutcheons).....18e/Sc
NOVOPLY (surfacing process) 14a/Jo
NOVOWALL (partition face material) 22a/Uni
NOXIDE (metal paint) 15/Pr
NU-COTE (floor finish) 13m/In
NU-FLEX (exhaust hose) 30e/Ca
NU-GRAIN (asbestos shingles) 8c/Ke
NU-HUE (paints) 15/Ma
NU JAMB (hinges) 18e/Mi
NU-PON (primer) 15/GLi
NU-SIMPLON (porcelain steel chalkboards) 23e/Lo
NU-STATIC (asphalt) 8a/FL
NU-STEEL (overhead doors) 16i/Co
NU-STRIP (lighting fixtures) 33a/WiL
NU-TRED (rubber matting) 13i/Ar
NU-VICTORY (porcelain steel chalkboards) 23e/Lo
NU-WOOD (tile, insulating board) 10a/Woo; 11a/Wor

NUCA-SEAL (fabric coating process).16e/Ne
NUCITE (chalkboards) 23e/Ne
NO. 25 ZINC CHROMATE PRIMER
(metal primer) 15/Pr
NURITE (crayon board) 23e/Ne
NUTONE (fans, door chimes,
heaters) 25a/Nu
NYCO (chalkboards) .....23e Ne
NYSTEEL (chalkboards) 23e/Ne

O

OBW (ornamental metalwork,
letters, plaques, etc.) 6f/Or
O-I (glass blocks) 7b/Ow
O.M. (mortar finishes) 9/Mas
O-T (steel joists) 2f/Tr
OAK-PLY (laminated oak block
flooring) 5b/PL
OAKBLOK (wood flooring) 13J/Fa
OAKITE (phosphate undercoat) 23d/Pe
OAKPLANK (wood flooring) 13J/Fa
OAKSTRIP (wood flooring) 13J/Fa
OASIS (water coolers) 30d/Eb
OCON (plasticizer) 9/Aq
OCTAGON (roof ventilators) 20c/Oc
OHIO (bathtubs) 27a/Cr
OILDRAULIC (hydraulic elevators) ...24a/Ro
OILIFT (loading platform) 24a/GL
OKENE (wood preservatives) 15/Pr
OLD STYLE PITCH (pitch) 8a/Ko
OLD VIRGINIA WHITE (paint) 15/Ca
OLIN (aluminum) 6a/OL
OLSEN (lath clips) 12c/Bes
OLSONITE (toilet seats) 27a/Sw
OLYMPIC (bathtubs) 27a/Cr
OLYMPIC (extractors) 27g/Tr
OMARK DRIVE-IT (fastening tools)....2i/Om
OMARK-GRAHAM (stud welding
system) 2i/Om
OMEGA (bathtubs) 27a/Cr
OMICRON (mortar finishes) 9/Mas
OMNI (space-maker system) 23c/St
ONE-CHECK SYSTEM (checking
system) 23d/Vo
ONEX-SEAL (floor treatments) 13m/Hi
ONEXIT (marble floor treatments)....13m/Hi
ONLIWON (bathroom accessories) ..27e/Aa
OPALUX (lighting fixtures) 33a/Lia
OPERA CRYSTAL (lighting fixtures)...33a/Lia
ORANGEBURG (fibre conduits) 32b/Or
ORANGEBURG (pipe, pipe fittings) ..29a/Or
ORANGEBURG (underfloor duct
system) 32b/Ora
ORIENTAL (finishing plaster) 12e/Un
ORLYT (greenhouses) 2J/Lo
ORTON (water closets) 27a/Ri
OUT-DOOR (incinerator) 28a/Oh
OUT-DOR-SEAL (weatherstripping) ...19b/Ch
OVERBROOK (toilet compartments)..22b/Cu
OVERDOOR (overhead doors) 16i/Ov
OVERHEAD (garage doors) 16i/Ove
OVERLINE (hollow metal doors) 16b/Ov
OVERLY (coping, roofing) 8b/Ov
OVERLY-GOODWIN (batten type
roofing) 8b/Ov
OXFORD (water closets, lavatories)...27a/Cr
OZITE (carpet cushions) 13L/Am

P

P&L (paint, stains) 15/Pr
PC (cement, insulation, etc.) 10a/Pi
PC (glass blocks) 3e/Pi; 7b/Pi
PDA (cement dispersing agent) 9/Au
P.E.A. (architectural panels) 3c/Ma
PF (glass fiber insulation) ...3f/Ow; 10c/Ow
PG (panel grids) 29a/Am
P-H (refrigerators, freezers, coolers)..26a/Pu
P & H (stand-by generators) 32c/Ha
PHI (panic exit devices) 18f/Pr
P&K (outdoor lighting equipment)....33c/Pf
PPG (door hardware) 18e/Pi
PPG (glass doors) 16d/Pi
PPG (store fronts) 21/Pi
PRC (caulking compounds, sealers)...3f/Pro
PVC (polyvinylchloride waterstops) 9/Lex
PWG (skylights) 7a/Pe
P & W (hardeners) 9/St
PACE-SETTER (office desks) ..23b/Art; 23a/Ar
PACEMAKER (overhead doors) 16i/Mc
PACEMAKER (sinks) 25b/ELk
PACIFIC (boilers) 31g/Pa
PACKAGE (entrances) 16L/Am
PACKEX (ejectors) 30a/Ye
PAGEMASTER (paging systems) 34a/Str
PAINT WITH LIGHT (lighting fixtures).33a/Ce
PAINTGRIP (steel sheets for painting).6c/Ar
PAINTLOK (electro-galvanized sheets) .6c/Re
PAL (paint) 15/Nat
PALCO (redwood) 5a/Pa
PAN FILE (refrigerators) 26a/Ko
PAN-L-TITE (joint sealers) 3e/Mar
PAN-L-WALL (prefabricated
panels) 2d/Ame
PAN-O-RAMIC (ceramic mosaic tile) ..13c/Am
PANATONE (acoustical panels) 11a/Ba
PANAVIEW (sliding aluminum
windows) 17a/Pa
PANAVIEW (sliding doors) 16d/GLi
PANCAKE (overfloor duct systems)...32b/Wi
PANEL-LAP (skylights) 20b/Fi
PANEL-MATIC (movable walls,
partitions) 22a/Pan
PANEL-TEX (tile) 11a/Wor
PANEL-TILE (insulating panel tiles) ..10a/Uni
PANEL-VENT (glass block vent) 7b/Ow
PANELBOARD (hardboard panels)..14d/Geo
PANELCLIP (shake panel clips) 8d/No
PANELCORK (cork-faced paneling) ...13i/Do
PANELCOUSTIC (acoustical panels)...11a/Na
PANELFOLD (sliding wood doors) 16e/Pa
PANELGLAS (fiber glass acoustical
panels) 11a/Jo
PANELGROOVE (hardboard
panels) 8b/Ma; 8b/Mas; 14d/Mas
PANELHITE (toilet compartments) 22b/FL
PANELITE (curtain walls) 17b/Ce
PANELMETAL (toilet compartments) ...22b/FL
PANELOK (hardboard
panels) 8b/Mas; 14d/Mas
PANELOUVRE (ventilating louvers)...20d/Ve
PANELPLANK (hardwood plywood
paneling) 5b/PL
PANELSTONE (asbestos panels) 8c/Ru
PANELWALL (cermanic veneer
curtain walls) 4e/Ar
PANELWOOD (hardboard
panels) 8b/Mas; 14b/Ma; 14d/Mas
PANELYTE (plastic panels) 14a/Pa
PANL-FRAME (steel buildings) 2J/Bu
PANTHEON (locks) 18e/Sc
PAPR-LOK (cavity wall cover) 2i/Ho
PAQUA (paints, enamels) 15/Moo
PAR-PLUS (hardeners) 9/Pa
PARA-LATERAL (sealers) 2i/Se
PARA-PLASTIC (asphalt joint sealers) ..2i/Se
PARA-PLASTIC JF (sealing compounds) 2i/Se
PARA-VENT (ventilators) 20b/Fi
PARAFLO (space heaters) 31c/Dr
PARAFLO (troffers) 33a/Da
PARAGON (chalkboards) 23e/Ne
PARAGON (projected aluminum
windows) 17a/Per
PARAGON (time switches) 32a/Pa
PARALLEL-O-GRAY (glass) 7a/Li
PARALLEL-O-PLATE (plate glass) 7a/Li
PARALOUVER (lighting louvers) 33a/Da
PARALUM (abrasive) 9/Pa
PARALUM (bathroom accessories) ...27d/Pa
PARAWING (lighting fixtures) 33a/Da
PARCO (floor finishes) 9/Pa
PARCO (link mats) 13i/Paw
PARCOLITH (hardeners) 9/Pa
PARCONITE (bonding agents,
adhesives) 9/Pa
PARCO-SEAL (sealers) 9/Pa
PARCOTEX (sealers) 9/Pa
PARCRETE (asphalt emulsion) 9/Pa
PARCURE (curing compounds) 9/Pa
PAREM (floor treatment) 9/Pa
PARFLEX (extruded caulking
compounds) 3f/Pa
PARISIENNE (plastic floor tile) 13i/Bo
PARK AVENUE (medicine cabinets) ..27d/Ke
PARKAY (flooring) 13J/Wo
PARKFLEX (plastic laminates) 14a/Par
PARKPANEL (plastic laminates) 14a/Par
PARKWALL (plastic laminates) 14a/Par
PARLON (rubber paint) 15/GLi
PARMASTIC (sealing compounds).....3f/Pa
PARQUETRY (cork floor tile) 13i/Ma
PARRA-SEAL (masonry treatments) 9/Co
PARTITION-LOK (masonry reinforce-
ment) 4h/Aa
PASTELS OF PARIS (floor tile).....13i/Ro
PATHFINDER (air conditioners) 31a/Yk
PATHFINDER (lighting fixtures) 6e/Fi
PATIO MAGIC (sliding glass doors)..16d/Da
PATIO-RAMA (sliding glass doors)...16d/Da
PATRICIAN (ventilating hoods) 31e/Tr
PAVE (floor and wall
terrazzo tile) 13g/Bo
PAVISEAL (sealers) 13i/Has
PEAK-TEMP (oil heaters) 31g/CL
PEARLTONE (vinyl floor tile) 13i/Do
PEBBLEX (pattern glass) 7a/Am
PECORA (building products) 3f/Pe
PEEL-KILL (wood primer) 15/Ame
PEEL-PROOF (house paints) 15/Ame
PEELLE (hangar doors) 16h/Pe
PEELLE (moving stairways) 24a/Pee
PEELLE (nuclear doors) 16m/Pee
PEELLE (pass windows, conveyor
doors) 26d/Pe
PEER (soap dispensers) 27e/Mo
PEERLESS (corkboards, map, display
rails) 23e/Be
PEERLESS (window cleaner's safety
devices) 22b/Pri
PEERLESS ELECTRIC (fans and
blowers) 31e/Pe
PEERLITE (lighting fixtures) 33a/Gu
PEG-BOARD (perforated
panels)..8b/Ma; 8b/Mas; 14b/Ma; 14d/Mas
PELLA (folding doors) 16e/Ro
PELLA (wood windows) 17c/RoL
PEM (masonry treatments) 9/St
PEN-PLANK (plywood) 5b/Sp
PENCO (lockers, cabinets, shelving) ..23d/Pe
PENDANT (bathtubs) 27a/Bri
PENETREM (floor sealer) 9/Tr
PENETREX (finish) 15/GLi
PENGLASS (roof ventilators) 7a/Pe
PENMETAL (channels, casings) 12a/Pe

trade names

PENMETAL (gratings) 13a/Pe
PENMETAL (movable partitions) 22a/Pe
PENMETAL (structural sections) 2f/Pe
PENN-ZEE (structural sections) 2f/Pe
PENNTON (urinals) 27a/Bri
PENNVERNON (window glass) 7a/Pi
PENNVERNON GRAYLITE (plate glass).7a/Pi
PENTA (wood preservatives) 5d/Mo
PENTECOR (glass) 7a/Mi
PENWOOD (flush wood doors) 16c/Sp
PENWOOD (plywood) 5b/Sp
PERF-A-BEAD (corner beads) 12c/Uni
PERF-A-TAPE (wallboard tape, cement) 12c/Uni
PERF-A-TRIM (wallboard trim) 12c/Uni
PERFA-TAPE (joint finishers) 15/Un
PERFATONE (acoustical tile) 11a/Un
PERFECT VISION (lighting fixtures)..33a/Cu
PERFO-LYTE (acoustical plaster) 12e/Na
PERFUSAIRE (registers) 31f/Au
PERI-GLO (floor cleaner) 13m/In
PERIMAHEAT (convectors) 31a/Yo
PERIMSUL (insulation) 10a/Ba
PERISEAL (spar vehicle, finish) 15/Na
PERM-A-GRIP (anchor templets) 27d/Ar
PERM-A-KROM (bathroom accessories) 27d/Ar
PERM-NENT (plastic cement, adhesives) 7d/As; 8b/As
PERM-O-SEAL (sink rims) 27a/Bri
PERM-SEAL (corrugated filler strips) 7d/As; 8b/As
PERMA CAP (roofing material).....8a/Ow
PERMA-CODE (pipe, wire and cable markers) 29a/Br
PERMA FAILLE (plastic fabric for vertical blinds) 19d/Su
PERMA-GLAZE (floor tiles) 13c/Po
PERMA-GLOSS (finish for plumbing fixtures) 27a/Ri
PERMA-PANEL (chalkboards, tackboards, pegboards) 23e/So
PERMA SHAN (plastic fabric for vertical blinds) 19d/Su
PERMA-SKIN (plastic coatings) 15/Su
PERMA SUN (plastic fabric for vertical blinds) 19d/Su
PERMA TEX (plastic fabric for vertical blinds) 19d/Su
PERMA-TOP (chimney tops, fly-ash chambers, spark arrestors) 28a/Pe
PERMACOLOR (finish) 22a/Vi
PERMACUSHION (gymnasium flooring) 13J/Rob
PERMABOARD (asbestos-cement sheets) 8c/Na
PERMACOUSTIC (acoustic tile) 11a/Jo
PERMAGLAS (storage tanks) 30c/Sm
PERMALIFE (plastic flooring) 13i/Am
PERMALITE (perlite aggregates) 10a/Gr; 12d/Gr
PERMALOK (nailable stud system) 12a/Pe
PERMALYNN (letter and sign backgrounds) 23a/Ly
PERMAPLY (plywood panels) 5b/Un
PERMAPLY (roofing material) 8a/Ow
PERMASLAB (fire-labeled doors).....16b/Sa
PERMATITE (windows) 17a/Ge
PERMATOWER (cooling towers) 30b/Ma
PERMATRED (stair treads) 13i/Ar
PERSPEC (metal office partitions).....22a/Ae
PETITE (bathroom cabinets) 27d/Mi
PETRALOX (cement-asbestos chalk-boards) 23e/Lo
PETRICAL (wood fiber building panels) 2d/Fi
PHANTOM (garage ventilation) 31e/Na
PHILLIPS RED HEAD (concrete anchors) 2i/Ph
PHOTO-LITE (gas light controls) 31a/Ar
PI-PLANK (precast, prestressed concrete plank) 2d/Pi
PICTO (plastic name plates, directories) 23a/AL
PICWOOD (laminated plastic) 14a/Fo
PIERCE (locks) 18e/Sa
PIGGY-BACK (heaters) 30c/Se
PILGRIM (metal bathroom accessories) 27d/La
PILGRIM (shingles) 8d/Cr
PIN-LOCK (sash lock) 17a/Dev
PINHOLE (downlights) 33a/Ra
PINNACLEDGE (roof edge assembly)...8a/Pi
PIONEER (fireproof doors) 16m/Pi
PIONEER (insulating protective coatings) 10d/Wi
PIONEER PLANK (cork floor tile) 13i/Do
PIONITE (laminated surfacing).....14a/Pi
PISTOL GRIP (grid handles) 26c/Hot
PITTCO (curtain wall systems) 3e/Pit
PITTCO (door hinges, checks) 16d/Pi
PITTCO (door hinge, store fronts) 7a/Pi
PITTCO (floor hinges, checks) 18e/Pi
PITTCO (store fronts) 21/Pi
PITTCOMATIC (checks, door hinges) 7a/Pi; 16d/Pi
PITTCOMATIC (door openers) 18e/Pi
PITTCOTE (asphalt emulsion) 10a/Pi
PITTSBURGH (paints) 15/Pi
PIVOMATIC (3 position windows) ..17a/Fen
PIVOT-DOR (tub enclosures) 27c/Ke
PLACEWEL (cement additive) 9/Jo
PLANET (drinking fountains) 27a/Bri
PLANK AND BLOCK (wall and ceiling paneling) 14b/Ma
PLANKTEX (plywood panels) 5b/Un
PLANKWELD (plywood panels) 5b/Un
PLASTECO (dome skylights) 20a/PLa
PLASTEEL (roofing, siding) 8b/PL
PLASTEELITE (fiberglas reinforced panels) 8b/PL
PLASTER-WELD (plaster bonding agent) 4i/La; 12e/La
PLASTERTOX (masonry treatments) 9/To
PLASTI-CALK (calking) 19b/Ch
PLASTI-CANVAS (window shade fabric) 19c/St
PLASTI-LUVR (luminous ceilings) 33a/Lum
PLASTICONE (concrete ties) 2i/Ga
PLASTICORK (cork insulation) 10b/Ar
PLASTIMENT (densifiers) 9/Si
PLASTISOL (joints) 29a/Sti
PLEX-A-LITE (louvers) 4h/Ho
PLEX-O-LITE (lighting fixtures) 33a/Wh
PLEX-ORAMIC (lighting fixtures) 33a/Mi
PLEXI-MODU-LUMINUS (luminous ceilings) 33a/Lum
PLEXIGLAS (plastic material).....7d/Roh
PLEXI-SPHERE (lighting fixtures) 33a/Lia
PLEXOLINE (lighting fixtures) 33a/Da
PLI-NAMEL (enamel) 15/GLi
PLIABOARD (asbestos-cement sheets)..8c/Na
PLIBRICO (incinerators) 28a/PL
PLIOTONE (rubber base coating) ...13h/Pr
PLUGMOLD (multi-outlet wiring systems) 32b/Wi
PLURALITE (glass) 7a/Mi
PLYBASE (plywood) 5b/Do
PLYCHEN (plywood finish) 5b/PL
PLYCLIPS (plywood clips) 2i/CL
PLYFORM (plywood) 5b/Do
PLYGLAZE 101 (concrete form panels).2i/Sai
PLYMETL (metal faced plywood laminate) 3a/Ha
PLYMOUTH (locks, locksets, lock escutcheons) 18e/Sc
PLYONEER (flush doors) 16c/Cu
PLYPANEL (plywood) 5b/Do
PLYRON (plywood) 5b/Si
PLYSCORD (plywood) 5b/Do
PLYSHIELD (plywood) 5b/Do
PLYWALL (plywood paneling) 14b/PL
PLYWEAVE (plywood) 5b/Si
PLYWELSH (hardwood paneling) 13J/Bru
POINTEX (pattern glass) 7a/Am
POLARIS (after hour depositories) 23b/Di
POLARIS (drinking fountains) 27a/Bri
POLKATILE (floor tile) 13i/Ro
POLSPEC (aluminum reflector) 33a/Mo
POLY-CHAMP (polyethylene films) ...8h/Lu
POLY-CLAD (plywood finish) 14b/PL
POLY-FLOW (paints) 15/Ma
POLY-GLAS (architectural panels) 3c/Ma
POLY-KROME (floor tile) 13i/Hak
POLYCHROME (ceramic veneers) 4e/Fe
POLYGRID (cooling tower fill).....30b/FL
POMPEIIAN (floor tile) 13i/Ro
PORC-LIN-PLY (plywood panels) 5b/Un
PORCELGOLD (gold porcelain enamel panels) 3c/Ing
PORCELINER (lighting fixtures) 33a/MiL
PORCELOX (porcelain steel chalk-boards) 23e/Lo
PORCELPANEL (porcelain enamel panels) 3c/Ing
PORCENA (toilet, shower compartments) 22b/Sa
PORCENELL (chalkboards) 23e/Ed
PORETE (concrete slabs) 2d/Con
PORETE (nailable planks) 2d/Po
PORETHERM (insulating concrete) 2d/Po
POREX (concrete slabs) 2d/Po
POREX (roof and floor decking) 2d/Con
POROCK (panel insulation) 3c/Er
POROSWALL (drain pipes) 29a/Wa
PORSETT (carpets) 13L/Le
PORT-A-TERIA (food storing and serving units) 26d/Li
PORTER (aluminum windows) 17a/Por
PORWELD (adhesives) 2d/Po
PORZELINE (incandescent lighting fixture) 33a/Pi
POST-FORM (plastic laminates) 14a/Par
POSTINDEX (record cabinets) 23b/Art
POTTER (fire escapes) 6h/Po
POW-R-TRUCK (elevators) 24a/Ot
POWDERFLO (soap dispensers) 27e/Mo
POWDURN (soap dispensers) 27d/Ar
POWELL (metal lath & accessories)..12a/Po
POWER-BEAMS (floodlights) 33a/Sto
POWER-GROVE (lighting fixtures) ...33a/Sm
POWER-LUME (lighting fixtures) 33a/Wh
POWERDOR (door operators) 16m/Fi
POWERGRAV (power or gravity ventilators) 20c/Va
POWERHOUSE (telephone booths) ...34a/Sh
POWERMATIC (electric toasters) 26c/To
POWEROLLER (bleacher operators) ..23J/Un
POWERPLUGIN (conduits, busbars) ..32a/Ad
POWERVENT (ventilator regulators) ...2J/Lo
POWR-VENT (skylights) 20a/Na
POWRDOR (electric elevator door operators) 24c/Gu

POWRTRUK (elevator sills) 24c/Gu
PRECIPITRON (air cleaners) 31a/We
PRECISION (disappearing stairways, closet fronts) 23n/Pr
PRECISION (electric hot water heating boilers) 31g/Pr
PREM-PAN (plastic laminated panels)..3e/Pr
PREMIER (chalkboards) 23e/So
PREMIER (display cases) 23e/Po
PREMIER (door hardware) 18e/Chi
PREMIER (overhead doors) 16i/Mo
PREMIER ALPHA (asbestos-cement panels) 3e/Pr
PREMIER DELTA (insulated sandwich panels) 3e/Pr
PREMIER GAMMA (insulated panels)..3e/Pr
PREMIER LAMBDA (insulated panels)...3e/Pr
PREMIER SIGMA (insulated panels)....3e/Pr
PREMIUM BRAND (insulation) 10a/Pr
PREMOULDED MEMBRANE (vapor seal).9/Me
PRESCOLITE (lighting fixtures) 33a/Pr
PRESCON (concrete prestressing system).2d/Pr
PRESCOTT (urinals) 27a/Ri
PRESDWOOD (concrete forms) 2i/Ma
PRESDWOOD (chalkboards) 23e/Go
PRESDWOOD (hardboard, panels)..8b/Ma; 8b/Mas; 14b/Ma; 14d/Mas
PRESIDENT (key drawer files) 18e/Moo
PRESKO (bulletin boards) 23e/We
PRESST-O-CEL (insulation tubing) 3f/Pre
PRESSTITE (sealing, caulking compounds) 3f/Pre
PRESSURE SEAL (double-hung windows) 17c/An
PRESSURESEAL (sealing, caulking compounds) 3f/Pre
PRESSWITCH (switches) 32b/Hu
PREST-O-MATIC (doors, operators) ...16h/CL
PREST-O-MATIC (electric cold storage doors) 23c/CL
PRESTEEL (stairways) 6h/Woo
PRESTFIN (refrigeration pipe) 31a/Fr
PRESTIGE LINE (closet doors).....16b/Amw
PRESTO-SET (glue) 5b/Un; 15/Uni
PRIDE-O-YARD (compressor-condenser) 31b/Ja
PRIMAFIL (primers and fillers) 15/Pr
PRINCE (water closets) 27a/Bri
PRINCESS (bathroom cabinets) 27d/Mi
PRINCESS (folding doors) 16e/CL
PRINCESS (sink cabinets) 27a/Bri
PRISM (glass blocks) 3e/Pi; 7b/Pi
PRISM-BLOCK (skylights) 20a/By
PRISMA-LUMINUS (luminous ceiling with diffusers) 33a/Lum
PRISMALUX (lens diffusers) 33a/Lia
PRISMOLD GRATELITE (light control louver) 33a/Gu
PRO-FIN (louvers) 19e/Lo
PROBOND E. T. (bonding agent).....9/Au
PROFESSION-L (business practice school furniture) 23i/Cr
PROJECT-O-LITE (lighting fixtures)....33a/Ce
PROJECT-O-VENT (projected windows) 17a/Sup
PROJECTORAMA (wide angle scene projectors) 33a/Ce
PROMENADE (roofing tile) 8c/Ke
PROTECTOR (snow guards) 8g/Le
PROTEKINSUL (protective coatings) 10a/Mir
PROTEX (concrete additives, sealers)...9/Au
PROVENCE (floor tile) 13c/Lu
PRY-LITE (lighting fixtures) 33a/Em
PRYEX (lifetime drainline) 29b/Co
PRYME-SHAKES (shingles) 8d/Cr
PSYCHOSECURITY (detention screens).19a/Ch
PUBLIC SERVICE (paper towels, holders) 27e/Cr
PUL-AIR (roof ventilators) 20c/Pe
PULFUZSWITCH (panelboards) 32a/Ad
PULLMAN (roof ventilators) 20c/Pe
PULLMAN (soap dispensers) 27e/Bo
PUNCHY (lighting fixtures) 33a/Cu
PURITAN (metal bathroom accesories) 27d/La
PURKETT (tumblers) 27g/Tr
PUSH-OVER (garage door hardware)..18d/AL
PUTTY STIK (filler) 15/Uni
PYGMEE (rolling steel doors) 16g/Ba
PYRACOTE (fireproof coating) 12d/Am
PYRACOUSTIC (acoustical plaster)...12d/Am
PYRAMID (ceiling pans and panels)..11a/Re
PYRAMID (chalkboards) 23e/Na
PYRAMID (natural slate) 4c/St
PYRENE (fire protection systems) 30f/Fy
PYRESOTE (fire-retardant wood treatments) 5a/Ba
PYREX (lighting glass) 33b/Co
PYRO PANL (fire retardant panels).....7d/Jo
PYROBAR (gypsum tile) 12c/Un
PYRODOME (skylights) 20a/Wa
PYRODOR (fire doors) 16b/Du
PYRODOR (sliding doors) 16h/Dus
PYROFILL (gypsum roof decks) 2d/Un
PYROFORM (formbord) 2d/Un
PYROJET (burners) 31c/Dr
PYROLITE (ceiling heaters) 31h/Ber
PYROMATIC (fire-labeled door operators) 16h/Dus
PYROPANEL (door panels) 16h/Dus
PYROVENT (skylights) 20a/Wa

q

Q-AIR (floor deck) 2b/Ro
Q-CLIP (fasteners) 2b/Ro
Q-DECK (roof deck) 2b/Ro
Q-FLOOR (floor decking) 2b/Ro
Q-PANEL (metal panels) 3c/Ro
Q-R (low contour ventilators) 20c/Va
Q-R JR. (power, roof ventilators) 20c/Va
Q-T DUCTLINER (duct linings) 11a/Ce
QUA-FLEX (fire hose) 30f/Fy
QUAKER MAID (kitchen cabinets, sinks, etc.) 25b/Qu
QUALI-KOTE (paint products) 15/Sh
QUALITY LINE (bathroom cabinets, accessories) 27d/Pa
QUALITYBILT (flush doors) 16c/Fa
QUALITYBILT (wood windows) 17c/Far
QUARTZOID (fire protection equipment) 30e/Gr
QUARTZOID (sprinklers) 30e/Gr
QUEEN ANNE (floor tile) 13i/Ro
QUEEN-BEE (masonry anchors).....2i/Gat
QUENTIN (lighting fixtures) 33a/Wh
QUICK-EXIT (exit, fire door device) ..18e/Sa
QUICKIE (hand and hair dryers)....27e/Bu
QUICK-SET (ceramic bathroom, kitchen accesories) 13c/Mos
QUICK-SET (masonry treatments) 9/Co
QUICKSEAL (masonry treatments) 9/St
QUICKWALL (primers) 15/Ba
QUIEDOR (sound retarding doors) ...16m/Fi
QUIET-DUCT (silencers) 11c/In
QUIET-FLOW (cooling tower silencers) 11c/In
QUIET-FLUSH (flush valves) 27b/SL
QUIET-VENT (silencers) 11c/In
QUIETEEZ (door operators) 16i/At
QUIETONE (acoustical tile) 10a/Uni
QUIK-DRY (enamels) 15/Ma
QUIK-FLAT (enamels) 15/Ma
QUIK-ROK (anchoring cement) 13h/Pr
QUIK-SEALER (plaster sealers) 15/Ma
QUINCY (lighting fixtures) 33a/Wh

r

R B & W (bolts) 2h/Ru
R&H (plastic material) 7d/Roh
R-C (duct floors) 2a/Ce
R & M-HUNTER (heating systems) 31h/Hu
R/C (underfloor wiring) 2a/Co
RCA (engineered sound) 34a/Ra
RCA WHIRLPOOL (home appliances) 25a/Wh
R.C.A. (floor, wall coverings) 13i/Ra
RCM (rubber flooring) 13i/Mu
RFD FARM-CHAMP (reflective insulation) 8h/Lu
R. I. W. (masonry treatments) 9/To
RL (troffer panels) 2c/Fe
RLM (lighting fixtures) 33a/MiL
RM (aluminum doors, frames) 21/Ri
R. O. W. (wood windows) 17c/Ro
R-PAR (lighting fixtures) 33a/Ce
RR (aluminum grating) 13a/KL
RS (ceramic tile panels) 3e/Ce
RS (steel, stainless steel) 6c/Re
R-W (doors, hardware) 16h/Ri
R-W (folding partitions) 22d/Ri
RA-GRID (heater plates) 7a/Am
RACKLE-LITE (lightweight roof slabs)...2d/Ra
RADIANT BLADES (heat-boosting fire-place blades) 31L/Ma
RADIILUXE (stainless steel equipment) 23L/Ju; 25b/Ju
RADOR (door operators) 16i/At
RAILITE (laminated plastic surfacing.14a/Re
RAINSTOP (water repellent) 29a/De
RAMBUSCH (church equipment, design service) 23h/Ra
RAMBUSCH DOWNLITES (down-lights) 33a/Ra
RAMSET (fastening systems) 2i/Ram
RANCH HOUSE (paint) 15/Ca
RANCH ROOF (continuous strip roofing) 8c/Bi
RANCHLINE 8a/Ba
RANDASH (flooring slate) 4c/Ve
RANDEX (pattern glass) 7a/Am
RANDOM-PLANK (hardboard panels) 14d/Geo
RANDOMWOOD (flooring) 13J/Ci
RANGELINE (ranges and ovens) 25a/Gen
RAPID CONTROL JOINT (masonry reinforcement) 4h/Du
RAPID-FLO (admixtures) 9/La
RAPID-FLO (water softeners) 27g/Pe
RAVEN (door chimes) 27d/Mi
RAY-COR (flush doors) 16i/Ray
RAY-LUX (composition panel) 16i/Ray
RAY PROOF (x-ray protective materials) 22e/Ra
RAY VENT (porch enclosures, combination doors) 17a/Dev
RAYSTEP (concrete piles) 1a/Ra
RE-NEW-COAT (coatings) 9/Tru
REACH-THRU (refrigerators) 26a/Ty
READY-FIT (flooring slate) 4c/Ve
READY-4-USE MASTERPLATE (floor treatments) 9/Mas
READY FRAMED (chalkboards, chalkboard trim) 23e/Go
REALOCK (fencing) 22g/Co
REBCO (aluminum building products)..21/Re

trade names

RECEDER (wardrobes) 23d/Eq
RECIPROVEYOR-PALLETLIFT (pallet conveyors) 24d/St
RECORDLIFT (conveyors) 24d/St
RECREATION LINE (gymnasium equipment) 23k/Re
RED TOP (insulating blanket, wool).10a/Uni
RED TOP (lime, gypsum plaster) 12e/Un
RED TOP (masonry lime) 4i/Un
RED TOP (patching plaster) 15/Un
RED TOP AUDICOTE (acoustical plaster) 11a/Uni
RED-I-MIX (insulation protection) 9/Le
REDONDO (floor, wall tile).....13c/Sty
REDWOOD (sealers, stains) 15/Moo
REFLECTADOME (plastic skylights) ...20a/Wa
REFLECTAL (building insulation).....10a/Re
REFLECTAL (screens) 19e/Re
REFLECT-A-LINE (lighting fixtures) ..33a/Lia
REFLECT-O-SPHERE (display accent lights) 33a/Ce
REFLECT-O-SPHERE (display accent lights) 33a/Ce
REFLECTO-BARRIER (adhesives, plastic film) 8a/Re
REFRIG-A-BAR (refrigerators) 25b/Ac
REFRIG-O-RANGE (kitchen units) 25b/Ac
REGAL (chalkboards) 23e/Ne
REGAL (folding doors) 16e/CL
REGAL (roof coating) 8a/Jo
REGALITE (shade cloth) 19c/Jo
REGENCY (overhead doors) 16i/At
REGENCY (sliding glass doors) 16d/AL
REGENT (key wall cabinets) 18e/Moo
REGENT (lock escutcheons) 18e/Sc
REGENT (overhead doors) 16i/Mo
REGLEX (pattern glass) 7a/Am
REGULA (lighting fixtures) 33a/Cu
RELAMP-A-LITE (lighting fixture frames) 33a/Pr
RELAX (spring hinges) 18e/Chi
RELGRIT (grating, safety treads) 13a/Re
RELIANCE (steel casement windows)..17b/Wi
REMINGTON RAND (office furniture).23a/Re
REMITE (mechanical seals) 31i/Be
RENAISSANCE (floor tile) 13c/Lu
RENAISSANCE (plastic flooring) 13i/Am
RENOIR (plastic floor tile) 13i/Bo
REPUBLIC (steel, stainless steel) 6c/Re
REPUBLIC (steel pipe) 29a/Rep
RESERVE (shower doors and enclosures, tub enclosures) 27c/Ke
RESIGARD (institutional screens) 17a/Se
RESILBASE (floor covering, underlayment) 10a/Ho
RESISTA-CRETE (finish) 15/Wa
RESISTOX (fillers) 9/To
RESIWELD (adhesives, coatings, sealants) 3f/Fu
RESOLITE (plastic panels) 7d/Re
RESTO-CRETE (masonry coating) 9/Wet
RETARDO (paints, enamels) 15/Moo
REV (enamels, paints) 15/Ame
REVCO BILT-IN (custom refrigerator-freezer combinations) 25a/Rev
REVERE (gravel stops) 8g/Rea
REVERE (tube and pipe) 29a/Rev
REVERE-KEYSTONE (flashings) 8b/Re
REVERE-SIMPLEX (reglets) 8b/Re
REVO-FILE (filing cabinets) 23b/Mos
REX (roofing) 8a/FL
REXPAR (paint products) 15/Sh
REXALT (roofing coatings) 8a/FL
REZ (wood sealers) 15/Re
REZ-SEAL (sealer) 9/Eu
REZILL (floor cushioning) 13J/Co
REZITE (wood finishes) 15/Re
REZNOR-OLSON (direct fired heaters) 31c/Rez
REZO (wood doors) 16c/Pa
REZO-FOLD (door units) 16c/Pa
RHEEM-RICHMOND (plumbing fixtures) 27a/Ri
RHINO BRAND (adhesives) 13c/Pe
RHINO BRAND (building products) 3f/Pe
RHINO-KLAD (plastic floor toppings)...15/Su
RIBAC (plank flooring) 13J/Har
RIBBON LITE (continuous skylight)....20a/By
RIBFORM (steel forms) 2a/In
RIBLATH (flat metal lath) 12a/Un
RIBPLEX (metal lath) 12a/Tr
RIB-LINE (hardboard panel siding)..10a/Ce
RIB-TITE (prefabricated metal buildings) 2J/Pa
RICE-TEX (shade, drapery fabric)....19c/Ri
RICE-TWEED (drapery fabric) 19c/Ri
RICHCOR (lavatories) 27a/Ri
RICHELIEU (lavatories) 27a/Ri
RICHLAND (movable wall partitions).22a/Ga
RICHMOND (baffles) 34a/Lo
RICHMOND (lighting fixtures) 33a/MiL
RICHMOND (pass windows) 16g/Ri
RIDGE (doors) 16i/Rid
RIDGE (overhead doors) 16i/Rid
RIDGEGROOVE (hardboard panels).....8b/Ma; 8b/Mas; 14d/Mas
RIDGELINE (hardboard panels).....8b/Ma; 8b/Mas; 14d/Mas
RIDGEVENT (roof ventilators) 20c/Oc
RIG-I-FLEX (curtain tracks) 23g/Au
RIGID-TEX (metals) 6c/Ri
RIGIDWALL (insulating board) 10a/Bar
RIGIDWALL (sheathing) 8a/Ba
RIJARC (flooring strips) 13g/Ma
RIJLINE (base beads) 13g/Ma
RILCO (arches, trusses, roof decking etc.) 2e/Ri
RILCORD (trusses) 2e/Ri
RINO BRAND (building products) 7c/Pe
RIPPLE-LAWN (carpet cushions) 13L/Go
RIPPLEWOOD (plywood paneling)....5a/Ge
RISERFRAME (seat anchors) 2i/Su
RITE-ANGLE (column clamps) 2i/Ho
RITE-LITE (acrylic skylights) 20a/By
RITE-LOCK (locks) 18e/Ad
RITE VENT (ventilator skylights) 20a/By
RITE-WEIGHT (building insulation)...10a/Ba
RITTENHOUSE (chimes) 25a/Em
RIV-DEXTEEL (bridge decking) 13a/KL
RIVAL (leader straps) 8g/Le
RIVIERA (lock escutcheons) 18e/Sc
RIVIERA (plastic panels) 7d/AL
RIVIERA (shower cabinet) 27c/Cu
RIXON (automatic door operators)....18e/Ri
RO-WAY (overhead doors, motor operators) 16i/Ro
ROBBINETTE (floor tile) 13i/Ro
ROCK CORK (mineral insulation) 8a/Jo
ROCK-WELD (filler, sealer) 13h/Pr
ROCKET (commercial cooking equipment) 26c/Hot
ROCKET (sliding door hardware) 18d/Gr
ROCKFACE (partitions) 22a/Wh
ROCKLATH (gypsum lath) 12a/Un
ROCKLATH (plasterwork accessories).12c/Un
ROCKTOP (pigment and aggregate) 9/To
ROKITE (oven hearth) 26c/BLo
ROL-FOL (folding benches, tables)..23i/Ro
ROL-TOP (rolling doors) 16g/Ki
ROLD EDGE (fire hose cabinets) 30f/St
ROLL-A-WAY (chalkboards) 23e/Ko
ROLL-A-WAY (gymnasium seating) ...23J/Un
ROLL-AWAY (skylights) 20b/Fi
ROLL-OUT (gymnasium seating) 23J/Hu
ROLL-R-RACKS (dishwashing racks) ..25a/Hot
ROLLA-HEAD (venetian blinds) 19d/Ea
ROLLA-TEX (venetian blind tape) 19d/Ea
ROLLFORM (acoustical ceiling panels, fastening systems) 11a/Ro
ROLLING-COLD (refrigerated packaging conveyors) 26a/Ty
ROLSCREEN (screens, windows) 17c/RoL
ROLTITE (adhesive) 14a/Co
ROLTITE (contact cement) 13i/Mi
ROLY-DOOR (overhead doors) 16i/Mo
ROMAN (steel sliding glass doors)..16d/Ro
ROMANY (ceramic tile) 13c/Un
ROMANY SPARTAN (ceramic tile panels) 3e/Ce
ROMARK (traffic paint) 15/GLi
RONDO (expanded metal) 6e/Un
ROOFINSUL (fiber insulation) 8a/Jo
ROOFINSUL (roof insulation) 10a/Jo
ROOF-LINE (gravity ventilators) 20c/Va
ROOFMATE (roof insulation).....10a/Do
ROOMAIRE (air conditioners) 31a/Yo
ROTA-GRILL (grilles, ovens) 25a/Hot
ROTA-LIFT (autopsy table tops) 23L/Ma
ROTA-RELIEF (power units) 24a/Ro
ROTARY (lifts) 24a/Ro
ROTARY (rising stages) 23g/Ro
ROTO-FILE (filing cabinets) 23b/Mos
ROTO-OPERATORS (window operators) 17b/FL
ROTO-STRIP (lighting fixtures) 33a/Ne
ROTO-WAITER (dumbwaiters) 24a/Se
ROTODRAPER (curtain fixtures) 23g/Au
ROTOSPOT (recessed lights) 33a/Ra
ROTOWOOD (plastic laminates)....14a/Par
ROYAL (face brick) 4f/Ce
ROYAL (flush valves) 27b/SL
ROYAL (glazed ceramic tile) 13c/Roy
ROYAL (roof ventilators) 20c/Pe
ROYALFOLD (accordion partitions) ...16e/Cu
RUBADUCT (wire coverings) 13i/Go
RUBATEX (closure strips) 8b/Ru
RUBATEX (insulation materials) 10b/Ru
RUBBAIR (rubber doors) 16k/St
RUBBER-BITE (refrigerator gaskets) ...26a/Ba
RUBBER CALK (caulking compounds, sealers) 3f/Pro
RUBBER-LOC (carpet cushion) 13L/AL
RUBBER-TOP (carpet cushion) 13L/AL
RUBBERSEAL COPPER (flashings, waterproofing) 8g/Mi
RUBEROID (built-up roofing) 8a/Ru
RUBEROID (shingles, siding) 8c/Ru
RUGASOL (concrete coating) 9/Si
RUGG-TEX (tile finish) 4f/Na
RUGTEX (rubber matting) 3i/Ar
RUSCO (steel windows) 17a/Ru
RUSHTON (urinals) 27a/Bri
RUST-OLEUM (rust preventives) 15/Ru
RUST STOPPER (metal primer) 15/Ame
RUSTALOY (primers) 15/So
RUSTIC (plastic tile) 13g/We
RUSTICWOOD (plywood) 5b/Si
RUSTITE (masonry treatments) 9/Pa
RUSTMASTER (tank primer) 15/GLi
RY-WEDG (grating) 2d/Ry
RY-WELD (grating) 2d/Ry
RYERTEX-OMICRON (waterstops, gaskets, pipe, etc.) 2d/Ry
RYEX (grating) 2d/Ry

RYNO HYDE 90 (metal protective coating) 9/HL
RYSDONITE (doors) 16m/Fi
RYNOSEAL (wood finishes) 15/So

S

S-C (sound communications system)..34a/Str
S-G (institutional hardware) 18f/Sa
S.I.S. (roofing) 8a/Ba
SM (partitions) 22a/Na
SP (steel partitions) 22a/St
SPS (school shop furniture).....23i/St
SSS (flush wood doors) 16c/Ge
SWP (paint products) 15/Sh
SABINA (sinks) 27a/Ri
SABINITE (acoustical plaster) 11a/Uni; 12e/Un
SABRE (lighting fixtures) 33a/MiL
SAF-T-DOR (wardrobes) 23d/Eq
SAF-T-LOK (weatherproof outlets, switches) 32b/Be
SAF-T-TRED (rubber flooring).....13i/Mu
SAFA (fire alarms) 30f/Fy
SAFE-BOND (contact cement) 14a/Fo
SAFE-EDGE (strip channels, corner lath) 12a/Na
SAFE-GRIP (grab bars) 27d/Ar
SAFE-GROOVE (thresholds, treads)..13b/Wo
SAFE-RAY (elevator operators) 24a/Ha
SAFE-T-COAT (coating for underground ducts) 32b/Sp
SAFE T LINE (window cleaners' devices) 18c/We
SAFE-T-SAN (floor polishes, finishes) 13m/Hu
SAFEGUARD (fencing) 22g/Cy
SAFETY GRID (heating elements) 31h/EL
SAFETY-SLIDE (cold storage room doors) 23c/Bu
SAFETYMIX (plumbing valves) 27b/Sy
SAFSTEP (safety treads) 13a/Ir
SAFWAY (telescoping gym seats) 23J/Sa
SAGLESS (door hardware) 18e/Chi
SAINO (fire doors) 16b/Sa
ST. CHARLES (hospital casework) 23L/Sa
ST. CHARLES (kitchen equipment) ...25b/Sa
ST. CHARLES (school storage furniture) 23i/Sa
SALEM (locksets) 18e/Sc
SALEM (shingles) 8c/Jo
SALEM (ventilating hoods).....31e/Tr
SALES-CASES (refrigerated food display cases) 26a/Ty
SALT SPRAY (steel doors and track)..16i/Ove
SAMPSON (clothesline poles) 2i/Ho
SAMSON (aluminum, steel curtain walls) 3a/Sa
SAMSON (shade cloth) 19c/Jo
SANACOUSTIC (metal tile) 11a/Jo
SANDRAN (vinyl flooring, adhesives)..13i/Sa
SANI-DRY (hand and hair dryers)....27e/Ch
SANI-FLAT (paints, enamels) 15/Moo
SANI-GIENE (enamel) 15/GLi
SANI-STEEL (registers) 31f/Un
SANIMASTER (water heaters) 30c/Ru
SANISAC (waste receptacles) 26e/Ro
SANISEAL (hardeners) 9/Mas
SANITON (women's urinals) 27a/Bri
SANPAN (translucent building panels).3e/Pa
SANYMETAL (toilet, shower compartments) 22b/Sa
SAPPHIRE (sliding aluminum windows) 17a/Sa
SARALOY (flashings) 8g/Do; 10a/Do
SARATOGA (shower cabinets) 22b/FL
SARGENT (builders hardware) 18e/Sa
SARGENT MAGNALOCK (locksets) ..22a/Hau
SARGENT SENTRYLOCK (locks) 22a/Hau
SATIN-ALKYD (enamel) 15/Ha
SATIN-GLAZE (tile) 13c/Mos
SATIN SHEEN (paint) 15/Ha
SATINHIDE (enamel) 15/Pi
SATINLAC (fillers, stains) 15/Uni
SATINLAC (lacquer) 5b/Un; 13k/Uni
SATURDAY PATCH (patching compound) 9/Eu
SATURN (drinking fountains) 27a/Bri
SATURN (locks, lock escutcheons) 18e/Sc
SAV-WAY (toilet tissue, dispensers)..27e/Ste
SAVE-LITE (paint products) 15/Sh
SAVEALL (automatic sprinklers) 30f/Fy
SAVOY (lock escutcheons) 18e/Sc
SAW SHUTLBRAK (switchboards) 32a/Ad
SAXE (welded connections) 2h/Sa
SAXON (glass blocks) 3e/Pi; 7b/Pi
SCHENLEY (sinks) 27a/Ri
SCHLAGE (locks, locksets, lock escutcheons) 18e/Sc
SCHLEGEL (weatherstripping) 16a/Sc; 17a/Sc
SCHOLASTIC (protective wood finish) ..15/Pr
SCHOOLER (water coolers) 30d/Fi
SCHOOLINE (wardrobe racks) 23d/Vo
SCHWAB (jalousies) 17d/Sc
SCHWARTZ (pharmacy equipment) ..23L/Gr
SCORBORD (insulation) 10a/Do
SCORED TILE (glazed tile) 13c/Am
SCOTCH SHORES (couplers) 2i/Gat
SCOTSMAN (gliding door hardware) 18d/Ke
SCOTT (washroom advisory service and equipment) 27e/Sc
SCOTTIE (gliding door hardware) ..18d/Ke
SCOUT (juvenile water closets) 27a/Bri
SCREW-TITE (chalkboard trim) 23e/Go
SCREW-TITE (nails) 18a/In
SCUF-CHAMP (vapor barriers) 8h/Lu
SCULP-STONE (decorative panels).....4d/Do
SCULPTURAMA (porcelain enamel panels) 3c/Da
SE-CUR (floor wax) 13m/In
SEA SWIRL (plywood panels) 5b/Un
SEADRIFT (hardboard panels) 8b/Mas; 14d/Mas
SEAFORD (sinks) 27a/Ri
SEAL-A-MATIC (awning windows) ...17a/Sup
SEAL-A-MATIC (garage hinge) 16i/Ro
SEAL COAT (sealers) 8a/Ko
SEAL-CRETE (concrete floor sealer)...13m/In
SEAL-FLEX (removable window operative hardware) 18a/Gr
SEAL-O-SAN (floor polishes, finishes) 13m/Hu
SEAL-PRUF (sheet flashing) 8g/Ru
SEALAIR (windows) 19e/Ka
SEALAIR (windows, spandrels) 17a/Ka
SEALAIRE (aluminum windows) 3a/Ka
SEALER-CLEAR (terrazzo floor sealer).13m/In
SEALSTRIP (glazing tape) 3f/St
SEALTIGHT (waterproofing membrane)..9/Me
SEALTITE CORKCOTE insulation mastic) 10a/Un
SEALUME (gaskets) 33a/Mc
SEALWELD (coffee urns) 26d/BL
SEALZ (primers) 15/So
SEAPORCEL (porcelain enamel) 3c/Se
SEAPORCLAD (insulated porcelain panel) 3c/Se
SECO (fire protection equipment) 30f/Se
SECO (plastic protective systems, abrasive building resins) 15/Su
SECOTON (plastic protective systems) ..15/Su
SECTIONFOLD (folding doors) 16g/WiL
SECUR-ALOY (wire mesh) 19a/Ba
SECURIT (glass doors) 16d/Am
SECURIT (heat tempered glass, glass doors) 7a/Am
SECURITEE (ceiling suspension system) 11b/Ha
SECURITY (elevator doors) 24a/Se
SECURITY (hollow metal doors, frames) 16b/Se
SECURITY (plastic panels) 7d/Re
SEGMENTILE (tile) 4f/Na
SELBATEX (seamless floor covering) ..13i/Se
SELECT-A-SPEC (locks and hardware file) 18e/Co
SELECT-A-VENT (awning windows) ...17a/Sou
SELECT-O-PHONE (communication systems) 34a/Ke
SELECTAFLOW (controls, valves) 31i/De
SELECTEMP (heating system) 31J/Ir
SELECTOMATIC (elevator controls)..24a/We
SELECTRIC (water heaters) 27a/Cr
SELF-SENTERING (metal lath) 12a/Tr
SELMA (sinks) 27a/Ri
SELV-EDGE (metal lath) 12a/Un
SEMENTCOAT (cement coatings) 9/La
SEMI-LUSTRE (paint products) 15/Sh
SENATOR (food warming cabinets)..26d/Foo
SENIOR (pocket doors) 16d/Su
SENTINEL (showers) 27b/Sp
SENTINEL (toilet partitions) 22b/Mi
SENTRYLOCK (locks) 18e/Sa
SEPTAMENE (concrete control) 9/Con
SEQUIN (floor covering) 13i/Co
SERBIN (sinks) 27a/Ri
SERV-MOBILE (cart food dispensers)..26d/Sw
SERVI-CENTER (cabinet sinks) 25b/Yo
SERVICE (shade cloth) 19c/Jo
SERVICEMAN (door operators) 16i/Mc
SERVICISED (sealers, fillers, waterstops 2i/Se
SERVILLA (sinks) 27a/Ri
SERVINETTE (food vendor units) 26a/Au
SERVIRE (fire doors) 16g/Co; 22d/Co
SEWERTITE (sewer joint cements) 2i/Ca
SHADE-PAX (aluminum marquees).....19e/AL
SHAD-O-RUG (rubber matting) 13i/Ar
SHAD-O-RUG (rubber runners) 13i/Ko
SHADOFRAME (aluminum rolling windows) 17a/GL
SHADOW-LINE (kitchen cabinets)....25b/Ki
SHADOWFLASH (unglazed tile) 13c/Am
SHADOWOOD (plywood) 5b/Si
SHADOWVENT (hardboard panels) 8b/Ma; 8b/Mas
SHAKE-PANEL (shake panels) 8d/No
SHALLORAMA (lighting fixtures) 33a/Sun
SHAW-WALKER (bank equipment) ...23b/Sh
SHEETFLEXTOS (asbestos sheets) 8c/Ke
SHEETFORM (steel forms for concrete).2a/Sm
SHEETROCK (gypsum formboard) 2d/Un
SHEETROCK (gypsum sheathing, wallboard) 12c/Uni
SHEETROCK (sealers) 15/Un
SHEETROCK-TRUSSTEEL (studs) 12c/Uni
SHEFFIELD (ventilating hoods) 31e/Tr
SHELFORD (lavatories) 27a/Cr
SHELL-ICE (ice making machine) 31a/Fr
SHELTON (sinks) 27a/Ri
SHERARDUCT (conduit, couplings) ...32b/Na
SHERATON ((lighting fixtures) 33a/Sm
SHIELDCOTE (enamels) 15/Ame
SHIELDOR (toilet seat covers, dispensers) 27e/Ste
SHIELDWHITE (house paint) 15/Ame
SHINGLE-BACKER (shingle undercourse) 10a/Ins

trade names

SHINGLSTIK (cement) 8c/Ru
SHONE (ejectors) 30a/Ye
SHOP-BLOCK (flooring) 13J/Ci
SHOP TOP (laminated wood bench tops) 23i/St
SHOVELITE (lighting fixtures) 33a/Ra
SHOWER MAGIC (bath enclosures)..16d/Da
SHOWERAMA (bath enclosures) 16d/Da
SHOWERITE (shower doors, tub enclosures) 27c/Ef
SHOWERMASTER (shower cabinets)..22b/Sa
SHOWEROFF (plumbing valves) 27b/Sy
SHURE-SET (fastening tools) 2i/Ram
SHUR-SITE (safety stair tread) 31f/He
SURE-TEMP (gas water heaters) 30c/Sm
SHURBOND (concrete inserts) 2i/Ho
SI-FLO (flush valves) 27b/Sp
SICO CORE (wall panels) 3c/Be
SIERRA (shower receptors) 27c/Fi
SIESTA (vertical ventian blinds) 19d/Ku
SIGHT-TITE (grilles) 31f/Ba
SIGHTLINE (lighting systems).....33a/Sun
SIGHTRON (lighting fixtures) 33a/Lia
SIGNATURE BRICK (plaques, signs)....6f/Ar
SIGNET (bathtubs) 27a/Bri
SIGNLITE (lighting fixtures) 33a/Wh
SIGUNIT (masonry treatments) 9/Si
SIKA (masonry treatments) 9/Si
SIKA AER (masonry treatments) 9/Si
SIKA-GARD (floor hardeners) 9/Si
SIKA GUARDKOTE (surfacing compound).9/Si
SIKA-KOTE (masonry treatments) 9/Si
SIKA-PEL (masonry treatments).....9/Si
SIKA-PLUG (sealers) 9/Si
SIKA SEAL (primers, sealers) 9/Si
SIKA-SET (masonry treatments) 9/Si
SIKA SURFACE-KOTE (surfacing compound) 9/Si
SIKACRETE (accelerators) 9/Si
SILAKOTE (masonry treatments) 9/We
SILANEAL (brick treatment) 9/Dw
SILCO (aluminum trim) 23e/Ne
SILCOLAC (water repellents) 9/Ce
SILCOTITE (water repellents) 9/Ce
SILENT CEILING (acoustical ceiling)..11a/Ea
SILENTEX (insulating tile) 10a/Na
SILIPRUF (masonry waterproofing)....13h/Pr
SILL-SEALER (blanket insulation)....10a/Wo
SILLSEAL (freezer door gaskets) 23c/Ja
SILLSULATION (insulation) 10a/Fo
SILOX (masonry sealers) 15/Wa
SILTECT (waffle bakers) 26c/To
SILVAY (sinks) 27a/Ri
SILVER-CHAMP (reflective insulation) 8h/Lu
SILVER SEAL (wood floor sealer) 13m/In
SILVER SERVICE (curtain machinery)..23g/Au
SILVER-SHEELD (protective film for ducts) 32b/Ga
SILVER-TEX (carpet cushion) 13L/AL
SIMIX (water mixing valves) 27b/Si
SIMPLEX (acoustical ceiling systems)...11a/Si
SIMPLEX (chalkboards, corkboards, molding) 23e/Be
SIMPLEX (disappearing stairways) ...23n/Pr
SIMPLEX (door hardware) 18e/Chi
SIMPLEX (gratings) 13a/Ir
SIMPLEX (raceway systems) 32b/St
SIMPLEX (radiant heating panels).....31b/Si
SIMPLEX (roof ventilators) 20c/Va
SIMPLEX (sprinkler system) 30e/Gr
SIMPLEX (steel casements) 17a/Fe
SIMPLEX (time recorders) 34b/Si
SIMPLICITY (bathroom accessories)..27d/Pa
SIMPLICITY (movable partitions) 22a/Un
SIMPSON (acoustical products) 11a/Sim
SIMPSON (plywood, plywood products) 5b/Si
SIMPSON (stile and rail doors) 16c/Sim
SIMPSON (wood doors) 16c/Si
SINGLINE (partitions) 22a/Mi
SINKETTE (sinks) 25b/ELk
SIPHON (roof ventilators) 20c/Oc
SIROCCO (fans) 31a/Am; 31a/Ame
61 (enamel, fillers, varnish) 15/Pr
SKY LUX (luminaires) 33a/Cu
SKYDOME (skylights) 20a/Wa
SKYLIGHTER (skylight blinds) 19d/Lo
SKYLINE (roof ventilators) 20c/Ar
SKYLINER (lighting fixtures) 33a-Mi
SKYSHADE (skylight shades) 20a/Van
SKYTEX (pattern glass) 7a/Am
SKYTRAIL (vinyl-asbestos floor tile)...13i/FL
SKYVENT (ventilating dome skylights) 20a/Wa
SLABFORM (concrete forms) 2f/Bet
SLABLIFT (concrete slab handles) 2i/Ho
SLATEBESTOS (chalkboards) 23e/Be
SLATOPLATE (chalkboards) 23e/Be
SLATOSTEEL (chalkboards) 23e/Be
SLEEK-LINE (continuous roof ventilators) 20c/Va
SLENDA-LITE (plastic diffusers) 33a/Lin
SLENDEX (lighting fixtures).....33a/Sm
SLIDE-A-SHADE (shades, shade hardware) 22c/Ji
SLIDE-AWAY (towel, pan, cup racks) .18g/Kn
SLIDE-MASTER (aluminum windows) 17a/Wir
SLIDERITE (drawer slides) 18d/Gr
SLIDE-WALL (folding partitions) 22d/Na
SLIMLINE (chests and beds) 23i/Sim
SLIMLUX (lighting fixtures) 33a/Gu
SLIP-TITE (chalkboard trim) 23e/Go
SLUSHSEAL (partitions) 22b/FL
SMALMESH (lath) 12a/In
SMOKESTACK (black paint) 15/GLi
SMOOTH SEAM (fiber tubes) 2a/Ap
SMOOTHEE (door closers) 18e/La
SNAP-IN (form ties) 2i/Da
SNAP-LOCK (panel moulding) 22a/Co
SNAP-ON (pipe insulation) 10a/Gu
SNAP-ON-TRIM (door, window trim).12c/Uni
SNAP-TITE (chalkboard trim) 23e/Go
SNAPICOIL (wiring systems) 32b/Wi
SNAPTIE (concrete form ties) 2i/Me
SNAPTITE (gutters) 8g/Re
SNAP-TY (anchors) 2i/Ri
SNEAD (library equipment) 23f/GL
SNO-QUEEN (refrigerators) 26a/Vi
SNOLITE (enamel, primer-sealer) 15/Pi
SNORKEL (bank windows) 23b/Mos
SNOW WHITE (paint, sealers) 9/St
SNOW-WHITE (vinyl roof coating)...8a/De
SNUG-TITE (door catch) 18g/En
SOAP MASTER (soap dispensers) 27e/St
SOAPARATUS (soap dispensers) 27e/We
SOAPMASTER (soap dispensers).....27e/Vo
SOF-TRED-TYLE (roll matting) 13i/Ko
SOFFITSOTE (soffit material) 10a/Ho
SOFSTEP (rubber floor tile) 13i/Mas
SOFT-LITE (glass blocks) 7b/Pi
SOFTAN (toilet tissue) 27e/Bro
SOFTENALL (water softeners) 27a/Cr
SOFTGLODOME (lighting ware) 33a/Pi
SOFTITE (galvanized coating) 2a/Wh
SOFTITE COP-R-LOY (galvanized steel) 12a/Wh
SOFTOWATER (water softening system) 30b/Li
SOFWITE (toilet tissue) 27e/Bro
SOL-DEC (sun control devices) 3a/ALu
SOL-SET (aluminum louvers) 19e/ALu
SOLARAIRE (skylight-ventilators) 20c/We
SOLARGRAY (plate glass) 7a/Pi
SOLAROID (domes) 20a/Na
SOLEX (plate glass) 7a/Pi
SOLIDEX (paint) 15/Pr
SOLIDOR (flush doors) 16c/Fa
SOLIDUS (hardeners) 9/La
SOLUX (lighting fixtures) 33a/So
SOLVE-X (solvents) 15/Ma
SON-NEL (chalkboards) 23e/So
SON-NEL (folding tables and benches) 23i/So
SON NO MAR (concrete floor treatment) 9/So
SONICBAR (sound retarding door) ...16m/Fi
SONOAIRDUCT (fibre ducts) 31f/Son
SONOBATTS (acoustical batts) 11a/Ow
SONOBRITE (concrete coloring) 9/So
SONOCO (concrete forms) 2i/Son
SONOCOR (acoustical pads, rolls) ..11a/Ow
SONOFACED (acoustical tile facing).11a/Ow
SONOLASTIC (synthetic caulking compounds) 9/So
SONOPLEX (coatings) 9/So
SONORA (sinks) 27a/Ri
SONOSORBER (sound absorbers) 11a/Ha
SONOTARD (concrete admixtures) 9/So
SONOTROL (roof ventilator curbs) ...20c/Pe
SONOTUBE (concrete column forms)..2i/Son
SONOVOID (fiber tubes) 2d/Son
SORBETTE (towel cabinets) 27e/Cr
SOUND LOK (door units) 16m/Fi
SOUND-SHIELD (acoustical insulation) 11a/Co
SOUNDEX (partitions) 22a/Ga
SOUNDMASTER (folding partitions)..22d/Ne
SOUNDPANS (translucent lighting pans) 11a/Con
SOUNDSHEET (translucent acoustical materials) 11a/Con
SOUTHSHORE (overhead doors) 16i/At
SOVEREIGN (lighting fixtures) 33a/MiL
SPA-SAVER (refrigerators) 25b/Ac
SPA SPIREX (sash balances) 18a/Ca
SPACE-MATES (domestic dryers) 25a/We
SPACE PANELS (aluminum partitions).22a/Par
SPACE-RITE (tile alignment systems) ...13c/Po
SPACE SAVER (blowers) 31e/Tr
SPACE-SAVER (film filing cabinet) 23L/Ge
SPACE SAVER (freezers, refrigerators).26a/Jo
SPACE-SAVER DOOR (folding doors).16e/Wo
SPACEMASTER (folding doors) 16e/Ne
SPACEMASTER (wardrobes) 23d/Eq
SPACESAVER (air conditioners, furnaces) 31a/Ai; 31a/Air
SPAL (detergents) 13m/Hu
SPANDO (metal flashing) 8g/Che
SPANDRELITE (colored glass) 3e/Pit
SPANDRELITE (structural glass) 7a/Pi
SPANG (underfloor distribution systems) 32b/Sp
SPANOTRAC (drapery tracks) 23g/Au
SPARAMICS (mosaic tiles) 13c/Un
SPARKLE (ceramic tile) 13c/We
SPARKLERS (floor tile) 13i/Bon
SPARLITE (lighting fixtures) 33a/Mu
SPARTAN (ceramic tile) 13c/Un
SPARTAN (locksets) 18e/Co
SPARTAN (overhead doors) 16i/At
SPARTON (urinals) 27a/Bri
SPARVEX (varnish sealer) 15/Na
SPATTER (linoleum) 13i/Arm
SPATTERTEX (rubber matting) 13i/Ar

SPECIALMESH (lath) 12a/In
SPECIFICATION (built-up roofing) 8a/Ba
SPECTRA-GLAZE (glazed concrete blocks) 4g/Bu
SPECTRIM (colored metal mouldings) ..21/Pi
SPEE-D-DRY (paints) 15/Ac
SPEED-A-BACKER (tile) 4f/Na
SPEED-A-TERIA (food storing and serving units) 26d/Li
SPEED-E-DRY (paint vehicle) 15/Ru
SPEED-E-STRIP (paint and varnish remover) 13m/In
SPEED-FILL (water stations) 27b/Ta
SPEED-STRIP (metal chamfer strips)....2i/Su
SPEEDENAMEL (primer) 15/GLi
SPEEDER (diswashers) 26b/In
SPEEDLINE (ironers) 27g/Tr
SPEEDLOK (refrigerator locking device) 26a/Ba
SPEEDMOUNT (wiring devices) 32b/Be
SPEEDOMATIC (troffers) 33a/Sm
SPEEDRAMPS (escalators) 24a/Mon
SPEEDWALKS (escalators) 24a/Mon
SPIN-SEAL (fateners) 2h/Ru
SPINTEX (mineral wool insulation) 10a/Jo
SPIRAFLEX (sash balances) 18a/Ca
SPIRAFLO (sewage treatment system).30e/Ye
SPIRAHOFF (sewage treatment system) 30a/Ye
SPIREX (sash balances) 18a/Ca
SPLEN-DOOR (folding doors) 16e/Sp
SPONGEX (carpet cushions) 13L/Go
SPORTSLIGHTER (floodlights) 33a/Sto
SPOT MUZAK (self-contained music distribution systems) 34a/Mu
SPOTTY (lighting fixtures) 33a/Cu
SPRATOWER (cooling towers) 30b/Ma
SPRAY CRAFT (sprayed-on insulation).10a/Aa
SPRAY-DAY-LITE (enamel) 15/GLi
SPRAYCRAFT (sprayed on fireproofing insulation) 10a/Sm; 12e/Sm
SPRAYDON (insulation and acoustical treatment) 11a/Sp
SPRAYOLITE (acoustical plaster) 12e/Na
SPRED (filler, paint) 15/GLi
SPRINGLAWN (carpet cushions) 13L/Go
SPRINGWOOD (resilient floor system).13J/Sp
SPUN-BLANKET (insulation) 10a/Ba
SPY-PROOF (lock dials) 18f/Sa
SQUARE-RIB (corrugated sheets) 8b/Sm
SQUAREFORM (steel forms for concrete) 2a/Sm
SQUAREHED (nails) 18a/In
SQUIRE (toilet bowls) 27a/Bri
STA-DRI (masonry treatments) 9/Am
STA-KOLD (refrigerators) 26a/Vi
STA-LITE (acoustical tile) 11a/Wor
STA-PUT (lighting fixtures) 33a/Ve
STA-RITE (wood doors) 16h/Ri
STA-SEAL (shingle sealing tabs) 8c/Ca
STACKDOOR (sliding doors) 16e/Am
STACK-FAST (clothes stackers) 27g/Tr
STAFFORD (lavatories) 27a/Cr
STAIN-SHIELD (range hoods) 26c/To
STAIR-CHAIR (passenger elevators)...24a/Se
STAIRMASTER (stair treads) 13b/Wo
STALLPACK (toilet enclosures) 22b/Ca
STAN-GUARDS (finger guards) 18e/Sta
STANDARD (conveyors) 24d/St
STANDARD (fire protection equipment) 30f/St
STANDARD (heating and air conditioning equipment) 31a/Ame
STANDARD (open web steel joists) 2f/St
STANDARD-FLUSH (wood doors) 16c/Ha
STANDARD LINE (bathroom cabinets, accessories) 27d/Pa
STANDEASE (mats and runners) 13i/Ar
STANSEAL (weatherstripping) 3f/St
STANSTRIP (weatherstripping) 3f/St
STANWIN (casement windows) 17b/Fe
STAR (locks) 18e/Sc
STAR (gauging plaster) 12e/Un
STAR (floor finishes) 13m/Hi
STAR-LINER (lighting fixtures) 33a/Mi
STAR LUX (lighting fixtures) 33a/Cu
STARFIRE (wall tile) 3c/Be
STARDUST (plastic flooring) 13i/Am
STARFOLD (accordion doors, partitions) 16e/Cu
STARKOTE (glazed tile) 4f/St
STARLITE (sinks) 25b/ELk
STASO (glazed brick) 4f/Ce
STATIC (asphalt) 8a/FL
STATIC CONDUCTIVE (linoleum) 13i/Co
STATICK (power ventilator) 20c/Hi
STATITE (plaster bond) 9/Aq
STAXAUSTER (ventilators) 20c/AL
STAY-LEVEL (toilet compartment doors) 22b/Ac
STAY-RIB (lath) 12a/In
STAY-RIB (steel forms) 2a/In
STAY-STRATE (flush doors) 16c/Un
STAY-STRATE (partition doors) 22a/Uni
STAYBRITE (mortar colors) 9/Ho
STEAM-CHEF (steamers) 26c/CL
STEAM-IT (pressure cookers) 26c/Ma
STEAM-THRIFT (steamer kettle) 26c/CL
STEAMCRAFT (steamers) 26c/CL
STEAMCRAFT CUB (steamers) 26c/CL
STEAMLINER (steamers) 26c/CL
STEAREX (concrete waterproofing agent) 9/Con
STEARONIUM (admixtures) 13h/Pr
STEAROX (admixtures) 9/Mas
STEEL-CEIL-CRETE (floor decking) 23f/Ar
STEEL-CEIL-RITE (floor decking) 23f/Ar
STEEL-LINE (sliding door hardware)..18e/Ya
STEEL-PLY (concrete forms) 2i/Sy
STEELACOUSTIC (acoustical panels) ..11a/Ce
STEELBESTOS (protected metal) 3a/Bo; 8b/Bo
STEELCO (bleachers and grandstands).23J/Es
STEELCRAFT (door and frames) 16b/Ste
STEELCRETE (reinforcing) 12a/Wh
STEELDEK (structural sections) 2f/Pe
STEELDOME (concrete forms) 2a/Ce
STEELECO (window shades) 19c/St
STEELEX (movable wall partitions)...22a/Ga
STEELEATHER (window shade fabric)..19c/St
STEELITE (folding doors) 16e/CL
STEELOX (steel building panels).....2J/Ar
STEELTEX (floor lath) 2a/Pit
STEELTEX (metal lath) 12a/Pi
STEEP (roofing asphalt) 8a/Ce
STEINER (washroom service and equipment) 27e/St
STELECRETE (sound-retarding doors) ..16m/Fi
STELLAR (lavatories) 27a/Cr
STEP-SEAL (vinyl door sealer) 19b/Dur
STEPLAP (plastic panels) 7d/AL
STERI-FLO (drinking fountains) 30d/Fi
STERLING (chalkboards) 23e/We
STERLING (lavatories) 27a/Cr
STERO (commercial dishwashing machines) 26b/St
STEWART (lavatories) 27a/Ca
STIC-KLIP (soap dispenser adhesive)..27e/Vo
STIKTITE (corkboard adhesive) 23e/Lo
STILE-MATE (window slider) 18a/Gr
STILES-KARLSON (automatic dispensers) 30b/St
STONCO (lighting fixtures) 33a/Sto
STONE-BESTOS (chalkboards) 23e/Ne
STONEBROOK (shower cabinets) 22b/FL
STONESET (portland cement) 4i/Me
STONINGTON (locks) 18e/Sa
STONEWALL (asbestos panels) 8c/Ru
STOP-STEP (step ladder) 23i/Cr
STOPS RUST (primers) 15/Ru
STOR-A-TERIA (food storing and serving units) 26d/Li
STOR-MOR (book drawers) 23f/Am
STOR-O-WHEEL (food storing, conveying, serving units) 26d/Li
STORAGEWALL (cabinets) 23i/Sto
STORM KING (roofing) 8a/Ba
STRAN-STEEL (steel framing, decking, curtain wall panels) 2f/Str
STRATAPANEL (plastic storage system).23c/Sc
STRATO-GLOW (lighting ware) 33a/Em
STRATO LUX (lighting fixtures) 33a/Cu
STRATO-RAY lighting glass) 33a/Em
STRATTON (sinks) 27a/Ri
STREAM FLOW GRATING (catch basin heads, frames, gratings) 6i/Ca
STREAMLINE (copper tube and fittings) 29a/Mu
STREAMLINER (registers, grilles) 31f/Au
STRIA (acoustical tile)....11a/Ow; 33b/Ow
STRIATONE (mineral fiber tile) 11a/Ce
STRIP-CLIP (partition fittings) 22a/Pan
STRIP-ITE (corner reinforcements) ...12a/Tr
STRIPITE (diamond mesh lath) 12a/Wh
STRIPITE (metal lath) 12a/Bo
STRIPLATH (metal lath) 12a/Un
STROMBERG-CARLSON (inter-communicating systems) 34a/Str
STRONG-TIE (anchors, joist hangers, etc.) 2i/Si
STRONG-WALL (sheathing) 10a/Ce
STRONGBORD (sheathing) 10a/Jo
STRONGHOLD (nails) 18a/In
STRONGMAN (clothesline poles) 2i/Ho
STRUCSURESEAL (sealing, caulking compounds) 3f/Pre
STRUCTO-BOARD (chalkboards) 23e/Go
STRUCTO-GUAGE (gauging plaster) 12e/Un
STRUCTO-LITE (gypsum plaster) 12e/Un
STRUCTOBOARD (hardboard) 10a/Uni
STRUCTOGLAS (plastic panels) 7d/In
STRUCTOSEAL (clear mastic) 7d/In
STRUCTUR-ACOUSTIC (acoustic roof forms) 2c/Gra; 2c/Grn
STRUCTURALITE (glass) 7a/Mi
STRUTWALL (wood window walls) ..17c/An
STRYTEX (asbestos shingles) 8c/Ke
STUCCOMESH (stucco reinforcing) ...12a/Un
STUDLOCK (clip system) 12a/Pe
STURDEE (diving stand) 23k/Par
STURDI-DOOR (doors) 16b/Amw
STURDIBILT (sinks) 25b/ELk
STYLE-LINE (dressing compartments)..22b/Pri
STYLE-TREND (flush doors) 16c/Cu
STYLINE (wall panels) 3a/Wa
STYLMARK (rolling door hardware; mirror, picture frames) 18g/De
STYLTONE (acoustical tile) 11a/Ba
STYROFOAM (insulation) 10a/Do
STYROFOAM (low temperature insulation) 10a/Dow
SU-WIN-CO (louver jalousie) 17a/Sup
SUBKOTE UNDERLAYMENT (latex floor underlayment) 13i/Cr

trade names

SUBURBAN (asphalt shingles) 8c/Ru
SUBURBAN (garage doors) 16i/Be
SUBURBAN (lighting fixtures) 33a/MiL
SUBVEYOR (dish conveyors) 26d/OL
SUDS-MISER (washers) 25a/Wh
SULTAN (toilet bowls) 27a/Bri
SUMMERFLO (controls, valves) 31i/De
SUMMIT (lavatories) 27a/Ri
SUMMITVILLE REDS (quarry tile) ...13c/Sum
SUN-PROOF (paint) 15/Pi
SUN-TRON (radiant heating panels)..31h/Su
SUN VALLEY (air conditioners) 31a/Ar
SUN VERTIKAL (vertical blinds) 19d/Su
SUNFLEX (paint) 15/Nat
SUNLIGHT (aluminum windows) 17a/Su
SUNLINE (hardboard panels) 8b/Ma; 8b/Mas; 14d/Mas
SUNNYBASE (baseboard heating) ...27a/Cr
SUNNYCREST (sinks) 27a/Cr
SUNNYDAY (boilers, sinks) 27a/Cr
SUNNYSAVER (heaters) 27a/Cr
SUNNYLAND (furnaces, air conditioners) 27a/Cr
SUNNYWALL (baseboard heating) ...27a/Cr
SUNRAY (linoleum) 13i/Co
SUNROC (water coolers) 30d/Su
SUNSCREEN (screens) 19e/Re
SUNTILE (ceramic tile) 13c/Ca
SUNTROL (glass blocks) 3e/Pi; 7b/Pi
SUNWALL (aluminum windows, curtain walls) 3a/Su
SUPER (dishwashers) 26b/In
SUPER BAR (guard windows) 17b/Ba; 17b/Baz
SUPER CAM (refrigerator door operators) 23c/Bu
SUPER-EX (corner beads) 12a/In
SUPER-FI (fiberglas) 7d/Fi
SUPER-FLO (floor drains) 30g/Jo
SUPER-FREEZER (freezer doors) 23c/Ja
SUPER-FREEZER (cold storage room doors) 23c/Bu
SUPER G (fry kettles) 26c/To
SUPER-GRIND (food waste dispensers) 25a/Gen
SUPER-GRIT (stair treads) 13b/Wo
SUPER HIL-BRITE (floor wax) 13m/Hi
SUPER-HIL-TONE (floor dressing) 13m/Hi
SUPER HILCO-LUSTRE (floor polish)..13m/Hi
SUPER-HOLD (wood windows) 17c/Car
SUPER-LIFT (wood windows) 17c/Car
SUPER-MATIC CALROD (ranges) 25a/Hot
SUPER-MIX (masonry treatments) 9/Co
SUPER-ONEX-SEAL (floor sealers) 13m/Hi
SUPER-SEAL (door fasteners) 23c/Bu
SUPER-POR-SEAL (coatings) 9/Tru
SUPER-POR-SEAL (masonry sealer) ...15/Dev
SUPER-POWER JOBMASTER (fastening tools) 2i/Ram
SUPER POWERHOUSE (insulating cement) 10c/BaL
SUPER RESISTANT (guard windows) 17b/Ba; 17b/Baz
SUPER SATIN SURFACE (flush wood doors) 16c/Ge
SUPER-SEPTIC (septic tanks) 30h/Ka
SUPER SHINE-ALL (floor cleaners) 13m/Hi
SUPER SKY (aluminum and glass skylights) 20b/Su
SUPER-THERM (wood windows) 17c/Car
SUPER THERMO-BASE (baseboard cooling, heating) 31f/Ger
SUPER-THICK (mineral wool batts)..10a/Na
SUPER TOXLOXPORE (masonry treatments) 9/To
SUPER TUFF-TEX (greaseproof floor tile) 13i/FL
SUPER 2600 CALROD (ranges, ovens) 25a/Hot
SUPER-WAY (wood doors) 16h/Ri
SUPERANGE (commercial ranges)....26c/Hot
SUPERANGE (electric ranges) 25c/Hot
SUPERCHIEF (commercial ranges)....26c/Hot
SUPERFLEX (linoleum backing) 13i/Co
SUPERFLO (continuous gravity, roof ventilators) 20c/Va
SUPERFLO (roof ventilators) 20c/Va
SUPERGRID (commercial ranges) 26c/Hot
SUPERHEAT (commercial ovens) 26c/Hot
SUPERIOR (concrete accessories) 2i/Su
SUPERIOR (fire shutters) 16g/Ki
SUPERIOR (wirework) 22f/Su
SUPERIOR TYPE (double hung windows) 17b/Po
SUPERITE (chalkboards) 23e/Ed
SUPERLINE (commercial cooking equipment) 26c/Hot
SUPERMATIC (washers, dryers) 25a/May
SUPERSANITAS (plastic-coated fabric wall covering) 13k/St
SUPERSEAL (waterproofing fabrics) 9/Mi
SUPERSINE (signs) 6f/Su
SUPERSPAN (concrete channels) 2d/Ra
SUPERTEX (shades) 23e/Be
SUPERTOP (commercial ranges) 26c/Hot
SUPERWALL (window walls) 17a/Sup
SUPERWOOD (plastic laminates) ...14a/Par
SUPEX (water repellent) 9/Wa
SUPRACOUSTIC (acoustical tile) 11a/Ce
SUPRATEXT (laminated safety glass)...7a/Am
SUPREX (plastic tile) 13i/Go
SURE-GRIP (anchors, ties, masonry construction accessories) 2i/Da
SURE-LOK (awning windows) 17c/Ro
SURE-LOK (masonry reinforcement) ...2i/Da
SURE/POWER (generator sets) 32c/AL
SURE-SET (tile backing) 13c/Sty
SURE-SPACE (tile lugs) 13c/Sty
SURESEAL (curing compounds) 9/Ce
SURE-FORM (concrete form panels)....5b/Un
SURFA-ETCH (concrete neutralizer) 15/Ru
SURFA-SELE (sealers) .....15/Ru finish) 8c/Na
SURFACEDUCT (steel surface raceway) 32b/Na
SURFCOAT (floor sealers, finishes) 13m/Hi
SURFHARD (hardener) 9/Eu
SURFLEX (hardener) 9/Eu
SURFLINER (lighting fixtures) 33a/We
SURFPLANK (solid lumber panels) 5b/Un
SURFTONE (wall panels) 10a/Ce
SURFWOOD (plywood panels) 5b/Un
SUSSEX (asbestos-cement siding).....8c/Na
SUSSEX (locksets) 18e/Sc
SWAN NECK (remote controls for windows) 18b/Te
SWIF-WAY (tile mounting) 13c/Mos
SWING-O-WAY (exhaust systems) ..20c/Amm
SWINGLITE (window operators) 18b/De
SWIRL-AWAY (washer draining action) 25a/May
SWITCH-BAK (shower) 27b/Sp
SYENITE (glass) 7a/Mi
SYLVA-CELL (lighting system) 33a/Sy
SYLVA-LUME (lighting systems) 33a/Sy
SYLVAN-AIRE (plastic lighting ware)..33a/Sy
SYLVANIA VHO (lamps, lighting fixtures) 33a/Sy
SYNCHROVENT (projected windows).17a/Fen
SYNTHACALK (caulking compounds)...3f/Pe
SYOSSET (plastic diffusers).....33a/Lin
SYPHONAIRE (ventilators) 20c/We

t

T & S (cocks, faucets, fittings, valves).27b/Ta
T & T (building directories) 23a/Ta
T & T (changeable letter signs) 23a/Tab
T-CHORD (longspan joists) 2f/Ha
T-METAL (zinc alloy sheet metal) 6b/Hy
TV FABRIC (drapery fabric) 19c/Ri
TABASCO (water heaters) 31a/Ame
TAC (building panels) 2c/Fe
TAC-AC (acoustical panels) 2c/Fe
TAC-ON (corkboards) 23e/We
TAC-T (troffer panels) 2c/Fe
TAC-TEX (tackboards) 23e/Ko
TALC (windows) 17a/Tr
TANALITH (wood preservatives) 5d/Ko; 5d/Kop
TANC-TYP (soap dispensers) 27e/Mo
TANK-COTE (tank lining) 13h/Pr
TAPE-R-TRACK (overhead door tracks) 16i/Win
TAPER TITE (garage door track) 16i/Ro
TAPERSTEEL (flagpoles) 6g/No
TAPERWELD (pipe, pipe fittings) 29a/Or
TAPESTRY (structural glass) 7a/Pi
TAR-ROK (tar) 8c/Ba
TARA-FLOR (rubber flooring) 13i/Ra
TARVIA (road tar) 8a/Ba
TASTE-MASTER (water filters) 30d/Fi
TATE (pipe linings) 1a/Ra
TECO-TESTED (plywood) 5b/Te
TECTUM (acoustical ceiling panels) ...11a/Te
TECTUM (form plank) 2a/Te
TECTUM (roof tiles, planks).....2d/Te
TEEKORATOR (incinerators) 28a/Sp
TEKWOOD (hardwood veneers) 5b/Un
TEL-A-COOK (range lights) 25a/Gen
TEL-O-POST (adjustable reinforcing posts) 2i/CL
TELCO (pass windows) 16g/Pei
TELE-POWER (dual raceway systems).32b/Wi
TELEFLEX (remote controls for windows) 18b/Te
TELENURSE (nurse call systems) 34a/Pe
TELKEE (key control systems) 19e/Moo
TELLERWAITER (dumbwaiters) 24a/Ch
TEL-U-MAT (signaling mats) 13i/Ar
TEMEDGE (pattern glass) 7a/Am
TEMLOK (roof insulation) 10a/Ar
TEMPCO (shower valves) 27b/Te
TEMPERED PRESDWOOD (chalkboards) 23e/Go
TEMPGARD (aluminum paint) 15/Moo
TEMPLITE (church lighting) 33a/Ra
TEMPO (bathroom accessories) 27d/Ha
TEMPO (lockset) 16b/Ce
TEMPO (steel chairs) 23o/Ha
TEMPRITE (water coolers) 30d/Te
TEMPRTILE (hardboard panels) 8b/Mas; 14dMas
TEMPTROL (thermostatic shower controllers) 27b/Sy
TENNQUARTZ (quartzite) 4c/Ten
TENSILFORM (concrete forms) 2a/Wh
TENSILFORM (floor slab form) 12a/Wh
TERMIBAR (termite vapor barriers).....8h/Bi
TERMINIX (termite control) 13J/Bru
TERRAFLEX (plastic floor tile) 13i/Jo
TERRALAST (plastic tile) 13i/Vi
TERRATEX (vitrified floor tile) 13c/Lo
TERRAVINYL (floor tile) 13i/Mat
TERRAVINYL (vinyl floor tile) 13i/Mas

TERRAZEAL (terrazzo floor sealers) ...9/Wes
TERRAZZINE (floor treatments).....13m/Hi
TERRAZZOTREM (terrazzo floor sealer)..9/Tr
TES-TITE (curtain walls, windows)....3a/Be
TEXAS TEXTURE (texturing materials).15/Nat
TEXBORD (hardboard siding, shingles) 10a/Ce
TEXCOLOR (hardeners) 9/Pa
TEX DRI-WALL (tile) 4f/Na
TEXLOC (carpet cement) 13L/Le
TEXOLITE (paint) 11a/Uni
TEXOLITE (paint products) 15/Un
TEX-STEELE (window shade fabric).....19/St
TEXTELLE (linoleum) 13i/Arm
TEXTOLITE (laminated plastic surfacing) 14a/Ge
TEXTOLITE (paint) 11a/Uni
TEXTONE (texturing paint) 15/Un
TEXTURE (texturing materials) 15/Nat
TEXTURE 1-11 (plywood) 5b/Si
TEXTURE-TONE (acoustic mineral tile) 11a/Ce
TEXTURED FLUTEX (pattern glass) 7a/Am
TEXTURED LINEX (pattern glass) 7a/Am
TEXTURLITE (shade cloth) 19c/Jo
TEXTURE-ONE-ELEVEN (plywood) 5b/Do
TEXWEAVE (asphalt-asbestos floor tile) 13i/FL
TEXWOOD (asphalt-asbestos floor tile) 13i/FL
THEMETILE (decorative tiles) 13i/Ke
THERM-A-LITE (insulated plastic panels) 20a/Bo
THERM-ARTEX (panels) 17a/Art
THERM-L-BAR (skylight condensation deterrent) 20a/Wa
THERM-O-LUX (triple-wall shade fabric) 19c/He
THERMACOUSTIC (sprayed-on mineral wool) 11a/Na
THERMAL-ACOUSTI (curbs for ventilators) 20c/Va
THERMALITE (high temperature insulation) 10c/BaL
THERMASIL (high temperature insulation) 10c/BaL
THERMAVENT (roof ventilators) 20c/Bu
THERMIDAIRE (furnaces) 31b/Ca
TERMINIX (termite control) 13J/Bru
THERMO-BASE (baseboard cooling, heating) 31f/Ger
THERMO-BASE (warm air baseboards) 27a/Cr
THERMO-BLOC (perimeter insulation) 10a/Na
THERMO-BORD (insulating panels)...8b/Car
THERMO-BORD (structural insulating panels) 8a/Ca
THERMOGUARD (cooler controls) ..30d/We
THERMO-VECTOR (radiation) 31a/Dun
THERMO DOOR (insulated sliding) glass doors) 16d/Ado
THERMO-VUE (windows) 17a/Am
THERMOFLOW (roof ventilators) 20c/We
THERMOPANE (insulating glass) 7a/Li
THERMOTEX ("B" emulsion) 8a/Ca
THER-MO (built-up roofing) 8a/Th
THESSCO (wardrobes) 23d/Sc
THIN-CELL (louvers) 33a/Sin
THIN-SET (ceramic tile setting method) 13c/Mir
THINLINE (air conditioners) 25a/Gen
THINLITE (glass curtain wall panels).3e/Ow
THIOKOL (polysulfide-based sealents)..7c/Th
THIOSEAL (caulking compound) 13h/Pr
38 (wood primer, varnish) 15/Pr
THORITE (masonry treatments) 9/St
THOR LUND (dumbwaiters, sidewalk elevators) 24a/Lu
THORO (masonry treatments) 9/St
THOROBOND (bonding agent) 9/St
THOROCLEAR (masonry treatments) 9/St
THOROLITH (masonry treatments) 9/St
THOROLOK (masonry treatments) 9/St
THOROSEAL (masonry treatments) 9/St
THOROSET (masonry treatments) 9/St
THOROSHEEN (masonry paint) 9/St
THREDLOCK (reflectors) 33a/Mu
3M (adhesives, sealers) 13i/Mi
3M (compound mixers) 3f/Mi
THREE-TWENTY (adhesive) 13i/Co
THRIFTI-TOWER (cooling towers) ..31a/Mar
THRIFTPAK (caulking compounds) 9/Ho
THRIFTY (bathroom accessories).....27d/Mi
THROUGH-WALL (flashings) 8b/Am
THRU-THE-WALL (chute doors) 27f/Wi
THRU-VU (vertical blinds) 19d/Th
THRU-WALL (brick vents) 2i/Ho
THULMAN (chimneys, fireplaces) 31L/Ma
TI-CO (galvanized steel) 2b/In; 2c/InL; 12a/In
TICKAWAY (electic scoreboard clock).23k/Fa
TICOTHERM (steam generators) 31g/Ti
TIE-TO (contact ceiling inserts) 2a/Fa
TIGER BRAND (lime products) 11a/Tig
TILE-MATE (clay tile mortar, grout, sealer) 13c/Upc
TILE-SET (ceramic tile grout) 13c/Ka
TILE-STIK (cement base ceramic tile adhesives) 13c/Pe
TILE-TEX (floor tile) 13i/FL
TILE-WELD (bonding agent) ..4i/La; 12e/La
TILT-A-FRONT (store fronts) 16b/Ov
TILT-UP (slab braces) 2i/Su
TIM-BER-LOX (wood sealer, preservative) 15/Na
TIM-DECK (roof decking) 2e/Tim
TIM-FLAT (laminated arches, trusses)..2e/Tim
TIM-TRUSS (laminated arches, trusses) 2e/Tim
TIME SAVER (bathroom accesories)...27d/Mi
TIME-SAVER (stair tread anchors) ..13b/Wo
TIME-SAVER (valves) 27b/Sp
TITAN (boilers) 31g/Ti
TITAN (locksets) 18e/Co
TITANIC (paint) 15/Pi
TITE-CRETE (concrete grout additive)..15/Su
TITE-ONS (asphalt shingles) 8c/Ru
TITEWALL (joint sealers) 2i/Se
TITEWALL (rubber control joints) 4h/Aa
TNEMEC (rust-resistant primers) 15/Tn
TOASTMASTER (electric cooking equipment) 26c/To
TOBEX (pattern glass) 7a/Am
TOCKOLITH (metal paint) 9/To
TOGGLE-JACK (mounting device for lighting fixtures) 33a/Go
TOLEDO (food service equipment)....26b/To
TOM THUMB (curtain machinery) 23g/Au
TOM THUMB (motor drives for shutters) 16g/Cor
TONETEX (carpets) 13L/Le
TOPPER SWITCH (switches) 32b/Hu
TOPSEAL (fastening systems) 8b/Fa
TOROPLY (wood paneling for partitions) 22d/To
TORSIONTITE (lighting fasteners) ...33a/Lia
TOSCAN (sinks) 27a/Ri
TOWELINK (bathroom accessories) ..27d/Mi
TOW'LESCOPE (utility bars) 27d/Ha
TOWL-TOWER (paper towel holders)..27e/Cr
TOWNE (paint) 15/Nat
TOWNSEND (lockbolts, rivets, etc.)...8b/To
TOX-SHADE (sun control) 9/To
TOXEMENT (admixtures) 9/To
TOXGRIP (hardeners) 9/To
TOXIK (wood preservative) 13J/Bru
TOXKURE (curing compounds) 9/To
TOXLOXPORE (masonry treatments) 9/To
TOXMIX (admixtures) 9/To
TRADE-WIND (blowers) 31e/Tr
TRAFFIC SENTINEL (elevator operator) 24a/We
TRAK-EZE (drapery tracks) 23g/Au
TRANSAIRE (roof ventilators) 20c/We
TRANSITE (acoustic panels) 11a/Jo
TRANS-O-MATIC (ramp) 24a/GL
TRANSI-FOLD (folding tables, benches) 23i/Sc
TRANSITE (asbestos panels) 22a/Jo
TRANSITE (corrugated asbestos panels) 8b/Jo; 8b/Joh
TRANSITE (corrugated roofing) 8a/Jo
TRANSITONE (movable walls) 22a/Jo
TRANSWALL (folding doors, partitions) 16e/Tr
TRAVACOUSTIC (acoustical tile, mineral wool) 11a/Na
TRAVEL MUZAK (music for trains, planes, ships, etc.) 34a/Mu
TRAVERTONE (acoustical materials) ..11a/Ar
TRAYLIFT (food conveyors) 24d/St
TRAYLOR (sinks, laundry trays) 27a/Ri
TRAYVEYOR (food service conveyors).24a/La
TREAD-O-MAT (carpet moulding) 18e/Tr
TREAD-O-MATIC (automatic door and gate controls) 18e/Tr
TREADWAY (gratings) 13a/Pe
TREE LIFE (plywood) 2i/Sai
TREMCO (caulking, pointing compounds) 3f/Tr
TREMCO (floor hardeners, sealers, etc)..9/Tr
TREMCRETE (concrete floor curer, sealer) 9/Tr
TREMGLAZE (glazing compounds) 3f/Tr
TREMSEAL (wood floor hardener, sealer).9/Tr
TREMSEAL-20 (concrete floor hardener, sealer) 9/Tr
TREMTAPE (mastic sealers) 3f/Tr
TREMTHOL (mastic compound) 3f/Tr
TREMTOP (coating for asphalt) 9/Tr
TRENDWOOD (wood-grain finishes).14b/Ma
TRESSCO (wardrobes) 23d/Sc
TRETINT (colors) 9/Tre
TRETOCALK (caulking compound).....9/Tre
TRETOCLEVE (concrete bond breaker, membrane sealing compound) 9/Tre
TRETOCONE (water-repellents) 9/Tre
TRETOCONE DECRACOAT (latex silicone water repellent) 9/Tre
TRETOCURE (curing compounds) 9/Tre
TRETOFLEX (asphalt foundation coating) 9/Tre
TRETOMENT (plasticizing admixture)..9/Tre
TRETOP (metallic topping) 9/Tre
TRETOSCREED (resurfacer) 9/Tre
TRETOSHED (bituminous foundation coatings) 9/Tre
TRETOSKALE (surface retarder) 9/Tre
TRETOSURF (aggregate topping) 9/Tre
TRETOTRED (plastic anti-slip material).9/Tre
TRETSET (hydraulic cement) 9/Tre
TRI-CORE (electric panel heating systems) 31h/EL
TRI-FILTER (underdrains) 4f/Na
TRI-RIB (steel roof deck) 12a/Wh

trade names

TRI-SAVER (coffee system) 26d/BL
TRIBRIC (brick, tile) 4f/St
TRIM-LINE VIT CAP (ceramic trimmer).13c/Po
TRIMIX (anti-freeze admixture) 9/So
TRIMLESS (fire hose cabinets) 30f/St
TRIMLINE (aluminum curtain walls)...3a/Am
TRIMLINE (aluminum entrances) 16a/Am
TRIMLINE (convectors and covers)....31h/Vu
TRIMLINE (lavatories) 27a/Ri
TRIMLINE (surface mounted door closers) 18e/No
TRINITY WHITE (white portland cement) 4i/Ge
TRIO (windows, doors) 17a/Tr
TRIPL-AIRE (registers and grilles) 31f/Har
TRIPLE-COVER (house paint) 15/Dev
TRIPLE S (flush wood doors) 16c/Ge
TRIPLE-SEALED (roofing products)....10a/Ce
TRIPLE-TEMP (refrigerated display cases) 26a/Ty
TRIPLEX (door hardware) 18e/Chi
TRIPLEX (tub enclosures) 27c/Ef
TROFFERDUCT (lighting fixtures) 33a/Wh
TROFFERETTE (lighting fixtures) 33a/En
TROFFERVENT (lighting fixtures) 33a/Wh
TROJAN (boilers) 31g/Ti
TROJAN (clothes washers) 27g/Tr
TROJAN (water closets) 27a/Ca
TROPHY (gym floor finishes).....13m/Hi
TROPHY SEAL (gym floor sealers) 13m/Hi
TROPICRAFT (woven wood fabrics) ..19d/Tro
TROUBADOOR (door chimes) 27d/Mi
TROY (laundry machinery) 27g/Tr
TRU-BOW (wood bow windows) 17c/Re
TRU-CURE (cement curing) 9/Tru
TRU-LUX (chalkboard panels) 23e/Lo
TRU-ROLL (stage track and equipment) 19d/Ma
TRU SCREED (screeds) 2i/Su
TRU-SEAL (aluminum windows, curtain walls) 17a/Va
TRU-SEAL (concrete curings, hardeners, sealers) 9/Tru
TRU-SEAL (waterproofing sheet) 8g/Ru
TRU-SITE (glass treatment) 7a/De
TRU-SNAP (chalkboard trim) 23e/Lo
TRU-VY-KOTE (coatings) 9/Tru
TRU-WALL (wood windows) 17c/Re
TRUAIRE (ventilating windows) 17b/Tr
TRUBRAE (floor plates, treads) 13b/Wh
TRUBRON (floor plates, treads) 13b/Wh
TRUCK LEVELER (truck lift) 24a/GL
TRULOCK (aluminum detention screens) 19a/Ba
TRULUM (floor plates, treads) 13b/Wh
TRUNIC (floor plates, treads) 13b/Wh
TRUS-LOK (lath clips) 12a/Un
TRUSS-LOOP (metal lath) 12a/Bo
TRUSS-SKIN (trussless roof construction) 2e/Wo
TRUSS-WING (corner beads) 12a/Bo
TRUSSBILT (metal doors) 16b/Tru
TRUSSCORE (metal doors) 16b/Tru
TRUSSTEEL (studs) 12a/Un; 12c/Uni
TRUTRED (floor plates, treads) 13b/Wh
TRUVISION (illuminator) 23L/Ge
TUB-CAULK (caulking compounds)...13c/Mir
TUBE-LINE (railings) 6e/BLu
TUBELITE (doors, door frames) 7a/Pi
TUBELITE (tubular aluminum doors) ...16a/Pi
TUBE SET (store fronts) 16a/Br
TUBULAR (concrete filled columns)....2g/Tu
TUF-FLEX (glass doors) 16d/Lib
TUF-FLEX (plate glass, doors) 7a/Li
TUFCOR (steel forms) 2c/Grn; 2a/Gr
TUFF-BOND (adhesives and sealers).10a/Mo
TUFF-DRY (floor finish) 13m/Mu
TUFF-TEX (greaseproof floor tile).....13i/FL
TUFF-TITE (fasteners) 8b/To
TUFF-WELD (nylon hanger system)...10a/Mo
TUFFGARD (house paint) 15/Moo
TUFFLEX (point sealers) 2i/Se
TUFLEX (rubber tile) 13i/Ge
TULIP (locks, lock escutcheons) 18e/Sc
TURBOVANE (fans) 31a/We
TURBULATOR (air diffusers) 31f/An
TURNETTE (bathroom accessories)....27d/Mi
12-VENEER (ceramic tile) 13c/Sum
TWIN (range, oven, sink units).....25b/Ge
TWIN-AIR-MIX (incinerator burners).28a/Oh
TWIN ANCHOR (terrazzo dividers).13g/Ma
TWIN-BEAM (church windows) 17a/In
TWIN-CAVITY-MESH-LOCK (reinforcing) 4h/Ho
TWIN-L (balancing valves) 31i/Th
TWIN-LITE (lighting glass).....33b/Co
TWIN-MESH-LOCK (reinforcing) 4h/Ho
TWI-NIGHTER (venetian blinds) 19d/Br
TWIN-ROLLORS (door guides).....16i/Mc
TWIN-SERV (soda fountains) 26b/Ba
TWIN-TILE (insulating panel tiles)..10a/Uni
TWIN-T-MASTIC (insulating tape) 7c/Di
TWIN-TRIM (plastic mouldings) 14a/Co
TWINDOW (insulating glass) ...7a/Pi; 21/Pi
TWINDOW (window panes) 3e/Pit
TWINDUCT (raceway systems) 32b/Na
TWINLINE (air conditioners) 31a/Yk
TWINLITE (awning windows) 17c/RoL
TWINSTILE (glass doors and frames)..16d/Sc
TWINSUL (double-glazed windows).17a/Sou
TWINSULATION (blanket insulation) .10a/Na
TWIST-LOCK (wiring devices) 32b/Hu
TWO FOL (folding benches, tables) ...23i/Ro
TWO-TEMP (water heater valves) 30c/Ru
TY-CHAIR (concrete reinforcing) 2i/Ri
TY-FRAME (anchors) 2i/Ri
TY-SCRU (inserts) 2i/Ri
TY-TITE (bar ties) 2i/Ho
TYE-BLOC (wall reinforcing) 2i/Gat
TYCONE (anchors) 2i/Ri
TYLAC (anchors) 2i/Ri
TYLER (refrigerators, storage freezers) 26a/Ty
TYLER-KETCHAM (color compatibility systems) 26a/Ty
TYLOOP (form hangers) 2i/Ri
TYTE-SEAL (masonry treatments) 9/We
TYTESET (bathroom accessories).....27d/Ke

U

U.S. AIRMASTER (carpet cushions)....13L/Un
U.S. AIRWAVE (carpet cushions) 13L/Un
U.S. JUNIOR (carpet cushions—non-skid) 13L/Un
U.S. LUXURYLINER (carpet cushions)..13L/Un
U.S. MAINLINER (carpet cushions) ...13L/Un
U.S. MARVELAIRE (carpet cushions)...13L/Un
U.S. ROYAL (carpet cushions) 13L/Un
U.S. WAFFLE (carpet cushions) 13L/Un
USF (metal doors and frames).....16b/Un
USF (vibration absorbers) 29a/Ke
USG (acoustical materials).11a/Un; 11a/Uni
USG (expanded metal) 6e/Un
USG (gypsum, metal lath) 12a/Un
USG (gypsum roof decks) 2d/Un
USG (gypsum sheathing, wall-board).12c/Uni
USG (insulation) 10a/Uni
USG (gypsum tile) 12c/Un
USG (lime, gypsum plaster) 12e/Un
USG (metal edge gypsum roof plank).2d/Uni
USG (metal grating) 13a/Un
USG (movable partitions) 22a/Un
USG (paint products) 15/Un
USG (steel roof decks) 2c/Uni
USL (extruded aluminum louvers) 20d/Un
USS (fencing) 22g/Cy
USS (steel joists).....2f/Am
UALCO (aluminum windows, curtain walls) 3a/Sou; 17d/Sou
ULTIMA (linoleum) 13i/Co
ULTRACOUSTIC (acoustical ceiling board) 11a/Gu
ULTRALAST (plastic tile) 13i/Vi
ULTRALITE (duct insulation) 10a/Gu
ULTRONIC (door operators) 16i/Ove
UNDERCHORD (bridging) 2f/Tr
UNDERFLOW (cooling towers) 30b/Ma
UNDERHILL (lighting fixtures) 33a/Wh
UNI-BILT (dumbwaiter doors) 24c/Se
UNI-BILT (dumbwaiter doors, frame units) 16h/Se
UNI-CHECK (door checks) 18e/Ri
UNI-CREST (insulation) 10a/Un
UNI-FLO (grilles) 31f/Ba
UNI-FRAME (lighting fixtures) 33a/Da
UNI-MOTOR (elevator doors).....24c/Se
UNI-RESONATOR (silencers) 11a/Ha
UNI-SILENCER (silencers) 11a/Ha
UNI-TRIM (exit device trim) 18f/Sa
UNI-VERSEN (lighting fixtures) 33a/Ve
UNI-WAITER (dumbwaiters) 27f/Wi
UNICOIL (heat transfer coils) 31a/CL
UNIFLEX (sash balance weatherstrip) 18a/Un
UNIQUE (sash balances) 18a/Un
UNIQUE (unique balanced vertical sliding chalkboards) 23e/Un
UNISTAK (prefabricated flues) 28a/Un
UNISTRUT (partitions) 22a/Ui
UNITROL (control centers) 32a/Cut
UNIT DECK (floor and roof deck)....2e/Un
UNIT DRIVE (industrial door operators) 16h/FL
UNIT-PANEL (partitions) 22a/Wh
UNIT-ROW (telephone booths) 34a/Su
UNITFOLD (folding partitions) 22d/Fa
UNITIZED (laboratory furniture) 23L/Fi
UNITIZED-FLEXI (steel shelving) 23f/Bo
UNITSLIDE (sliding partitions) 22d/Fa
UNITHERM (unit heaters) 31a/CL
UNITRON (carriers, closet fittings) ...30g/Jo
UNIVERSAL (bleachers and grandstands) 23J/Un
UNIVERSAL (concrete inserts) 2i/Ho
UNIVERSAL (partitions, walls) 22a/Jo
UNIVERSAL (steel casement windows) 17b/Wi
UNIVERSITY (loudspeakers) 34a/Un
UNIWALL (tile) 4f/Na
UPBLAST (power roof ventilators).....20c/Va
UPLIGHT URN (lighting fixtures) 33a/Ce
UPTON (water closets) 27a/Ri
URITO (urinals) .....27a/ Ri
USIC (destructors, incinerators) 28a/Un
UTIL-I-DUCT (duct-shelving sections).31h/No

V

V-BAK (tile) 13c/Mur
V-BEAM (steel beams).....2f/Ma
V-CORR (corrugated steel roofing and siding) 8b/Be
V-CORR (roofing, siding) 3c/Be
V-FORM (steel forms for concrete)..2a/Sm
V-GIRDER (steel girders) 2f/Ma
V-LINE (refrigerators) 26a/Vi
V-LOK (steel framing) 2f/Ma
V-PLANK (plywood panels) 5b/Un

V-RIB (corrugated sheets) 8b/Sm
V-T (soap dispensers, soap) 27e/Vo
V-WINDOWS (inswinging windows) ..3c/Ro
"VF" (window walls) 17a/ALw
VL (vinyl wall covering) 13c/Mu
VMP (partitions) 22a/Vi
VPI (plastic tile) 13i/Vi
VABAR (masonry treatments) 9/St
VACU-MASTER (vacuum cleaning systems) 28b/Va
VACU-MATIC (vacuum cleaning systems) 28b/Va
VACUMITE (swimming pool filters)..23k/Va
VALAY (toilet tissue, dispensers) 27e/Ste
VALCALOX (damper regulator) 31f/Yo
VALENCIA (floor tile) 13c/Lu
VAMPCO (aluminum entrances) 16a/Va
VAMPCO (aluminum windows, curtain walls) 3a/Va; 17a/Va
VAN (food service equipment) 26d/Va
VAN GUARD (garage doors) 16i/Cra
VANCO (aluminum and steel skylights) 20b/Va
VANCO (plastic dome skylights) ..20a/Van
VANCO (plastic skylights) 20a/Va
VANCO (roof ventilators) 20c/Va
VANCO (wall louvers, louver penthouses) 20d/Va
VANCOLUX (plastic skylights) 20a/Va
VANDL-RATOR (metered valves) 27b/Sp
VANGUARD (garage doors) 16i/Cra
VANGUARD (toilet compartments) ...22b/Sa
VANINET (bathroom cabinets) 27d/Mi
VAP-O-MATIC (refrigerator drain)....26a/Pu
VAPEX (flat wall finish) 15/Pr
VAPOLUX (lighting fixtures) 33a/Wh
VAPOR-CHAMP (vapor seals) 8h/Lu
VAPOR-TIGHT (lighting fixtures) 33a/Wh
VAPORLETS (vapor-proof lights) 33a/Sim
VAPORMATIC (food warmers) 26d/Ba
VARAVENT (reversible windows) 17a/Po
VARI-FLOW (heating controls) 31a/Dun
VARI-SPOT (lighting fixtures) 33a/Cu
VARI-TILE (ceramic tile) 13c/Un
VARI-VAC (differential heating) 31a/Dun
VARI-VENT (window operators) 18b/De
VARIETY (doors, frames, partitions, etc.) 16b/Va
VARITONE (unglazed tile) 13c/Am
VEEP (folding portable coat and hat racks) 23d/Vo
VELTONE (floor, wall coverings).....13i/Co
VELVATEX (structural tile) 4f/EL
VELVET (enamel, paint) 8c/Na; 15/Nat
VELVETEX (tile) 13c/Mos
VELVETONE (chalkboards) 23e/Ro
VELVETONE (tile) 13c/Mo
VELVEX (pattern glass) 7a/Am
VEN-TROL-GEAR (vent panel actuators) 18a/Gr
VENETIAN (bathroom cabinets) 27d/Co
VENETIAN (floor covering) 13i/Co
VENI-FLEX (folding doors, room dividers) 16e/Co
VENT-A-BATH (blowers) 25a/Em
VENT-A-LITE (fan and light) 25a/Nu
VENT BRICK (vent bricks) 20d/Ri
VENT-X-IT (roof ventilators) 20c/Oc
VENTAIR (ventilation windows) 17c/Wo
VENTDOME (skylights) 20a/Wa
VENTILATTIC (fans) 31e/Pe
VENTILOUVRE (ventilating louvers) ...20d/Ve
VENTROLITE (aluminum and steel windows) 17a/Se
VENTURA (fans) 31a/Am; 31a/Ame
VENTURAFIN (unit heaters) 31a/Am; 31a/Ame
VENTURI-FLO (diffusers) 31f/Ba
VENUS (locks) 18e/Sc
VER-TEL (telescoping doors) 16h/Se
VERDURA (paint) 15/Pr
VERI-THIN (stainless steel sheet) 6c/Wa
VERILUX (lighting fixtures) 33a/Wh
VERMARCO (marble) 4b/Ve; 13f/Ver
VERMARCO (marble tile) 13f/Ve
VERMARCO PANEL-WALL (marble curtain walls) 3e/Ve
VERMONT (colored slate) 8e/Ri
VERSAILLES (plastic floor tile) 13i/Bo
VERSALINE (lighting fixtures) 33a/MiL
VERSATILE WALL (curtain walls) 3c/Ro
VERSATOWL (towel dispensing device) 27e/Cr
VERSITILE (aluminum windows) 17a/Va
VERTI-COL (screw lift elevators) 24a/Ha
VERTI-GROOVE (hardboard siding panels) 10a/Ce
VERTI-SLIDE (aluminum windows) ...17a/Sou
VERTIFLOW (unit heaters) 31a/Yo
VERTISEAL (joint sealers) 2i/Se
VI NALL (exterior paint) 15/So
VI-PAK (plastic packaging solutions)...15/Su
VIBACALL (intercommunicating systems) 34a/Du
VIBRO-PRUF (anti-vibration grouting) ...9/La
VICTOR (shade cloth) 19c/Jo
VICTORIA (lavatories) 27a/Ri
VICTORY (fencing) 22g/Cy
VIDEOPLATE (chalkboards) 23e/Be
VIEW ALL (tie racks) 18g/Kn
VIEWALL (window walls) 17a/ALw
VIKING (shade cloth) 19c/Jo
VILLA (overhead type doors) 16i/At
VIMCO (refrigerators) 26a/Vi
VINA-FLO (interior paint) 15/So
VINA-LUX (plastic tile) 13i/Az
VINL-STOP (weatherstripping) 19d/Dur
VINYL-COTE (mastic) 15/GLi
VINYLAST (plastic tile) 13i/Vi
VINYLAY (elastic coating) 13h/Ce
VINYLBEST (floor coverings) 13i/Co
VINYLFLEX (plastic floor tile) 13i/Hak
VINYLUX (lighted ceilings) 33a/Di
VISCOUNT (toilet bowls) 27a/Bri
VISION-VENT (window walls) 3d/Tr
VISIONAIRE (lighting fixtures) 33a/Sun
VISITRON (lighting fixtures) 33a/Cu
VISKALT (roofing felts) 8a/FL
VISQUEEN (vapor barriers) 9/Vi
VISTA (glass curtain wall panels)....3e/Ow
VISTA-LITE (aluminum windows) 17a/Am
VISTA-LINER (lighting fixtures) 33a/We
VISTA-LUX (translucent plastic panels).8d/No
VISTA-WALLS (aluminum windows) ..17a/Am
VISTALUME (lighting fixtures) 33a/Lie
VISTARAMA (venetian blind operators) 19d/Ku
VISUALITE (plastic skylights) 20a/Na
VISUALOCKER (steel lockers) 23d/Re
VISUMATIC (door controls) 18e/Vi
VITOBEST (chalkboards) 23e/We
VITOPREST (chalkboards, chalkboard cement) 23e/We
VITRACITE (chalkboards) 23e/CL
VITRALITE (enamel) 15/Pr
VITRAMIC (siding) 8c/Ru
VITRE-STEEL (toilet compartment finish) 22b/We
VITRIBRIK (ceramic glazed tile) 4f/Na
VIRTIFLEX (joint sealers) 2i/Se
VITRITILE (ceramic glazed tile) 4f/Na
VITRO-BOARD (chalkboards) 23e/Ed
VITRO GLAZE (spray-on cement) 13h/De
VITRO-MATIC (chalkboards) 23e/Go
VITROCK (porcelain enamel panel backing) 3c/Da
VITROLUX (glass curtain wall material).3e/Li
VITROLUX (plate glass) 7a/Li
VITRON (curtain wall spandrel material) 17a/Fen
VIZABLEDG (safety treads) 13a/Ir
VOLITE (enamel) 15/Dev
VOGUE (lavatories) 27aRi
VON DUPRIN (exit hardware) 18f/Vo
VUE (glass blocks) 3e/Pi; 7b/Pi
VUELINE (aluminum windows) 17a/Bay
VULCANOR (incinerators, destructors) 28a/Mc
VULCATEX (caulking compounds) 9/Ho
VY-NIL-COTE (vinyl coating) 13h/Pr
VYN-AL (red lead) 15/GLi

W

WB (rolling steel doors) 16g/Ba
WB (laboratory fixtures) 23L/Wo
W R C (lighting standards) 33c/Ry
WRDA (water-reducing admixture) 9/De
WSP (plywood) 5b/Do
W-W (curtain walls) 3a/Wi
W-W (windows) 17b/Wi
W-CANOPY (canopies) 19e/Ka
WACO (portable bleachers) 23k/Por
WADE (seal removers) 13m/Hu
WAFERLUME (lighting fixtures) 33a/Lie
WAL-DOR (insulated folding doors) 16e/CL
WAL-DOR (sound retarding doors)...16m/Fi
WAL-LOK (reinforcing) 4h/Le
WAL-MESH (masonry reinforcing) 2i/Ho
WAL-MESH-LOCK (mortar joint reinforcement) 4h/Ho
WAL-PAK (water coolers) 30d/Fi
WALBLO (water closets) 27a/Ca
WALCON (roof deck, panels) 3a/Wa
WALJET (water closets) 27a/Ca
WALSAN (water closets) 27a/Cr
WALK-IN (storage freezers) 26a/Ty
WALKOVER (roofing) 8a/Ba
WALL-A-WAY (folding partitions) ...22d/To
WALL-FLEX (rubber, vinyl wall coverings) 13i/Ra
WALL-FOL (folding benches, tables)..23i/Ro
WALL-HIDE (water coolers) 30d/Co
WALL-I-DUCT (duct sections) 31h/No
WALL LINE (water coolers) 30d/We
WALL-MASTER (sliding glass doors).17a/Wir
WALL-TEX (wall coverings) 13k/Co
WALL-WEIGH (bathroom scales) 27d/Ke
WALLCHEF (built-in ovens) 25a/Pr
WALLCLAD (vinyl-coated fabric wall covering) 13k/St
WALLHIDE (paint) 15/Pi
WALLMOUNT (wardrobe and overshoe racks) 23d/Vo
WALLPAD (dispenser fasteners) 27e/Bo
WALLSPAN (curtain walls) 3a/Wi
WANETTA (laundry sinks) 27a/Ri
WARM-DRI (towel rack) 27d/Ha
WASCO (light control louvers) 20a/Wa
WASCOFILM (vapor barriers) 8g/Wa
WASCO HATCHWAY (skylight hatchway) 20a/Wa
WASCOSEAL (vapor barriers) 8g/Wa
WASHFOUNTAIN (group washing equipment) 27a/Br
WATAPRUF (roof coatings) 29a/De

trade names

WATCO (sealers, finishes, preservatives) 9/Wa
WATER SAVER (metering showers)...27b/Sp
WATER SEAL (concrete accessories)....2i/Su
WATER SEAL (sealants) 9/Th
WATER-WHEEL (rotary distributors) ..30a/Ye
WATERBAN (water-repellents) 9/La
WATERFLOW (sprinkler control system) 34a/Au
WATERLOO (registers, grilles, dampers, door ventilators) 31f/Wa
WATERLOX (finishes, sealers) 15/Wa
WATERPELLER (bonding agents) 9/Eu
WATERPLUG (masonry treatments) 9/St
WATERSPAR (enamel, varnish, wax) ...15/Pi
WATROUS (soap dispensers).....27e/Im
WATSON (hospital cabinets and equipment) 23L/Wa
WAVE-TEX (brick finish) 4f/Na
WAVELENGTH (expanded metal).....6e/Un
WAVERLY (locksets, lever handles) ...18e/Sc
WAX-SEAL (floor wax, seal) 9/Up
WAX STRIPPER (wax remover) 13m/Hu
WAY "LOCTOR" (access panels) ...16J/Wa
WAYLITE (concrete blocks) 4g/Wa
WEAR-EVER (floor tile) 13c/Sty
WEAR-EVER (aluminum kitchen equipment) 26c/We
WEAREVER (vinyl floor tile) 13i/Mas; 13i/Mat
WEATHER-BAR (shingles) 8a/Ba
WEATHER-CIDE (wood preservative) ..15/Wa
WEATHER-KING (door panels) 16i/Ba
WEATHERALL (floor wax) 13m/Hu
WEATHERBAN (sealers, primers, cleaners) 3f/Mi
WEATHERBAN (building sealers) 13i/Mi
WEATHERCAP (metal joint sealers) 9/Mi
WEATHERCOTE (coating) 15/GLi
WEATHERGUARD (window cleaners' devices) 18c/We
WEATHERMAKER (air conditioners)..31a/Car
WEATHERMAN (louvers) 2i/Ho
WEATHERMASTER (air conditioners).31a/Car
WEATHERSHIELD (aluminum double hung windows) 19a/Kan
WEATHERTITE (joint sealers) 4J/Wi
WEATHERTITE (roof insulation) 8a/Jo
WEATHERTITE (sheathing) 10a/Jo
WEATHERTITE (window ventilators)..17a/Ro
WEATHERTRON (heating, cooling heat pump systems) 31a/Gen
WEATHERWALL (sliding glass doors)..16d/Su
WEATHERWEAR (roof deck covering) 13i/Cr
WEAVE (ceramic tile) 13c/We
WEBCO (display and map rails, chalkboard cement) 23e/We
WEBTEX (bulletin boards) 23e/We
WEBTEX (caulking, sealing compounds) 3f/We
WEDGE-LOK (joints) 29a/Sti
WEDGE-TITE (anchors) 2i/Ar
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WEIRMAR (plastic tile) 13g/We
WEISART (toilet compartments) 22b/We
WEISTEEL (toilet compartments) 22b/We
WEISTYLE (hinges) 22b/We
WEISWAY (shower cabinets) 22b/We
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WELBACK (drinking fountains) 27a/Ri
WELD-CRETE (concrete bonding compound) 4i/La; 12e/La
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WELDON (roofing cement) 8a/FL
WELDBORD (plywood panels) 5b/Un
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WELDROK (mineral core partitions)..22a/Uni
WELDROK (fire door core) 16c/Un
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WELDWOOD (chalkboards) 3c/Be
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WELSPRING (drinking fountains) 27a/Ri
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WESTERNAIRE (blowers) 20c/We
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doors

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Fleet of America, Inc. 16d/FL
Fleming Steel Co. 16h/FL
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• *doors* 16b/Ri
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Roddis Plywood Corp. 16c/Ro
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Roman Metal Products Inc. 16d/Ro
Rowe Mfg. Co. 16i/Ro
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Schacht Associates, Inc. 16d/Sc
Schlegel Mfg. Co. 16a/Sc
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Security Metal Products Corp. 16b/Se
Simpson Logging Co. 16c/Si
Splendor Corp. 16e/Sp
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Steelcraft Mfg. Co. 16b/Ste
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Straits Products, Inc. 16e/St
Sulzer Bros. Ltd. 16L/Su
Sun Valley Industries, Inc. 16d/Su
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Truscon Steel Div., Republic Steel Corp.
• *industrial doors* 16h/Tr
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Trussbilt Div., Siems Bros., Inc. 16b/Tru
United States Plywood Corp. 16c/Un
United Steel Fabricators, Inc. 16b/Un
Valley Metal Products Co., Sub. Mueller Brass Co. 16a/Va
Variety Fire Door Co., Inc. 16b/Va
Walsh-Hannon-Gladwin, Inc. 16J/Wa
Williamsburg Steel Products Co.....16b/Wi
Wilson, J. G., Corp. 16g/WiL
Winfield Door Corp. 16i/Win
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Woodall Industries Inc. 16c/Woo

door and frame packaged units

metal

Aetna Steel Products Corp. 16b/Aet
Alumiline Corp. 16a/ALu
American Art Metals Co. 16a/Am
Amweld Building Products Div., American Welding & Mfg. Co. 16b/Amw
Arcadia Metal Products 16d/Ar
Brasco Mfg. Co. 16a/Br
Ceco Steel Products Corp. 16b/Ce
Clark Div., Standard Products Co....17b/CLa
Clark Door Co., Inc. 16h/CL; 23c/CL
Coast Line Steel Products, Inc. 16b/Co
Cupples Door & Frame Corp. 16a/Cu
Dusing & Hunt, Inc. 16b/Du
Ellison Bronze Co., Inc. 16a/EL
Federal Windows Mfg. Co., Inc. 17b/Fe
Fenestra, Inc. 16b/Fe
Firebar Door Div., Rysdon Products Co. 16m/Fi
Flour City Ornamental Iron Co.....16a/FL
Friedrich, E. H., Co. 16b/Fr
General Bronze Corp. 16f/Ge
Glide Windows, Inc. 16d/GLi
Himmel Brothers Co. 16a/Hi
Industrial Acoustics Co., Inc.....11c/In
International Steel Co., Revolving Door & Entrance Div. 16f/In
Kawneer Co. 16a/Kaw
Marmet Corp. 16a/Mar
Mesker Brothers 16b/Me
Miami Cabinet Div., Philip Carey Mfg. Co. 16J/Mi
Newman Brothers, Inc. 16a/Ne
Overly Mfg. Co. 16b/Ov
Pioneer Fireproof Door Corp. 16b/Pi
Pittsburgh Plate Glass Co. 7a/Pi; 16a/Pi; 16d/Pi
Pricemetal Corp. 22b/Pri
Rebco, Inc. 21/Re
Reuter, M., & Sons 16b/Re
Rigid Metal Products Inc. 21/Ri
Roman Metal Products, Inc. 16d/Ro
Saino, F. L., Mfg. Co. 16b/Sa
Schacht Associates, Inc. 16d/Sc
Steelcraft Mfg. Co. 16b/Ste
Sun Valley Industries, Inc. 16d/Su
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
Truscon Steel Div., Republic Steel Corp. 16b/Trs; 16h/Tr
Trussbilt Div., Siems Bros., Inc. 16b/Tru
United Steel Fabricators, Inc. 16b/Un
Valley Metal Products Co., Sub. Mueller Brass Co. 16a/Va; 17a/Va
Variety Fire Door Co., Inc. 16b/Ua
Williamsburg Steel Products Co. 16b/Wi

wood

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Bellwood Co. of California, Div. Clark Door Co., Inc. 16h/CL

door and frame packaged units *cont.*

wood *cont.*

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Wood Specialty Products, Inc. 16e/Wo

doors

access—ceiling or wall

Babcock-Davis Associates, Inc. 16J/Ba
Bilco Co. 16J/Bi
Cahill, Edward, Inc. 16g/Ca
Carrier Corp. 31a/Car
Columbia Metal Box Co. 27d/Co
Construction Specialties, Inc. 20d/Con
Donley Brothers Co.....31L/Do
Haslett Chute & Conveyor Co. 27f/Ha
Hohmann & Barnard, Inc.....2i/Ho
Inland Steel Products Co.....12a/In; 16J/In
Miami Cabinet Div., Philip Carey Mfg. Co. 16J/Mi; 27d/Mi
Rebco, Inc. 21/Re
Sedgwick Machine Works 24a/Se
United States Gypsum 12a/Un
Walsh-Hannon-Gladwin, Inc. 16J/Wa

access—crawl space

Babcock-Davis Associates, Inc. 16J/Ba
Construction Specialties Inc. 20d/Con
Donley Brothers Co.....31L/Do
Hohmann & Barnard, Inc.....2i/Ho
Miami Cabinet Div., Philip Carey Mfg. Co. 16J/Mi

accordion type

American Accordion-Fold Doors, Inc..16e/Am
Clopay Corp., Folding Door Div.....16e/CL
Curtition Corp. 16e/Cu
Holcomb & Hoke Mfg. Co., Inc. 16e/Ho
New Castle Products, Inc. 16e/Ne
Nova Sales Co., Sub. Homasote Co...8d/No
Panelfold Doors, Inc. 16e/Pa
Rolscreen Co. 16e/Ro
Splendor Corp. 16e/Sp
Straits Products, Inc. 16e/St
TransWall Coated Products, Div. Waco Mfg. Co. 16e/Tr

air

Air Door, Inc., Div. New Castle Products, Inc. 16L/Ai
American Air Curtain Corp. 16L/Am
Sulzer Bros. Ltd. 16L/Su

airplane hanger

Byrne Doors, Inc. 16h/By
Electric Power Door Co., Inc. 16i/EL
Fleming Steel Co. 16h/FL
International Steel Co. 16h/Int
Kinnear Mfg. Co. 16g/Ki
Overhead Door Corp. 16i/Ove
Peelle Co. 16h/Pe
Richards-Wilcox Mfg. Co. 16h/Ri
St. Louis Fire Door Co. 16h/Sa
Truscon Steel Div., Republic Steel Corp. 16h/Tr
Wilson, J. G., Corp. 16g/WiL

doors *cont.*

aluminum—commercial or industrial

Acme Central Metal Products, Inc. ...16g/Ac
Acme Metal Molding Co.....21/Ac
Ador Sales Corp 16d/Ado
Alumiline Corp. 16a/ALu
American Art Metals Co. 16a/Am
American Window & Door Co., Inc. 17a/Ame
Arcadia Metal Products 16d/Ar
Arm-R-Lite Door Mfg. Co., Inc.....16i/Ar
Brasco Mfg. Co.....16a/Br
Byrne Doors, Inc. 16h/By
Clark Door Co., Inc. 16h/CL
Continental Nu-Steel Metal Products Co. 16i/Co
Cookson Co. 16g/Co; 22d/Co
Dusing & Hunt, Inc. 16a/Dui
Flour City Ornamental Iron Co. 16a/FL
Frantz Mfg. Co. 16i/Fr
Hankins & Johann, Inc. 16a/Ha
International Steel Co., Revolving Door & Entrance Div. 16f/In
Kawneer Co. 16a/Kaw; 21/Kaw
Marmet Corp. 16a/Mar
McKee Door Co. 16i/Mc
Mesker Brothers 17a/Me
Miller Sliding Glass Door Co. 16d/Mi
Mosher Mfg. Co. 16h/Mo
Moynahan Bronze Co. 3a/Mo
Newman Brothers, Inc. 16a/Ne
Overdoors Inc. 16i/Ov
Overhead Door Corp. 16i/Ove
Pacific Rolling Door Co. 16g/Pa
Panelfab Products Inc. 16a/Pan
Pittsburgh Plate Glass Co.....16a/Pi
Rebco, Inc. 21/Re
Rigid Metal Products Inc. 21/Ri
St. Louis Fire Door Co. 16h/Sa
Trio Industries, Inc. 17a/Tr
Valley Metal Products Co., Sub. Mueller Brass Co. 16a/Va; 17a/Va
Wilson, J. G., Corp. 16g/WiL
Winfield Door Corp. 16i/Win

aluminum—entrance

Acme Metal Molding Co. 21/Ac
Ador Sales Corp. 16d/Ado
Alumiline Corp. 16a/ALu
American Art Metals Co. 16a/Am
Brasco Mfg. Co. 16a/Br
Cupples Door & Frame Corp. 16a/Cu
Dusing & Hunt, Inc. 16a/Dui
Ellison Bronze Co., Inc. 16a/EL
Fiske, J. W., Architectural Metals, Inc. 6e/Fi
Flour City Ornamental Iron Co. 16a/FL
General Bronze Corp. 16f/Ge
Hankins & Johann, Inc. 16a/Ha
Himmel Brothers Co. 16a/Hi
International Steel Co., Revolving Door & Entrance Div. 16f/In
Kawneer Co. 16a/Kaw; 21/Kaw
Marmet Corp. 16a/Mar
Mesker Brothers 17a/Me

products

doors *cont.*

aluminum—entrance cont.
Moynahan Bronze Co. 3a/Mo
National Store Fronts Co. Inc. 16a/Nat
Newman Brothers, Inc. 3a/Ne; 16a/Ne
Panelfab Products, Inc. 16a/Pan
Pittsburgh Plate Glass Co. 16a/Pi; 16d/Pi
Rebco, Inc. 21/Re
Rigid Metal Products Inc. 21/Ri
Sun Valley Industries, Inc. 16d/Su
Trio Industries, Inc. 17a/Tr
Valley Metal Products Co., Sub.
Mueller Brass Co. 16a/Va; 17a/Va

aluminum—residential
Ador Sales Corp. 16d/Ado
Alwintite Div., General Bronze
Corp. 16d/AL
Arcadia Metal Products 16d/Ar
Daryl Products Corp. 16d/Da
Folmar, R. H., Co. 17a/Fo
Glass Shower Door Co., Inc. 16d/GL
Glide Windows, Inc. 16d/GLi
Miller Sliding Glass Door Co., Inc...16d/Mi
Panelfab Products Inc. 16a/Pan
Pittsburgh Plate Glass Co. 16d/Pi
Sun Valley Industries, Inc. 16d/Su
Textron Metals Co. 17a/Te
Winter Seal Corp. 17a/Wir

blast-resistant
Firebar Door Div., Rysdon
Products Co. 16m/Fi
Peelle Co. 16m/Pee

bronze
Flour City Ornamental Iron Co. 16a/FL
Newman Brothers, Inc. 16a/Ne
Pittsburgh Plate Glass Co. 16d/Pi
Schacht Associates, Inc. 16d/Sc
Trio Industries, Inc. 17a/Tr

bronze—entrance
Ellison Bronze Co., Inc. 16a/EL
Flour City Ornamental Iron Co. 16a/FL
General Bronze Corp. 16f/Ge
International Steel Co., Revolving
Door & Entrance Div. 16f/In
Newman Brothers, Inc. 3a/Ne; 16a/Ne
Pittsburgh Plate Glass Co. 16d/Pi
Schacht Associates, Inc. 16d/Sc
Trio Industries, Inc. 17a/Tr

bulkhead
Abbotsford Co., Inc. 16g/Ab
Bilco Co. 16J/Bi
Donley Brothers Co. 31L/Do

canopy
Byrne Doors, Inc 16h/By
Electric Power Door Co., Inc. 16i/EL
Fleming Steel Co. 16h/FL
International Steel Co. 16h/Int
St. Louis Fire Door Co. 16h/Sa
Truscon Steel Div., Republic Steel Corp. 16h/Tr

casement
Crittall Mfg. Co., Ltd. 17b/Cr
Federal Windows Mfg. Co., Inc. 17b/Fe
Hope's Windows, Inc. 17b/Ho
Mesker Brothers 17b/Me
Trio Industries, Inc. 17a/Tr
Truscon Steel Div., Republic Steel
Corp. 17b/Tr

doors *cont.*

closet—folding, sliding, etc.
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Clopay Corp., Folding Door Div. 16e/CL
Consolidated General Products, Inc...16e/Co
Curtis Companies, Inc. 16c/Cu
Curtition Corp. 16e/Cu
Dubuque Products, Inc. 22d/Du
Holcomb & Hoke Mfg. Co., Inc. 16e/Ho
New Castle Products, Inc. 16e/Ne
Straits Products, Inc. 16e/St
Truscon Steel Div., Republic Steel
Corp. 16b/Trs
United Steel Fabricators, Inc. 16b/Un
Wood Specialty Products, Inc.....16e/Wo
Woodall Industries Inc. 16c/Woo

closet—folding, sliding, etc.—with frames
American Accordion-Fold Doors, Inc..16e/Am
Amweld Building Products Div., American
Welding & Mtg. Co. 16b/Amw
Precision Parts Corp. 23n/Pr
Rolscreen Co. 16e/Ro
Truscon Steel Div., Republic Steel
Corp. 16b/Trs
United States Plywood Corp. 16c/Un
United Steel Fabricators, Inc. 16b/Un

coal
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cold storage or refrigerator
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counter
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craneway opening
Byrne Doors, Inc. 16h/By
Cookson Co. 16g/Co
Electric Power Door Co., Inc. 16i/EL
Fleming Steel Co. 16h/FL
International Steel Co. 16h/Int
Kinnear Mfg. Co. 16g/Ki
Mahon, R. C., Co. 16g/Ma
Pacific Rolling Door Co. 16g/Pa
Ridge Door Co. 16i/Rid
Truscon Steel Div., Republic Steel Corp. 16h/Tr
Wilson, J. G., Corp. 16g/WiL

detention
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dumbwaiter
see doors—elevator:—dumbwaiter 24

Dutch
Ceco Steel Products Corp. 16b/Ce
Curtis Companies, Inc. 16c/Cu

elevator
see doors—elevator:—freight, etc......24

entrance
Acme Steel Door Corp., Div. Acme Steel
Partition Co. 16b/Ac
Alumiline Corp. 16a/ALu
Brasco Mfg. Co. 16a/Br
Cahill, Edward, Inc. 16g/Ca
Coast Line Steel Products, Inc. 16b/Co
Crooks, W. D., & Sons 16c/Cr
Curtis Companies, Inc. 16c/Cu

doors *cont.*

entrance *cont.*
Electric Power Door Co., Inc. 16i/EL
Farley & Loetscher Mfg. Co. 16c/Fa
Fenestra, Inc. 16b/Fe
Flour City Ornamental Iron Co. 16a/FL
General Bronze Corp. 16f/Ge
General Plywood Corp. 16c/Ge
Hankins & Johann, Inc. 16a/Ha
International Steel Co., Revolving
Door & Entrance Div. 16f/In
Libbey-Owens-Ford Glass Co. 16d/Lib
Mesker Brothers 17a/Me
National Store Fronts Co. Inc. 16a/Nat
Overly Mfg. Co. 16b/Ov
Paine Lumber Co., Ltd. 16c/Pa
Rebco, Inc. 21/Re
Rigid Metal Products Inc. 21/Ri
Roddis Plywood Corp. 16c/Ro
Simpson Logging Co. 5b/Si
Sun Valley Industries, Inc. 16d/Su
Superior Fireproof Door &
Sash Co., Inc. 16b/Sup
United States Plywood Corp. 16c/Un
Valley Metal Products Co., Sub.
Mueller Brass Co. 16a/Va
Variety Fire Door Co., Inc. 16b/Ua

entrance—with frames
Acme Metal Molding Co. 21/Ac
Ador Sales Corp. 16d/Ado
Alumiline Corp. 16a/ALu
American Art Metals Co. 16a/Am
Brasco Mfg. Co. 16a/Br
Ceco Steel Products Corp. 16b/Ce
Coast Line Steel Products, Inc. 16b/Co
Cupples Door & Frame Corp. 16a/Cu
Dusing & Hunt, Inc. 16b/Du
Ellison Bronze Co., Inc. 16a/EL
Flour City Ornamental Iron Co. 16a/FL
General Bronze Corp. 16f/Ge
Hankins & Johann, Inc. 16a/Ha
Himmel Brothers Co. 16a/Hi
International Steel Co. 16h/Int
International Steel Co., Revolving Door and
Entrance Div. 16f/In
Kawneer Co. 16a/Kaw; 21/Kaw
Marmet Corp. 16a/Mar
Mesker Brothers 16b/Me
National Store Fronts Co. Inc. 16a/Nat
Overly Mfg. Co. 16b/Ov
Panelfab Products, Inc. 16a/Pan
Pittsburgh Plate Glass
Co. 7a/Pi; 16a/Pi; 16d/Pi
Rebco, Inc. 21/Re
Reuter, M., & Sons 16b/Re
Schacht Associates, Inc. 16d/Sc
Sun Valley Industries, Inc. 16d/Su
Superior Fireproof Door &
Sash Co., Inc. 16b/Sup
Trio Industries, Inc. 17a/Tr
United Steel Fabricators, Inc. 16b/Un
Valley Metal Products Co., Sub.
Mueller Brass Co. 16a/Va
Williamsburg Steel Products Co. 16b/Wi

fire-labeled
Abbotsford Co., Inc. 16g/Ab
Aetna Steel Products Corp. 16b/Aet
American Metal Works, Inc. 16b/Am
Amweld Building Products Div., American
Welding & Mfg. Co. 16b/Amw
Atlantic Metal Products, Inc. 16b/At

doors *cont.*

fire-labeled *cont.*

Atlas Fireproof Door Co., Inc. 16b/AtL
Balfour, Walter, & Co., Inc. 16g/Ba
Bellwood Co. of Califirnia, Div.
Packard-Bell 16c/Be
Bourne Mfg. Co. 16c/Bou
Cahill, Edward Inc. 16g/Ca
Ceco Steel Products Corp. 16b/Ce
Coast Line Steel Products, Inc. 16b/Co
Cookson Co. 16g/Co; 22d/Co
Cornell Iron Works, Inc. 16g/Cor
Dusing & Hunt,
Inc. 16b/Du; 16c/Dus; 16h/Dus
Electric Power Door Co., Inc. 16i/EL
Fenestra, Inc. 16b/Fe
Friedrich, E. H., Co. 16b/Fr
General Plywood Corp. 16c/Ge
Hansson, Elof, Inc., Acoustical Div...11a/Ha
Haslett Chute & Conveyor Co. 27f/Ha
Hazen Metal Products, Inc. 16g/Ha
Kawneer Co. 16a/Kaw
Kinnear Mfg. Co. 16g/Ki
Lawrence Steel Co. 16g/La
Mahon, R. C., Co. 16g/Ma
Merchant & Evans Co. 16h/Me
Mesker Brothers 16b/Me
Moeschl-Edwards Corrugating Co.,
Inc. 16g/Mo
Overly Mfg. Co. 16b/Ov
Owens-Illinois Plywood Co. 16c/Ow
Pacific Rolling Door Co. 16g/Pa
Peelle Co. 24c/Pe
Philipp Mfg. Co. 16b/Ph
Pioneer Fireproof Door Corp. 16b/Pi
Reuter, M., & Sons.....16b/Re
Richards-Wilcox Mfg. Co. 16h/Ri
Richmond Fireproof Door Co. 16b/Ri
Roddis Plywood Corp. 16c/Ro
Saino, F. L., Mfg. Co. 16b/Sa
St. Louis Fire Door Co. 16h/Sa
Security Metal Products Corp. 16b/Se
Sedgwick Machine Works.....24a/Se
Steelcraft Mfg. Co. 16b/Ste
Superior Fireproof Door & Sash Co.,
Inc. 16b/Sup
Truscon Steel Div., Republic Steel
Corp. 16b/Trs
Trussbilt Div., Siems Bros., Inc. 16b/Tru
United States Plywood Corp. 5b/Un; 16c/Un
United Steel Fabricators, Inc. 16b/Un
Variety Fire Door Co., Inc. 16b/Ua
Williamsburg Steel Products Co. 16b/Wi
Wilson, J. G., Corp. 16g/WiL

fire-labeled—operators for

Abbotsford Co., Inc. 16g/Ab
Cahill, Edward, Inc. 16g/Ca
Dusing & Hunt, Inc. 16h/Dus
Electric Power Door Co., Inc. 16i/EL
Fenestra, Inc. 16b/Fe
Hazen Metal Products, Inc. 16g/Ha
Lawrence Steel Co. 16g/La
LCN Closers, Inc. 18e/La
Mahon, R. C., Co. 16g/Ma
Merchant & Evans Co. 16h/Me
Norton Door Closer Co., Div. Yale &
Towne Mfg. Co. 18e/No
Overly Mfg. Co. 16b/Ov
Richmond Fireproof Door Co. 16b/Ri
Saino, F. L., Mfg. Co. 16b/Sa

doors *cont.*

fire-resistant

American Accordion-Fold Doors, Inc..16e/Am
American Steel Products Corp. 16b/Ame
Balfour, Walter, & Co., Inc. 16g/Ba
Barber-Colman Co. 16i/Ba
Bourne Mfg. Co. 16c/Bou
Clark Door Co., Inc. 16h/CL
Coast Line Steel Products, Inc. 16b/Co
Continental Nu-Steel Metal Products
Co. 16i/Co
Donley Brothers Co.....31L/Do
Dusing & Hunt, Inc. 16c/Dus
Eggers, F., Plywood & Veneer Co. 16c/Eg
Firebar Door Div., Rysdon
Products Co. 16m/Fi
Hardwood Products Corp. 16c/Ha
Haskelite Mfg. Corp. Sub. Evans
Products Co. 16c/Has
Haslett Chute & Conveyor Co.....27f/Ha
Hazen Metal Products, Inc. 16g/Ha
Holcomb & Hoke Mfg. Co., Inc. 16e/Ho
Hyde-Murphy Co. 16c/Hy
Jamestown Veneer & Plywood Corp. 16c/Ja
Merchant & Evans Co. 16h/Me
Owens-Illinois Plywood Co. 16c/Ow
Panelfab Products Inc. 16a/Pan
Peelle Co. 16m/Pee
Richards-Wilcox Mfg. Co. 16h/Ri
Roddis Plywood Corp. 16c/Ro
Splendor Corp. 16e/Sp
Steelcraft Mfg. Co. 16b/Ste
United States Plywood Corp. 16c/Un
Wilson, J. G., Corp. 16g/WiL

flush—metal

Aetna Steel Products Corp.....16b/Aet
Alumiline Corp. 16a/ALu
American Metal Works, Inc. 16b/Am
American Steel Products Corp. 16b/Ame
Amweld Building Products Div.,
American Welding & Mfg. Co.....16b/Amw
Atlantic Metal Products, Inc. 16b/At
Atlas Fireproof Door Co., Inc. 16b/AtL
Ceco Steel Products Corp. 16b/Ce
Clark Door Co., Inc. 16h/CL
Coast Line Steel Products, Inc. 16b/Co
Continental Nu-Steel Metal Products
Co. 16i/Co
Cupples Door & Frame Corp. 16a/Cu
Detroit Steel Products Co. 16b/De
Dusing & Hunt,
Inc. 16a/Dui; 16h/Dus; 16b/Du
Electric Power Door Co., Inc. 16i/EL
Fenestra, Inc. 16b/Fe
Firebar Door Div., Rysdon
Products Co. 16m/Fi
Flour City Ornamental Iron Co. 16a/FL
Frantz Mfg. Co. 16i/Fr
Friedrich, E. H., Co. 16b/Fr
Hansson, Elof, Inc., Acoustical Div..11a/Ha
Kawneer Co. 16a/Kaw
Mesker Brothers 16b/Me
Overly Mfg. Co. 16b/Ov
Panelfab Products Inc. 16a/Pan
Philipp Mfg. Co. 16b/Ph
Pioneer Fireproof Door Corp. 16b/Pi; 16m/Pi
Pittsburgh Plate Glass Co. 16a/Pi
Rebco, Inc. 21/Re
Reuter, M., & Sons.....16b/Re
Richards-Wilcox Mfg. Co. 16h/Ri
Richmond Fireproof Door Co. 16b/Ri
Saino, F. L., Mfg. Co. 16b/Sa

doors *cont.*

flush—metal *cont.*

St. Louis Fire Door Co. 16h/Sa
Steelcraft Mfg. Co. 16b/Ste
Superior Fireproof Door &
Sash Co., Inc. 16b/Sup
Truscon Steel Div., Republic Steel
Corp. 16b/Trs
Trussbilt Div., Siems Bros., Inc. 16b/Tru
United Steel Fabricators, Inc. 16b/Un
Variety Fire Door Co., Inc. 16b/Ua
Virginia Metal Products, Inc. 22a/Vi
Williamsburg Steel Products Co. 16b/Wi

flush—plywood or wood

Architectural Products Mfg. Co. 16c/Ar
Clark Door Co., Inc. 16h/CL
Crooks, W. D., & Sons.....16c/Cr
Curtis Companies, Inc. 16c/Cu
Dusing & Hunt, Inc. 16c/Dus
Eggers, F., Plywood & Veneer Co. ..16c/Eg
Electric Power Door Co., Inc. 16i/EL
Farley & Loetscher Mfg. Co. 16c/Fa
Frantz Mfg. Co. 16i/Fr
General Plywood Corp. 16c/Ge
Hardwood Products Corp. 16c/Ha
Haskelite Mfg. Corp., Sub. Evans
Products Co. 16c/Has
Hyde Murphy Co. 16c/Hy
Ipik Door Co., Inc. 16c/Ip
Mengel Co. 16c/Me
Munchhausen Soundproofing Co.,
Inc. 16m/Mu
Owens-Illinois Plywood Co. 16c/Ow
Paine Lumber Co., Ltd. 16c/Pa
Roddis Plywood Corp. 16c/Ro
Simpson Logging Co. 5b/Si; 16c/Si
Splicewood Corp. 5b/Sp; 16c/Sp
Superior Woodwork Co. 16c/Su
United States Plywood Corp. ..5b/Un; 16c/Un
Wilson, J. G., Corp. 16g/WiL

folding and sliding—commercial or industrial

Aetna Steel Products Corp. 16b/Aet
American Accordion-Fold Doors, Inc..16e/Am
American Window & Door Co.,
Inc. 17a/Ame
Atlas Overhead Door Co., Div Industrial
Corp. of America 16i/At
Barber-Colman Co. 16i/Ba
Bayley, William, Co. 17b/Ba
Bellwood Co. of California, Div.
Packard-Bell 16c/Be
Bogert & Carlough Co. 17b/Bo
Butcher Boy Refrigerator Door Co....23c/Bu
Byrne Doors, Inc. 16h/By
Ceco Steel Products Corp. 16b/Ce
Clark Door Co., Inc. 16h/CL; 23c/CL
Consolidated General Products, Inc. .16e/Co
Continental Nu-Steel Metal Products
Co. 16i/Co
Crawford Door Co. 16i/Cra
Curtition Corp. 16e/Cu
Dusing & Hunt, Inc. 16h/Dus
Electric Power Door Co., Inc. 16i/EL
Federal Windows Mfg. Co., Inc. 17b/Fe
Firebar Door Div., Rysdon Products
Co. 16m/Fi
Fleming Steel Co. 16h/FL
Holcomb & Hoke Mfg. Co., Inc. 16e/Ho
International Steel Co. 16h/Int
Kinnear Mfg. Co. 16g/Ki

products

doors *cont.*

folding and sliding—commercial or industrial *cont.*

McKee Door Co. 16i/Mc
Merchant & Evans Co. 16h/Me
Mesker Brothers 16b/Me
Miller Sliding Glass Door Co., Inc...16d/Mi
Morrison Steel Products, Inc. 16i/Mo
New Castle Products, Inc. 16e/Ne
Overhead Door Corp. 16i/Ove
Overly Mfg. Co. 16b/Ov
Panelfold Doors, Inc. 16e/Pa
Pioneer Fireproof Door Corp. 16b/Pi
Pittsburgh Plate Glass Co. 16a/Pi
Raynor Mfg. Co. 16i/Ray
Richards-Wilcox Mfg. Co. 16h/Ri
Richmond Fireproof Door Co. 16b/Ri
Rolscreen Co. 16e/Ro
Roman Metal Products, Inc. 16d/Ro
Saino, F. L., Mfg. Co. 16b/Sa
St. Louis Fire Door Co. 16h/Sa
Security Fire Door Co. 16h/Se
Shlagro Steel Products Corp. 2f/ShL
Splendor Corp. 16e/Sp
Straits Products, Inc. 16e/St
Superior Woodwork Co. 16c/Su
TransWall Coated Products, Div. Waco Mfg. Co. 16e/Tr
Trio Industries, Inc. 17a/Tr
Truscon Steel Div., Republic Steel Corp. 16b/Trs; 16h/Tr
Trussbilt Div., Siems Bros., Inc. 16b/Tru
Wilson, J. G., Corp. 16g/WiL
Wood Specialty Products, Inc. 16e/Wo

folding and sliding—residential

Alwintite Div., General Bronze Corp. 16d/AL
American Accordion-Fold Doors, Inc..16e/Am
Amweld Building Products Div., American Welding & Mfg. Co. 16b/Amw
Bellwood Co. of California, Div. Packard-Bell 16e/Be
Clopay Corp., Folding Door Div.....16e/CL
Consoliated General Products, Inc. ..16e/Co
Crawford Door Co. 16i/Cra
Curtis Companies, Inc. 16c/Cu
Curtition Corp. 16e/Cu
Fleet of America, Inc. 16d/FL; 17a/FLa
Glass Shower Door Co., Inc. 16d/GL
Grant Pulley & Hardware Corp. 18d/Gr
Hardwood Products Corp. 16c/Ha
Holcomb & Hoke Mfg. Co., Inc. 16e/Ho
Kawneer Co. 16a/Kaw
McKee Door Co. 16i/Mc
Miller Sliding Glass Door Co., Inc....16d/Mi
New Castle Products, Inc. 16e/Ne
Nova Sales Co., Sub. Homasote Co. ..8d/No
Overhead Door Corp. 16i/Ove
Paine Lumber Co., Ltd. 16c/Pa
Panelfold Doors, Inc. 16e/Pa
Raynor Mfg. Co. 16i/Ray
Rolscreen Co. 16e/Ro
Roman Metal Products, Inc. 16d/Ro
Splendor Corp. 16e/Sp
Straits Products, Inc. 16e/St
Sun Valley Industries, Inc. 16d/Su
TransWall Coated Products, Div. Waco Mfg. Co. 16e/Tr
Tropicraft of San Francisco 19d/Tro
Truscon Steel Div., Republic Steel Corp. 16b/Trs
United States Plywood Corp. 16c/Un

doors *cont.*

folding and sliding—residential *cont.*

Winter Seal Corp. 17a/Wir
Wood Specialty Products, Inc. 16e/Wo
Woodall Industries Inc. 16c/Woo

folding—louver

Consoliated General Products, Inc...16e/Co
Curtis Companies, Inc. 16c/Cu

garage—decorative panels

Barber-Colman Co. 16i/Ba
Berry Door Corp. 16i/Be
Crawford Door Co. 16i/Cra
Frantz Mfg. Co. 16i/Fr
McKee Door Co. 16i/Mc
Overdoors Inc. 16i/Ov
Overhead Door Corp. 16i/Ove
Raynor Mfg. Co. 16i/Ray
Ridge Door Co. 16i/Rid
Winfield Door Corp. 16i/Win

garage—metal

Acme Central Metal Products, Inc. ..16g/Ac
Arm-R-Lite Door Mfg. Co., Inc. 16i/Ar
Barber-Colman Co. 16i/Ba
Berry Door Corp. 16i/Be
Byrne Doors, Inc. 16h/By
Continental Nu-Steel Metal Products Co. 16i/Co
Cookson Co. 16g/Co
Cornell Iron Works, Inc. 16g/Cor
Crawford Door Co. 16i/Cra
Fleming Steel Co. 16h/FL
Frantz Mfg. Co. 16i/Fr
International Steel Co. 16h/Int
Kinnear Mfg. Co. 16g/Ki
Morrison Steel Products, Inc. 16i/Mo
Overdoors Inc. 16i/Ov
Overhead Door Corp. 16i/Ove
Pacific Rolling Door Co. 16g/Pa
Raynor Mfg. Co. 16i/Ray
Richards-Wilcox Mfg. Co. 16h/Ri
Richmond Fireproof Door Co. 16b/Ri
Ridge Door Co. 16i/Rid
Rowe Mfg. Co. 16i/Ro
Security Fire Door Co. 16h/Se
Shlagro Steel Products Corp. 2f/ShL
Truscon Steel Div., Republic Steel Corp. 16h/Tr
Wilson, J. G., Corp. 16g/WiL
Winfield Door Corp. 16i/Win

garage—wood

Atlas Overhead Door Co., Div Industrial Corp. of America 16i/At
Barber-Colman Co. 16i/Ba
Crawford Door Co. 16i/Cra
Electric Power Door Co., Inc. 16i/EL
Frantz Mfg. Co. 16i/Fr
Kinnear Mfg. Co. 16g/Ki
McKee Door Co. 16i/Mc
Overdoors Inc. 16i/Ov
Overhead Door Corp. 16i/Ove
Raynor Mfg. Co. 16i/Ray
Ridge Door Co. 16i/Rid
Rowe Mfg. Co. 16i/Ro
Security Fire Door Co. 16h/Se
Wilson, J. G., Corp. 16g/WiL
Winfield Door Corp. 16i/Win

glass

Alwintite Div., General Bronze Corp. 16d/AL
American-Saint Gobain Corp. 16d/Am
Amweld Building Products Div., American Welding & Mfg. Co. 16b/Amw

doors *cont.*

glass *cont.*

Arcadia Metal Products 16d/Ar
Arm-R-Lite Door Mfg. Co., Inc. 16i/Ar
Dusing & Hunt, Inc. 16b/Du
Ellison Bronze Co., Inc. 16a/EL
Flour City Ornamental Iron Co. 16a/FL
Glass Shower Door Co., Inc. 16d/GL
Glide Windows, Inc. 16d/GLi
International Steel Co., Revolving Door & Entrance Div. 16f/In
Kaiserhof Industries, Inc. 16d/Ka
Ketcham, G. M. Mfg. Corp. 16d/Ke
Libbey-Owens-Ford Glass Co..7a/Li; 16d/Lib
Mesker Brothers 17a/Me
Miller Sliding Glass Door Co., Inc..16d/Mi
Overly Mfg. Co. 16b/Ov
Pittsburgh Plate Glass Co. 7a/Pi; 16a/Pi; 16d/Pi
Schacht Associates, Inc. 16d/Sc

glass—double-glazed

Acorn Aluminum Products Co. 16d/Ac
Ador Sales Corp. 16d/Ado
Alwintite Div., General Bronze Corp. 16d/AL
Arcadia Metal Products 16d/Ar
Fleet of America, Inc. 16d/FL
Glide Windows, Inc. 16d/GLi
Kaiserhof Industries, Inc. 16d/Ka
Miller Sliding Glass Door Co., Inc..16d/Mi
Sun Valley Industries, Inc. 16d/Su

glass—sliding (window wall)

Acorn Aluminum Products Co. 16d/Ac
Ador Sales Corp. 16d/Ado
Alwintite Div., General Bronze Corp. 16d/AL; 17a/ALw
Andersen Corp. 17c/An
Arcadia Metal Products 16d/Ar
Arm-R-Lite Door Mfg. Co., Inc. 16i/Ar
Daryl Products Corp. 16d/Da
Fleet of America, Inc. 16d/FL; 17a/FLa
Folmar, R. H., Co. 17a/Fo
Glass Shower Door Co., Inc. 16d/GL
Glide Windows, Inc. 16d/GLi
Ketcham, G. M. Mfg. Corp. 16d/Ke
Miller Sliding Glass Door Co., Inc..16d/Mi
Pittsburgh Plate Glass Co. 7a/Pi
Roman Metal Products, Inc. 16d/Ro
Sun Valley Industries, Inc. 16d/Su
Textron Metals Co. 17a/Te
Winter Seal Corp. 17a/Wir

grounded

Hardwood Products Corp. 16c/Ha

hardware for

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hopper

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jail

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jalousie

Air Master Corp. 17d/Ai
Fleet of America, Inc. 17a/FLa
Panelfab Products Inc. 16a/Pan
Southern Sash Sales & Supply Co., Inc. 17a/Sou
Winter Seal Corp. 17a/Wir

doors cont.

laundry chute

see chutes:—*laundry—doors for*.....27

metal—hollow

(see also doors:—*steel* .....16)
Acme Steel Door Corp., Div. Acme Steel Partition Co. 16b/Ac
Aetna Steel Products Corp. .16b/Ae; 16b/Aet
American Metal Works, Inc. 16b/Am
American Steel Products Corp. 16b/Ame
Atlantic Metal Products, Inc. 16b/At
Atlas Fireproof Door Co., Inc. 16b/AtL
Byrne Doors, Inc. 16h/By
Ceco Steel Products Corp. 16b/Ce
Coast Line Steel Products, Inc. 16b/Co
Continental Nu-Steel Metal Products Co. 16i/Co
Electric Power Door Co., Inc. 16i/EL
Fenestra, Inc. 16b/Fe
Friedrich, E. H., Co. 16b/Fr
International Steel Co. 16h/Int
Kawneer Co. 16a/Kaw
Mesker Brothers 16b/Me
Overly Mfg. Co. 16b/Ov
Philipp Mfg. Co. 16b/Ph
Pioneer Fireproof Door Corp. 16b/Pi; 16m/Pi
Reuter, M., & Sons.....16b/Re
Richmond Fireproof Door Co. 16b/Ri
St. Louis Fire Door Co. 16h/Sa
Security Fire Door Co. 16h/Se
Security Metal Products Corp. 16b/Se
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
Truscon Steel Div., Republic Steel Corp. 16b/Trs; 16h/Tr
Trussbilt Div., Siems Bros., Inc. 16b/Tru
United Steel Fabricators, Inc. 16b/Un
Williamsburg Steel Products Co. 16b/Wi

metal—kalamein

Acme Steel Door Corp., Div. Acme Steel Partition Co. 16b/Ac
American Metal Works, Inc. 16b/Am
Atlantic Metal Products, Inc. 16b/At
Atlas Fireproof Door Co., Inc. 16b/AtL
Barber-Colman Co. 16i/Ba
Dusing & Hunt, Inc. 16b/Du
Electric Power Door Co., Inc. 16i/EL
Friedrich, E. H., Co. 16b/Fr
International Steel Co. 16h/Int
Jamestown Veneer & Plywood Corp. ..16c/Ja
Marmet Corp. 16a/Mar
Munchhausen Soundproofing Co., Inc. 16m/Mu
Overly Mfg. Co. 16b/Ov
Philipp Mfg. Co. 16b/Ph
Pioneer Fireproof Door Corp. 16b/Pi
Reuter, M., & Sons.....16b/Re
Richards-Wilcox Mfg. Co. 16h/Ri
Richmond Fireproof Door Co. 16b/Ri
Saino, F. L., Mfg. Co. 16b/Sa
St. Louis Fire Door Co. 16h/Sa
Security Fire Door Co. 16h/Se
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
United States Plywood Corp. 16c/Un
Variety Fire Door Co., Inc. 16b/Ua
Williamsburg Steel Products Co. 16b/Wi

metal—tubular

Acme Metal Molding Co. 21/Ac
Alumiline Corp. 16a/ALu

doors cont.

metal—tubular cont.

American Art Metals Co. 16a/Am
Bayley, William, Co. 17b/Ba
Bogert & Carlough Co. 17b/Bo
Byrne Doors, Inc. 16h/By
Himmel Brothers Co. 16a/Hi
International Steel Co. 16h/Int
Kawneer Co. 16a/Kaw
Marmet Corp. 16a/Mar
Overly Mfg. Co. 16b/Ov
Panelfab Products, Inc. 16a/Pan
Pittsburgh Plate Glass Co. 16a/Pi
Rebco, Inc. 21/Re
Richards-Wilcox Mfg. Co. 16h/Ri
Richmond Fireproof Door Co. 16b/Ri
St. Louis Fire Door Co. 16h/Sa
Security Fire Door Co. 16h/Se
Trio Industries, Inc. 17a/Tr
Truscon Steel Div., Republic Steel Corp. 16b/Trs; 16h/Tr

operators for

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operators—door 18

overhead type

Arm-R-Lite Door Mfg. Co., Inc. 16i/Ar
Atlas Overhead Door Co., Div. Industrial Corp. of America 16i/At
Barber-Colman Co. 16i/Ba
Berry Door Corp. 16i/Be
Butcher Boy Refrigerator Door Co.....23c/Bu
Byrne Doors, Inc. 16h/By
Continental Nu-Steel Metal Products Co. 16i/Co
Crawford Door Co. 16i/Cra
Fleming Steel Co. 16h/FL
Frantz Mfg. Co. 16i/Fr
International Steel Co. 16h/Int
Kinnear Mfg. Co. 16g/Ki
McKee Door Co. 16i/Mc
Morrison Steel Products, Inc. 16i/Mo
Mosher Mfg. Co., Inc. 16h/Mo
Overdoors Inc. 16i/Ov
Overhead Door Corp. 16i/Ove
Raynor Mfg. Co. 16i/Ray
Ridge Door Co. 16i/Rid
Rowe Mfg. Co. 16i/Ro
St. Louis Fire Door Co. 16h/Sa
Truscon Steel Div., Republic Steel Corp. 16h/Tr
Wilson, J. G., Corp. 16g/WiL
Winfield Door Corp. 16i/Win

packaged units

see *door and frames packaged units*.....16

power-operated

Abbotsford Co., Inc. 16g/Ab
Acme Central Metal Products, Inc. ..16g/Ac
Atlas Overhead Door Co. Div. Industrial Corp. of America 16i/At
Balfour, Walter, & Co., Inc. 16g/Ba
Barber-Colman Co. 16i/Ba
Butcher Boy Refrigerator Door Co.....23c/Bu
Byrne Doors, Inc. 16h/By
Cahill, Edward, Inc. 16g/Ca
Ceco Steel Products Corp. 16b/Ce
Clark Door Co., Inc. 16h/CL; 23c/CL
Continental Nu-Steel Metal Products Co. 16i/Co
Cookson Co. 16g/Co

doors cont.

power-operated cont.

Cornell Iron Works, Inc. 16g/Cor
Crawford Door Co. 16i/Cra
Dusing & Hunt, Inc. 16h/Dus
Electric Power Door Co., Inc. 16i/EL
Firebar Door Div., Rysdon Products Co. 16m/Fi
Fleming Steel Co. 16h/FL
Frantz Mfg. Co. 16i/Fr
Holcomb & Hoke Mfg. Co., Inc. 16e/Ho
International Steel Co. 16h/Int
Kinnear Mfg. Co. 16g/Ki
Lawrence Steel Co. 16g/La
Mahon, R. C., Co. 16g/Ma
McKee Door Co. 16i/Mc
Moeschel-Edwards Corrugating Co., Inc. 16g/Mo
Morrison Steel Products, Inc. 16i/Mo
Mosher Mfg. Co., Inc. 16h/Mo
New Castle Products, Inc. 16e/Ne
Overdoors Inc. 16i/Ov
Overhead Door Corp. 16i/Ove
Pacific Rolling Door Co. 16g/Pa
Peelle Co. 34c/Pe
Pittsburgh Plate Glass Co. 7a/Pi; 16d/Pi
Raynor Mfg. Co. 16i/Ray
Richards-Wilcox Mfg. Co. 16h/Ri
Richmond Fireproof Door Co. 16b/Ri
Ridge Door Co. 16i/Rid
Rowe Mfg. Co. 16i/Ro
St. Louis Fire Door Co. 16h/Sa
Security Fire Door Co. 16h/Se
Shlagro Steel Products Corp. 2f/ShL
Straits Products, Inc. 16e/St
Truscon Steel Div., Republic Steel Corp. 16h/Tr
Wilson, J. G., Corp. 16g/WiL

radiation shielding—with frames

Firebar Door Div., Rysdon Products Co. 16m/Fi
Peelle Co. 16m/Pee
Superior Fireproof Door & Sash Co., Inc. 16b/Sup

revolving

General Bronze Corp. 16f/Ge
International Steel Co. 16h/Int
International Steel Co., Revolving Door & Entrance Div. 16f/In

rolling—aluminum

Abbotttsford Co., Inc. 16g/Ab
Acme Central Metal Products, Inc. ..16g/Ac
Cookson Co. 16g/Co; 22d/Co
Cornell Iron Works, Inc. 16g/Cor
Hazen Metal Products, Inc. 16g/Ha
Kinnear Mfg. Co. 16g/Ki
Mahon, R. C., Co. 16g/Ma
Moeschl-Edwards Corrugating Co., Inc. 16g/Mo
Pacific Rolling Door Co. 16g/Pa
Wilson, J. G., Corp. 16g/WiL

rolling—bronze

Abbottsford Co., Inc. 16g/Ab
Cornell Iron Works, Inc. 16g/Cor
Kinnear Mfg. Co. 16g/Ki
Mahon, R. C., Co. 16g/Ma
Moeschl-Edwards Corrugating Co., Inc. 16g/Mo

rolling—steel or stainless steel

Abbottsford Co., Inc. 16g/Ab
Acme Central Metal Products, Inc. ..16g/Ac
Balfour, Walter, & Co., Inc. 16g/Ba

products

doors cont.

rolling—steel or stainless steel cont.
Cahill, Edward, Inc. 16g/Ca
Cookson Co. 16g/Co; 22d/Co
Cornell Iron Works, Inc. 16g/Cor
Hazen Metal Products, Inc. 16g/Ha
Kinnear Mfg. Co. 16g/Ki
Lawrence Steel Co. 16g/La
Mahon, R. C., Co. 16g/Ma
Moeschl-Edwards Corrugating Co., Inc. 16g/Mo
Pacific Rolling Door Co. 16g/Pa
Wilson, J. G., Corp. 16g/WiL

rolling—wood
Kinnear Mfg. Co. 16g/Ki
Wilson, J. G., Corp. 16g/WiL

roundhouse
Electric Power Door Co., Inc. 16i/EL
Richards-Wilcox Mfg. Co. 16h/Ri
Truscon Steel Div., Republic Steel Corp. 16h/Tr

rubber
Butcher Boy Refrigerator Door Co. 23c/Bu
Jamison Cold Storage Door Co. 23c/Ja
Stic-Klip Mfg. Co., Inc. 16k/St

screen
see screens:—door 19

seals for—lightproof, dust, gas, vapor
Ameray Corp. 22e/Am
Bar-Ray Products, Inc. 22e/Ba
DURAflex Co. 19b/Dur
Firebar Door Div., Rysdon Products Co. 16m/Fi
International Steel Co., Revolving Door & Entrance Div. 16f/In
Zero Weather Stripping Co., Inc. 19b/Zer

showcase
see display cabinets and cases 23

shower stall
see showers:—doors 26

sidewalk
(see also doors—elevator:—sidewalk ....33)
Babcock-Davis Associates, Inc. 16J/Ba
Bilco Co. 16J/Bi
Gillespie, Robert, Co. 24d/Gi

sliding
see doors:—folding and sliding 16

sound insulating or retarding
Aetna Steel Products Corp. 16b/Aet
American Accordion-Fold Doors, Inc. ..16e/Am
American Art Metals Co. 16a/Am
American Metal Works, Inc. 16b/Am
American Steel Products Corp. 16b/Ame
Amweld Building Products Div., American Welding & Mfg. Co. 16b/Amw
Atlantic Metal Products, Inc. 16b/At
Atlas Fireproof Door Co., Inc. 16b/AtL
Bellwood Co. of California, Div. Packard-Bell 16c/Be
Ceco Steel Products Corp. 16b/Ce
Coast Line Steel Products, Inc. 16b/Co
Crooks, W. D., & Sons 16c/Cr
Dusing & Hunt, Inc. 16b/Du
Eggers, F., Plywood & Veneer Co. 16c/Eg
Firebar Door Div., Rysdon Products Co. 16m/Fi
Hansson, Elof, Inc., Acoustical Div. ..11a/Ha
Hardwood Products Corp. 16c/Ha

doors cont.

sound insulating or retarding cont.
Holcomb & Hoke Mfg. Co., Inc. 16e/Ho
Hyde-Murphy Co. 16c/Hy
Industrial Acoustics Co., Inc. 11c/In
International Steel Co. 16h/Int
Jamestown Veneer & Plywood Corp. ..16c/Ja
Jamison Cold Storage Door Co., Sound Reduction Div. 16m/Ja
Munchhausen Soundproofing Co., Inc. 16m/Mu
New Castle Products, Inc. 16e/Ne
Owens-Illinois Plywood Co. 16c/Ow
Panelfold Doors, Inc. 16e/Pa
Peelle Co. 16m/Pee
Pioneer Fireproof Door Corp. 16m/Pi
Reuter, M., & Sons 16b/Re
Roddis Plywood Corp. 16c/Ro
St. Louis Fire Door Co. 16h/Sa
Splendor Corp. 16e/Sp
Steelcraft Mfg. Co. 16b/Ste
Stic-Klip Mfg. Co., Inc. 16k/St
Straits Products, Inc. 16e/St
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
TransWall Coated Products, Div. Waco Mfg. Co. 16e/Tr
Truscon Steel Div., Republic Steel Corp. 16b/Trs
United States Plywood Corp. 16c/Un
Williamsburg Steel Products Co. 16b/Wi
Wood Specialty Products, Inc. 16e/Wo

stainless steel
Clark Door Co., Inc. 16h/CL
Continental Nu-Steel Metal Products Co. 16i/Co
Cookson Co. 16g/Co
Flour City Ornamental Iron Co. 16a/FL
Glass Shower Door Co., Inc. 16d/GL
Newman Brothers, Inc. 16a/Ne
Overly Mfg. Co. 16b/Ov
Pacific Rolling Door Co. 16g/Pa
Peelle Co. 24c/Pe
Pittsburgh Plate Glass Co. 16d/Pi
Schacht Associates, Inc. 16d/Sc
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
Trio Industries, Inc. 17a/Tr

stainless steel—entrance
Ellison Bronze Co., Inc. 16a/EL
Fiske, J. W., Architectural Metals, Inc. ..6e/Fi
Flour City Ornamental Iron Co. 16a/FL
General Bronze Corp. 16f/Ge
International Steel Co., Revolving Door & Entrance Div. 16f/In
Newman Brothers, Inc. 3a/Ne; 16a/Ne
Overly Mfg. Co. 16b/Ov
Panelfab Products, Inc. 16a/Pan
Pittsburgh Plate Glass Co. 16d/Pi
Schacht Associates, Inc. 16d/Sc
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
Trio Industries, Inc. 17a/Tr
Williamsburg Steel Products Co. 16b/Wi

steel
Acme Central Metal Products, Inc. ..16g/Ac
Aetna Steel Products Corp. 16b/Aet
American Metal Works, Inc. 16b/Am
American Steel Products Corp. 16b/Ame
Amweld Building Products Div., American Welding & Mfg. Co. 16b/Amw

doors cont.

steel cont.
Atlas Fireproof Door Co., Inc. 16b/AtL
Balfour, Walter, & Co., Inc. 16g/Ba
Bayley, William, Co. 17b/Ba
Berry Door Corp. 16i/Be
Bogert & Corlough Co. 17b/Bo
Butcher Boy Refrigerator Door Co. 23c/Bu
Byrne Doors, Inc. 16h/By
Cahill, Edward, Inc. 16g/Co
Ceco Steel Products Corp. 16b/Ce
Clark Door Co., Inc. 16h/CL; 23c/CL
Coast Line Steel Products, Inc. 16b/Co
Continental Nu-Steel Metal Products Co. 16i/Co
Cookson Co. 16g/Co
Dusing & Hunt, Inc. 16a/Dui; 16h/Dus; 16b/Du
Federal Windows Mfg. Co., Inc. 17b/Fe
Fenestra, Inc. 16b/Fe
Firebar Door Div., Rysdon Products Co. 16m/Fi
Fleming Steel Co. 16h/FL
Flour City Ornamental Iron Co. 16a/FL
Friedrich, E. H., Co. 16b/Fr
Hansson, Elof, Inc., Acoustical Div. ..11a/Ha
International Steel Co. 16h/Int
Mahon, R. C., Co. 16g/Mo
Merchant & Evans Co. 16h/Me
Mesker Brothers 16b/Me
Morrison Steel Products, Inc. 16i/Mo
Overdoors Inc. 16i/Ov
Overhead Door Corp. 16i/Ove
Overly Mfg. Co. 16b/Ov
Pacific Rolling Door Co. 16g/Pa
Peelle Co. 16m/Pee; 24c/Pe
Philipp Mfg. Co. 16b/Ph
Pioneer Fireproof Door Corp. ..16b/Pi; 16m/Pi
Reuter, M., & Sons 16b/Re
Richards-Wilcox Mfg. Co. 16h/Ri
Richmond Fireproof Door Co. 16b/Ri
Roman Metal Products, Inc. 16d/Ro
Saino, F. L., Mfg. Co. 16b/Sa
St. Louis Fire Door Co. 16h/Sa
Security Fire Door Co. 16h/Se
Security Metal Products Corp. 16b/Se
Shlagro Steel Products Corp. 2f/ShL
Steelcraft Mfg. Co. 16b/Ste
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
Truscon Steel Div., Republic Steel Corp. 16b/Trs; 16h/Tr; 17b/Tr
Trussbilt Div., Siems Bros., Inc. 16b/Tru
United Steel Fabricators, Inc. 16b/Un
Virginia Metal Products, Inc. 22a/Vi
Williamsburg Steel Products Co. 16b/Wi
Wilson, J. G., Corp. 16g/WiL

steel—entrance
Bayley, William, Co. 17b/Ba
Coast Line Steel Products, Inc 16b/Co
Dusing & Hunt, Inc. 16a/Dui
Ellison Bronze Co., Inc. 16a/EL
Flour City Ornamental Iron Co. 16a/FL
Friedrich, E. H., Co. 16b/Fr
International Steel Co. 16h/Int
International Steel Co., Revolving Door & Entrance Div. 16f/In
Mesker Brothers 16b/Me
Overly Mfg. Co. 16b/Ov
Panelfab Products, Inc. 16a/Pan
Pioneer Fireproof Door Corp. ..16b/Pi; 16m/Pi

doors *cont.*

steel—entrance *cont.*
Reuter, M., & Sons 16b/Re
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
Wilson, J. G., Corp. 16g/WiL

steel or cast iron—concrete filled—with frames
Firebar Door Div., Rysdon Products Co. 16m/Fi
International Steel Co. 16h/Int
Peelle Co. 16m/Pee

steel—plastic-faced
Dusing & Hunt, Inc. 16a/Dui

storm
see *screens:—door—storm sash combination* 19

toilet stall
see *partitions:—toilet, shower, etc.*.....22

vault, storage or record room
see *bank equipment:—vault doors; file room doors:—fire-resistant* 23

ventilator paneled
Aetna Steel Products Corp. 16b/Aet
Alumiline Corp. 16a/ALu
American Metal Works, Inc. 16b/Am
American Steel Products Corp. 16b/Ame
Amweld Building Products Div., American Welding & Mfg. Co. 16b/Amw
Architectural Products Mfg. Co. 16c/Ar
Atlantic Metal Products, Inc. 16b/At
Atlas Fireproof Door Co., Inc. 16b/AtL
Bourne Mfg. Co. 16c/Bou
Ceco Steel Products Corp. 16b/Ce
Coast Line Steel Products, Inc. 16b/Co
Cookson Co. 16g/Co
Crooks, W. D., & Sons 16c/Cr
Curtis Companies, Inc. 16c/Cu
Dusing & Hunt, Inc. 16a/Dui; 16b/Du
Fenestra, Inc. 16b/Fe
Friedrich, E. H., Co. 16b/Fr
General Plywood Corp. 16c/Ge
Hardwood Products Corp. 16c/Ha
Haskelite Mfg. Corp., Sub. Evans Products Co. 16c/Has
Hyde-Murphy Co. 16c/Hy
Ipik Door Co., Inc. 16c/Ip
Kawneer Co. 16a/Kaw
Kinnear Mfg. Co. 16g/Ki
Mengel Co. 16c/Me
Mesker Brothers 16b/Me
Newman Brothers, Inc. 16a/Ne
Overly Mfg. Co. 16b/Ov
Pacific Rolling Door Co. 16g/Pa
Paine Lumber Co., Ltd. 16c/Pa
Panelfab Products Inc. 16a/Pan
Philipp Mfg. Co. 16b/Ph
Pioneer Fireproof Door Corp. .16b/Pi; 16m/Pi
Pittsburgh Plate Glass Co. 16a/Pi
Reuter, M., & Sons 16b/Re
Richmond Fireproof Door Co. 16b/Ri
Roddis Plywood Corp. 16c/Ro
Saino, F. L., Mfg. Co 16b/Sa
Security Metal Products Corp. 16b/Se
Simpson Logging Co. 16c/Si
Splicedwood Corp. 16c/Sp
Superior Fireproof Door & Sash Co., Inc. 16b/Sup

doors *cont.*

ventilator paneled *cont.*
Superior Woodwork Co. 16c/Su
Truscon Steel Div., Republic Steel Corp. 16b/Trs; 16h/Tr
Trussbilt Div., Siems Bros., Inc. 16b/Tru
United States Plywood Corp. 16c/Un
United Steel Fabricators, Inc. 16b/Un
Variety Fire Door Co., Inc. 16b/Va
Williamsburg Steel Products Co. 16b/Wi

wardrobe
see *wardrobe:—doors* 23

window wall
see *doors:—glass—sliding (window wall)*.16

wire
Woven Wire Products Assn. 22f/Wo

wood
Andersen Corp. 17c/An
Atlas Overhead Door Co., Div. Industrial Corp. of America 16i/At
Bellwood Co. of California, Div. Packard-Bell 16c/Be
Clark Door Co., Inc. 16h/CL
Clopay Corp., Folding Door Div. 16e/CL
Connor Lumber & Land Co. 13J/Co
Consoliated General Products, Inc. ..16e/Co
Cookson Co. 16g/Co
Crawford Door Co. 16i/Cra
Crooks, W. D., & Sons 16c/Cr
Curtis Companies, Inc. 16c/Cu
Dusing & Hunt, Inc. 16c/Dus
Eggers, F., Plywood & Veneer Co. 16c/Eg
Electric Power Door Co., Inc. 16i/EL
Farley & Loetscher Mfg. Co. 16c/Fa
General Plywood Corp. 16c/Ge
Hansson, Elof, Inc.. Acoustical Div. .11a/Ha
Hardwood Products Corp. 16c/Ha
Haskelite Mfg. Corp., Sub. Evans Products Co. 16c/Has
Hyde-Murphy Co. 16c/Hy
Ipik Door Co., Inc. 16c/Ip
Jamestown Veneer & Plywood Corp. ..16c/Ja
McKee Door Co. 16i/Mc
Mengel Co. 16c/Me
Munchhausen Soundproofing Co., Inc. 16m/Mu
New Castle Products, Inc. 16e/Ne
Overdoors Inc. 16i/Ov
Overhead Door Corp. 16i/Ove
Owens-Illinois Plywood Co. 16c/Ow
Paine Lumber Co., Ltd. 16c/Pa
Panelfold Doors, Inc. 16e/Pa
Pricemetal Corp. 22b/Pri
Richards-Wilcox Mfg. Co. 16h/Ri
Ridge Door Co. 16i/Ri
Roddis Plywood Corp. 16c/Ro
Rolscreen Co. 16e/Ro
Security Fire Door Co. 16h/Se
Simpson Logging Co. 5b/Si; 16c/Si
Splicedwood Corp. 5b/Sp; 16c/Sp
Superior Woodwork Co. 16c/Su
United States Plywood Corp. 16c/Un
Wood Specialty Products, Inc. 16e/Wo
Woodall Industries Inc. 16c/Woo

wood—plastic-faced
Architectural Products Mfg. Co. 16c/Ar
Bourne Mfg. Co. 16c/Bou
Haskelite Mfg. Corp., Sub. Evans Products Co. 16c/Has

doors *cont.*

wood—plastic-faced *cont.*
Nova Sales Co., Sub. Homasote Co. ..8d/No
Paine Lumber Co., Ltd. 16c/Pa
Roddis Plywood Corp. 16c/Ro
Superior Woodwork Co. 16c/Su
United States Plywood Corp. 16c/Un

x-ray-protective
Ameray Corp. 22e/Am
Bar-Ray Products, Inc. 22e/Ba
Bellwood Co. of California, Div. Packard-Bell 16c/Be
Bourne Mfg. Co. 16c/Bou
Crooks, W. D., & Sons 16c/Cr
General Lead Construction Corp. ..22e/Ge
General Plywood Corp. 16c/Ge
Hardwood Products Corp. 16c/Ha
Hyde-Murphy Co. 16c/Hy
New England Lead Burning Co., Inc. ..22e/Ne
Peelle Co. 16m/Pee
Ray Proof Corp. 22e/Ra
Roddis Plywood Corp. 16c/Ro
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
Superior Woodwork Co. 16c/Su
United States Plywood Corp. 16c/Un

entrances

see *doors:—entrance* 16

frames—door

(see also door and frame packaged units.16)

buck and trim units
Alumiline Corp. 16a/ALu
American Art Metals Co. 16a/Am
American Metal Works, Inc. 16b/Am
American Steel Products Corp. 16b/Ame
Amweld Building Products Div., American Welding & Mfg. Co. 16b/Amw
Atlantic Metal Products, Inc. 16b/At
Atlas Fireproof Door Co., Inc. 16b/AtL
Braun, J. G., Co. 6a/Br
Ceco Steel Products Corp. 16b/Ce
Coast Line Steel Products, Inc. 16b/Co
Dusing & Hunt, Inc. 16b/Du
Firebar Door Div., Rysdon Products Co. 16m/Fi
Friedrich, E. H., Co. 16b/Fr
Kawneer Co. 16a/Kaw
Mesker Bros. 16b/Me
Munchhausen Soundproofing Co., Inc. 16m/Mu
National Store Fronts Co Inc. 16a/Nat
Overly Mfg. Co. 16b/Ov
Peelle Co. 34c/Pe
Philipp Mfg. Co. 16b/Ph
Pioneer Fireproof Door Corp. .16b/Pi; 16m/Pi
Reuter, M., & Sons 16b/Re
Richmond Fireproof Door Co. 16b/Ri
Roman Metal Products, Inc. 16d/Ro
Schacht Associates, Inc. 16d/Sc
Security Metal Products Corp. .....16b Se
Steelcraft Mfg. Co. 16b/Ste
Superior Fireproof Door & Sash Co. Inc. 16b/Sup
Trio Industries, Inc. 17a/Tr

products

frames—door *cont.*

buck and trim units *cont.*

Truscon Steel Div., Republic Steel Corp. 16b/Trs
Trussbilt Div., Siems Bros., Inc. 16b/Tru
United Steel Fabricators, Inc. 16b/Un
Williamsburg Steel Products Co. 16b/Wi

metal

Acme Steel Door Corp., Div. Acme Steel Partition Co. 16b/Ac
Alumiline Corp. 16a/ALu
American Art Metals Co. 16a/Am
American Metal Works, Inc. 16b/Am
American Steel Products Corp. 16b/Ame
Amweld Building Products Div., American Welding & Mfg. Co. 16b/Amw
Atlantic Metal Products, Inc. 16b/At
Atlas Fireproof Door Co., Inc. 16b/AtL
Bogert & Carlough Co. 17b/Bo
Ceco Steel Products Corp. 16b/Ce
Coast Line Steel Products, Inc. 16b/Co
Cupples Door & Frame Corp. 16a/Cu
Dusing & Hunt, Inc. 16b/Du
Firebar Door Div., Rysdon Products Co. 16m/Fi
Friedrich, E. H., Co. 16b/Fr
General Bronze Corp. 16f/Ge
Himmel Brothers Co. 16a/Hi
Kawneer Co. 16a/Kaw
Kennatrack Corp., Sub. Ekco Products Co. 18d/Ke
Mesker Bros. 16b/Me
Miller Sliding Glass Door Co., Inc. ..16d/Mi
Munchhausen Soundproofing Co., Inc. 16m/Mu
National Store Fronts Co. Inc. 16a/Nat
Overly Mfg. Co. 16b/Ov
Peelle Co. 34c/Pe
Philipp Mfg. Co. 16b/Ph
Pioneer Fireproof Door Corp..16b/Pi; 16m/Pi
Pittsburgh Plate Glass Co. 7a/Pi; 16a/Pi; 16d/Pi
Reuter, M., & Sons 16b/Re
Richmond Fireproof Door Co. 16b/Ri
Rigid Metal Products Inc. 21/Ri
Roman Metal Products, Inc. 16d/Ro
Saino, F. L., Mfg. Co. 16b/Sa
Schacht Associates, Inc. 16d/Sc
Security Metal Products Corp. 16bSe
Steelcraft Mfg. Co. 16b/Ste
Superior Fireproof Door & Sash Co., Inc. 16b/Sup
Truscon Steel Div., Republic Steel Corp. 16b/Trs
Trussbilt Div., Siems Bros., Inc. 16b/Tru
United Steel Fabricators, Inc. 16b/Un
Variety Fire Door Co., Inc. 16b/Ua
Virginia Metal Products, Inc. 22a/Vi
Williamsburg Steel Products Co. 16b/Wi

wood

Curtis Companies, Inc. 16c/Cu
Kennatrack Corp., Sub. Ekco Products Co. 18d/Ke
Munchhausen Soundproofing Co., Inc. 16m/Mu

glass

window wall

see doors:—glass—sliding (window wall..16)

grilles or curtains

(see also Sections 6, 23, 30)

rolling, coiling, folding or sliding

Abbotsford Co., Inc. 16g/Ab
Balfour, Walter, & Co., Inc. 16g/Ba
Cahill, Edward, Inc. 16g/Ca
Cookson Co. 16g/Co; 22d/Co
Cornell Iron Works, Inc. 16g/Cor
Hazen Metal Products, Inc. 16g/Ha
Kinnear Mfg. Co. 16g/Ki
Lawrence Steel Co. 16g/La
Mahon, R. C., Co. 16g/Ma
Moeschl-Edwards Corrugating Co., Inc. 16g/Mo
Pacific Rolling Door Co. 16g/Pa
Wilson, J. G., Corp. 16g/WiL

hatchways or scuttles

Babcock-Davis Associates, Inc. 16J/Ba
Bilco Co. 16J/Bi
Marco Co. 20a/Ma
Matot, D. A., Inc. 24a/Ma

skylight combination

Bohem Mfg. Co., Inc. 20a/Bo
By-Products Co., Div. Borne Chemical Co. 20a/By
Marco Co. 20a/Ma
Naturalite, Inc., Marketing Agency of Plastic Products of Texas 20a/Na
Pam Co. 20a/Pa
Plasteco, Inc. 20a/PLa
Van Noorden, E., Co. 20a/Va; 20a/Van
Wasco Products, Inc. 20a/Wa; 20a/Van

jalousies

see doors:—jalousie 16

operators—door—commercial or residential

electronic or photoelectric

Abbottsford Co., Inc. 16g/Ab
Acme Central Metal Products, Inc. ..16g/Ac
Atlas Overhead Door Co., Div. Industrial Corp. of America 16i/At
Barber-Colman Co. 16i/Ba
Clark Door Co., Inc. 16h/CL
Cookson Co. 16g/Co
Crawford Door Co. 16i/Cra
Electric Power Door Co., Inc. 16i/EL
Frantz Mfg. Co. 16i/Fr
International Steel Co., Revolving Door & Entrance Div. 16f/In
McKee Door Co. 16i/Mc
New Castle Products, Inc. 16e/Ne
Overdoors Inc. 16i/Ov
Overhead Door Corp. 16i/Ove
Rowe Mfg. Co. 16i/Ro
Shepard Elevator Co., Div. Dover Corp. 24a/Sh
Stanley Hardware, Div. Stanley Works 18e/Sta

operators—door—commercial or residential *cont.*

manual or mechanical

Abbotsford Co., Inc. 16g/Ab
Acme Central Metal Products, Inc. ..16g/Ac
Atlas Overhead Door Co., Div. Industrial Corp. of America 16i/At
Balfour, Walter, & Co., Inc. 16g/Ba
Barber-Colman Co. 16i/Ba
Butcher Boy Refrigerator Door Co.....23c/Bu
Cahill, Edward, Inc. 16g/Ca
Clark Door Co., Inc. 16h/CL
Cookson Co. 16g/Co
Cornell Iron Works, Inc. 16g/Cor
Crawford Door Co. 16i/Cra
Electric Power Door Co., Inc. 16i/EL
Frantz Mfg. Co. 16i/Fr
Hazen Metal Products, Inc. 16g/Ha
Kinnear Mfg. Co. 16g/Ki
Lawrence Steel Co. 16g/La
Mahon, R. C., Co. 16g/Ma
McKee Door Co. 16i/Mc
Moeschl-Edwards Corrugating Co., Inc. 16g/Mo
New Castle Products, Inc. 16e/Ne
Overdoors Inc. 16i/Ov
Overhead Door Corp. 16i/Ove
Pacific Rolling Door Co. 16g/Pa
Peelle Co. 24c/Pe
Pittsburgh Plate Glass Co. 16d/Pi
Ridge Door Co. 16i/Rid
Rowe Mfg. Co. 16i/Ro
Stanley Hardware, Div. Stanley Works 18e/Sta
Visumatic Corp. 18e/Vi
Wilson, J. G., Corp. 16g/WiL

power

Abbotsford Co., Inc. 16g/Ab
Acme Central Metal Products, Inc. ..16g/Ac
Atlas Overhead Door Co., Div. Industrial Corp. of America 16i/At
Balfour, Walter, & Co., Inc. 16g/Ba
Barber-Colman Co. 16i/Ba
Butcher Boy Refrigerator Door Co.....23c/Bu
Cahill, Edward, Inc. 16g/Ca
Clark Door Co., Inc. 16h/CL
Cookson Co. 16g/Co
Cornell Iron Works, Inc. 16g/Cor
Crawford Door Co. 16i/Cra
Electric Power Door Co., Inc. 16i/EL
Firebar Door Div., Rysdon Products Co. 16m/Fi
Frantz Mfg. Co. 16i/Fr
Hazen Metal Products, Inc. 16g/Ha
International Steel Co., Revolving Door & Entrance Div. 16f/In
Kinnear Mfg. Co. 16g/Ki
Lawrence Steel Co. 16g/La
McKee Door Co. 16i/Mc
Mahon, R. C., Co. 16g/Ma
Moeschl-Edwards Corrugating Co., Inc. 16g/Mo
Overhead Door Corp. 16i/Ove
Pacific Rolling Door Co. 16g/Pa
Peelle Co. 24c/Pe
Pittsburgh Plate Glass Co. 7a/Pi; 16d/Pi
Republic Industries, Inc. 18e/Re
Richards-Wilcox Mfg. Co. 16h/Ri
Ridge Door Co. 16i/Rid
Rowe Mfg. Co. 16i/Ro
Security Fire Door Co. 16h/Se

operators—door—commercial or residential *cont.*

power *cont.*
Stanley Hardware, Div. Stonley Works 18e/Sta
Visumatic Corp. 18e/Vi
Wilson, J. G., Corp. 16g/WiL

radiation-protective equipment

see specific type x-ray-protective product as:
concrete block:—x-ray-protective 4
glass:—x-ray-protective 7
lath:—x-ray-protective; plaster:—x-ray-protective 12
panels and boards—prefinished:—x-ray-protective 14
doors:—x-ray-protective 16
windows—special types:—x-ray-protective 17
nails, screws, etc.:—x-ray-protective..18
ceilings:—x-ray-protective; partitions:—x-ray-protective 22

screens and storm sash

see screens:—door—storm sash combination 19

scuttles

see hatchways or scuttles 16

shutters

(see also shutters—interior .....19)

counter
Abbotsford Co., Inc. 16g/Ab
Balfour, Walter, & Co., Inc. 16g/Ba
Barber-Colman Co. 23d/Ba
Cookson Co. 16g/Co; 22d/Co
Cornell Iron Works, Inc. 16g/Cor
Hozen Metol Products, Inc. 16g/Ho
Kinnear Mfg. Co. 16g/Ki
Lawrence Steel Co. 16g/Lo
Mohon, R. C., Co. 16g/Mo
Moeschl-Edwords Corrugoting Co., Inc. 16g/Mo
Pacific Rolling Door Co. 16g/Pa
Voriety Fire Door Co., Inc. 16b/Ua
Wilson, J. G., Corp. 16g/WiL

door
Cahill, Edward, Inc. 16g/Co
Cornell Iron Works, Inc. 16g/Cor
Curtis Companies, Inc. 16c/Cu
Mahon, R. C., Co. 16g/Ma
Voriety Fire Door Co., Inc. 16b/Ua

fire-labeled
Hazen Metol Products, Inc. 16g/Ho
Kinnear Mfg. Co. 16g/Ki
Mohon, R. C., Co. 16g/Mo
Moeschl-Edwords Corrugating Co., Inc. 16g/Mo

fire-retarding
Hazen Metol Products, Inc. 16g/Ho
Kinnear Mfg. Co. 16g/Ki
Lowrence Steel Co. 16g/Lo

shutters *cont.*

window
Mahon, R. C., Co. 16g/Mo

skylights

hatchway combination
see hatchways or scuttles 16

storm sash

see screens:—door—storm sash combination 19

x-ray protection equipment

see specific material or product as:
concrete block:—x-ray-protective 4
glass:—x-ray-protective 7
lath:—x-ray-protective; plaster:—x-ray-protective 12
panels and boards—prefinished:—x-ray-protective 14
doors:—x-ray-protective 16
windows—special types:—x-ray-protective 17
nails, screws, etc.:—x-ray-protective...18
louvers—door or window:—x-ray-protective 19
ceilings:—x-ray-protective; partitions:—x-ray-protective 22

ALUMILINE

FABRICATORS & FINISHERS

OF ARCHITECTURAL

ALUMINUM PRODUCTS

ENTRANCES

STORE FRONTS

CURTAIN WALLS

CUSTOM FABRICATION

INDEX

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Wide Stile Doors	2, 3
Honeycomb Flush Panel Doors	2, 3
Heavy Duty Flush Panel Doors	2, 3
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Curtain Walls	10
Custom Work	12

A.I.A. File No. 16-E
A.I.A. File No. 26-D

THE ALUMILINE CORPORATION
DUNNELL LANE, PAWTUCKET, R. I.

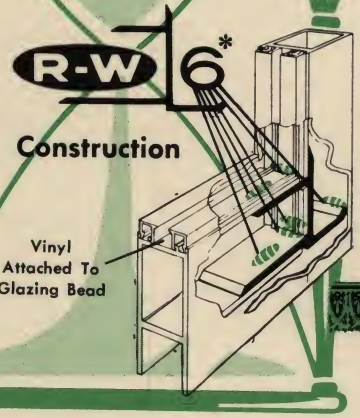
•ADVANCE DESIGN *Plus* •GUARANTEE TIME...by FIRST ALUMILINE

Only The Alumiline Corporation has designed and perfected aluminum door construction with R-W6 to allow you to give your customer a . . . . . .

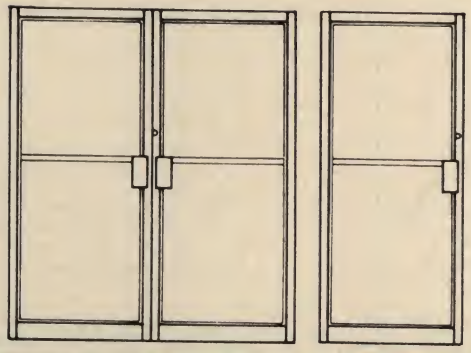
10 Year GUARANTEE

The Alumiline Corporation guarantees replacement or repair of door, if, under any but abnormal use or accident, R-W 6 door corner breaks within 10 years from the date of purchase.

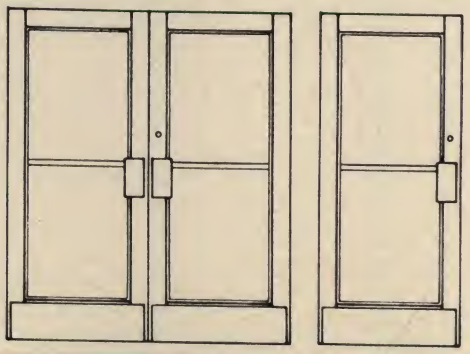
R-W 6* Construction



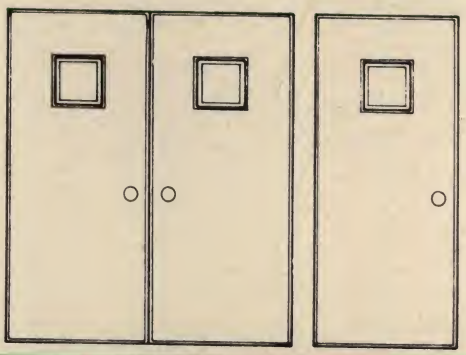
*R-W6 The exclusive Alumiline method of fusing a machined corner reinforcement to the stile and rail with 6-high tensile welds.



NARROW STILE DOORS



WIDE STILE DOORS



HONEYCOMB FLUSH PANEL & HEAVY DUTY FLUSH PANEL DOORS

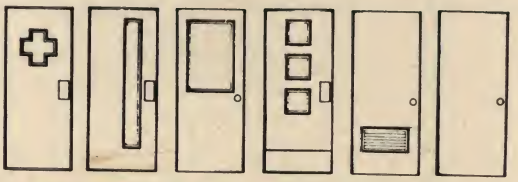
What better proof of quality can we offer to you . . . and you, in turn, offer to your client, than a 10 year guarantee of quality. The Alumiline Corporation makes this guarantee because exhaustive tests prove Alumiline doors with R-W6 tensile welded construction to be four times stronger than other designs.

Specify guaranteed quality as well as beauty . . . specify Alumiline doors, available in clear alumilite and architectural colors.

Alumiline's advance design also features:

- Unique glazing principle, eliminates screws, permits faster installation.
- Accommodates glass up to ⅜" thick and a wider range of hardware.
- Can be custom built to meet architect's specifications.
- Alumilited finishes offer choice of polished Alumilite, Satin Alumilite and Architectural colors, Gold Lite, Red Lite, Blue Lite and Black Lite.

Architectural colors are available on complete door or may be used as colored rim on glazing sections and push-pulls.



Typical Flush Panel Door Modifications

SCALE 1/4"-1' (except door modifications)

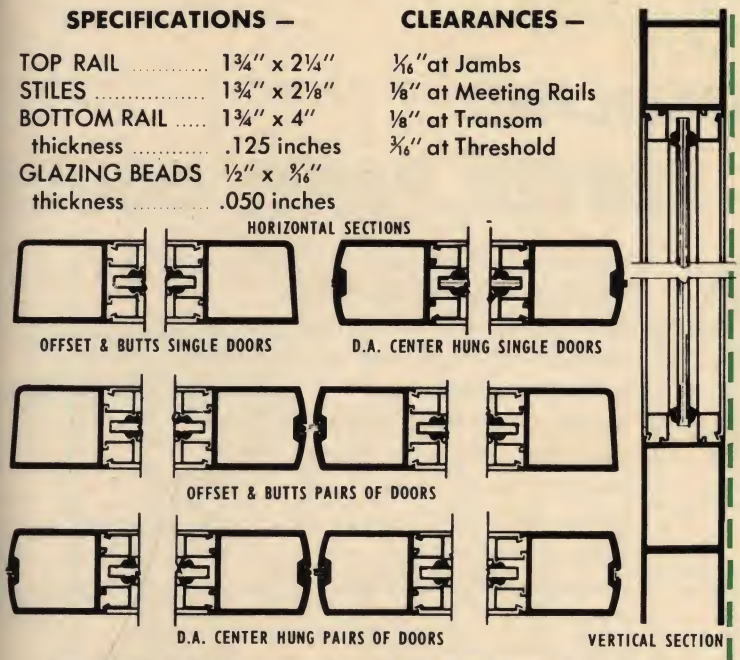
ALUMILINE NARROW STILE DOORS

SPECIFICATIONS —

TOP RAIL	1¾" x 2¼"
STILES	1¾" x 2⅛"
BOTTOM RAIL	1¾" x 4"
thickness	.125 inches
GLAZING BEADS	½" x ⅝"
thickness	.050 inches

CLEARANCES —

1/16"	at Jambs
⅛"	at Meeting Rails
⅛"	at Transom
3/16"	at Threshold


HORIZONTAL SECTIONS
OFFSET & BUTTS SINGLE DOORS
D.A. CENTER HUNG SINGLE DOORS
OFFSET & BUTTS PAIRS OF DOORS
D.A. CENTER HUNG PAIRS OF DOORS
VERTICAL SECTION

Only Alumiline doors are manufactured with R-W6, the exclusive method of fusing a machined corner reinforcement to the stile and rail with 6 high tensile welds. Exhaustive tests prove these doors stronger — so strong that they are guaranteed for 10 years against corner breakage.

See Page 4 For Hardware Schedule

STANDARD DOOR SIZES

TYPE	DOOR OPENING	DOOR SIZE
SINGLE	3'0" x 7'0"	2'11⅞" x 6'11 3/16"
SINGLE	3'6" x 7'0"	3'5⅞" x 6'11 3/16"
PAIR	5'0" x 7'0"	2'5⅞" x 6'11 3/16"
PAIR	6'0" x 7'0"	2'11⅞" x 6'11 3/16"

SPECIAL SIZE DOORS — Readily Available

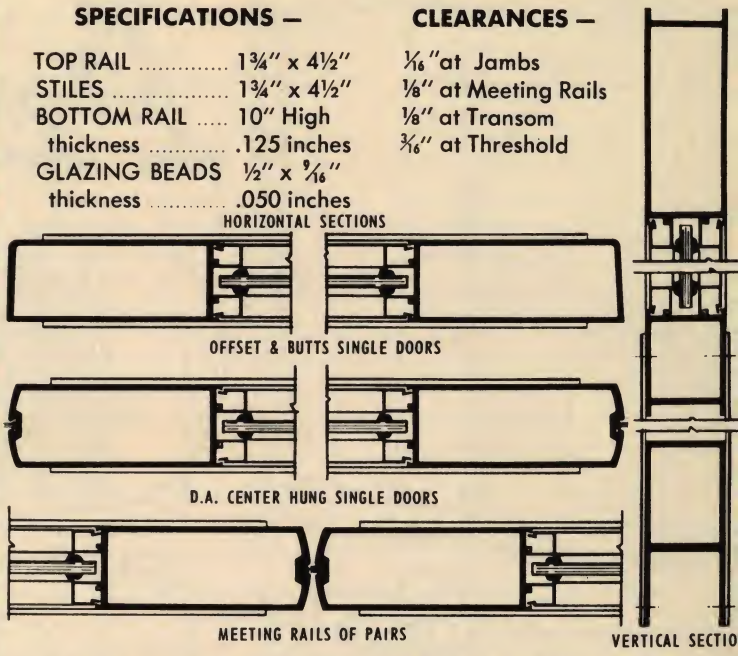
ALUMILINE WIDE STILE DOORS

SPECIFICATIONS —

TOP RAIL	1¾" x 4½"
STILES	1¾" x 4½"
BOTTOM RAIL	10" High
thickness	.125 inches
GLAZING BEADS	½" x 9/16"
thickness	.050 inches

CLEARANCES —

1/16"	at Jambs
⅛"	at Meeting Rails
⅛"	at Transom
3/16"	at Threshold



Aluminum doors are particularly attractive finished in architectural colors. The Alumiline Corporation has pioneered in architectural aluminum finishes and their superior Gold Lite, Blue Lite, Black Lite and Red Lite have stood the test of time. Through color, the architect can achieve outstanding design effects at a very moderate increase in cost.

STANDARD HARDWARE DIMENSIONS

For Standard Size Doors

From The Bottom Of Door

LOCK	— 4'5"	— to ℄ of Cylinder
PUSH BAR H-105	— 3'9⅞"	— to top of handle
PULL HANDLE H-208	— 3'9⅞"	— to top of handle
PULL HANDLE H-101	— 3'10⅝"	— to top of handle
PANIC BAR	— 3'1"	— to ℄ of crash bar
BUTTS-from TOP of door	— 4⅛"	— to top of upper butt
	— 5'11 13/16"	— to top of bottom butt

HONEYCOMB FLUSH PANEL DOOR—Type "H"

Thickness — 1¾".

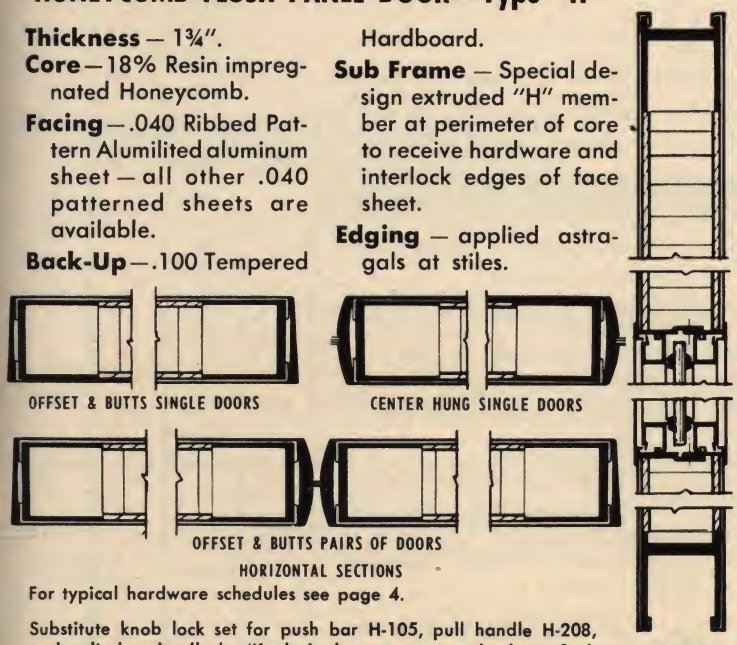
Core — 18% Resin impregnated Honeycomb.

Facing — .040 Ribbed Pattern Alumilited aluminum sheet — all other .040 patterned sheets are available.

Back-Up — .100 Tempered Hardboard.

Sub Frame — Special design extruded "H" member at perimeter of core to receive hardware and interlock edges of face sheet.

Edging — applied astragals at stiles.



For typical hardware schedules see page 4.

Substitute knob lock set for push bar H-105, pull handle H-208, and cylinder deadlock. (Knob Lock sets are standard on flush panel doors.)

HEAVY DUTY FLUSH PANEL DOOR—Type "G"

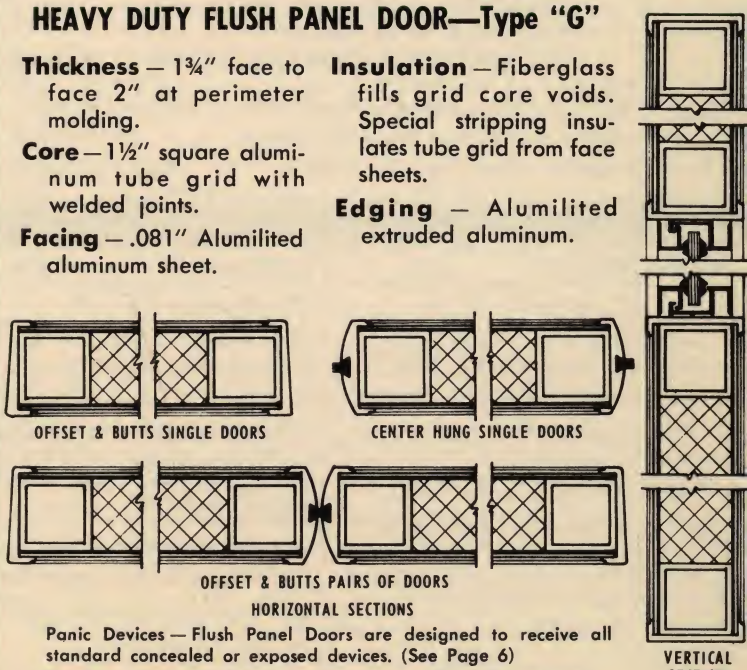
Thickness — 1¾" face to face 2" at perimeter molding.

Core — 1½" square aluminum tube grid with welded joints.

Facing — .081" Alumilited aluminum sheet.

Insulation — Fiberglass fills grid core voids. Special stripping insulates tube grid from face sheets.

Edging — Alumilited extruded aluminum.



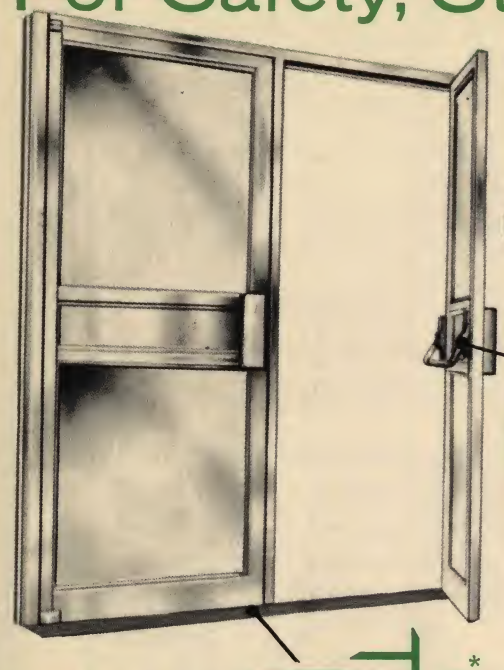
Panic Devices — Flush Panel Doors are designed to receive all standard concealed or exposed devices. (See Page 6)

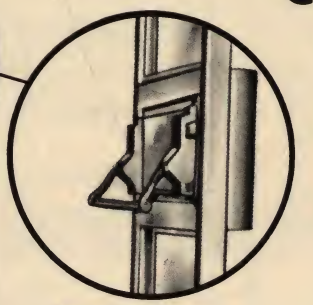
For door sizes and clearances (see above). Special sizes are readily available.

SCALE 1/4 SIZE

See Alumiline Full Size Details For Complete Dimensions And Construction Drawings.

For Safety, Strength and Long Life





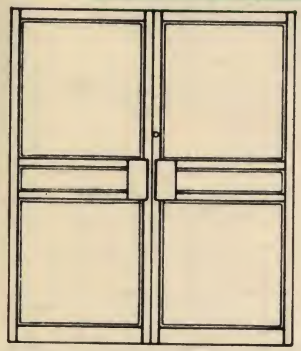
Panic Crash Bar is Concealed From Outside

Specify ALUMILINE CENTER PANEL DOORS

- Center panel protects the public against injury from glass breakage.
- Horizontal mullions provide for additional reinforced and welded joints for greater strength.
- Single doors with center post and rim type panics prevent illegal entry with wires. Rim type panics reduce maintenance.
- Enhances entrance design by concealing crash bar of panic device.

Constructed with R-W 6*

Narrow Stile Center Panel Doors



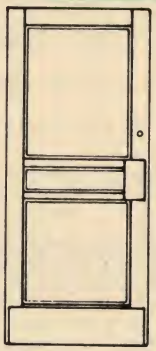
SPECIFICATIONS

Top Rail	1¾" x 2¼"
Stiles	1¾" x 2⅛"
Bottom Rail	1¾" x 4"
Muntins	1¾" x 1¾"
Thickness	.125 inches
Glazing Beads	½" x 5/16"
Thickness	.050 inches

Special Note: Muntins reinforced and welded to stiles.

Built Up Bottom Rails Available

Wide Stile Center Panel Doors



SPECIFICATIONS

Top Rail	1¾" x 4½"
Stiles	1¾" x 4½"
Bottom Rail	10" high
Muntins	1¾" x 1¾"
Thickness	.125 inches
Glazing Beads	½" x 5/16"
Thickness	.050 inches

Special Note: Muntins reinforced and welded to stiles.

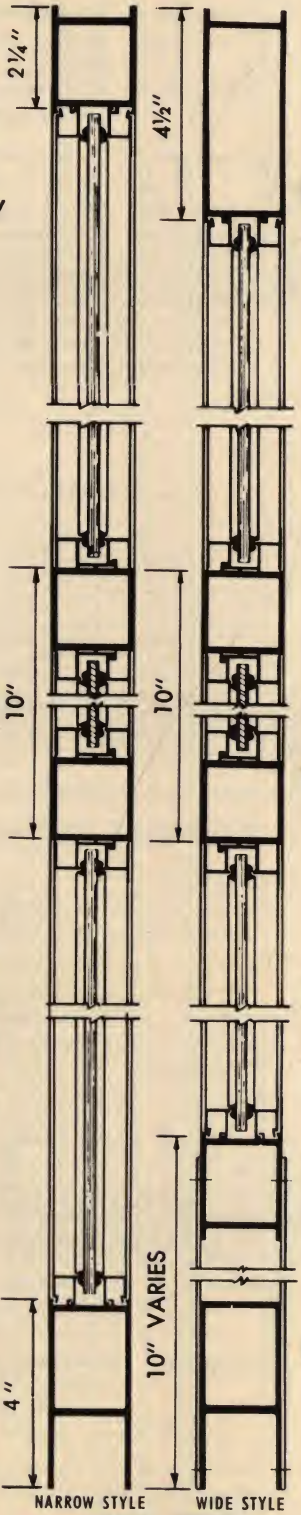
Bottom Rail Height Variable

- **Panic devices — if required, change typical hardware schedule as follows:**
  1. **Delete lock, flush bolts and pushbar H-105**
  2. **Add panic device — See Page 6**

NOTE: With Detroit concealed or rim type devices use Alumiline H-102 or Detroit 40 40 pull handles due to cylinder location. Center panel can be padded to receive other adaptable rim type devices.

4½" wide stile receives most of the standard unit locks and mortise locks. Rim type panic devices with cases up to 4" wide are applicable.

SCALE 1/4"-1'



ALUMILINE CENTER PANEL DOORS *are furnished with*

1. Concealed or Rim Type Panic Devices
2. Concealed or Exposed Door Holders
3. Butt Hinges or Hanging Stile Pivots
4. Locks with Cylinders or Locks Less Cylinders To Receive Master Keyed Cylinders by Others
5. Overhead Closers or Floor Checks

HARDWARE SCHEDULES *(per leaf)* ALL DOORS

BUTT DOORS

- 1 - 1-5/32" diameter double cylinder deadlock (active leaf)
- 1 - pr. flush bolts (inactive leaf)
- 1 - pr. 4½"x 4"ball bearing butts
- 1 - H-208 pull handle
- 1 - H-105 push bar
- 1 - overhead door closer
- 1 - 98-4 threshold ½" high, width of door opening

HANGING STILE PIVOT DOORS

- 1 - 1-5/32" diameter double cylinder deadlock (active leaf)
- 1 - pr. flush bolts (inactive leaf)
- 1 - hanging stile pivot set
- 1 - H-208 pull handle
- 1 - H-105 push bar
- 1 - overhead door closer
- 1 - 98-4 threshold ½" high, width of door opening

OFFSET DOORS

- 1 - 1-5/32" diameter double cylinder deadlock (active leaf)
- 1 - pr. flush bolts (inactive leaf)
- 1 - H-208 pull handle
- 1 - H-105 push bar
- 1 - offset single acting floor check
- 1 - 98-7 threshold ½" high, width of door opening

DOUBLE ACTING DOORS

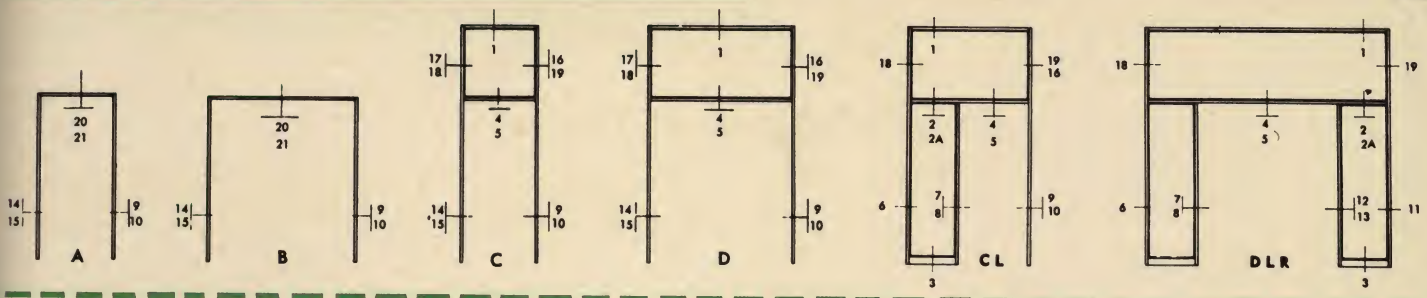
- 1 - 1-5/32" diameter double cylinder deadlock (active leaf)
- 1 - pr. flush bolts (inactive leaf)
- 2 - H-105 push bars
- 1 - center hung D.A. floor check
- 1 - 98-7 threshold ½" high, width of door opening

NOTE:

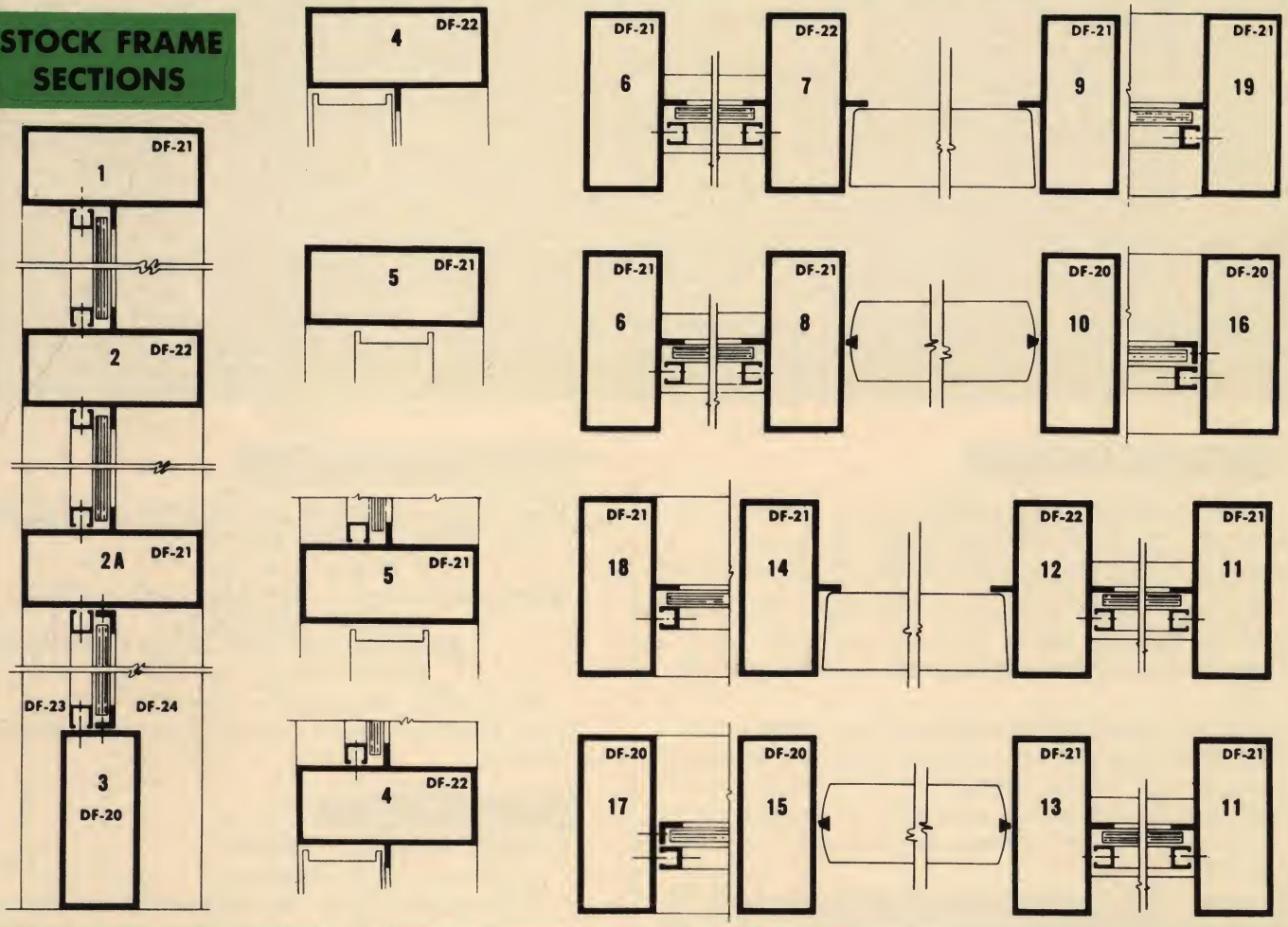
For Wide Stile Doors and Center Panel Doors substitute H-101 pull handle in place of the H-208.

ALUMILINE STOCK DOOR FRAMES

Illustrated Only A Few of 16 Stock Frames Manufactured by The Alumiline Corporation (Scale ⅛"=1')



STOCK FRAME SECTIONS



STOCK FRAMES AND SIDELITES

CONSTRUCTION Alumiline's stock entrance units are fabricated with 1¾" x 4" x ⅛" wall extruded aluminum tubes with removable glazing beads.

K. D. UNIT Stock frame units are shipped knocked down with accessories for field assembly.

PREFABRICATED UNITS All Alumiline entrance units are also available completely prefabricated. Cradles to accurately position the floor checks are optional.

CUSTOM FRAMES Stock and custom design frames are available with the framing sections shown above.

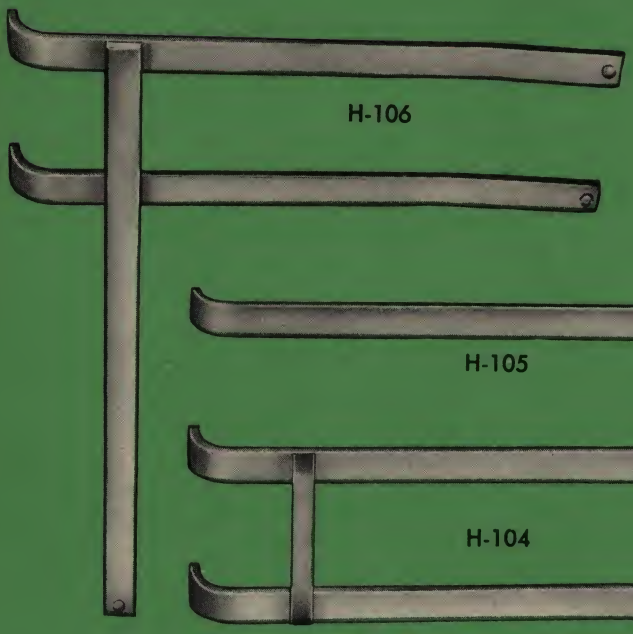
FINISH All stock units are furnished in Alumiline's polished Alumilite 204-A1-R1. Other Alumiline finishes available.

STYLE	DOOR OPENING	FRAME SIZE	MASONRY OPENING
A	3'-0" x 7'-0" 3'-6" x 7'-0"	3'-3½" x 7'-1¾" 3'-9½" x 7'-1¾"	3'-4" x 7'-2" 3'-10" x 7'-2"
B	5'-0" x 7'-0" 6'-0" x 7'-0"	5'-3½" x 7'-1¾" 6'-3½" x 7'-1¾"	5'-4" x 7'-2" 6'-4" x 7'-2"
C	3'-0" x 7'-0" 3'-6" x 7'-0"	3'-3½" x 10'-3½" 3'-9½" x 10'-3½"	3'-4" x 10'-3¾" 3'-10" x 10'-3¾"
D	5'-0" x 7'-0" 6'-0" x 7'-0"	5'-3½" x 10'-3½" 6'-3½" x 10'-3½"	5'-4" x 10'-3¾" 6'-4" x 10'-3¾"

SCALE ¼ SIZE

See Alumiline Full Size Details For Complete Dimensions And Construction Drawings.

ALUMILINE PUSH & PULL HANDLES



H-106

H-105

H-104

H-103 Similar Without Vertical Grip

H-209

ALSO AVAILABLE

- BARS OF SPECIAL DESIGN
- ENGRAVING ON BARS
- ARCHITECTURAL COLORS — GOLD LITE, BLUE LITE, RED LITE AND BLACK LITE

H-102 H-101 H-208

LOCKING DEVICES

DEADLOCKS-Single and double cylinder deadlocks with standard 1-5/32" cylinders or thumb turns.

LATCH LOCKS-With 1-5/32" cylinder outside and lever handle or thumb turn inside.
With lever handles both sides in conjunction with double cylinder deadlock.

KEY-IN-KNOB LOCK SETS-For flush panel or wide stile doors.

LATCH HANDLE LOCKS-For flush panel or wide stile doors.

ELECTRIC STRIKE-Operates with latch-type lock. Requires a minimum of 2" face of frame.

MASTER KEYING-Locks are available with cylinders master keyed or without cylinders set up to receive cylinders by others.

PANIC EXIT DEVICES

VON DUPRIN NARROW LINE CONCEALED DEVICES
Finish US26D (Bronze Chrome Plated) or
US27 (Brushed Aluminum)

DETROIT SERIES 200, CONCEALED DEVICE FOR NARROW LINE DOORS
SERIES 300, RIM TYPE DEVICE FOR NARROW LINE DOORS
Finish US26D (Bronze Chrome Plated)

Other adaptable devices are furnished to architect's specifications.

DOOR CLOSERS

EXPOSED OVERHEAD CLOSERS

Yale — No. 50 & No. 80 Series
Other adaptable closers are furnished to architect's specifications.

CONCEALED FLOOR CLOSERS

Rixson — Offset, single acting center hung and double acting.
Dor-o-Matic — Offset, single acting center hung and double acting.
With or without hold open feature at 90° or 105°
With or without positive backstop at 90° or 105°

Floor hinge cradles are available on factory prefabricated frame units to accurately position floor hinges.

DOOR HOLDERS

GLYNN JOHNSON

#200 Series Concealed Holder For Double Acting Doors

#100 Series Concealed Holder For Single Acting Doors

90 Series Quality Exposed Holder For Single Acting Doors

80 Series Exposed Holder For Moderate Cost Installations

See Alumiline Full Size Details For Complete Dimensions And Construction Drawings.

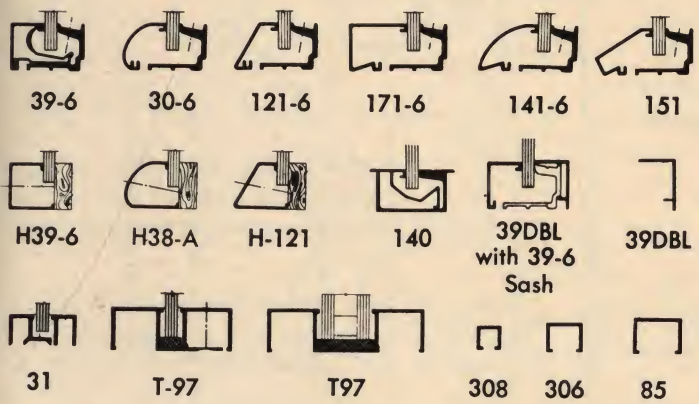
For Economical Installations

Specify **ALUMILINE**

"400" SERIES SASH & SILL COMBINATIONS

These economical units establish a 2-piece installation method instead of the normal 3 to 4 piece procedure resulting in lower cost of materials as well as lower cost of installation.

SASH AND BEAD



Extruded Aluminum — Alumiline Sash and Bead is manufactured of extruded aluminum — easier to handle, easier to install and free of waves.

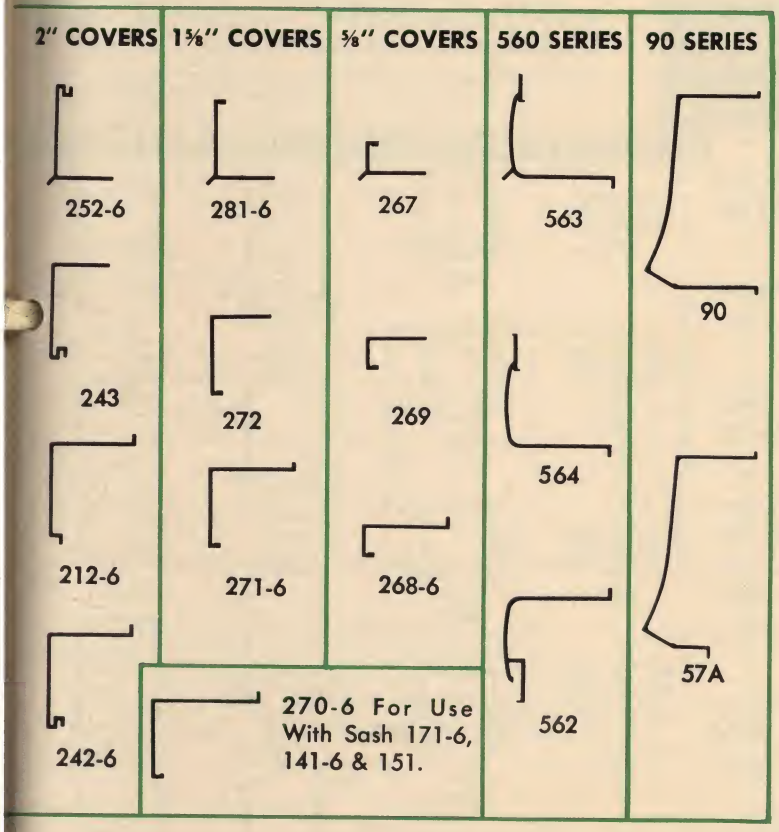
Glass Grab — Deeper glass grab for easier and safer installation.

Flexible Spring Clip — Cushions glass-to-metal contact.

Designs — Wide range of designs including half sashes.

Sash for Insulating Glass — Adjustable for thicknesses from ⅛" to 1" and designed for bedding glass in compound as recommended by glass manufacturers.

NOTE: 39DBL is used with a 39-6 and 171-6 sash to provide a double face sash effect with the excellent qualities of a spring set sash.



SILLS, HEADS AND JAMBS

The Alumiline Corporation manufactures a complete line of heads, sills and jambs for flush and recessed conditions. Heads and jambs are adjustable for greater flexibility.

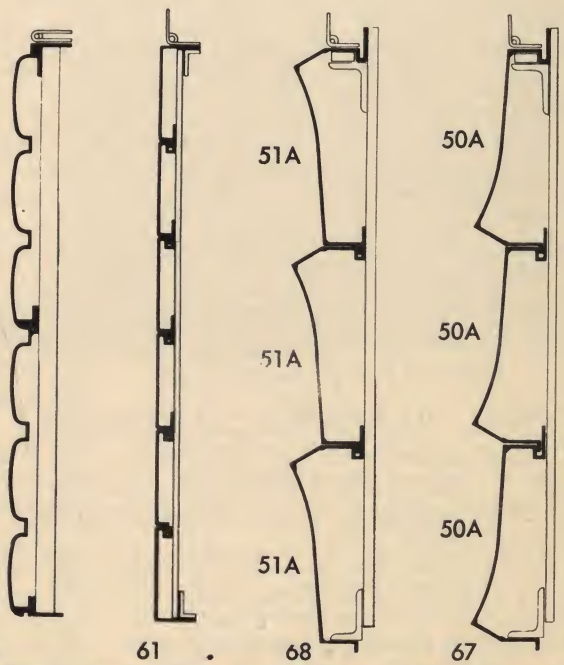
SCALE 1/4 SIZE

AWNING FLAPS

Complementary Designs: Designed to be used with various Alumiline fascia to assure a complementary design throughout.

Flap Sizes: Alumiline Awning Flaps can be made to specific sizes computable with multiplicities of the basic dimension.

Extruded Aluminum: Awning flaps are manufactured of extruded aluminum . . . easier to handle, easier to install and free of waves.



62 Awning Flap Assembly

61 Awning Flap Assembly

68 Awning Flap Assembly

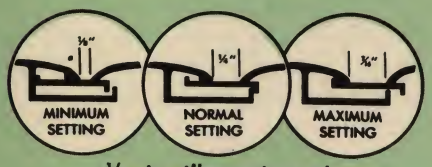
67 Awning Flap Assembly

ALUMILINE 560 SERIES FASCIA

Designed For Attractive Appearance and Ease of Installation

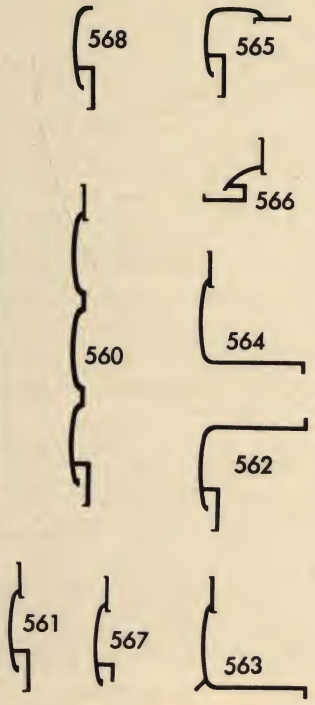
560 Series: A pleasing contour with extreme flexibility at heads, jambs, sills, corners and reverse turns.

ADJUSTABLE INTERLOCK SETTINGS

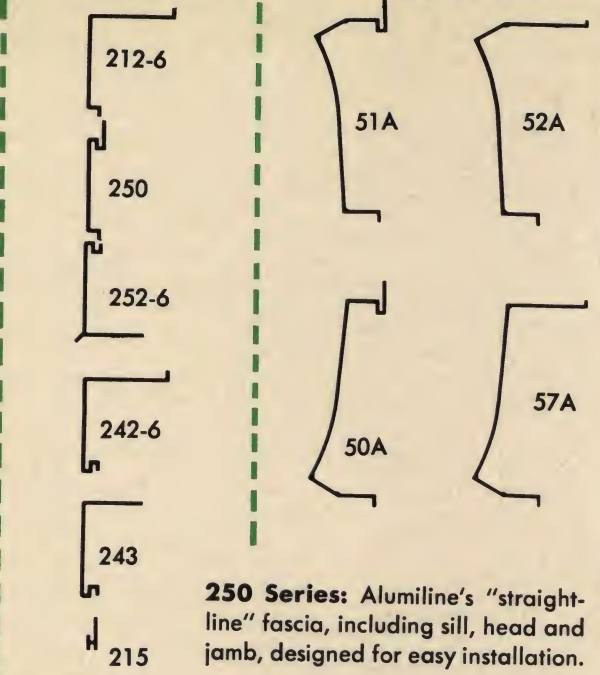


½ size illustrations above

Three positive settings allow the opening to be varied over a 5/16" adjustment. Thus, variations in wood and stud dimensions can be easily taken-up to effect an easy, properly fitted installation.



ALUMILINE FASCIA



250 Series: Alumiline's "straight-line" fascia, including sill, head and jamb, designed for easy installation.

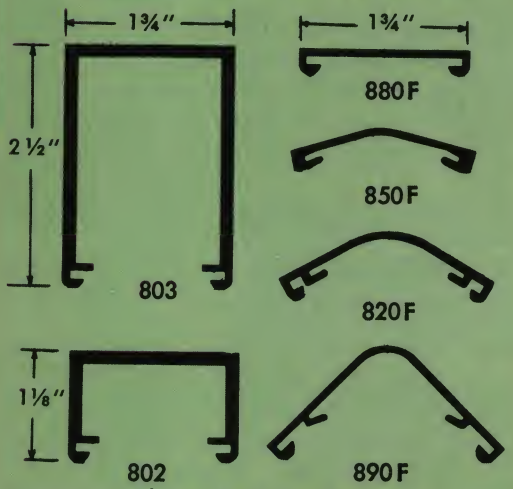
Note #215 interlock is used with two #212 to form 4" pilaster cover.

90 Series: Fascia shapes for outstanding scalloped picture frame and unique architectural effects.

Extruded Aluminum: Fascia sections are manufactured of extruded aluminum . . . easier to handle, easier to install and free of waves.

ALUMILINE DIVISION BARS

These Six Basic Members Assemble Into 15 Bars



Above Units Illus. ½ Size

Versatility: For each face angle a variety of back stiffeners are available.

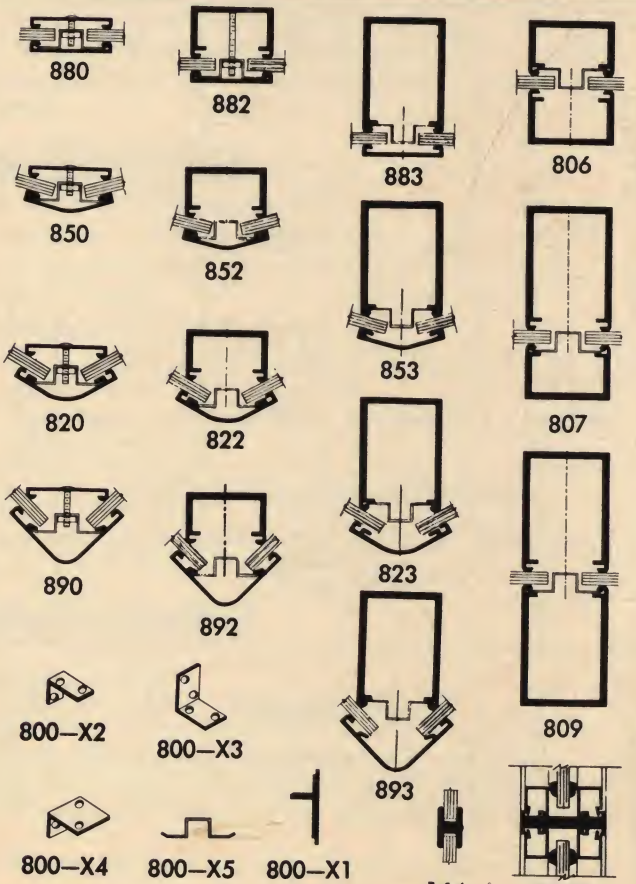
Glass Grab: Deeper glass grab for safer and easier installation.

Flexible Spring Clip: Cushions glass-to-metal contact.

Phillips Hex Head Screws: In stiffeners for neat appearance. Hex head feature allows tightening in limited access areas.

Alumilited Aluminum: On both face AND BACK STIFFENERS. No chance of ugly rust stains.

Special K-D Construction: K-D construction allows assembly of 15 division bars from 6 basic members offering the advantages of flexibility and smaller inventory requirements.



SCALE 1/4 SIZE

Screws For Assembly of KD Division Bars

Only 4 basic screws are required to assemble all KD division bars

800-X6 Assembly screw for 820, 850, 880, 890

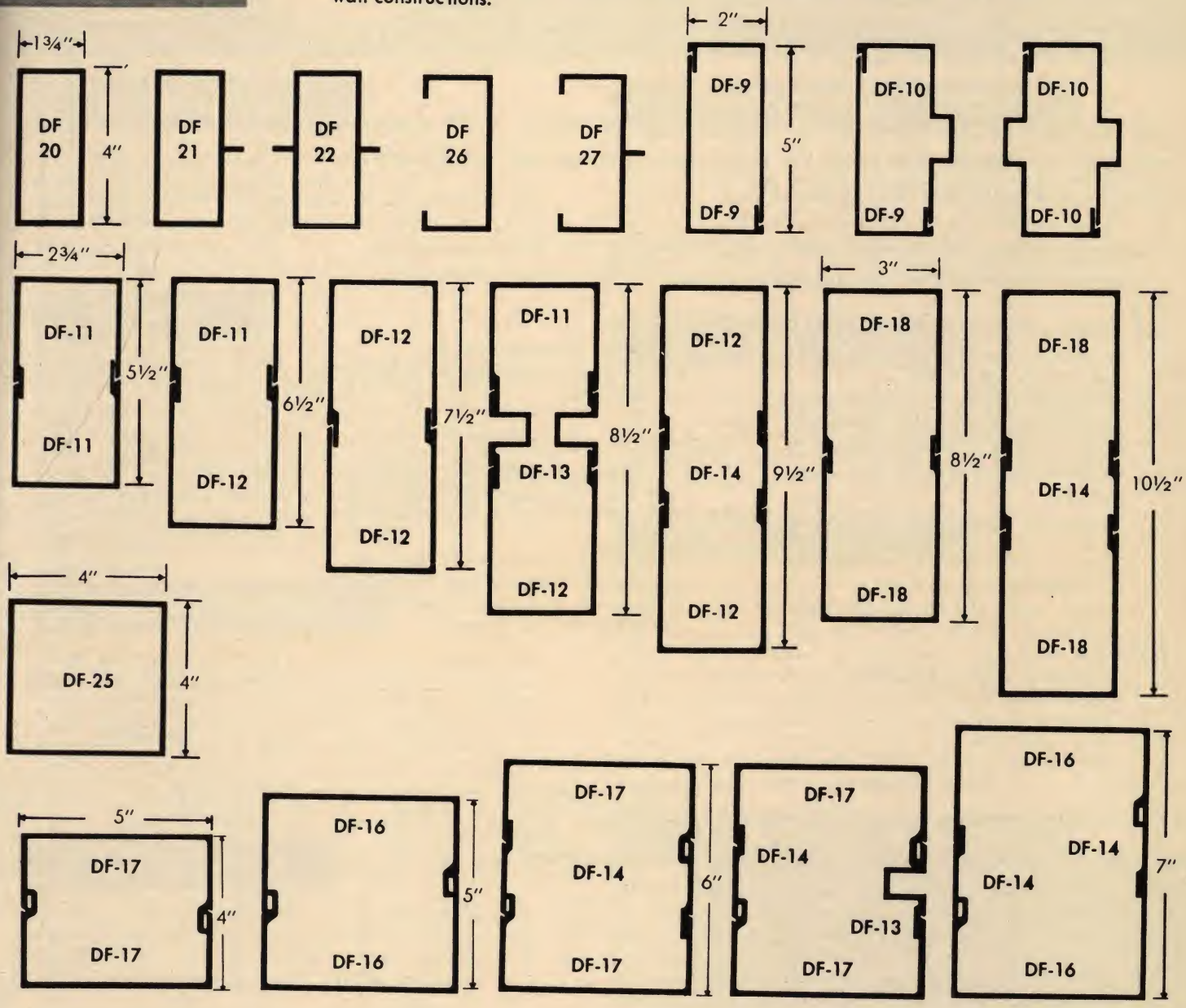
800-X7 Assembly screw for 806, 808, 822, 852, 882, 892

800-X8 Assembly screw for 823, 883

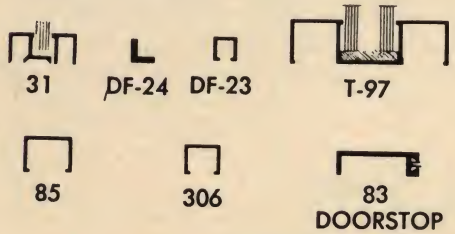
800-X9 Assembly screw for 807, 809, 853, 893

ALUMILINE DF FRAMING MEMBERS

The Alumiline Corporation's DF Framing Sections allow the architect greater variety of design in planning door frames, entrances, window expanses, and curtain wall constructions.



The following illustrations are glazing beads and door stops which may be used in conjunction with DF Framing Members and other Alumiline materials illustrated in this catalog.



SCALE 1/4 SIZE

SPECIAL NOTE

Structural Architectural Shapes

The Alumiline Corporation has a complete line of standard architectural shapes and sheet products such as angles, channels, tubes, etc. These are available in clear alumiline or architectural colors — Gold Lite, Blue Lite, Black Lite and Red Lite

See Alumiline Full Size Details For Complete Dimensions and Construction Drawings

ALUMILINE CURTAIN WALL

969 SERIES CURTAIN WALL

969 Series Curtain Wall is an "Engineered" Modular Wall System designed by Alumiline to meet the requirements of current architectural designs and current building designs.

Alumiline has produced a wall system meeting the required design standards developed by the many recent Curtain Wall Seminars.

969 SERIES CURTAIN WALL provides:

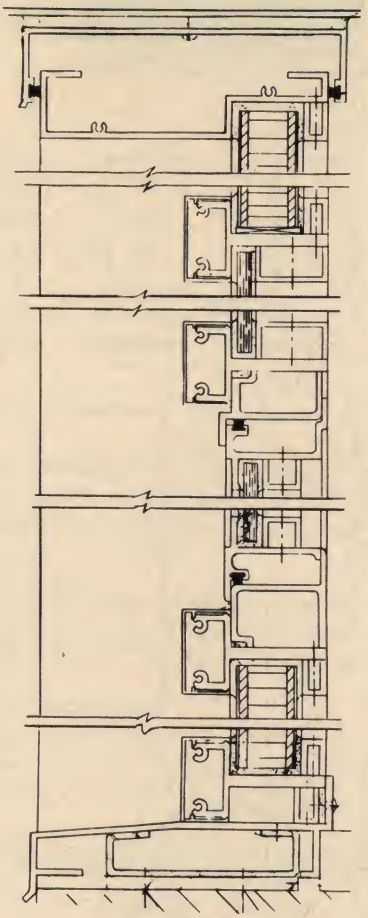
- Modules to span 20 feet at 4 foot widths under 20 PSF wind loads.
- ¾" rabbitts required for glazing large glass lites, insulating glass and panels.
- Direct screw applied glazing beads as recommended by major sealant manufacturers.
- Weathered interlocking mullions and heads to allow for vertical and horizontal movements due to expansion and building movements.
- Awning and hopper type ventilators.

FINISHES:

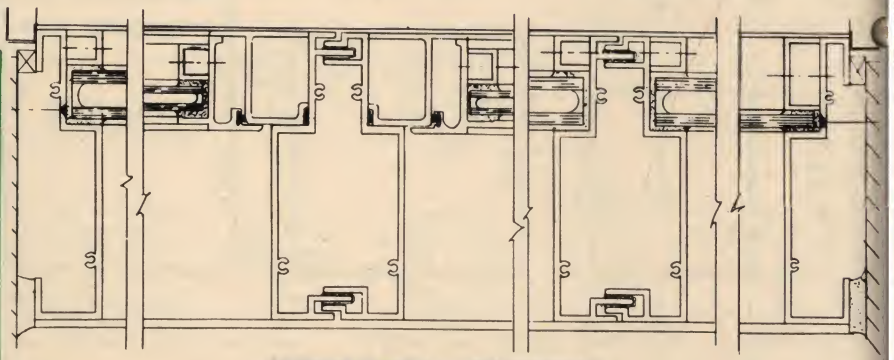
- Alumiline's Polished Alumilite (204-A1-R1)
- Etched and Anodized (204-R1)
- Architectural Colors: Gold Lite, Blue Lite and Black Lite.

ENTRANCES and DOORS:

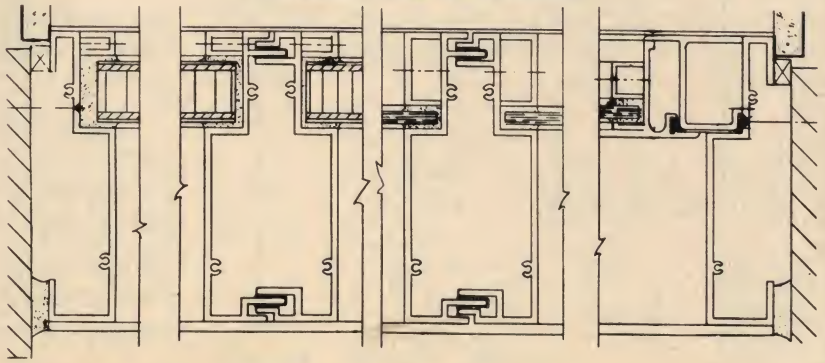
- To maintain a continuity of design, Alumiline Entrance Doors with RW^6 may be incorporated in the 969 Series Wall System.
- Many different architectural effects may be obtained by coordinating Alumiline's large variety of framing members with the 969 Series Wall System.



VERTICAL SECTION



HORIZONTAL SECTIONS



See Alumiline Full Size Details For Complete Dimensions and Construction Drawings

SCALE 1/4 SIZE

THE ALUMILINE CORPORATION

FABRICATORS & FINISHERS OF ARCHITECTURAL ALUMINUM PRODUCTS

STORE FRONTS

The Alumiline Corporation manufactures a complete line of extruded aluminum store front construction including sash, sill, division bars and fascia. These materials are designed to be used in conjunction with Alumiline's doors, entrances and curtain wall.

DOORS

Alumiline doors with R-W 6 have received nationwide recognition for superior quality. R-W 6 emphasizes Alumiline's method of fusing a machined aluminum corner reinforcement to the extruded stile and rail with 6-high tensile welds to assure a quality door that you can recommend with a 10-YEAR WRITTEN GUARANTEE of satisfaction. The Alumiline Corporation manufactures a complete line of doors including narrow stile, center panel, wide stile, flush panel and sliding doors.

SLIDING DOORS

While sliding doors are not included in this catalog, The Alumiline Corporation has a separate Sliding Glass Door division that manufactures an exceptional line of sliding glass doors for residential and business application. You may obtain a copy of Alumiline's Sliding Glass Door Catalog by writing directly to The Alumiline Corporation, Pawtucket, Rhode Island.

ENTRANCES

Alumiline offers a complete line of entrance designs with framings from 1¾" x 4" tubing up to 3" x 10½". Units are available with reinforcing steel or are designed to be re-assembled around structural steel by others.

CUSTOM WORK

The Alumiline Corporation fabricates a wide variety of unusual and highly specialized architectural products such as custom designed doors, frames, church steeples, religious emblems, handrails, decorative grills, and laminated products. These are designed and manufactured to the exact specifications of the builder or architect and are available in clear Alumilite or in architectural colors. On the following page you will see examples of custom work crafted by The Alumiline Corporation.

ARCHITECTURAL COLORS

Alumiline's time-tested architectural colors — Gold Lite, Blue Lite, Black Lite and Red Lite are applicable to all our products. The Finishing Division of The Alumiline Corporation has pioneered in the research and development of architectural color applications and the Company has a reputation for high quality uniformity and dependability on architectural color work.

CURTAIN WALL

Alumiline manufactures a curtain wall system that meets all of the required design standards developed through the many recent Curtain Wall Seminars. Our 969 series is an engineered modular wall system that meets today's design standards.

PLANT FACILITIES

Alumiline manufacturing facilities are completely integrated — engineering, fabrication and finishing are all coordinated under one roof in our Rhode Island factory. Our Finishing Division, for example, is one of the most modern, complete and automated in the industry and adds to the customer's assurance of uniform dependability of finish at lowest possible cost. Years of experience in handling stock, fabricating and custom construction are the intangible ingredients that provide the customer with the quality, thoroughness and accuracy desired.

WAREHOUSE FACILITIES

To speed deliveries to specific areas in the United States, The Alumiline Corporation maintains warehouses in Hicksville, Long Island and Chicago, Illinois. The complete addresses are listed below. Most of all the items covered in this catalog are stocked in clear Alumilite for immediate delivery at both these warehouses. Many items are also stocked in Alumiline's popular Gold Lite.

SPECIFICATIONS AND BULLETINS

The Alumiline Corporation MASTER FILE OF DATA with complete specifications of all our products is available to architects and engineers. In addition, the following technical bulletins are available: Heat Transfer Terminology, Design for Fascia in Architectural Colors, Architectural Aluminum Anodizing, Basic Designs of Narrow Stile Doors and Sliding Glass Doors.

THE ALUMILINE CORPORATION

DUNNELL LANE • PAWTUCKET, RHODE ISLAND • PAWTUCKET 5-9400

MID-WEST WAREHOUSE
1503 W. 35th Street
Chicago, Illinois

EASTERN WAREHOUSE
50 Beth Page Road
Hicksville, Long Island, New York

THE ALUMILINE CORPORATION

CUSTOM WORK

The Alumiline Corporation fabricates a wide variety of specialized custom architectural products such as church steeples, religious emblems, crosses, handrails, powerhouse doors and laminated products. Our engineering department works hand-in-hand with architects and company engineers in designing, fabricating and constructing architectural alumium products to exact specifications.

Illustrated on this page are a variety of jobs in which aluminum standard entrances and doors are used in conjunction with custom aluminum products manufactured by The Alumiline Corporation for customers throughout the United States and the rest of the world.

THE ALUMILINE CORPORATION

DUNNELL LANE • PAWTUCKET, RHODE ISLAND

PAWTUCKET 5-9400

MID-WEST WAREHOUSE
1503 W. 35th Street
Chicago, Illinois

EASTERN WAREHOUSE
50 Beth Page Road
Hicksville, Long Island
New York

Printed In U.S.A.

A.I.A. File No. 16-E
1960 AMARLITE ENTRANCES

16a
Am

aluminum entrances

1960

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AMERICAN ART METALS COMPANY

A.I.A. File No. 16-E
1960 AMARLITE ENTRANCES

AMARLITE®

SATISFACTION OF SERVICE
CONVENIENCE OF AVAILABILITY

SERVICE

When you ask for Amarlite service, you get a man – not a letter of explanation.

When you buy an Amarlite Entrance, you are also buying Amarlite Service. This knowledge is a source of continuing satisfaction for the architects, the dealers, and the owners who choose Amarlite.

AVAILABILITY

The network of 1,000 Authorized Amarlite Dealers is composed of glazing contracting firms with proven ability to install and service plate glass and metal storefronts and entrances.

Each of the Amarlite district plants has a well-stocked warehouse, an experienced sales engineering staff, and shop facilities for modification of stock materials.

Sales and Service policy

A. MATERIALS AND WORKMANSHIP

1. All materials and workmanship are guaranteed to be of first quality; embodying all features claimed in the advertising of respective products.

B. HARDWARE

1. DOOR CHECKS, OPERATORS AND CLOSERS: When furnished by American Art Metals Company for use with Amarlite Door replacement parts or units, if required by reason of defect in material or workmanship, will be supplied in accordance with the published warranty of the manufacturer of that equipment.

2. FLUSH BOLTS, LOCKS, HINGES, PIVOTS: As manufactured by American Art Metals Company for use with standard Amarlite Doors, if required by reason of defect in material of workmanship, replacement parts or units will be supplied for Flush Bolts, Locks, Hinges or Pivots without additional charge for a period of five years after the original shipment of that equipment.

3. PANIC EXIT DEVICES: As manufactured by American Art Metals Company for use with Amarlite Doors, if required by reason of defect in material or workmanship, replacement parts or units will be supplied for Panic Exit Devices for a period of ten years after the original shipment of that equipment.

C. LIABILITY

Nothing in the above guarantee shall expose American Art Metals Company to any liability whatsoever for any costs for labor, transportation or otherwise in connection with replacement of any of the parts or units supplied under this guarantee; nor for any other expense not approved in writing by the Main Office of this company prior to the incurring of the expense.

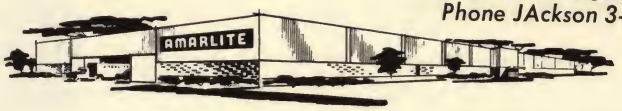
Should it become necessary to exercise this guarantee, simply contact your Amarlite Sales Representative for prompt assistance and instructions as to prescribed procedure.

1. ILLINOIS DISTRICT
8859 South Greenwood Avenue
Chicago, Illinois
Phone REgent 1-6050

2. NEW JERSEY DISTRICT
20 Park Place
P. O. Box 25
Paramus, New Jersey
Phone COlfax 2-1540

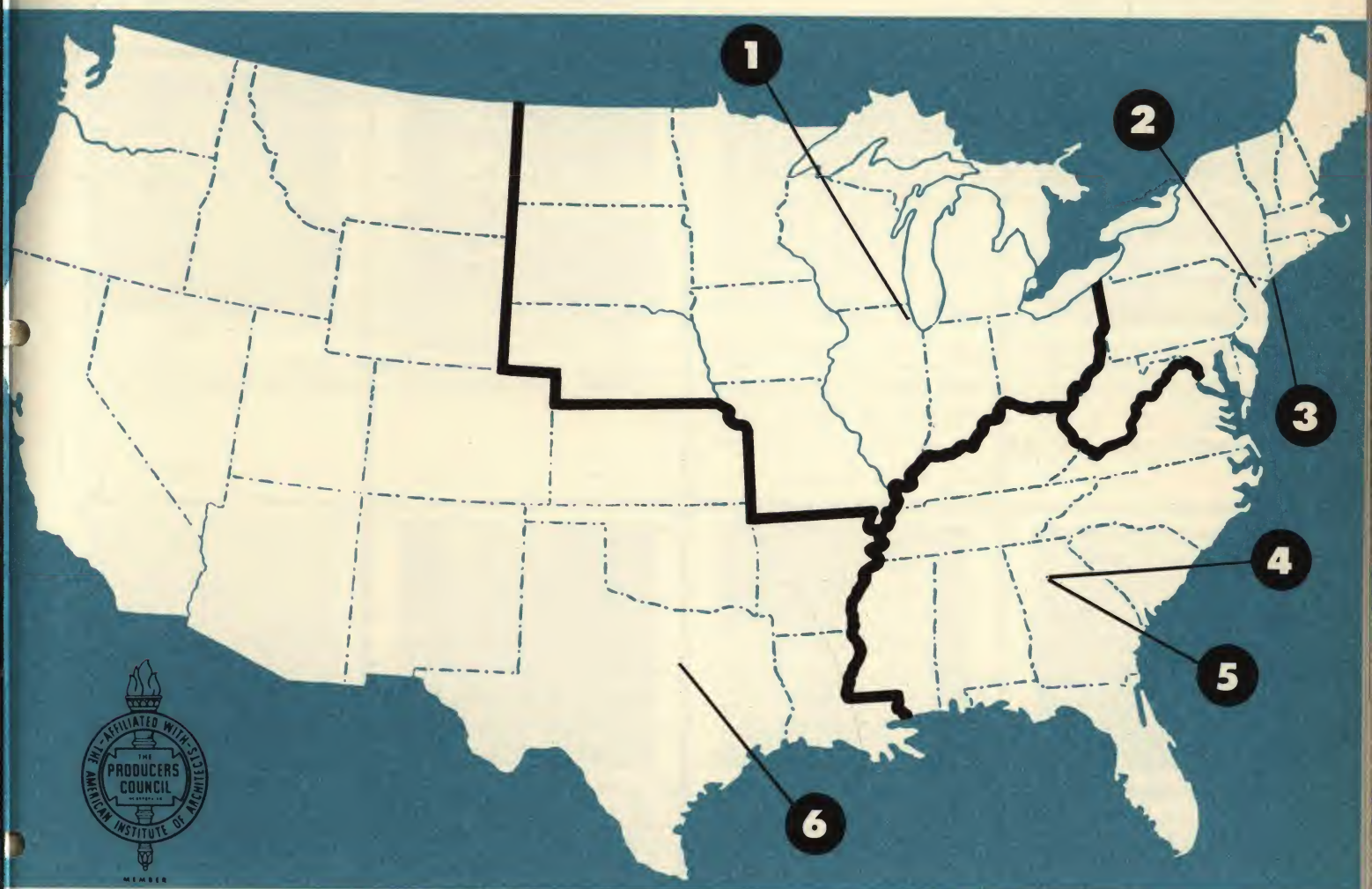
3. NATIONAL ACCOUNTS OFFICE
405 Lexington Avenue
Chrysler Building—Room 3205
New York 17, New York
Phone MUrrayhill 7-0696

4. MAIN OFFICE
P. O. Box 7188, Station C
Atlanta, Georgia
Phone JAckson 3-7471



5. GEORGIA DISTRICT
763 Trabert Avenue, N. W.
P. O. Box 7364, Station C
Atlanta, Georgia
Phone TRinity 6-3628

6. TEXAS DISTRICT
8100 Chancellor Row
P. O. Box 10034, Industrial Station
Dallas, Texas
Phone FLeetwood 7-7389



THE PRODUCERS COUNCIL — AFFILIATED WITH THE AMERICAN INSTITUTE OF ARCHITECTS — MEMBER

SIX AMARLITE SERVICE CENTERS

AMARLITE®

STANDARD
type and sizes

(Carried in Warehouse Stocks)

The Amarlite System of standardized components offers you the advantages of quality controlled production along with economy. It also permits the use of custom accessories at modest additional cost.

standard nomenclature

For brevity and clarity in communications, the Amarlite System uses a very simple code of nomenclature.

Model "E" refers to the Standard *Door*
Model "T" refers to the Standard *Frame*
Model "ET" indicates the Standard *Entrance*

The letters X, Y, W and Z indicate the types of closing equipment, hinges and pivots.

(An example of the use of the ordering code is shown on this page)

standard arrangements

Model ET Amarlite "Trimline" Entrances are single or double door units. They consist of doors and frames, with or without fixed transoms, made in standard sizes, furnished with standard hardware and operating equipment.

standard sizes

On this page are shown sizes for Standard Entrances. Sizes are indicated by the dimensions of the door opening in inches. The first two figures show the width and the last two the height. "TF" denotes a fixed transom.

operational types

Standard Amarlite Entrances are available for four operating conditions:

Single acting with butt hinges and overhead "Trimline" closer. (Entrance Model ETX)—see page 6

Single acting with offset top pivot and concealed floor check. (Entrance Model ETY)—see page 7

Single acting with offset top and bottom pivots and overhead "Trimline" closer. (Entrance Model ETW)—see page 8

Double acting with center top pivot and concealed floor check. (Entrance Model ETZ)—see page 9

standard hardware and equipment

Refer to pages 6, 7, 8, and 9 for detailed lists of standard equipment as provided for the particular operational types.

specifications

Refer to pages 16, 17 for detailed specifications.

swing of doors

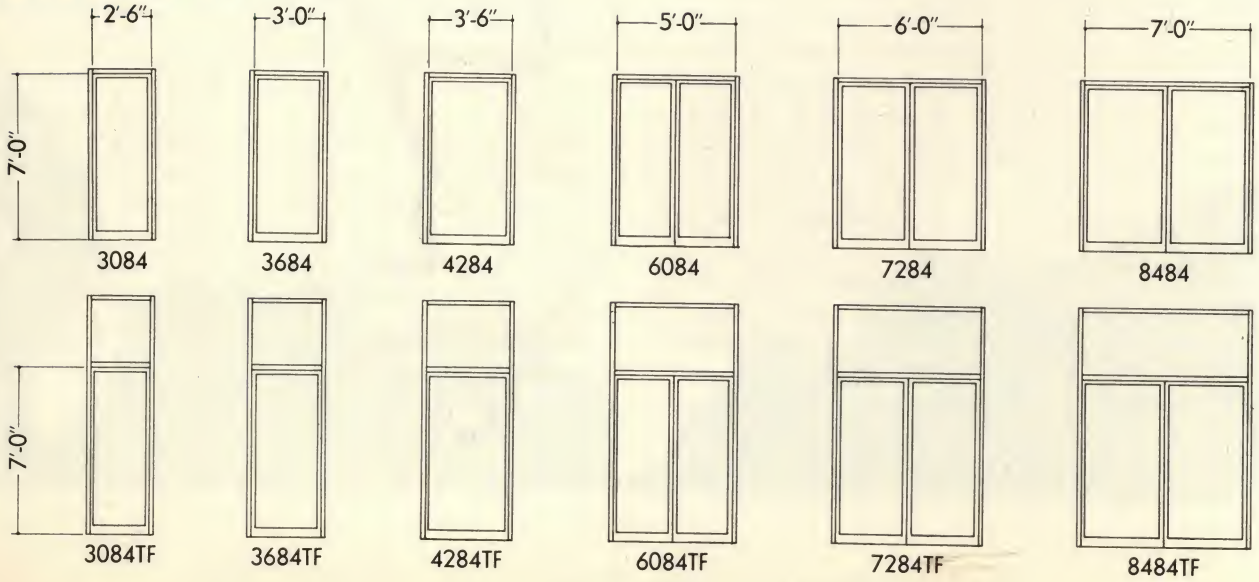
The swing of the leaf of a single door, or the swing of the active leaf of a double door entrance may be indicated by the addition of letters as follows:

LH—Left Hand Swing: Hinged Left "IN"—as viewed from outside.
RH—Right Hand Swing: Hinged Right "IN"—as viewed from outside.
LHR—Left Hand Reverse: Hinged Left "OUT"—as viewed from outside.
RHR—Right Hand Reverse: Hinged Right "OUT"—as viewed from outside.

example of ordering code

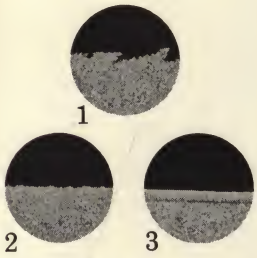
ETX 7284 TF 131¾" RHR indicates:
E: Amarlite "Trimline" Doors Model E.
T: Standard Frame, 4" thick, Tubular Extrusion.
X: Butt Hinges with overhead closers (surface mounted).
7284: Double door opening, 6'0" wide x 7'0" high.
TF: With fixed transom.
131¾": Overall frame height, 131¾".
RHR: Active leaf hinged on right; doors open "out."

STANDARD SIZES



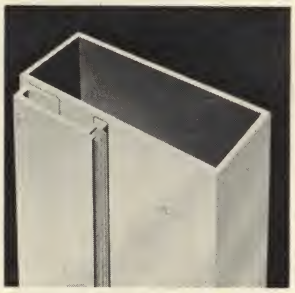
The Features of AMARLITE Entrances

"Architectural Jewelry," as Amarlite products have been called, refers in part to their clean design, in part to their remarkably beautiful and durable finish. This "Alumilite" finish is the result of rigidly controlled materials, painstaking surface preparation, and thorough electro-chemical processing.



quality finish

Step 1. Cross section of the raw aluminum alloy as it comes from the extrusion press.
Step 2. Polished and buffed to a mirror-like smoothness.
Step 3. Anodized "Alumilite" finish. Hard, tough surface has uniform color, resists wear.



weatherstripped frame

The Amarlite Standard Frame is made of one-piece, seamless tubular extrusions, assembled before the frame is placed in the masonry opening. Vinyl weatherstrip in door stop provides snug, silent closing.

weatherstripped astragal

Pile-type weatherstripping in the Amarlite astragal (for double-acting or paired doors) keeps out wind, dust, and insects.

lock

The Amarlite astragal forms a continuous face-plate for the Amarlite Cylinder Lock. Engineered directly into the door stile, this lock is designed and constructed to provide simplicity, durability and dependability.

door pull

25018 door pull is solid aluminum with comfortable grip. Finish is lustrous Alumilite, matching doors and frames.

push bar

25029 push bar is smooth and solid, the perfect counterpart to the Amarlite door pull.

butt hinges

Amarlite's hinge leaves, mounted within frame and stile sections, become integral parts of the assembly. Nylon-on-nylon bearings provide smooth, responsive operation, never need lubrication.

flush bolt

Completely enclosed in the stile, this Amarlite Flush Bolt is operated by a small, slotted button which is easily turned with a door key when active door is open. Cannot be operated when doors are locked.

sturdy construction

Welded and Bolted Construction combines rigidity with strength. Rails and stiles are joined with high-tensile bolts, both top and bottom. The deep-penetrating weld, uniting heavy web-sections of rail and stile, provides complete rigidity.

"levelizer"

Adjustable setting block in the top rail of the door is readily accessible and provides easy means of making adjustments in glass setting.

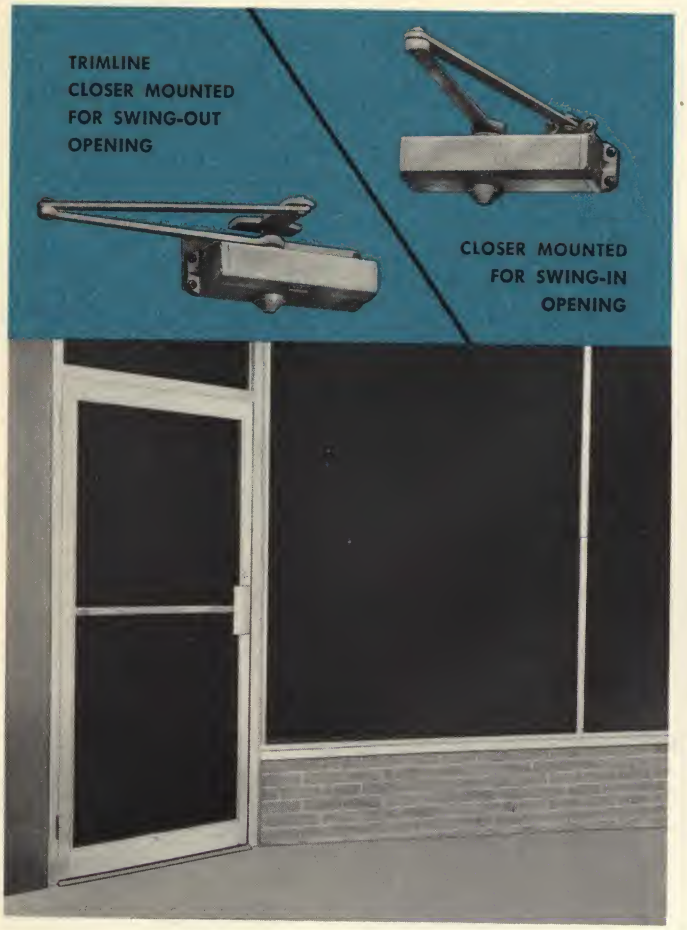
adjustable astragal

Single-acting doors and paired double-acting doors are equipped with this Amarlite adjustable astragal for minor adjustments of clearance.

dry-set snap-in glass stops

They snap smartly in place, secured by spring clips and gripping the glass between vinyl glazing beads. The interior glass stop is readily removable when necessary; however, the exterior stop can be removed only after the glass has been removed.

AMARLITE®



Model ETX

SINGLE-ACTING OPERATION FOR OVERHEAD CLOSER (Surface Type)

Door: Amarlite "Trimline" Door, Model E.

Standard Frame: 1¾" wide x 4" thick with weather-stripped door stop.

Closer: Unit is manufactured for overhead Trimline closer, surface type, for mounting at head of each door leaf. (See page 14 for closers available.)

Hinges: Amarlite butt hinges, nylon-bearing polished anodized aluminum, two per door leaf.

Lock: Amarlite cylinder deadlock, one in vertical stile of each active door leaf, two cylinders per lock. Keying alike or master-keying with standard cylinders available if required.

Flush Bolts: Amarlite, two per inactive door leaf, edge mounted, top and bottom.

Threshold: 4" wide aluminum, mill finish.

Astragals: Adjustable on meeting stile of all active doors.

Weatherstripping: Strike stile, inactive leaves only.

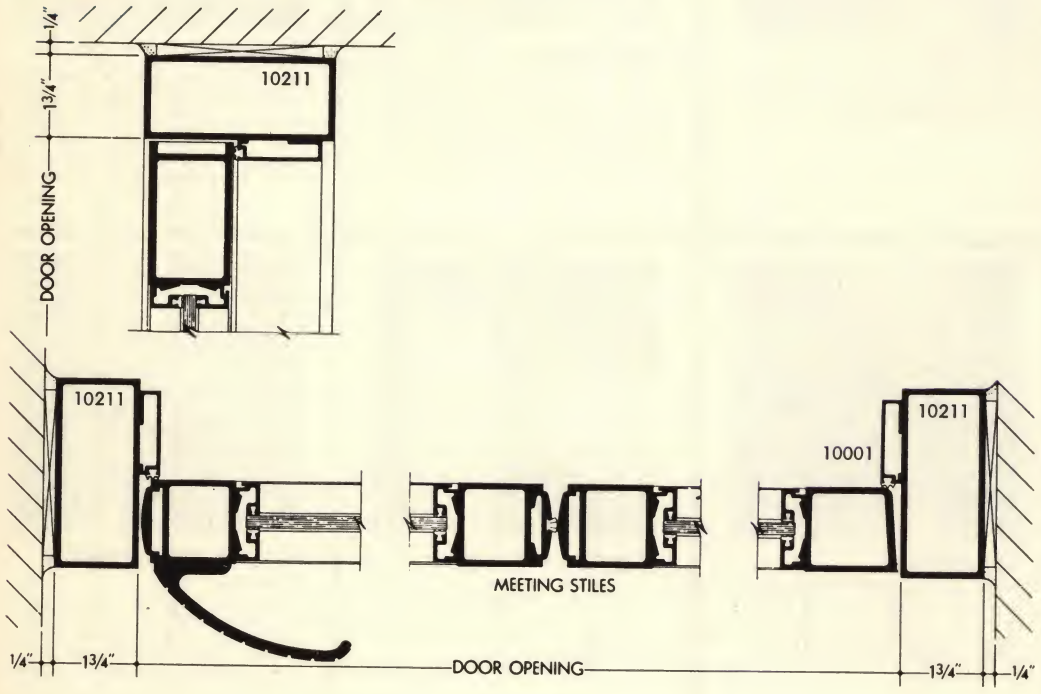
Door Pull: One pull bar, No. 25018, per door leaf.

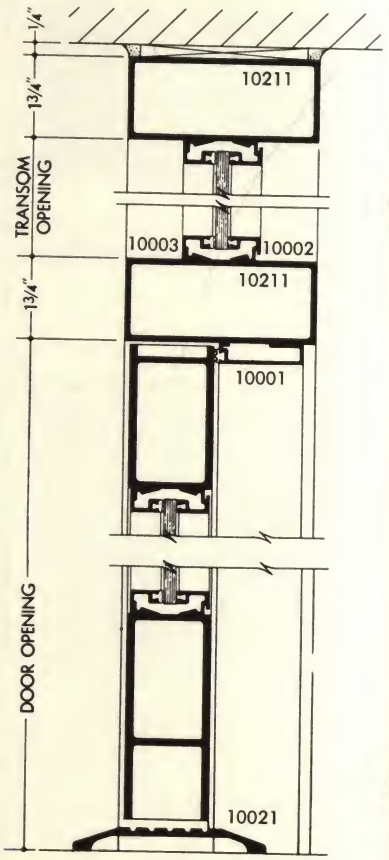
Push Bar: One push bar, No. 25029, per door leaf. (Centerlines are 44 5/16" above bottom of door.) Specifications: See pages 16, 17.

Glass Stops: Snap-in type, dry-set vinyl glazing bead.

Door Levelizer: Adjustable glass-setting block, accessible from top of door.

details — scale 3" = 1'-0"





Model ETY

SINGLE-ACTING OPERATION FOR FLOOR CLOSER (Offset Pivot Type)

Door: Amarlite "Trimline" Door, Model E.

Standard Frame: 1¾" wide x 4" thick with weather-stripped door stop.

Closer and Hinge: Concealed floor closer, offset pivot type, single-acting, one per door leaf. Top pivot, one per door leaf.

Lock: Amarlite cylinder deadlock, one in vertical stile of each active door leaf, two cylinders per lock. Keying alike or master-keying with standard cylinders available if required.

Flush Bolts: Amarlite, two per inactive door leaf, edge mounted, top and bottom.

Threshold: 4" wide aluminum, mill finish, continuous, with extruded aluminum cover over offset pivot floor check to match 4" threshold.

Astragals: Adjustable on meeting stile of all active doors.

Weatherstripping: Strike stile, inactive leaves only.

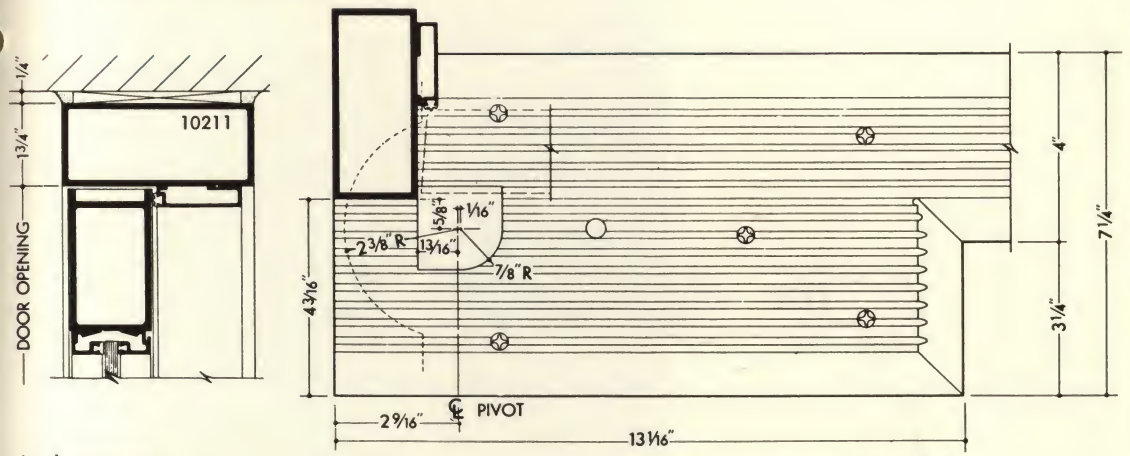
Door Pull: One pull bar, No. 25018, per door leaf.

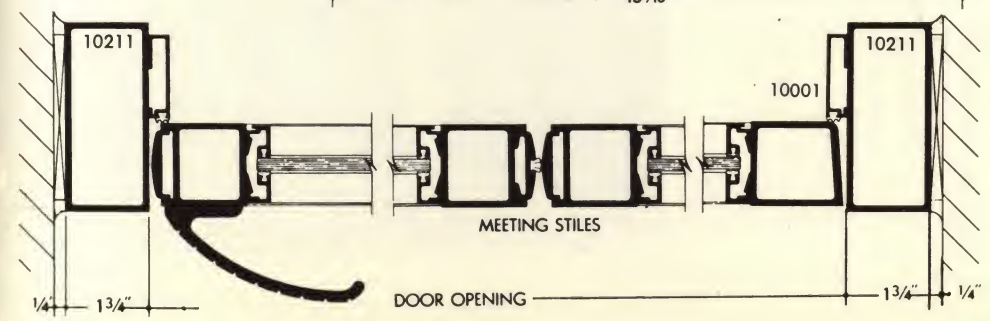
Push Bar: One push bar, No. 25029, per door leaf. (Centerlines are 44 5/16" above bottom of door.) Specifications: See pages 16, 17.

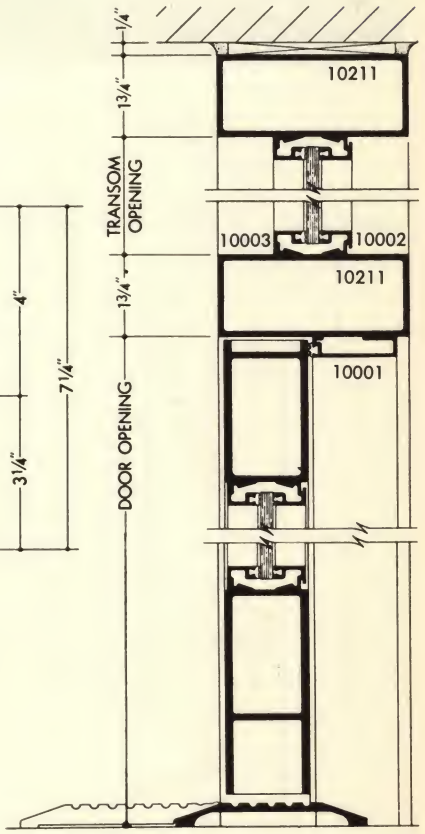
Glass Stops: Snap-in type, dry-set vinyl glazing bead.

Door Levelizer: Adjustable glass-setting block, accessible from top of door.

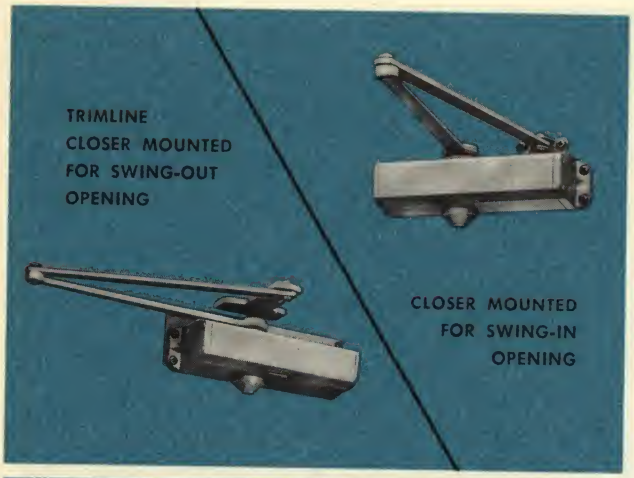
details — scale 3"=1'-0"

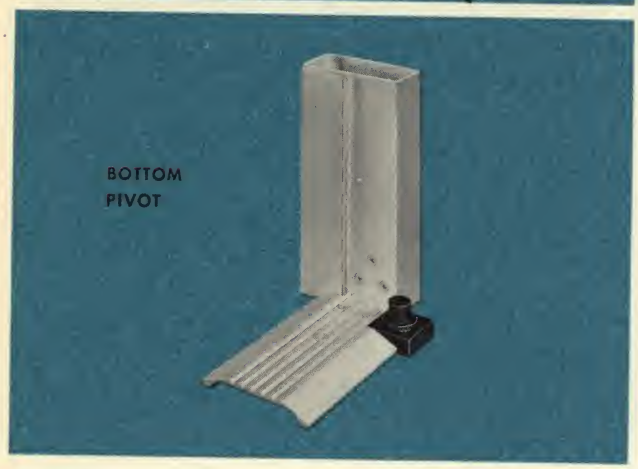






AMARLITE®





Model ETW

SINGLE-ACTING OPERATION FOR OVERHEAD CLOSER (Surface Type) WITH TOP AND BOTTOM OFFSET PIVOTS

Door: Amarlite "Trimline" Door, Model E.

Standard Frame: (same as for ETY).

Closer: (same as for ETX).

Hinge: Top and bottom offset pivots, one each per door leaf.

Lock: (same as for ETX, ETY, ETZ).

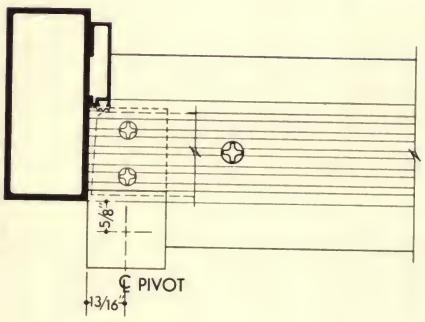
Flush Bolts: (same as for ETX, ETY, ETZ).

Threshold: 4" wide aluminum, mill finish, notched and drilled to receive bottom pivot.

Other Features: (same as for ETY).

Specifications: See pages 16, 17.

details — scale 3" = 1'-0"



Model ETZ

DOUBLE-ACTING OPERATION FOR FLOOR CLOSER (Center Pivot Type)

Door: Amarlite "Trimline" Door, Model E.

Standard Frame: 1¾" wide x 4" thick.

Closer and Hinge: Concealed floor closer, center pivot type, double-acting, one per door leaf. Top pivot, one per door leaf.

Lock: (Same as for Models ETX, ETY and ETW.)

Threshold: Threshold assembly, 7" wide, aluminum, mill finish.

Astragals: Adjustable on meeting stile of all inactive doors.

Weatherstripping: Hinge stile and lock stile of active leaves. Hinge stile only of inactive leaves.

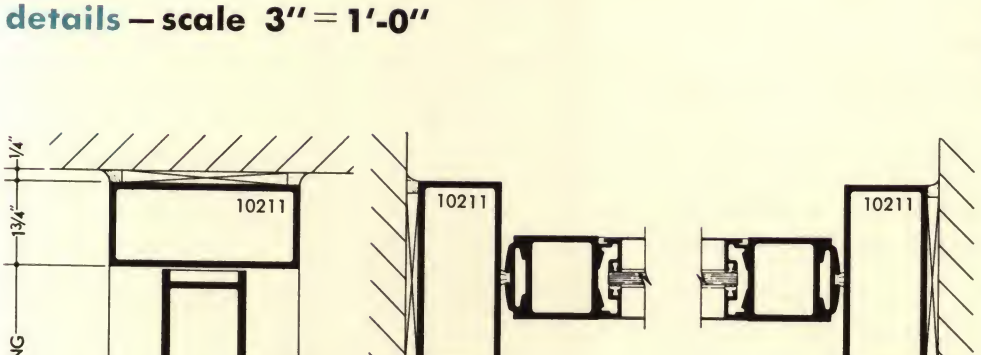
Push Bar: Two push bars, No. 25029, per door leaf. (One each side.) Centerlines are 44 5/16" above bottom of door.

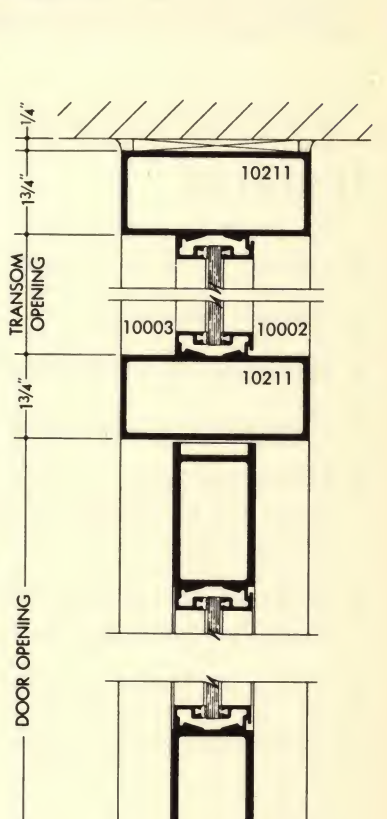
Glass Stops: Snap-in type, dry-set Vinyl glazing bead.

Door Levelizer: Adjustable glass-setting block, accessible from top of door.

Specifications: See pages 16, 17.

details — scale 3" = 1'-0"





AMARLITE®

CONCEALED PANIC HARDWARE

Amarlite Fire and Panic Exit Devices, Model PF-3, are designed and manufactured by American Art Metals Company for exclusive use with Amarlite "Trimline" Entrances (and Amarlite Wide Stile Entrances). They have been tested and approved by Underwriters Laboratories, Inc., Safety Appliance No. 1814, Application No. 57C4203.

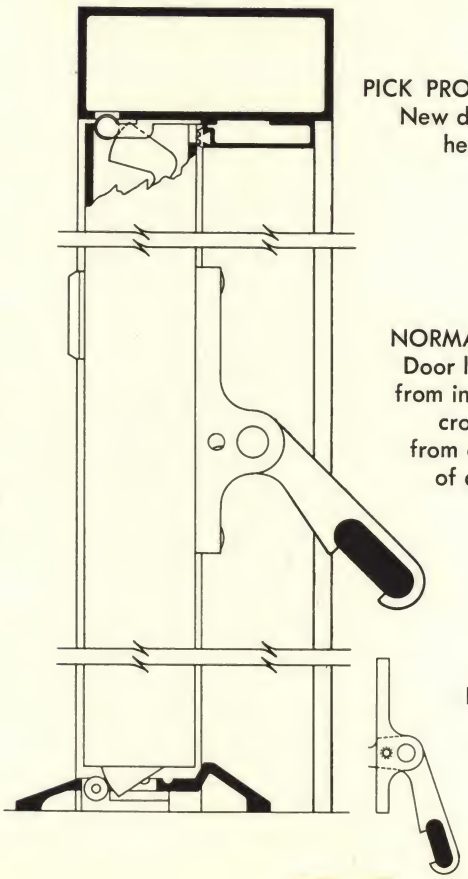
State of New York Department of Labor, Board of Standards and Appeals, Approval No. 4214-A.

Industrial Board of the Pennsylvania Department of Labor and Industry Certificate of Approval No. 1763.

features

- Carried in stock for standard size doors.
- Precisely constructed for effortless operation.
- Mechanism is concealed and protected.
- Operating bar cannot pinch fingers.
- Mechanism can be dogged down ONLY in "open" position, precluding any possibility of restriction of panic exit operation.
- Cylinders for all openings equipped with Amarlite Panic Hardware may be keyed alike for single control.
- Chromium-plated bronze head and foot latches.
- Specifications: See pages 16, 17.

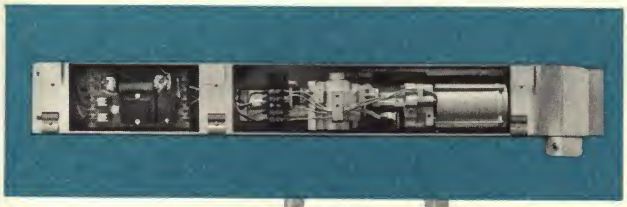
LISTED UNDER REEXAMINATION SERVICE UL OF UNDERWRITERS' LABORATORIES, INC.



PICK PROOF FEATURE . . . New design of Amarlite head latch prevents forcible entry.

NORMAL POSITION . . . Door latched, operable from inside by means of cross bar. Operable from outside by means of cylinder lock key.

"OPEN" POSITION . . . Door not latched, swings freely. Dogging screw can be turned only when operating arm is in this position.



ELECTRICALLY OPERATED ENTRANCE
automatic door operator

Dependability of performance and simplicity of servicing are the outstanding features of this concealed electro-hydraulic operator. The entire electrical unit may be removed without removing the door or interfering with the hydraulic closer unit, permitting uninterrupted use of the entrance.

A COMPLETE, PACKAGED UNIT, including the following:

Door: Amarlite "Trimline" Door, Model "E", narrow-stile; (or Model "D", wide-stile; or Model "N", medium-stile, as specified,) complete with standard push and pull bars, lock, offset pivots (center pivots optional).

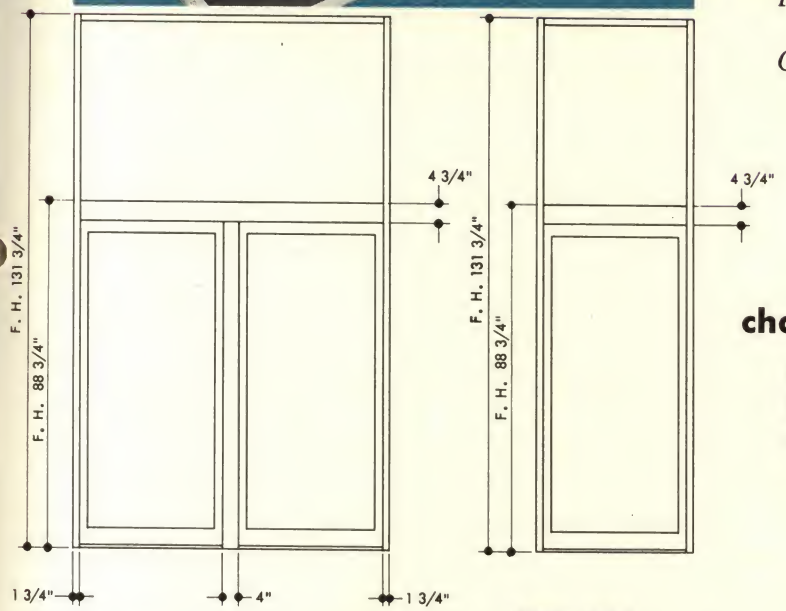
Frame: 1¾" wide x 4" thick with weatherstripped door stop.

Operator: Norton Electro-hydraulic automatic operator, concealed in transom bar or frame header.

Mats and Threshold: 60" x 30" approach mat, 45" x 30" safety mat with aluminum trim and aluminum threshold.

Power: 110 volt AC 60 cycle 20 ampere fused circuit.

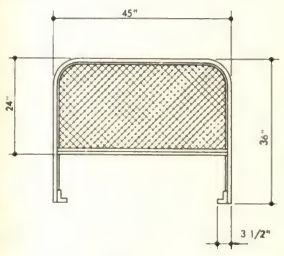
Control Switches: Power switch and hold-open switch located on interior side of door frame.



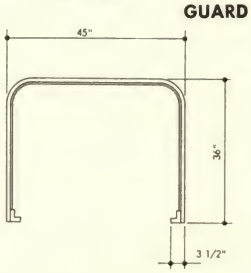
choice of 36" or 42" doors

(Special sizes and special hardware available on request.)

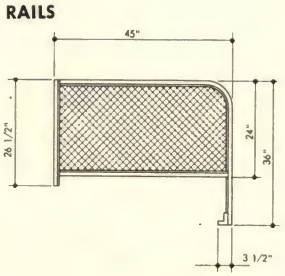
GUARD RAILS



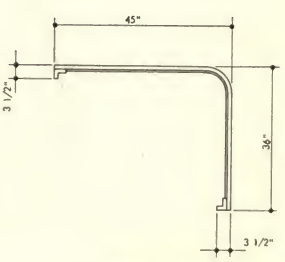
CLOSED TYPE



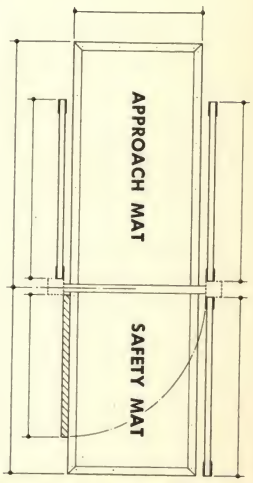
OPEN TYPE



CLOSED TYPE



OPEN TYPE



Moulded vinyl mats, colors available: Green, Blue, Brown, Gray

AMARLITE®

OPTIONAL MODELS

PANEL DOORS

Amarlite Panel Doors (Model "P") provide privacy, insulation, and sound-proofing qualities. They are weather proof and suitable for exterior as well as interior use.

Model "P" doors are used with standard Amarlite frames and thresholds and are available in all of the operational types. Concealed panic hardware or other optional equipment can be applied if specified.

Size and arrangement of lights as desired.

Specifications: See page 18.

MEDIUM STILE DOORS

Amarlite Medium Stile Doors (Model "N"), with $3^{11}/_{16}$"stiles, will accommodate any of the hardware which may be applied to "Trimline" narrow stile doors and, in addition, will take rim-type panic devices and many other devices which are not suitable for narrow stile doors.

Model "N" doors are used with standard Amarlite frames and are available in all operational types.

Specifications: See page 18.

WIDE STILE DOORS

Amarlite Wide Stile Doors (Model "D"), with 5" stiles, provide a massive, monumental effect and will accommodate extraordinary hardware requirements. Model "D" doors are used with standard Amarlite frames and are available in all operational types with hardware, either by Amarlite or by other manufacturers, as specified.

Specifications: See page 18.

OPTIONAL FABRICATION

Doors

The standard Amarlite hardware items as designed and manufactured for Amarlite Trimline doors will be provided, except when specific options are indicated, such as the following, which are applicable to narrow stile doors, medium stile doors, wide stile doors or panel doors.

locks, latch bolts and electric releases

Locks with keyed-alike cylinders
Locks with master-keyed cylinders
Locks with cylinder one side, thumb-turn other side "Maximum Security" locks
Deadlock and latch combinations
Deadlocking latch
Electric release for application to door or frame (voltage as specified)
Time locks
Additional locks in stile or bottom and/or top rail

flush bolts

Lever-operated flush bolts
Concealed Cremone bolts
Surface-mounted Cremone bolts

operating transoms

With transom chains or friction holders

automatic operators

Amarlite doors can be factory fabricated to work with all automatic operators.

electrically operated entrance

See page 11

intermediate pivots and special butt hinges

May be applied as required.

panic hardware

Amarlite Panic Hardware is manufactured for installation in Amarlite Trimline doors as an integral mechanism. Other panic devices, as manufactured for narrow stile doors, may be installed if required.

hold-open devices

Overhead, surface-mounted door holders
Overhead, concealed door holders
Lever-type door holders (for bottom rail)

overhead concealed closers

May be applied as required.

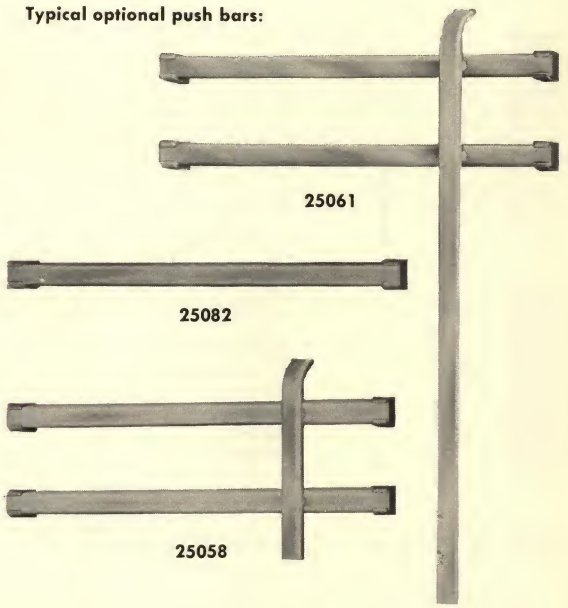
muntins

As required for the division of glass areas in doors.

gold alumilite finish

May be applied to doors and frames as required.

Typical optional push bars:



Framing

Frame sections detailed on page 21.

Note:

Framing shapes such as 10207, 10202 and 10203 may be fabricated with ⅛" thick aluminum filler plate to produce mullion and transom bar assemblies of special width.

For glazing requirements (sash, division bars, etc., see Amarlite Store Fronts Catalog, A.I.A. File 26-D, Sweet's File 21/Am). Screw-attached glass stops ½" high (10014 and 10015) and ¾" high (10016 and 10017) are illustrated with Stock Shapes, pages 22 and 23 of this catalog.

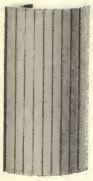
Double glazing, etc. (See Store Front Catalog for various types of sash.)

AMARLITE®

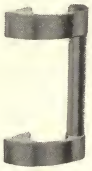
ACCESSORIES

Equipment and accessories which are applicable to standard entrance units and are available from district warehouses.

DOOR PULLS

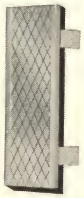

25018

25019


25020

25008

25009


Red 25067
Black 25068

RED

25011

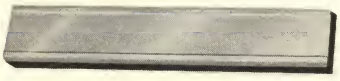
BLACK

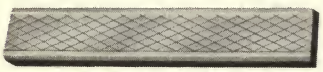
25012

PUSH BAR STANDARD

25029

PUSH BAR PLATES


25013


Red 25069
Black 25070

RED

25016

25014

BLACK

25017

DOOR CLOSERS

overhead closers

OVERHEAD CLOSERS, SURFACE MOUNTED

Norton "Trimline-D" (Recommended for 30" and 36" doors when no heavy pressure or wind conditions are anticipated)

Norton "Trimline-E" (Recommended for other conditions)

concealed floor closers

CONCEALED FLOOR CLOSERS (offset pivot, single-acting)

Dor-O-Matic

Rixson

Floor Plates for above-listed closers.

CONCEALED FLOOR CLOSERS (center pivot, single-acting)

Dor-O-Matic

Rixson

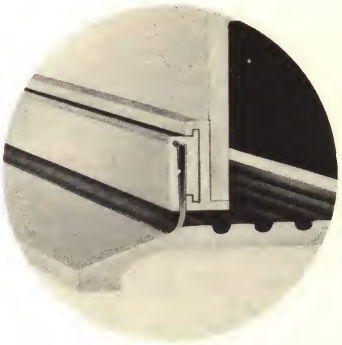
Floor plates for above-listed closers.

CONCEALED FLOOR CLOSERS (center pivot, double-acting)

Dor-O-Matic

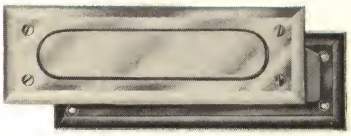
Rixson

Floor plates for above-listed closers.



bottom rail weatherstrip

(Keeps out wind, insects, blowing dust and rain.)
This weatherstrip can be applied to the bottom of a wooden or metal door.



letter slot

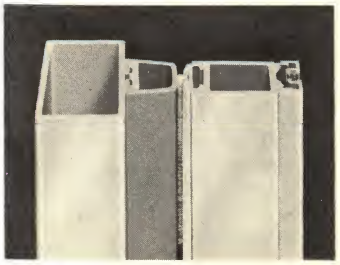
(Opening 1½" x 8".)
For installation in 1¾" thick section (bottom rail of door, side light base.)

thumb turn

Interchangeable with standard Amarlite cylinder.

"accent line"

Colored glass stops (standard size).
Gold, anodized finish.



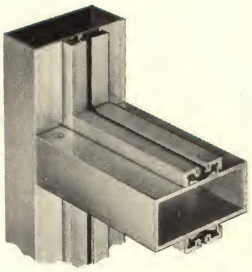
finger guard

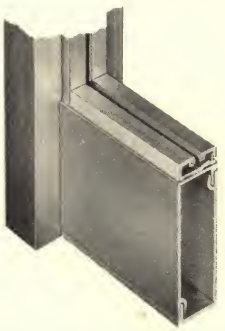
(To keep out wind yet prevent finger pinching between double-acting stile and jamb.) Requires special width frame or special width door.

bumper plate

(For heavy traffic – baggage, carts, etc.)
Securely fastened to the Amarlite door (either on the job or at the factory), this steel-faced Bumper Plate can easily take the hard knocks, guard the glass, and keep the flawless Alumilite finish unmarred. Not only does it protect the door, it facilitates the movement of carts, baggage, etc. Eliminate glass breakage with an Amarlite Bumper Plate!

SPECIFICATIONS ½" Aluminum, Alumilite Finish.
16-gauge stainless steel, brush finish.
6 springs, tension as determined by job requirement.



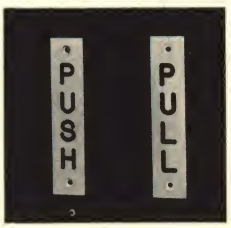


framing units

Frames for doors (all standard sizes and operational types, with and without transoms).

Side lights (36" x 84" and 36" x 132")

Transom bars 36" long.



direction plates

(For mounting on door stiles) "PUSH", "PULL".

AMARLITE®

SPECIFICATIONS

CONDENSED SPECIFICATIONS

Aluminum Entrances shall be Amarlite as manufactured by American Art Metals Company, Atlanta, Georgia.

Sections of doors and frames shall be extruded from architectural aluminum alloy number 6063-T5.

doors:

a. Thickness of walls of extruded sections shall not be less than one eighth inch (⅛").
b. Fastenings shall be of aluminum alloys, stainless steel, carbon steel, cadmium or chromium plated.
c. All doors shall be bolted and electric arc Sigma welded. Welding shall be at unexposed junction of rails and stiles. The welds shall have deep penetration without creating blemishes on exposed surfaces.
d. Hardware for the doors shall be furnished by the door manufacturer and applied at the factory.
e. Doors shall have extruded aluminum snap-in glass stops with Vinyl insert for puttyless glazing.

frames:

a. Frames shall be of extruded aluminum not less than one eighth inch (⅛") in thickness.
b. The door stops shall be applied to the frame with concealed fastenings with Vinyl insert for weatherproofing and door silencing.

finish:

a. All exposed surfaces shall have A-1 Alumilite finish (Alcoa specifications 204A-1).
b. Thickness of the Alumilite coating shall be not less than .0005 inches tested in accordance with ASTM B-110 specifications.

1 SCOPE

Aluminum Entrances (doors and frames) shall be Amarlite Model ETX (or ETY, ETW, ETZ) as manufactured by American Art Metals Company, Atlanta, Ga.

Installation, glass and glazing shall be by glazing contractor.

2 MATERIALS

Sections of doors and frames shall be extruded from Architectural Aluminum Alloy No. 6063-T5.

Thickness of walls of extruded sections shall be not less than one eighth inch (⅛").

Fastenings shall be of aluminum alloy, stainless steel or carbon steel, cadmium or chromium plated.

3 CONSTRUCTION

All corners of doors shall be both bolted and electric arc Sigma welded. Bolts shall be ⅜" in diameter steel with flex-lock nuts, engaging stiles at all corners.

Welding shall be at unexposed junctions of rails and stiles. The welds shall have deep penetration without creating blemishes on exposed surfaces.

4 FINISH

All exposed surfaces shall have A-1 Alumilite finish; (Alcoa specification 204A-1) polished and buffed, lustrous and free of die marks, grinding marks, spots, streaks and other blemishes. After buffing, the surface shall not be etched or otherwise roughened or altered before being anodized.

Thickness of the Alumilite coating shall be not less than .0005 inches, tested in accordance with ASTM B-110 specifications.

Sealing of the Alumilite coating shall be complete and permanent and shall not require further sealing, painting or preservative treatment.

Samples of finish shall be submitted for approval of the architect. Finish of all material installed shall be subject to comparison with sample and shall be rejected if not comparable.

5 WORKMANSHIP

All joints shall be fitted accurately, neatly and securely. All cut and machined ends and recesses shall be true and accurate and free of burrs or rough edges.

6 HARDWARE

Hardware for doors shall be furnished by the door manufacturer and applied at the factory.

As applicable for the door manufacturer's Model ETX (or ETY, ETW, ETZ), hardware shall include:

(a) AMARLITE Hinges.
Each type "X" door shall be equipped with 1 pair of butt hinges. Hinge leaves shall be riveted to inner surfaces of door and frame sections, to be concealed within frame and stile at all times. Hinge pins shall be free of protruding heads and caps.

(b) AMARLITE Flush Bolts.
Flush bolts shall be concealed within door stiles with no protruding or exposed levers, knobs or arms, not operable when doors are closed.

(c) AMARLITE Cylinder Deadlocks.
Locks shall be manufactured of chromium plated brass, aluminum alloy or other non-corrosive materials. Locks shall be furnished with two standard cylinders, located 50⅞" above bottom of door. These cylinders shall be 1 5/32" diameter, capable of being interchanged with other standard size cylinders, as manufactured exclusively for American Art Metals Company. The bolt of each deadlock shall contain a free-rolling hardened steel dowel imbedded horizontally.

(d) **AMARLITE Push Bar (25029)**
On push side of all single-acting doors.
On both sides of all double-acting doors.

(e) **AMARLITE Door Pull (25018)**
On pull side of all single-acting doors.

(f) **CLOSERS**
Doors shall be equipped with "Norton" surface-mounted overhead closers as furnished by the door manufacturer.

OR — FLOOR CHECKS
Doors shall be equipped with Dor-O-Matic Floor Checks with positive backstop at *90° or 105°* (as required) as furnished by the door manufacturer. Checks *shall* or *shall not* (as required) have built-in hold-open feature.

OR — OPTIONAL FLOOR CHECKS
Doors shall be equipped with "Rixson" floor checks as furnished by the door manufacturer.

All hardware shall have finish which closely matches that of doors and frames.

7 WEATHERSTRIPPING

Doors shall be equipped with weatherstripping installed by the door manufacturer. This weatherstripping shall be wool pile woven into a fabric base and securely held in a concealed vinyl channel. All weatherstrip astragals shall permit replacement without special tools and without removal of doors. Weatherstrip astragals shall be attached by means of snap-on clips and shall be completely assembled by the manufacturer. No screws or exposed fastenings shall be allowed.

Locations of weatherstrip astragals shall be these:

MODEL EX, strike stile, inactive leaves only.
MODEL EY, strike stile, inactive leaves only.
MODEL EZ, hinge stile and lock stile of active leaves, hinge style only of inactive leaves.

8 DOOR STOPS

Where door stops are detailed they shall be of aluminum, alumilited to match the frame. Door stops shall be snap-on type with a Vinyl weatherstrip along edges in contact with doors.

9 GLASS STOPS

Glass stops of doors shall be alumilited snap-in type with no visible fastenings, either exterior or interior; edges of glass stop in contact with glass shall contain a Vinyl glazing bead to eliminate the use of putty. Interior glass stop shall be readily removable; exterior glass stop shall be removable only after interior stop has been removed.

10 SHOP DRAWINGS

Before performance of work under this contract, complete shop drawings, in quadruplicate, shall be submitted to the architect for approval and for verification of dimensions by installing agency.

11 PREPARATION FOR ERECTION

Where aluminum is to be placed in contact with masonry, steel, wood, concrete, or other dissimilar materials, the aluminum shall be back-painted before erection with an approved bituminous paint.

12 ERECTION

All items included under the heading of Aluminum Entrances shall be installed in correctly prepared openings, according to the manufacturer's recommended installation instructions. They shall be set plumb, square and level in correct alignment with floors, ceilings, walls and other work. They shall be securely anchored and completely ready for operation. This work shall be done by experienced technicians.

To produce a watertight job, all joints between frames and masonry shall be tightly caulked and neatly pointed. Excess caulking material shall be completely removed.

13 PROTECTION

To prevent damage to finish, the general contractor shall protect all aluminum surfaces from contact with lime, plaster, mortar, terrazzo, concrete, cement, acids and other harmful substances as well as from damage by careless handling of tools, machinery, and materials. Protection procedure as prescribed by the door manufacturer shall be followed, including the covering of aluminum surfaces with waterproof masking tape and/or petroleum jelly.

14 CLEANING

When the protective materials have served their purpose, the General Contractor shall be responsible for the removal of such materials and the cleaning of all aluminum.

All aluminum shall be thoroughly cleaned, following the procedure recommended by the door manufacturer, including washing with mineral spirits, followed by washing with mild soap and water. No abrasive or caustic or acid cleaning agents shall be used.

suggestion to owner:

Wax, applied and polished as recommended for automotive finishes, will help prevent adherence of dirt to aluminum surfaces and make periodic cleaning easier.

AMARLITE®

OPTIONAL SPECIFICATIONS

For your convenience in writing specifications, the general specifications are presented on the preceding two pages, except for the four important classifications listed below:

CONCEALED PANIC HARDWARE

(Insert these specifications in place of Items 6- b, c, d and e in general specifications, pages 16, 17.)

Doors shall be equipped with Amarlite Concealed Panic Hardware as manufactured by American Art Metals Company and applied at the factory.

The panic hardware mechanism shall contain no castings. It shall be acceptable only if approved by Underwriters Laboratories, Inc.

The panic hardware mechanism shall be operable by means of a cross-bar, centerline of which shall be $35\frac{5}{16}$" above the bottom of the door. The operating arm shall be provided with a dogging device which permits the mechanism to be secured in "open" position only, with latch bolts withdrawn, permitting unrestricted access from the outside. No lock, latch or other device shall be permitted which restricts egress when pressure is applied to the operating bar.

Cylinders for devices shall be applied at the factory by the door manufacturer.

Door pulls shall be Amarlite 25020, one per door, centerline of which shall be $37\frac{3}{4}$" above bottom of door.

PANEL DOORS

(Insert these specifications in place of Items 1, 2, 6 and 9 in general specifications, pages 16, 17.)

1. Scope
   Aluminum doors shall be Amarlite "Panel" as manufactured by American Art Metals Company, Atlanta, Georgia. Installation and glazing shall be by others.
2. Materials
   Door sections shall be extruded members of Architectural Alloy No. 6063-T5. Door panel shall be "sandwich" construction with $\frac{3}{4}$" thick core of resin-impregnated paper "honeycomb", $\frac{1}{8}$" hardboard on both sides of panel, No. 10 pattern aluminum sheet laminated to both sides.
6. Hardware
   Amarlite Standard Hardware shall be applied.
9. Glass Stops
   Glass stops shall be alumilited to match extruded sections of doors and shall be attached by screws accessible only from interior side of door.

MEDIUM STILE DOORS

(Insert these specifications in place of Items 1, 2, and 6 in general specifications, page 16.)

1. Scope
   Aluminum doors shall be Amarlite Model "N" as manufactured by American Art Metals Company, Atlanta, Georgia. Installation and glazing shall be by others.
2. Materials
   Door sections shall be extruded members of Architectural Alloy No. 6063-T5. Door thickness shall be $1\frac{3}{4}$". Width of stiles (exclusive of glass stops) shall be $3\frac{1}{2}$". Height of top rail (exclusive of glass stops), shall be 3". Height of bottom rail (exclusive of glass stops), shall be $4\frac{5}{16}$". Fastenings shall be of aluminum alloy or stainless steel.
6. Hardware
   A. Concealed Panic Hardware (specifications on this page).
   B. Hardware by Others (list by item, manufacturer's name, model number, and other identification as required).

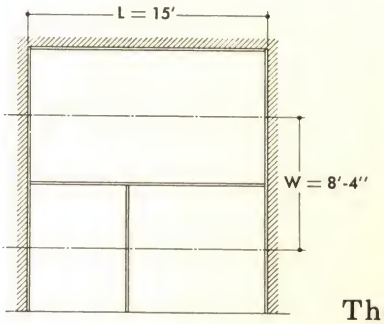
WIDE STILE DOORS

(Insert these specifications in place of Items 1, 2 and 6 in general specifications, page 16.)

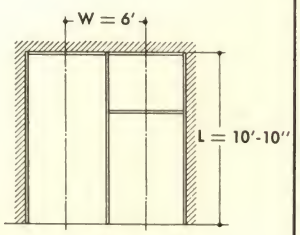
1. Scope
   Aluminum doors shall be Amarlite Model "D" as manufactured by American Art Metals Company, Atlanta, Georgia. Installation and glazing shall be by others.
2. Materials
   Door sections shall be extruded members of Architectural Alloy No. 6063-T5. Door thickness shall be $1\frac{3}{4}$". Width of stiles and height of top rail (exclusive of glass stops) shall be 5". Height of bottom rail (exclusive of glass stops), shall be $6\frac{1}{2}$". Fastenings shall be of aluminum alloy or stainless steel.
6. Hardware
   A. Concealed Panic Hardware (specifications on this page).
   B. Hardware by Others (list by item, manufacturer's name, model number and other identification as required).

HOW TO SELECT AMARLITE FRAMES (USING FRAME SELECTOR ON PAGE 20)

Take as example "A" a mullion 10′-10″ high, centered in a masonry opening. Draw centerlines vertically between the mullion and the support points on both sides. The measurement is 6′ in this example. Thus you obtain the dimensions of the wind load area affecting this particular mullion: L = 10′-10″; W = 6′.



example B



example A

The dimensions "L" and "W" establish the wind load conditions for installations of flat glass in Amarlite frames.

Plotting L and W on the graph, you establish a point inside zone 2. Scanning the display of frame sections, you see that any of the Amarlite frames are suitable, without reinforcement, for the strength requirements of this example. You may select whichever frame suits your requirements for size and proportions.

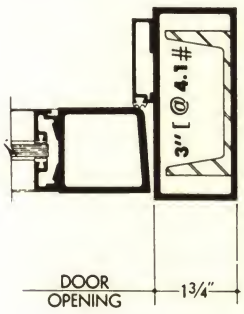
As example "B" take a horizontal member. This is a transom bar 15′ long; the distance between the centerlines of the wind-loaded areas above and below the transom bar is 8′-4″. Thus, L = 15′; W = 8′-4″. These dimensions, plotted on the chart, cross each other in zone 6, which indicates to you, from the data alongside the frame details, that you may use frames with black zone numbers of 6 or higher without steel reinforcement. With the proper reinforcement, you may use frames with blue zone numbers of 6 or higher. For example, frame number 80013 may be used without steel for zone 6, but frame number 80004 requires reinforcement with 4″ channel @ 5.4 lbs.

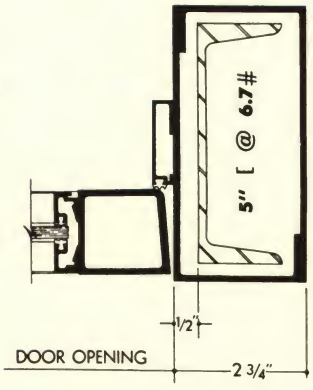
See graph on following page.

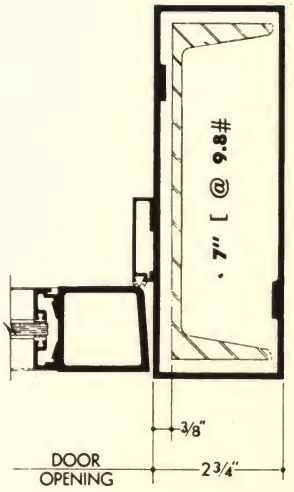
STEEL CHANNEL REINFORCEMENT

typical details

Steel channel reinforcement for 80001 frame to be notched as required to clear attachments.







AMARLITE®

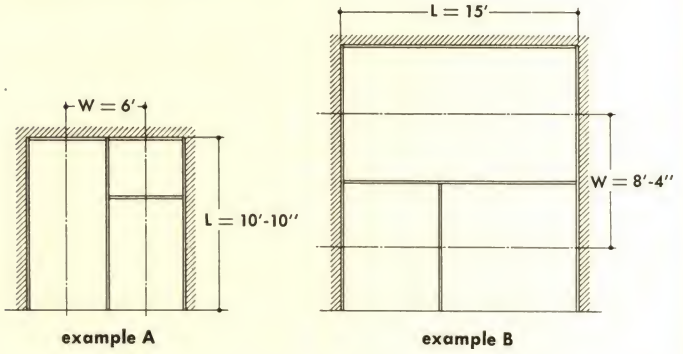
FRAME SELECTOR

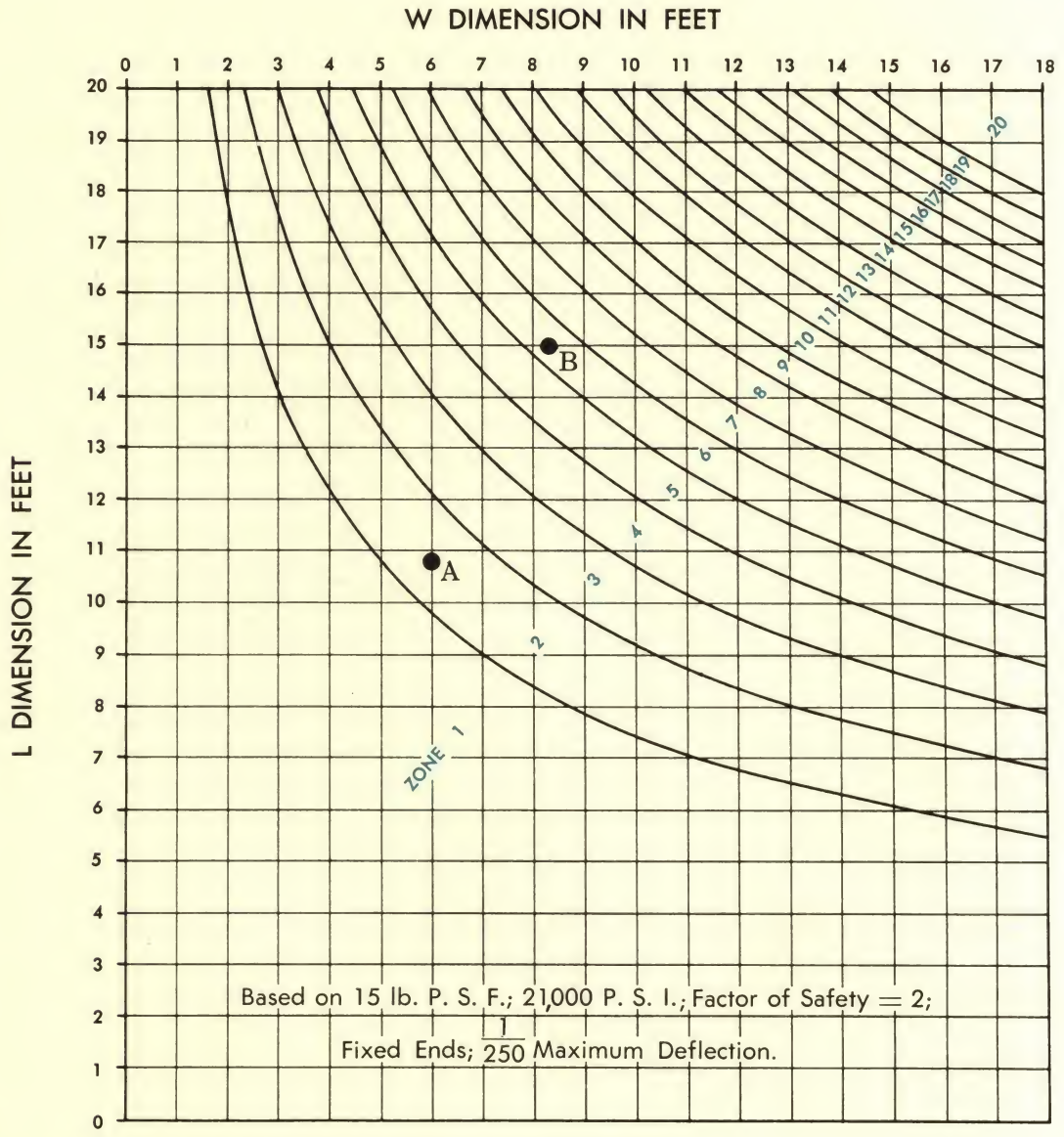
how to select the right frame for special conditions

Plot, on the chart below, the dimensions of the glass area of your design as indicated in the illustrations (elevation drawings).

The resulting dot on the chart will lie in one of the numbered zones. The suitability of each Amarlite frame for supporting plate glass under wind-loaded conditions is indicated by the zone numbers printed alongside the section drawing of the frame.

The dimensions "L" and "W" establish the wind load conditions for installations of flat glass in Amarlite frames.





WIND LOAD GRAPH

OPTIONAL FRAMES

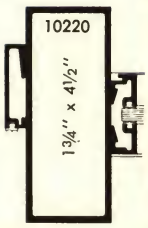
FRAME SELECTION

details — scale 3" = 1'-0"

80001

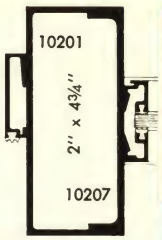
ZONE 2
ZONE 3
3" @ 4.1

80002



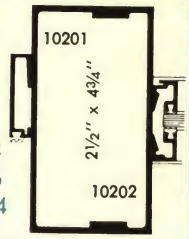
ZONE 2
ZONE 3
3" @ 4.1

80003



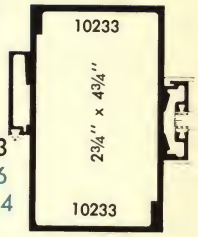
ZONE 3
ZONE 4
3" @ 4.1

80004



ZONE 3
ZONE 6
4" @ 5.4

80005



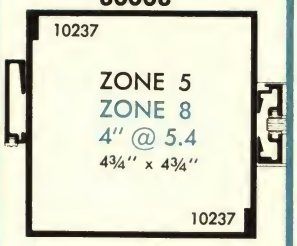
ZONE 3
ZONE 6
4" @ 5.4

80006

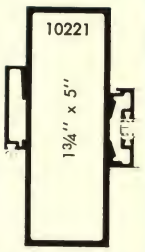
ZONE 4
ZONE 6
4" @ 5.4

80007

80008



80009

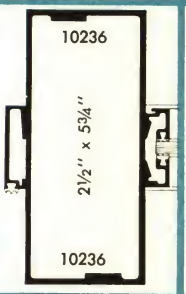


ZONE 2
ZONE 3
3" @ 4.1

80010

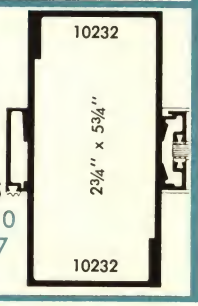
ZONE 5
ZONE 7
4" @ 5.4

80011



ZONE 5
ZONE 9
5" @ 6.7

80012



ZONE 5
ZONE 10
5" @ 6.7

80013

ZONE 6
ZONE 10
5" @ 6.7

80014

ZONE 4
ZONE 8
5" @ 6.7

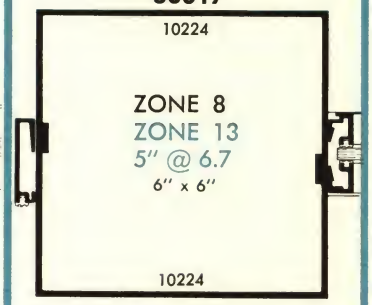
80015

ZONE 2
ZONE 5
4" @ 5.4

80016

ZONE 6
ZONE 13
6" @ 8.2

80017



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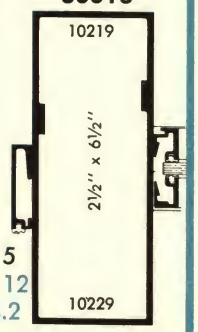
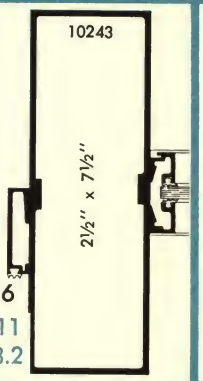


ZONE 5
ZONE 12
6" @ 8.2

80025



ZONE 6
ZONE 11
6" @ 8.2

80019

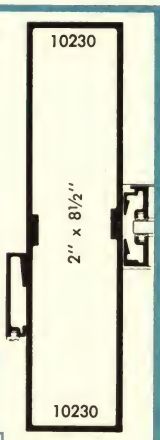
ZONE 8
ZONE 17
7" @ 9.8

80020

ZONE 8
ZONE 17
7" @ 9.8

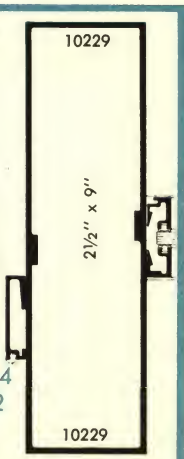
80021

80022



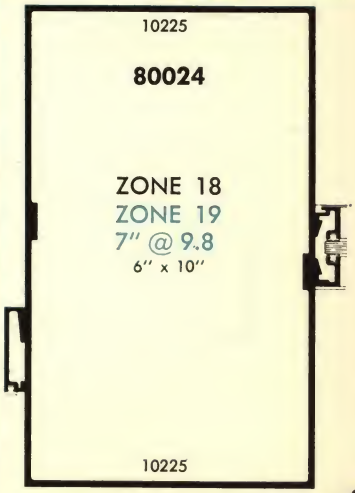
ZONE 7
ZONE 8
TWO
PIECES
3" @ 4.1

80023



ZONE 9
ZONE 14
6" @ 8.2

80024



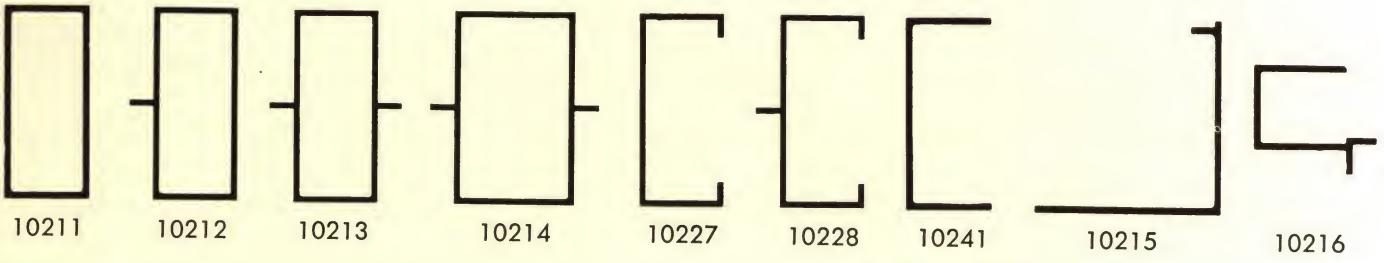
AMARLITE®

EXTRUDED ALUMINUM SHAPES

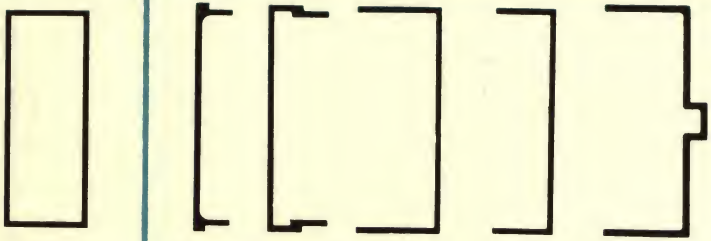
Extruded aluminum shapes are available in stock lengths of 22'-0". Finish is polished and buffed Alumilite (Alcoa specification 204-A1). These shapes are designed and finished to complement and match the doors, frames and sidelights of Amarlite Aluminum Entrances and the various members of Amarlite Store Fronts.

Flat aluminum sheet, finish both sides, .040" thick, (#18 Ga.), is available in the following sizes:

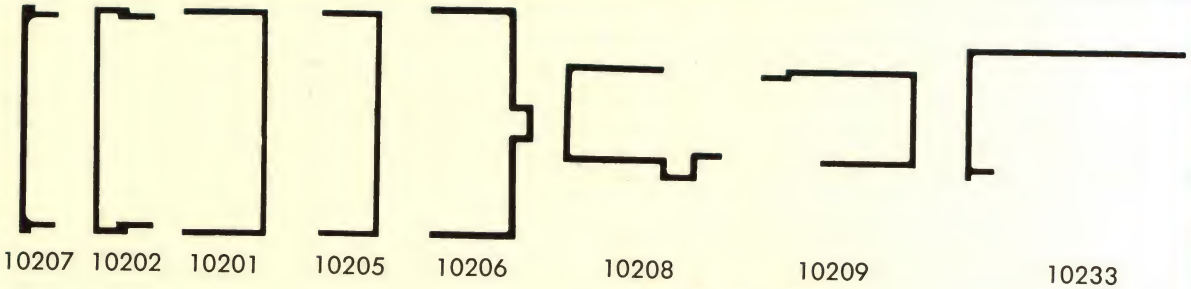
index number	size
11001	36" x 96"
11002	36" x 120"
11003	36" x 144"
11004	48" x 120"
11005	48" x 144"



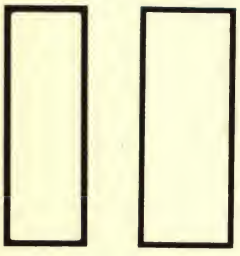
4" SHAPES



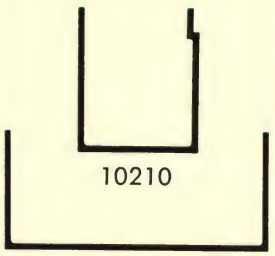
4 1/2" SHAPE



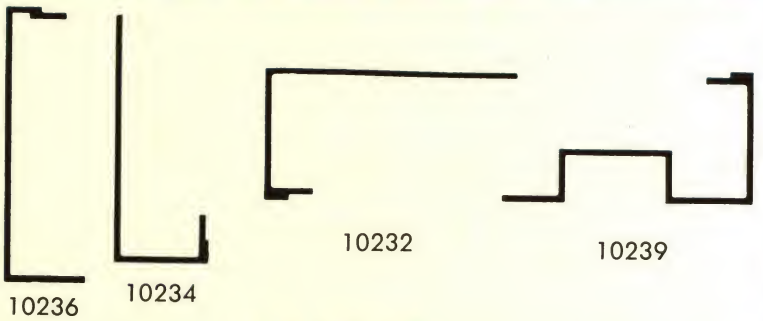
4 3/4" SHAPES



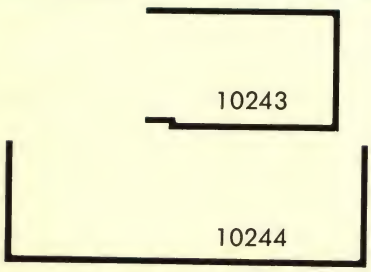
5" SHAPES



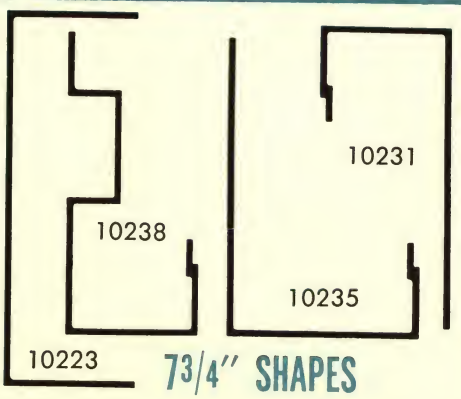
5 1/2" SHAPES



5 3/4" SHAPES



7 1/2" SHAPES

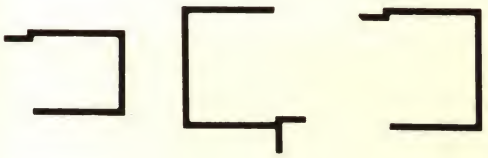


7 3/4" SHAPES

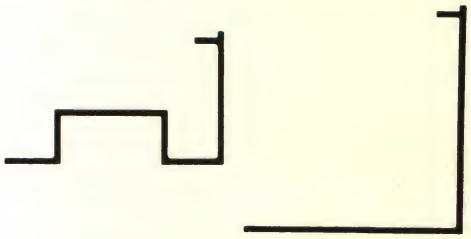
8 1/2" SHAPE

9" SHAPE

scale 3" = 1'-0"

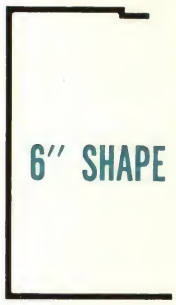


10217 10218 10219



10240 10237

6" SHAPE

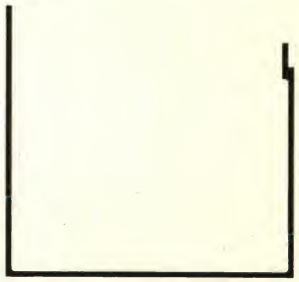


10224

6 3/4" SHAPES

10203 10204

10" SHAPE



10225

miscellaneous shapes & mouldings

10013

10006

10024

10007

30004

10003

10002

10015

10014

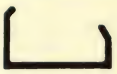
10026

10016

10017

31105

10008



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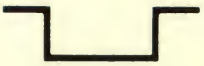

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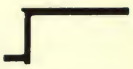


10025

10019

10020

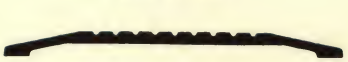
10010

10001

10005

10018

MILL FINISH



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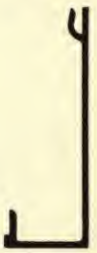
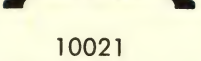


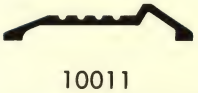
10009

MILL FINISH



10021

MILL FINISH



10011

MILL FINISH

10012

10246

architectural aluminum

Curtain Walls

Sweet's Catalog Index Number 3a/Am

Entrances

Sweet's Catalog Index Number 16a/Am

Store Fronts

Sweet's Catalog Index Number 21/Am

AMARLITE®

AMERICAN ART METALS COMPANY

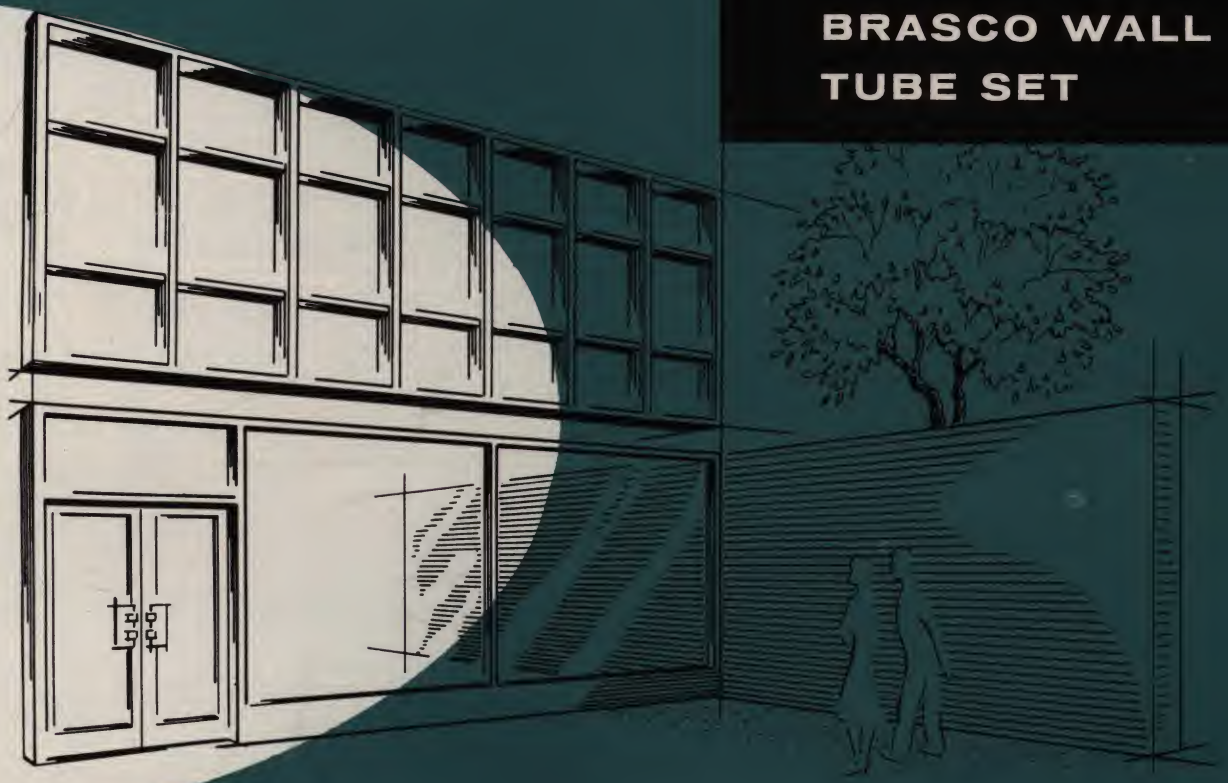
A.I.A. File Nos. 16-E, 26-[illegible] 17-A

Brasco

Correlated

Architectural Metal Products

ENTRANCES
STORE FRONTS
BRASCO WALL
TUBE SET



No. 60

Brasco MANUFACTURING CO. · HARVEY, ILL.

Brasco

Quality and Service For Almost Half a Century

For over 45 years Brasco has been providing architectural metal products with character, with strength . . . with client and customer satisfaction built in. You can use Brasco materials knowing that you will have less problems and more compliments . . . that you have used the material that will do the job you want done—best.

A Few Outstanding Brasco Installations

Evergreen Plaza Shopping Center—Chicago
Architect—**Holabird, Root & Burgee**
Associate—Howard W. Fisher & Assoc.

Lutheran Brotherhood Home Office Bldg.—Minneapolis
Architect—**Perkins and Will**

Marquette University, Father Brook's Hall—Milwaukee
Architect—**Brust and Brust**

163rd Street Shopping Center—Miami
Architect—**Gamble, Pownall & Gilroy**

M. D. Anderson Hospital—Houston
Architect—**Mackie and Kamrath**
Consultant—**Schmidt, Garden & Erikson**

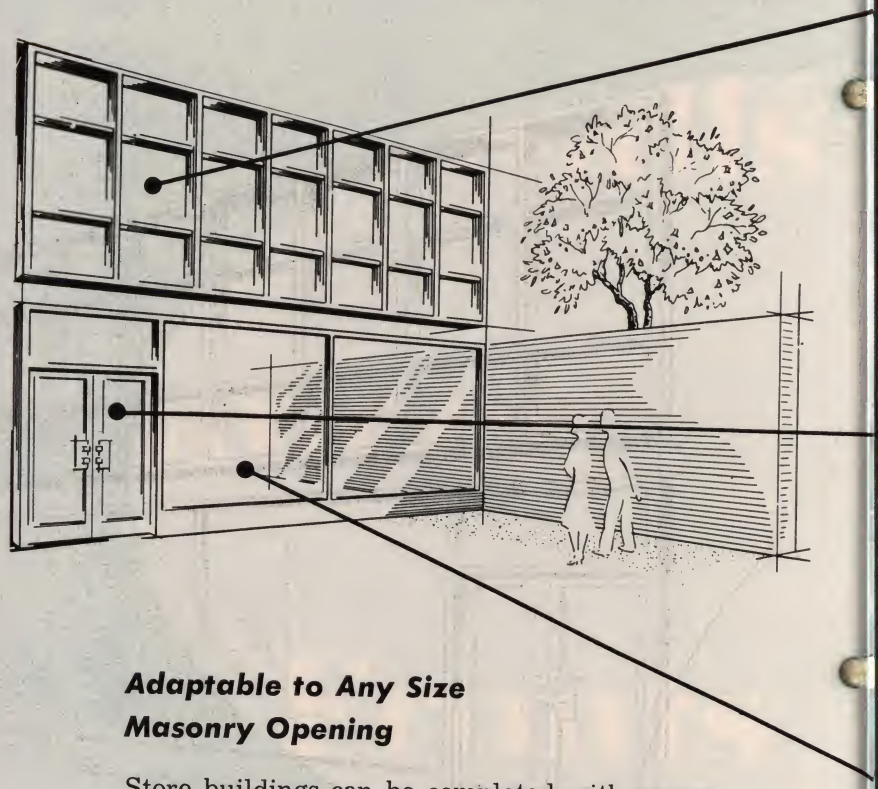
Sears Roebuck and Co.—Daytona Beach
Architect—**Walton, Spicer, Leete & Gehlert**

Jordan Marsh Co.—Miami
Architect—**Weed, Russell, Johnson Assoc.**

Julius Lewis Store—Memphis
Architect—**Hanker and Heyer**

Willow Lawn Shopping Center—Richmond
Architect—**Joseph A. Sanders and Assoc.**

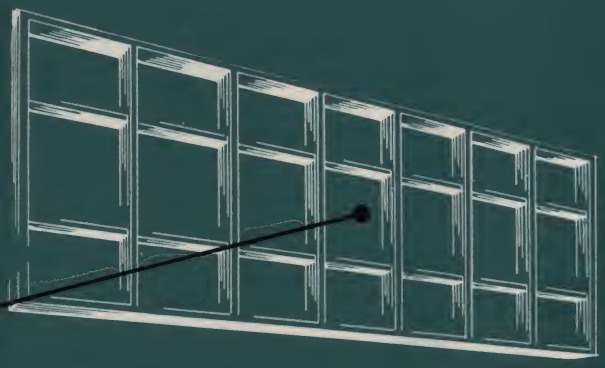
All Brasco lines are engineered to provide materials with greater strength . . . longer life. Finishes, component parts, assembly methods are designed to cut down maintenance cost, repair call-backs, the necessity for later adjustments. Possible sources of trouble are eliminated in the original product giving you the most satisfactory architectural metals it is possible to manufacture.



Adaptable to Any Size Masonry Opening

Store buildings can be completed with spaces between piers left open. When type of occupancy is determined, Brasco Correlated Construction will fit perfectly into street and upper floor openings—from slab to lintel and pier to pier.

Correlation of store fronts, entrances and window wall units provides modern, unified appearance and speeds installation. All units can be installed by one contractor, with one responsibility for complete erection and glazing.



BRASCO-WALL

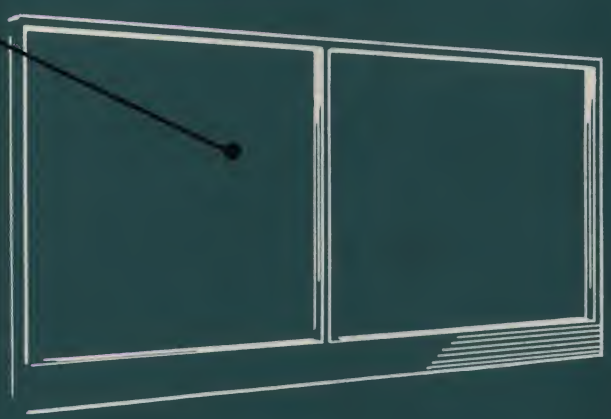
Stock or special size modular aluminum units adaptable to all types of glazing and spandrel materials . . . especially practical for single and double story buildings. Triple protection against weather infiltration through double gasketing and Thiokol glazing . . . unique "condensation outlet."

pages 9-12

BRASCO ENTRANCES

Two outstanding lines for varying job conditions and budgets . . . 6063-T5 aluminum alloy extrusions, 204A1-R1 anodized . . . thru-bolted and welded door corners . . . snap-in glass stops without screws . . . puttyless glazing . . . concealed pivot pin butt hinges . . . personalized push plates and bars.

pages 4-8



STORE FRONT METAL

Anodized aluminum . . . rolled and extruded shapes for every store front requirement . . . clean, modern profiles . . . simplified setting . . . deep, safe glass grip. Direct-on-Masonry settings . . . snap-on mouldings . . . color enameled facing . . . heavy duty sash and bars.

pages 13-15

NEW TUBE SET

Flush glazing construction.

page 16

ENTRANCES—TWO COMPLETE LINES

Standard . . .

For Most Jobs—

Budget Priced

The strongest Standard line door on the market. Thru-bolts in top and bottom rail, deep "pentra-weld" at each corner and contour milled joints mean no slipping, no racking, no sagging . . . no expensive call-backs. You get a longer lasting door with a rich 204A1-R1 anodized finish. 6063-T5 extrusions are used throughout the door and frame. One glass stop is an integral part of the door stile, the other is a snap-in without screws. Door thickness — 1¾". Your own choice of hardware and dozens of possible door and frame variations.

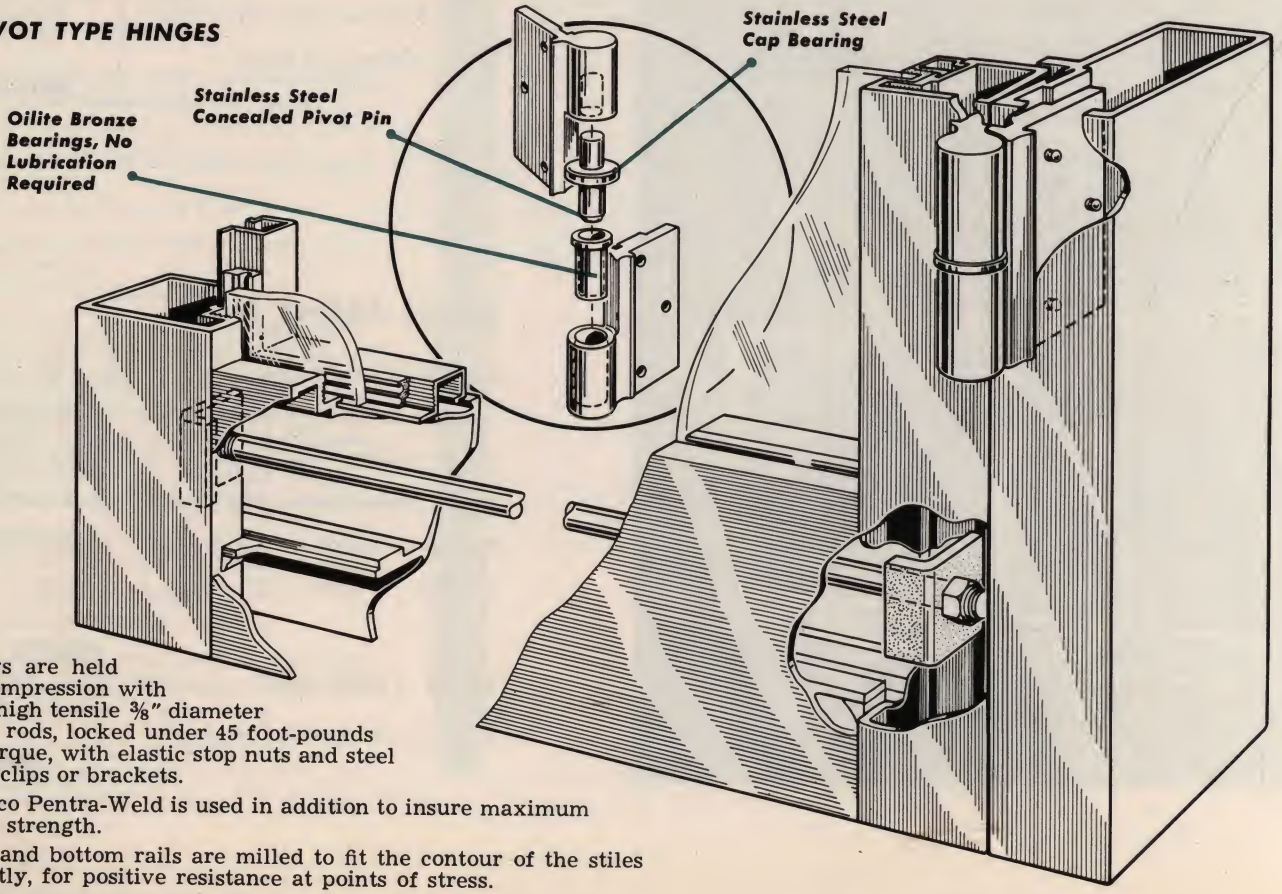
De Luxe . . .

For the Finest Jobs

on the Board

This is an exceptionally outstanding door for those who want the very finest obtainable. The door is a full 2" thick . . . frame is a massive 2" x 6". This, with thru-bolting, contour milling, "pentra-weld" makes Brasco De Luxe the ultimate in aluminum doors. Long-lasting, maintenance-free, easier and surer installation . . . the door you install with greatest pride. Practically every connection and screw is concealed. The finish is buffed, etched and anodized (204A1-R1) 6063-T5 aluminum alloy. Brasco De Luxe will meet *any* architectural requirement and has dozens of hardware and application variations.

PIVOT TYPE HINGES

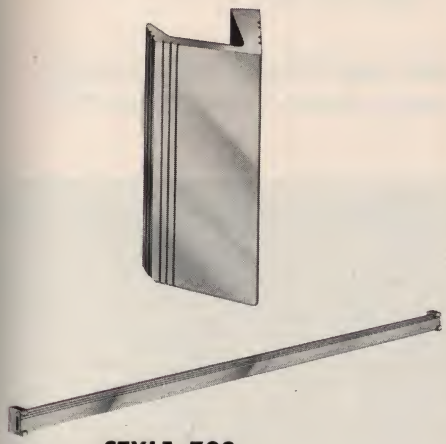


Doors are held in compression with two high tensile ⅜" diameter steel rods, locked under 45 foot-pounds of torque, with elastic stop nuts and steel heel clips or brackets.

Brasco Pentra-Weld is used in addition to insure maximum joint strength.

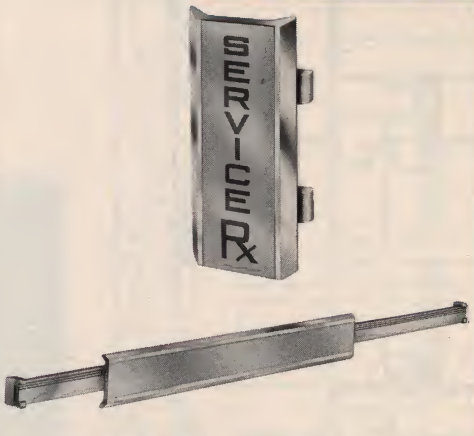
Top and bottom rails are milled to fit the contour of the stiles exactly, for positive resistance at points of stress.

ENTRANCE HARDWARE



STYLE 700

Graceful, ribbed aluminum pull handle and sturdy, matching push bar. Grooved lines are available with or without color . . . red, blue, green, black . . . or both push and pull may be gold anodized. A practical, handsome hardware set.



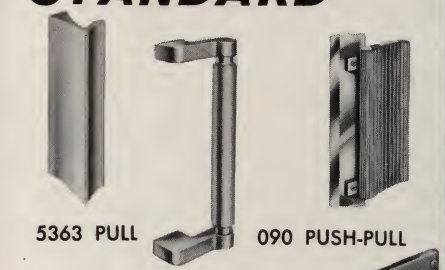
STYLE 701

Modern plastic insert, with your choice of color and engraving, on graceful aluminum back plate . . . 12" x 5" pull plate and 4" x 18" push plate mounted on 700 bar. Personalize each job with this rich looking set.

STYLE 702

The simple dignity of a gleaming aluminum plate . . . grooves, if you want, in your own design. The face may be engraved . . . color filled or not. You may choose your own material and shape. Use this for individuality.

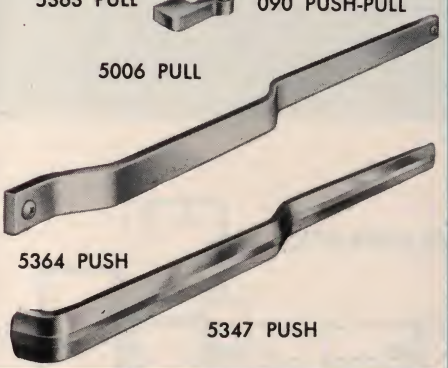
STANDARD



5363 PULL

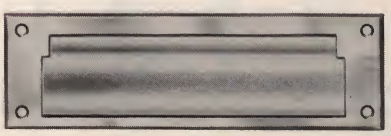
090 PUSH-PULL

5006 PULL



5364 PUSH

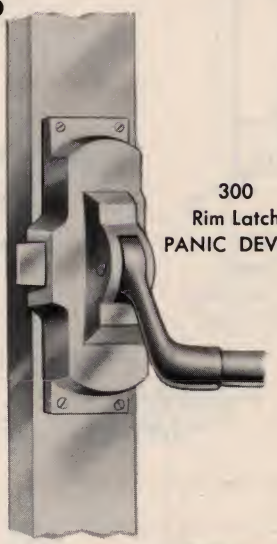
5347 PUSH



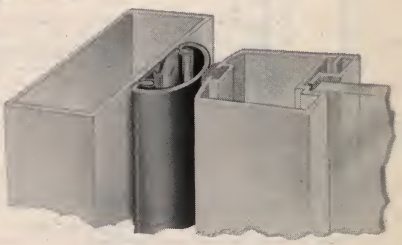
5146 LETTERSLOT

PANIC DEVICES

200
Concealed Vertical Bar
PANIC DEVICE



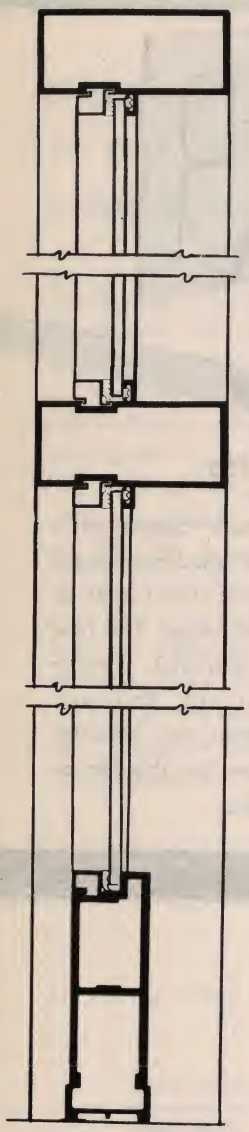
300
Rim Latch
PANIC DEVICE



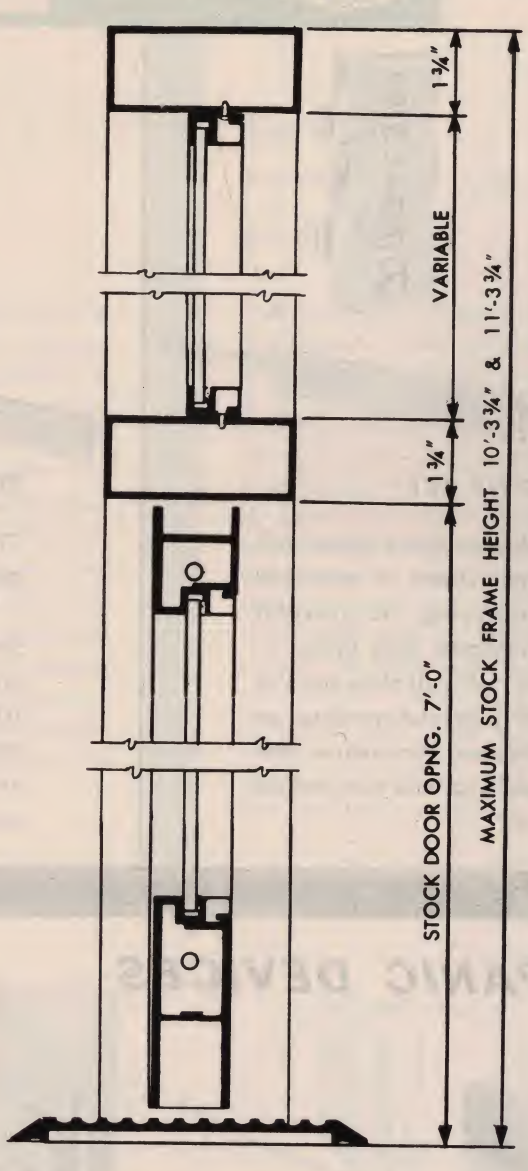
372 FINGARD

STANDARD ENTRANCE DETAILS

quarter size



VERTICAL SECTION
THRU SIDE LIGHT



CENTER HUNG DOOR
WITH FIXED TRANSOM

Standard Doors are 1¾" thick, with tubular frames 1¾" x 4".

TYPES OF ENTRANCES

SINGLE DOOR
AND FRAME

DOUBLE DOOR
AND FRAME

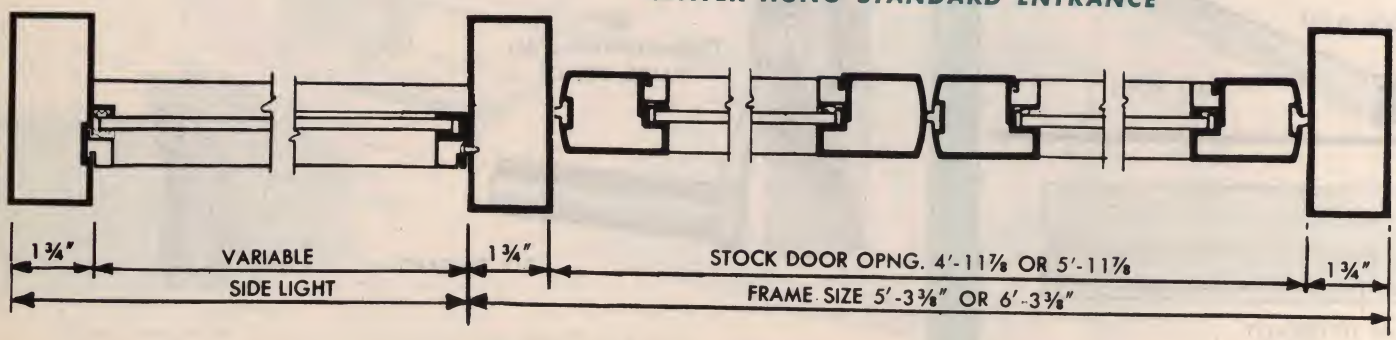
SINGLE DOOR AND
FRAME WITH FIXED
TRANSOM

DOUBLE DOORS AND
FRAME WITH FIXED
TRANSOM

• ALSO AVAILABLE: Single Door without Frame. Double Doors without Frame. Available; single acting on butt hinges and overhead check, single acting on offset pivot floor check, or double acting on center pivoted floor checks.

QUARTER SIZE DETAILS

CENTER HUNG STANDARD ENTRANCE



DOUBLE DOORS WITH SIDE LIGHT

DELUXE ENTRANCE DETAILS

quarter size

DeLuxe Doors are 2″ thick, with 2″ x 6⅛″ frames.

FOR BOTH LINES

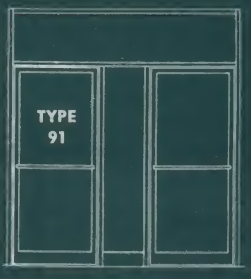
SINGLE DOOR SIDELIGHTS AND FIXED TRANSOM

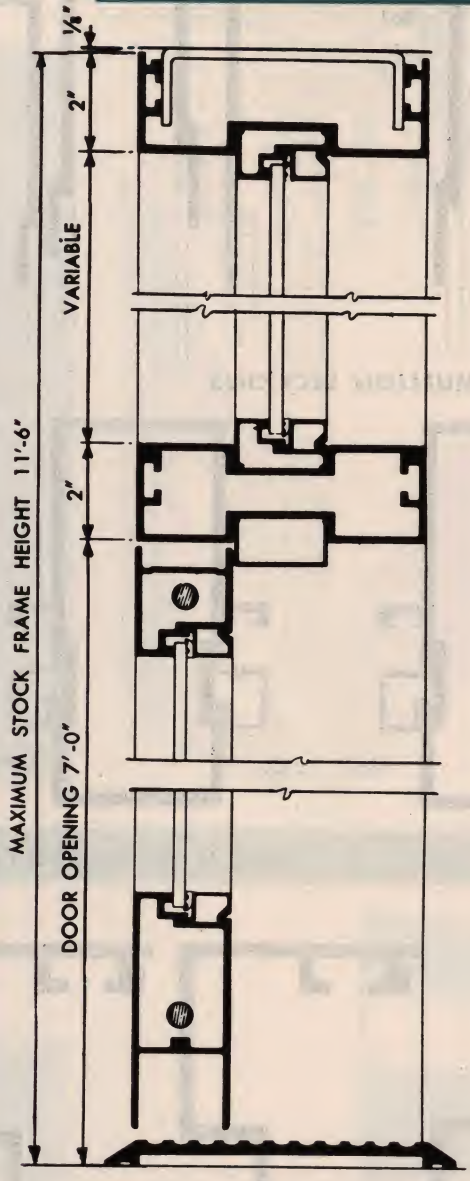
DOUBLE DOORS SIDELIGHTS AND FIXED TRANSOM

SINGLE DOOR SIDELIGHT AND FIXED TRANSOM

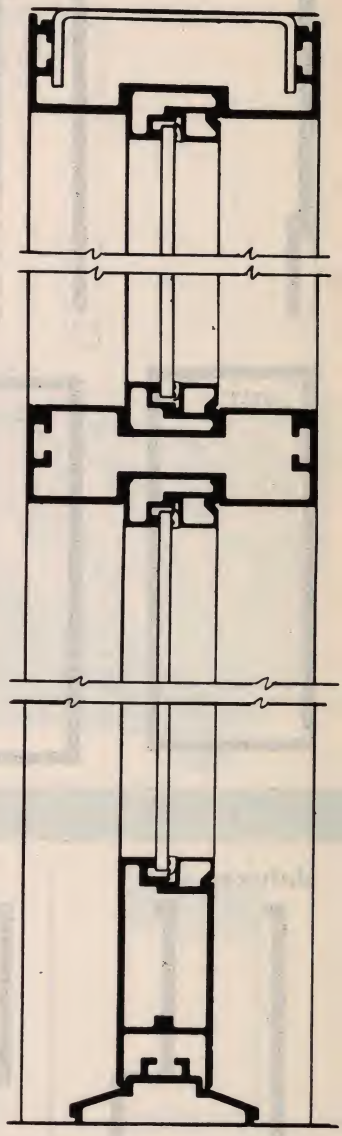
DOUBLE DOORS SIDELIGHT AND FIXED TRANSOM

SINGLE DOORS CENTER LIGHT AND FIXED TRANSOM





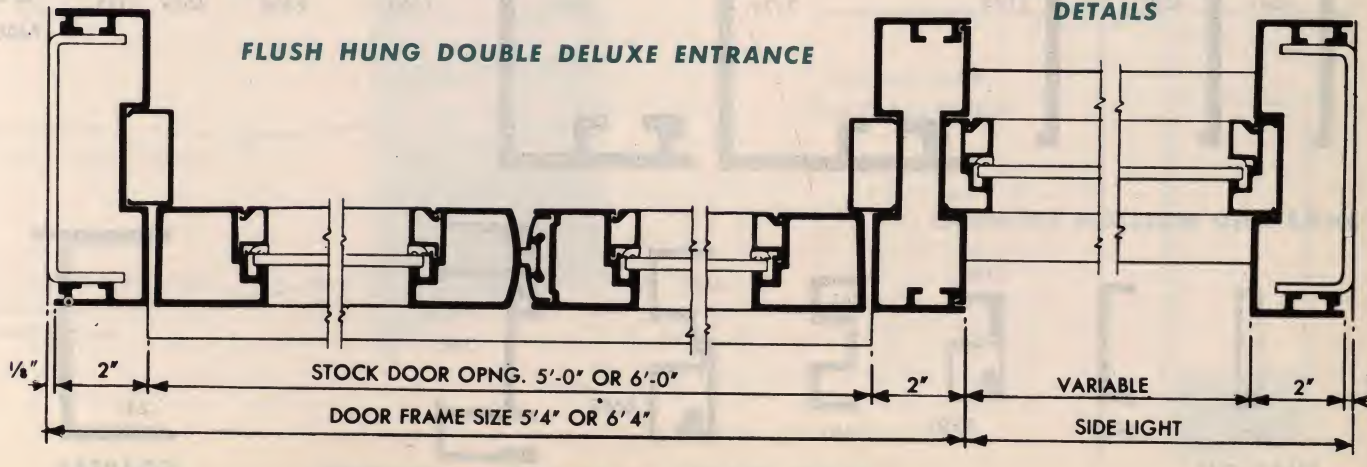
DOOR AND FRAME WITH FIXED TRANSOM



VERTICAL SECTION THRU SIDE-LIGHT

QUARTER SIZE DETAILS

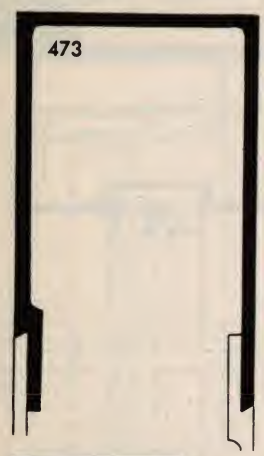
FLUSH HUNG DOUBLE DELUXE ENTRANCE

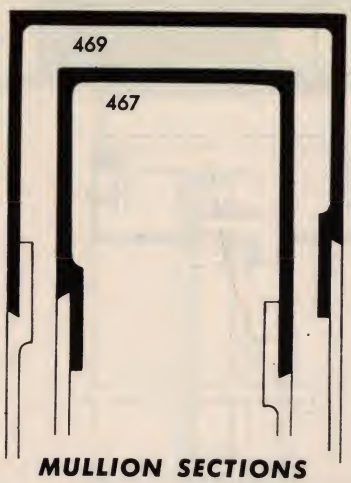


DOUBLE DOORS WITH SIDE LIGHT

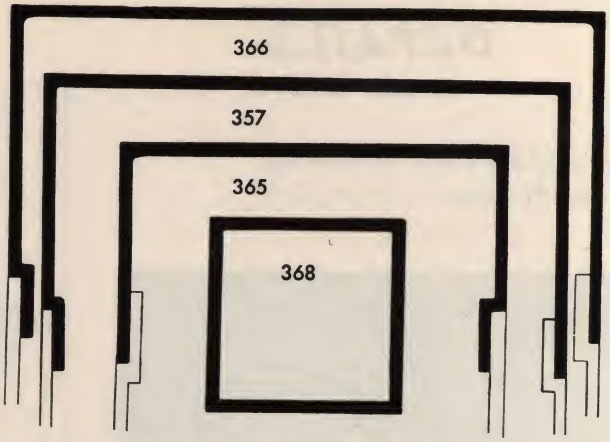
ENTRANCE MOULDINGS

standard

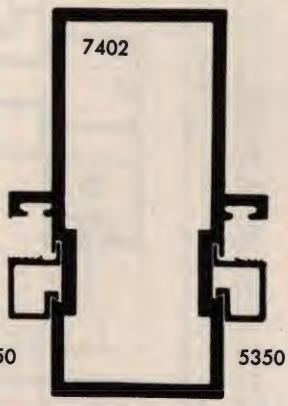


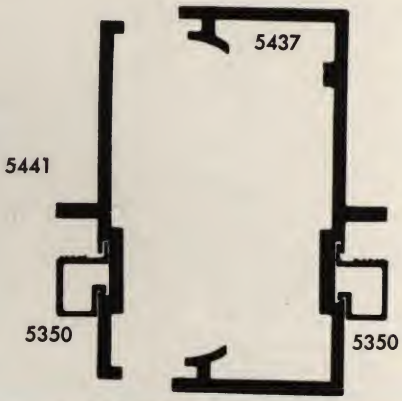


MULLION SECTIONS



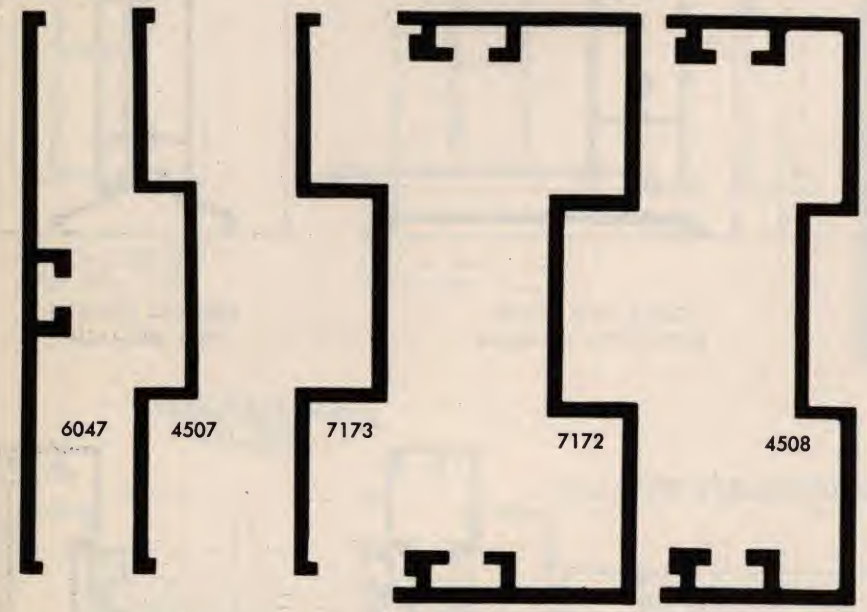
CORNER MULLION SECTIONS

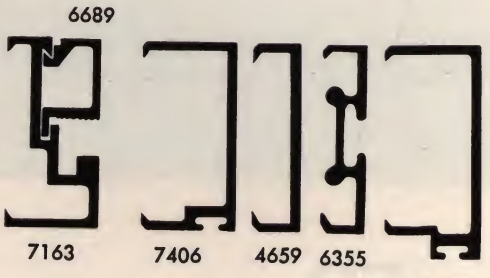




HALF SIZE DETAILS

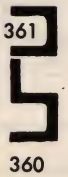
deluxe



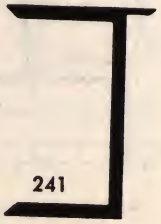


JAMB AND MULLION SECTIONS

SNAP-ON



GLASS STOPS

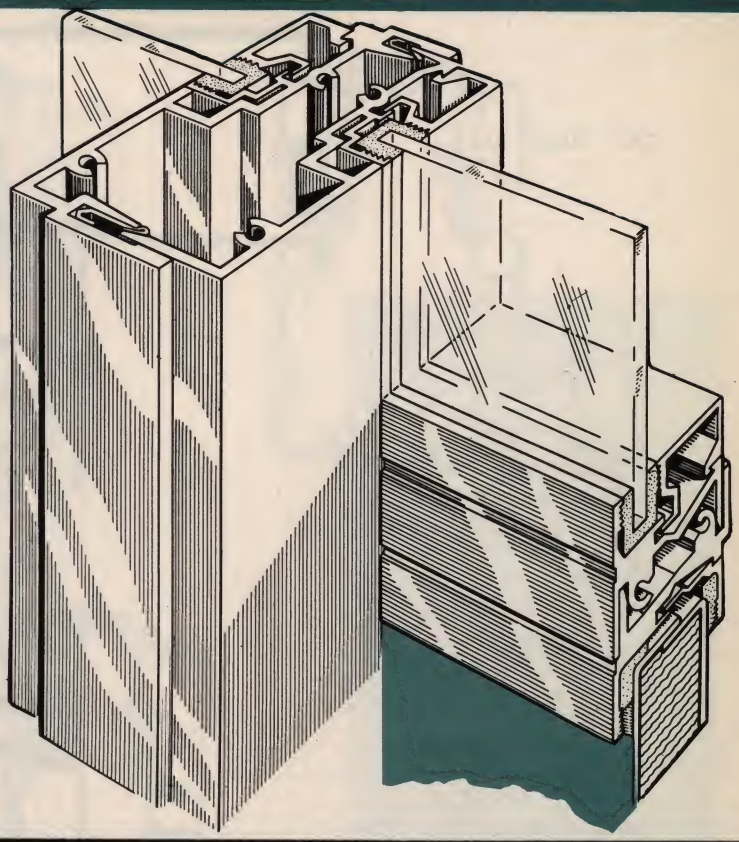


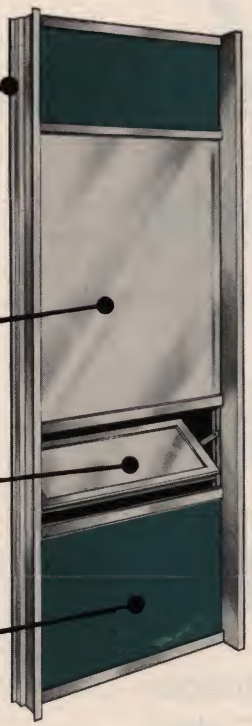
ADAPTER

BRASCO • WALL

FOR COMMERCIAL, EDUCATIONAL, INSTITUTIONAL, INDUSTRIAL BUILDINGS

Brasco-wall is a monumental-looking construction designed primarily for one and two story buildings. It is engineered so that it can be installed several different ways . . . to meet varying conditions . . . with all screws and fastenings concealed. You get adequate tolerances for expansion and contraction and a long-lasting, rich-looking etched and anodized finish.





Double vinyl gaskets, under compression, between all units.

All glazing from inside building...Thiokol sealant recommended.

Pivoted vents to open in at top or out at bottom.

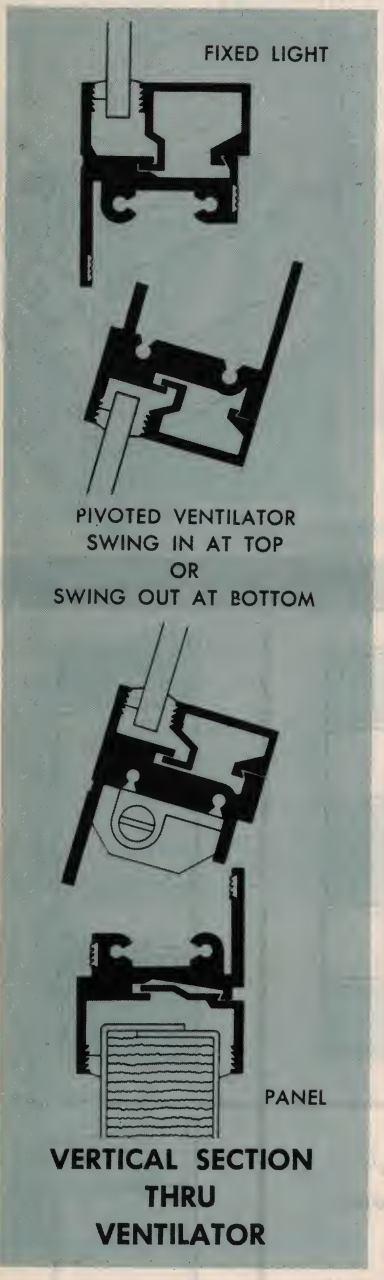
Porcelain enamel panels factory installed and Thiokol glazed.

"Custom-Look" Stock Variations

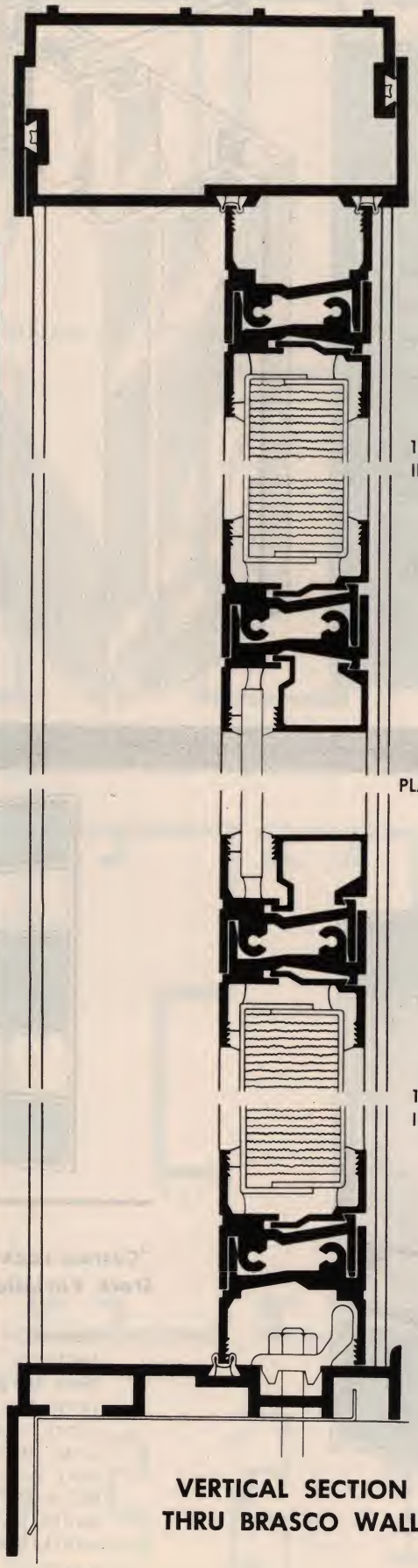
Dozens of architectural variations are possible from the basic stock unit. 4'0" wide, the height may vary from 9'0" to 22'0". Other width units are available if required.

BRASCO•WALL—DETAILS

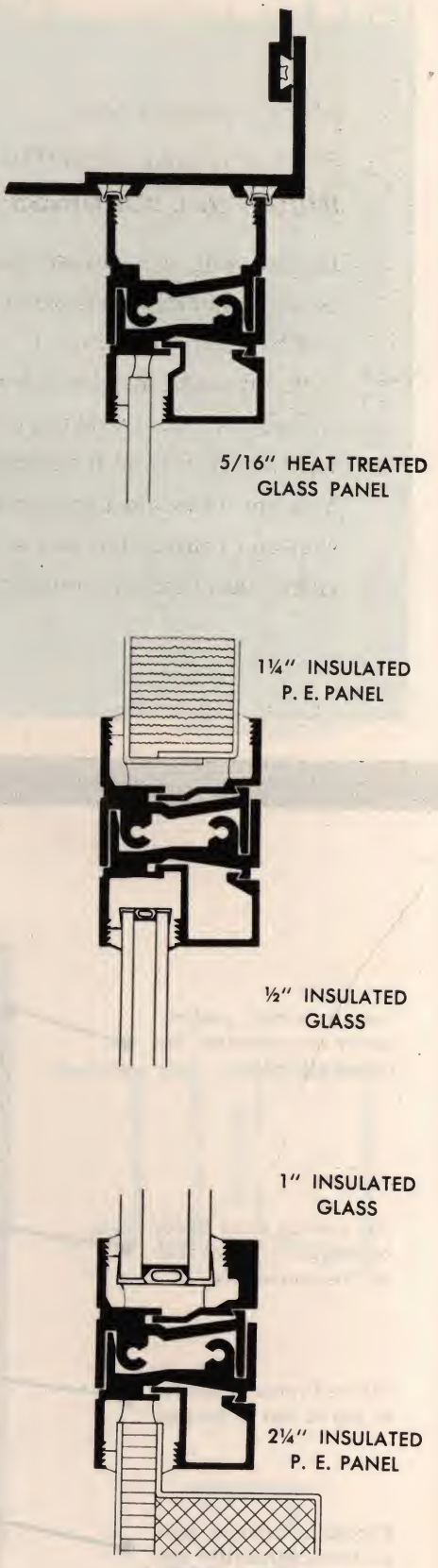
ONE HALF SIZE



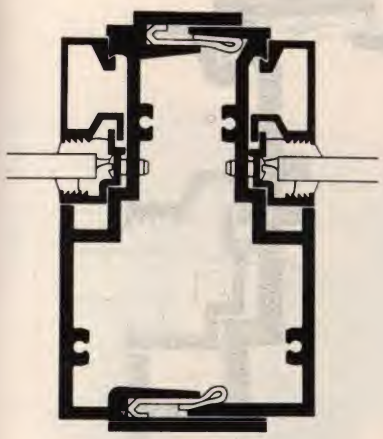
VERTICAL SECTION THRU VENTILATOR



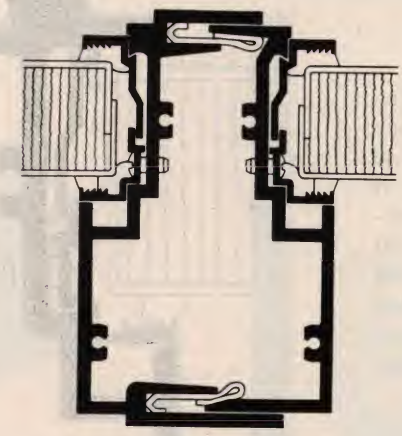
VERTICAL SECTION THRU BRASCO WALL



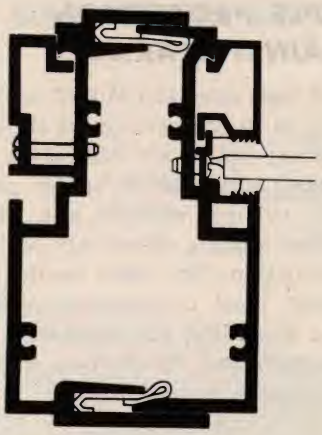
ALTERNATE VERTICAL SECTIONS THRU BRASCO WALL



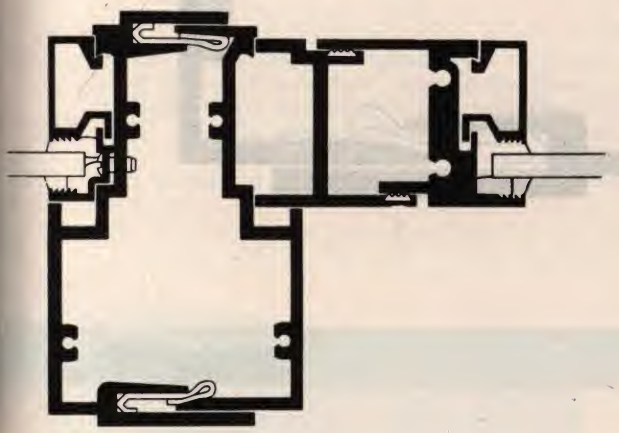
MULLION
Thru Plate Glass



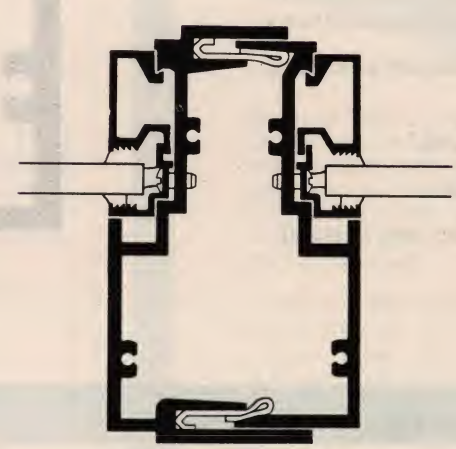
MULLION
Thru Panels



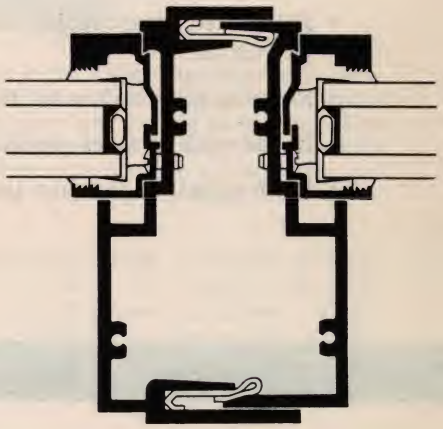
SIDE
Thru Plate Glass



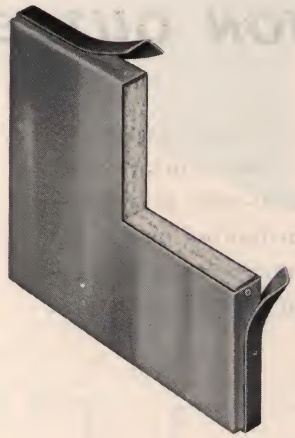
MULLION
At Ventilator



5/16 Tempered Glass
Spandrel Settings



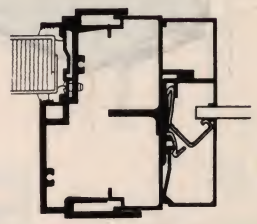
One Inch Thick
Insulating Glass



Porcelain Enamel
PANEL

Correlated
WITH

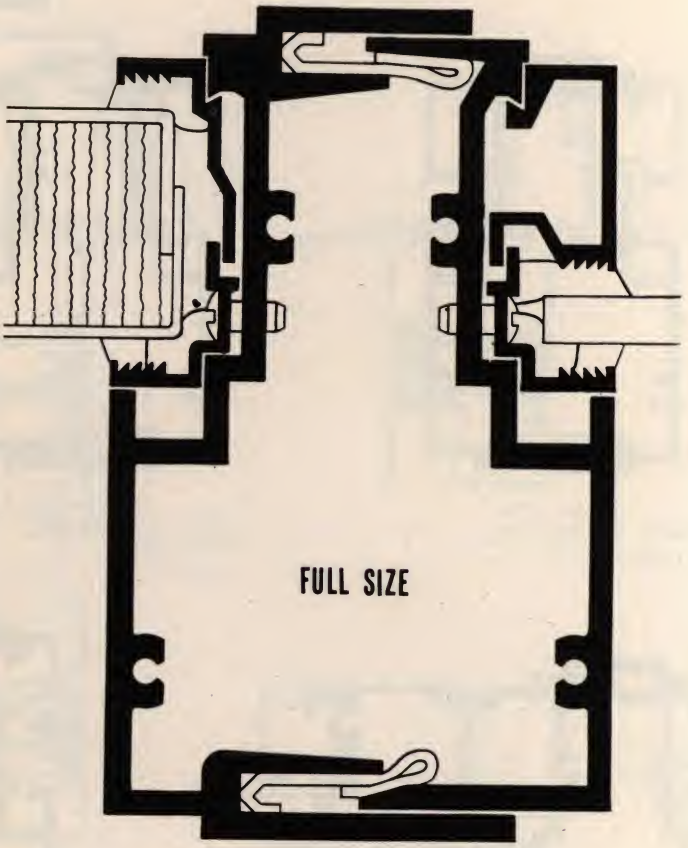
BRASCO Entrances **and** BRASCO Store Fronts



BRASCO • WALL

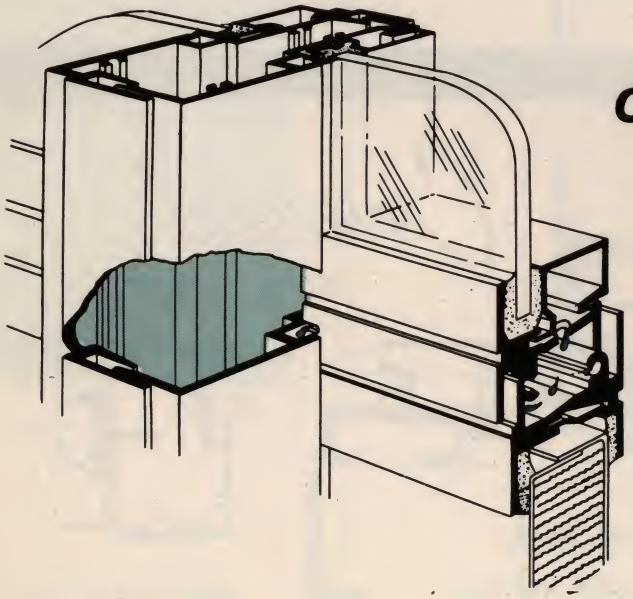
TRIPLE PROTECTION AGAINST LEAKAGE

Wind tests over 120 M.P.H. with water introduced at 20 gal. per minute show no water infiltration and no air infiltration. This, because double vinyl gaskets, under compression, at every vertical mullion and Thiokol recommended glazing effectively seals Brasco • wall construction. The split vertical mullion and floating head construction keep this sealed while providing the necessary tolerances for expansion and contraction and for building variations.



Important Construction Features . . .

- Adequate tolerance provided, horizontal and vertical, for building construction variations.
- Fabricated from 6063R1 anodized aluminum extrusions.
- Framing sections are ⅛" thick.
- Inside wall surfaces are flush.
- Predominating exterior lines are vertical.

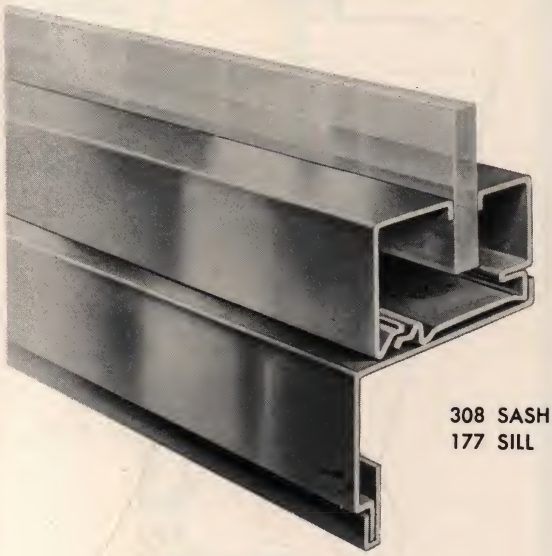


CONDENSATION OUTLET

Due to the nature of metal, condensation will occur in any curtain wall construction. Brasco • wall provides a concealed and protected outlet for these drops of water—along the vertical mullion and down and out at street level.

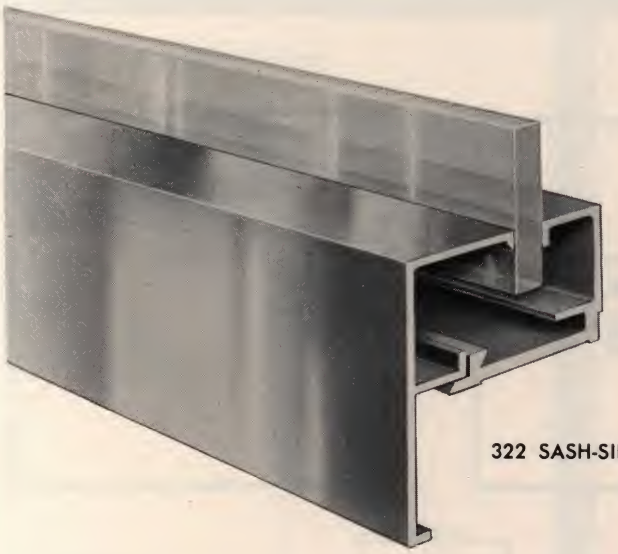
STORE FRONTS

SNAP-ON SASH



308 SASH
177 SILL

Brasco Snap-On Sash presents a modern, clean-lined appearance on *both sides* of the glass . . . ideal for both single and double face settings. Glass and metal are held securely with special stainless steel clip . . . a simple, practical setting system rigorously field tested and approved for glass safety and glazing economy.



322 SASH-SILL

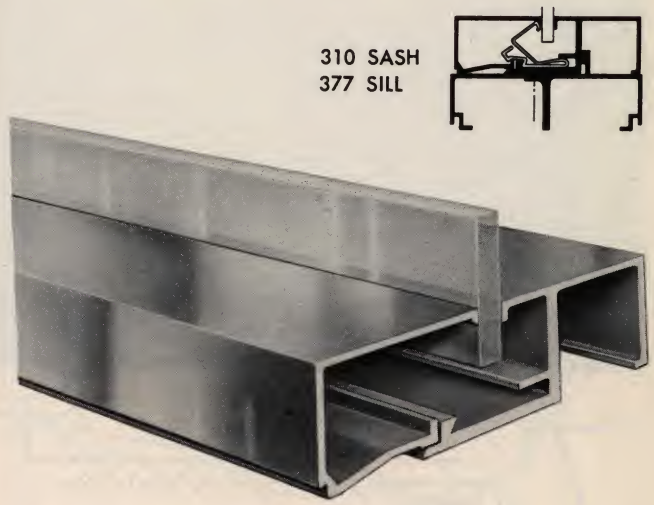
half size

309 SASH

307 SASH

DIRECT-ON-MASONRY SETTINGS

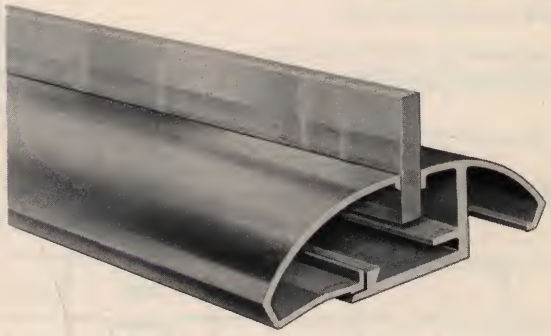
310 SASH
377 SILL



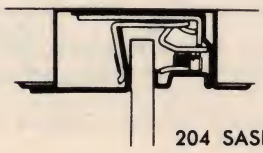
Snap-on Sash used with Direct-on-Masonry Settings presents a continuous flush glazed appearance, unmarred by screws or other visible fastenings. The combination provides full ¾" glass grip, permits complete glazing from the outside, saves time and costs and retains its smart appearance with occasional cleaning.

Direct-on-Masonry construction is completely self-supporting. It is set directly on masonry, marble, granite, steel, etc. and *eliminates woodwork*. There is nothing to rot out, nothing to wear out and necessitate repairs.

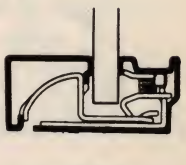
314 SASH
377 SILL



313 SASH



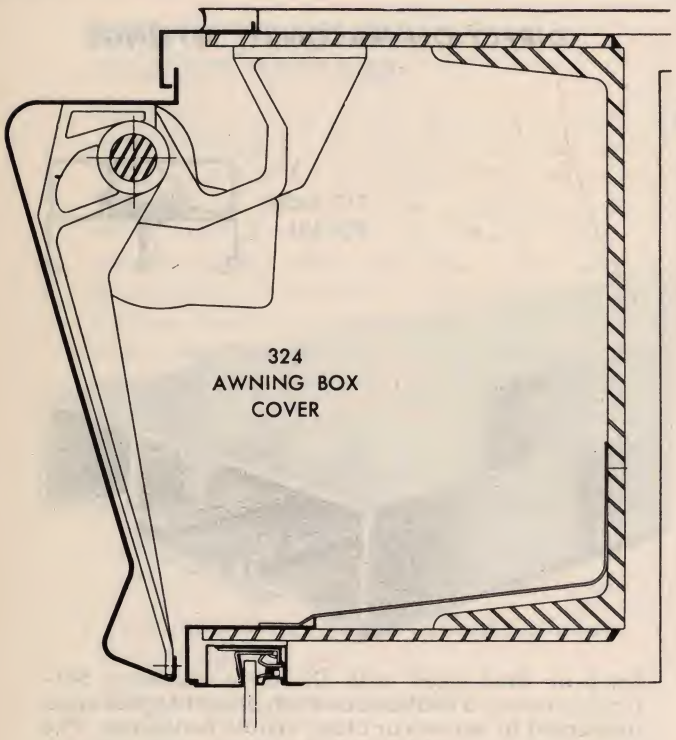
204 SASH

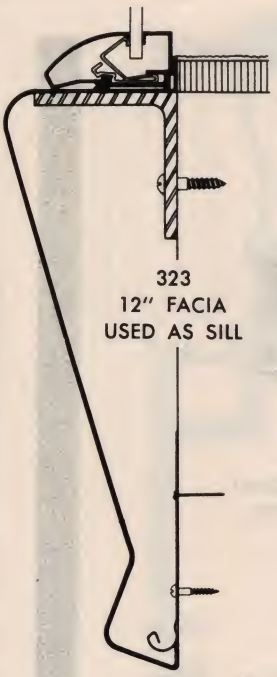


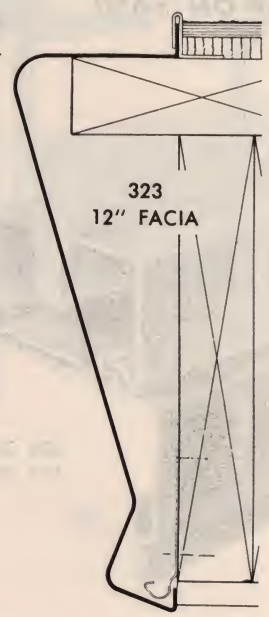
208 SASH

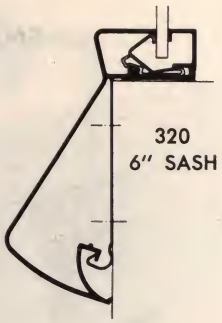
STORE FRONT DETAILS

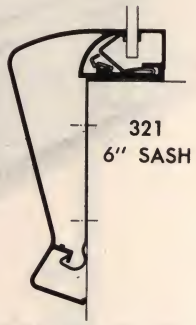
quarter size







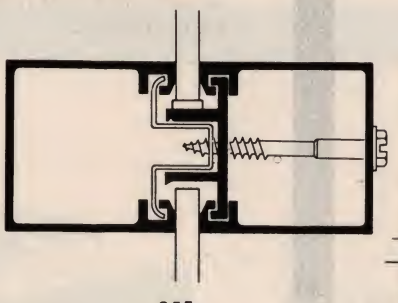


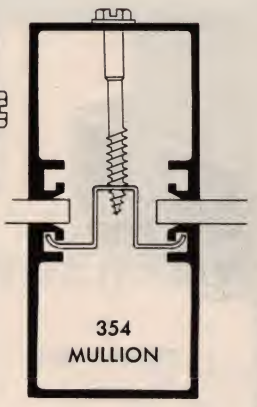


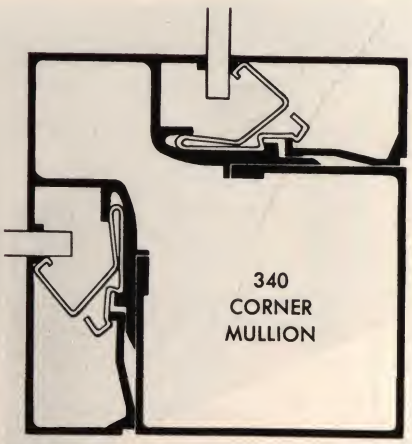
BRASCO BARS

SPECIAL FEATURES

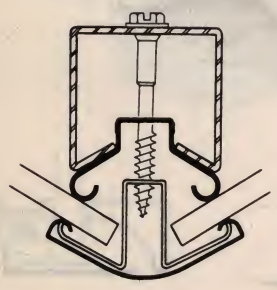
- Designed for support of larger and heavier glass loads.
- No protruding screws or bolts.
- New reinforcements.
- Continuous draw plate for maximum security.

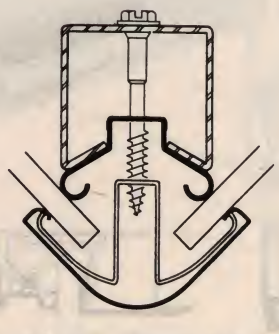


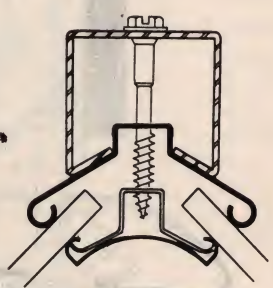


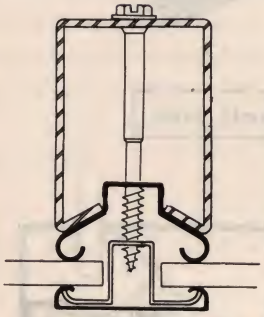


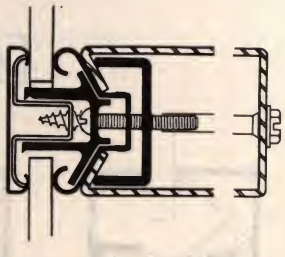
half size


INTERMEDIATE BAR


90°-120° CORNER BAR


REVERSE CORNER BAR

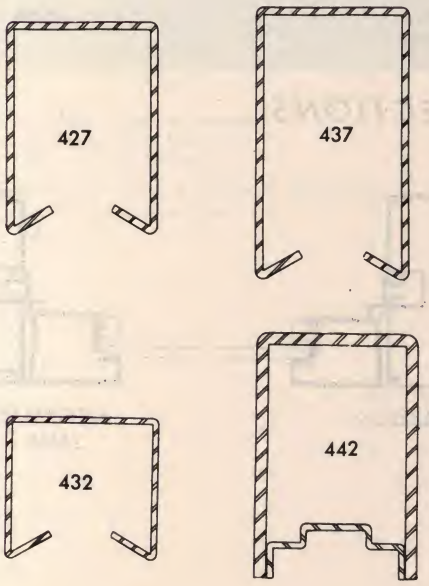

DIVISION BAR


HORIZONTAL DIVISION BAR

REINFORCEMENTS

extruded aluminum

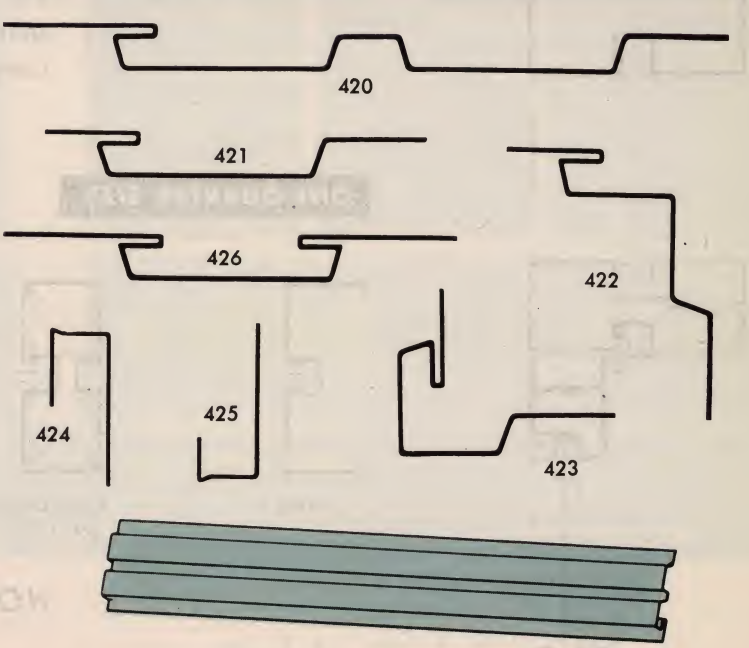
rolled steel



FACING METALS half size

420 series is an ideal facing material for new or remodeled construction. The baked-on-aluminum enamel is similar to that used on your automobile. Its rock-hard finish is suitable for exterior, as well as interior use. Now in 6 specially select colors and anodized aluminum, it can be used for "dressing-up" whenever the added attractiveness of color is called for.

- BLAZING RED
- RUSSET BROWN
- ARCTIC WHITE
- SUNRISE YELLOW
- CAVALIER GREEN
- ONYX BLACK

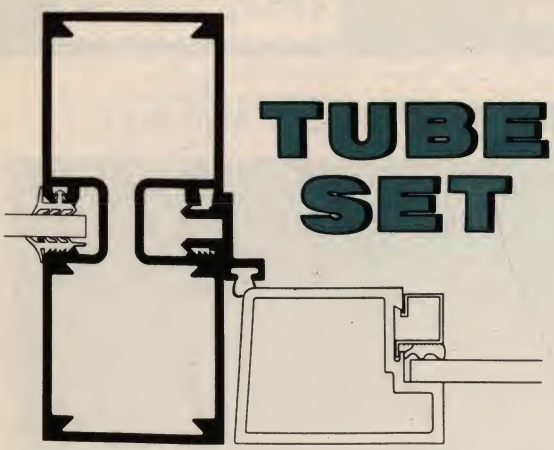


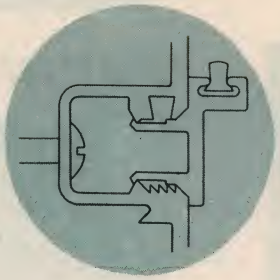
technical data

Base Material	.040 Aluminum
Base Color	Alykd Base Enamel
Primer	Zinc Chromate
Firing Method	Gas Fired Furnace
Method of Test	200 Hour Salt Spray
Result of Test	No Appreciable Deterioration
Color	Fade Resistant

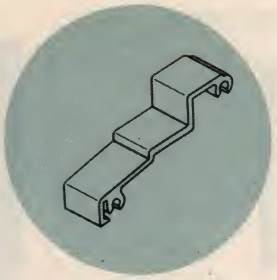
NEW

TUBE SET





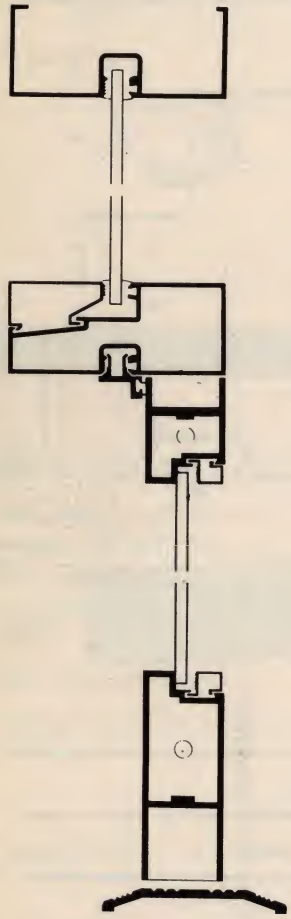
NEW snap in door stops



NEW weather-proofing anchor bracket

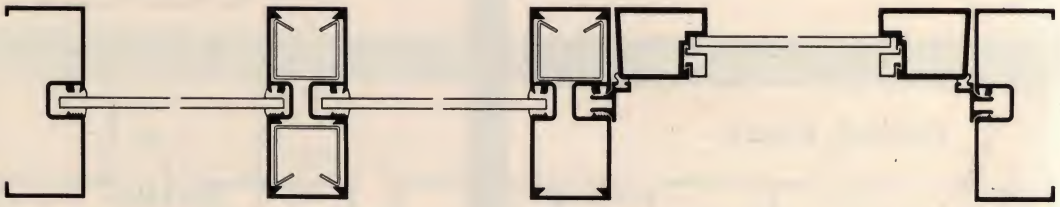
NEW water-proofing vinyl gasket glazing

A new flush glazing construction, with heavier, stronger sections. Full 2″ x 4¾″ profile incorporating NEW weatherproofing anchor brackets, NEW waterproofing vinyl gasket, NEW snap-in door stop. No exposed screws and completely anodized finish.



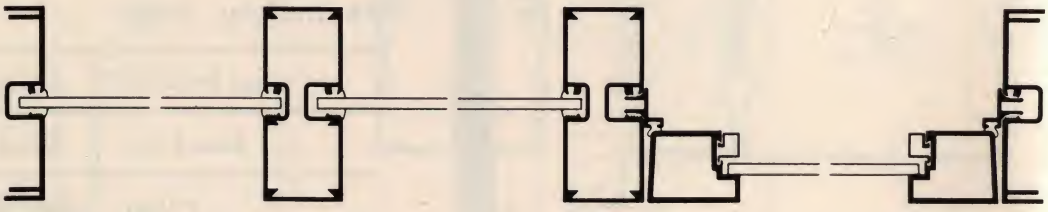
VERTICAL SECTION WITH BRASCO ENTRANCE

ONE QUARTER SIZE



JAMB | REINFORCED MULLION | REINFORCED MULLION | JAMB

HORIZONTAL SECTIONS



ALTERNATE JAMB | MULLION | MULLION | ALTERNATE JAMB

Brasco MANUFACTURING CO. · HARVEY, ILL.

Printed in U.S

Intramural Sports Building
Michigan State University
East Lansing, Michigan
Architect: Lewis J. Sarvis & Associates
Battle Creek, Michigan

aluminum doors and entrances

Cupples

cupples door and frame corporation • dowagiac, michigan

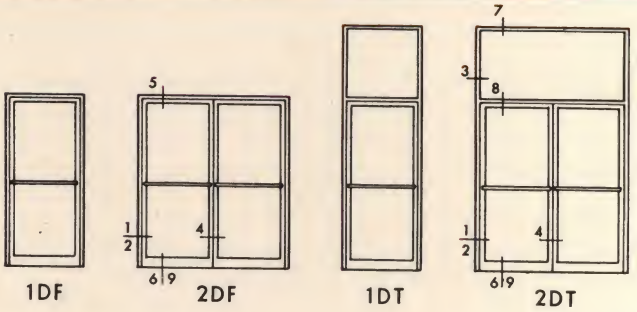
stock aluminum entrances no. 40 line

All Cupples Door and Frame units, both Stock and Custom are fabricated from heavy extruded aluminum alloy #6063T5, polished and anodized to a finish specification #204A1R1. All mechanical and welded joints are milled to hairline accuracy.

The New Cupples #40 Line offers these distinct advantages: • Complete Flush Glazing • No Exposed Screws • Simplicity of Field Fabrication and Anchoring • 100% Vinyl Glazing • Minimum Number of Shapes Required • Vinyl Sealed Expansion Mullion.

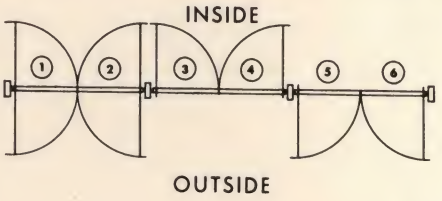
Entrance units are carried in stock sizes listed in chart, complete with standard hardware.

Standard Hardware: Cast white bronze pivot hinges with oilite bearing for top and ball bearing for bottom when overhead type closer is specified. Alternate floor type closer available. Push bar, pull handle, expanding bolt deadlock, flush bolts in inactive leaf of double door units, and aluminum threshold. Stock entrances are available on double acting floor type closers when required. Panic hardware available for all Cupples entrances.

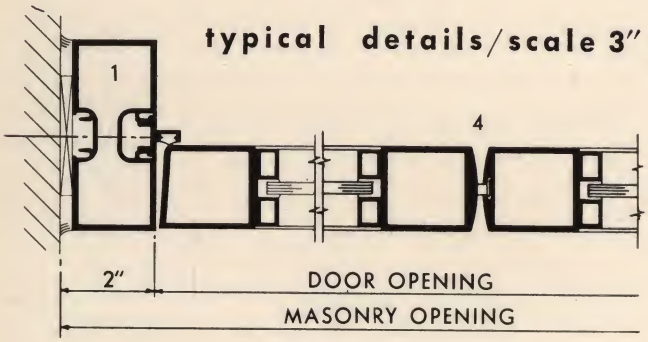


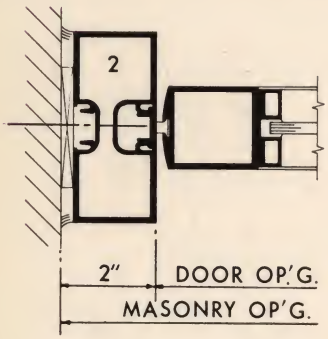
type	masonry opening	door opening
1DF	3′ 4″ x 7′2″ 3′10″ x 7′2″	3′0″ x 7′0″ 3′6″ x 7′0″
2DF	5′ 4″ x 7′2″ 6′ 4″ x 7′2″	5′0″ x 7′0″ 6′0″ x 7′0″
1DT	3′ 4″ x 10′2″ 3′10″ x 10′2″	3′0″ x 7′0″ 3′6″ x 7′0″
2DT	5′ 4″ x 10′2″ 6′ 4″ x 10′2″	5′0″ x 7′0″ 6′0″ x 7′0″

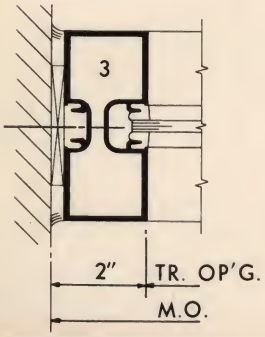
SPECIFY SWING OF DOOR BY NUMBER

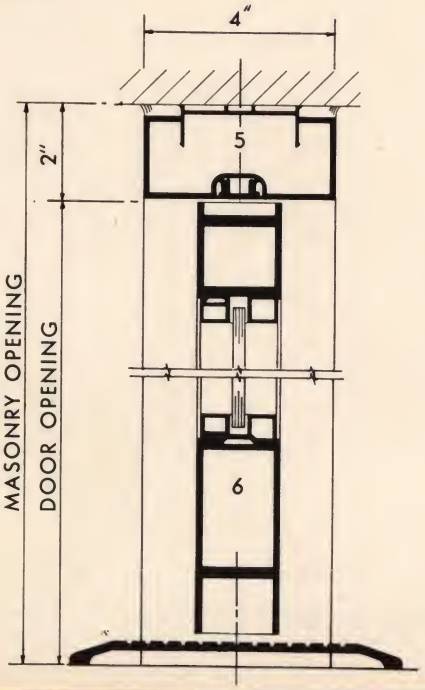


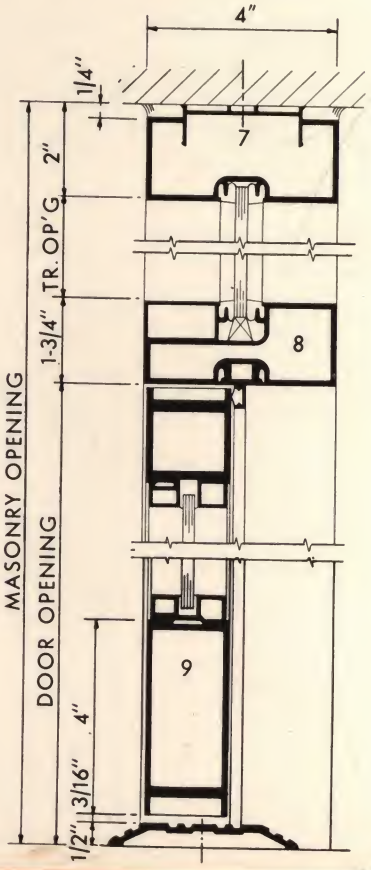
typical details/scale 3″ = 1′-0″



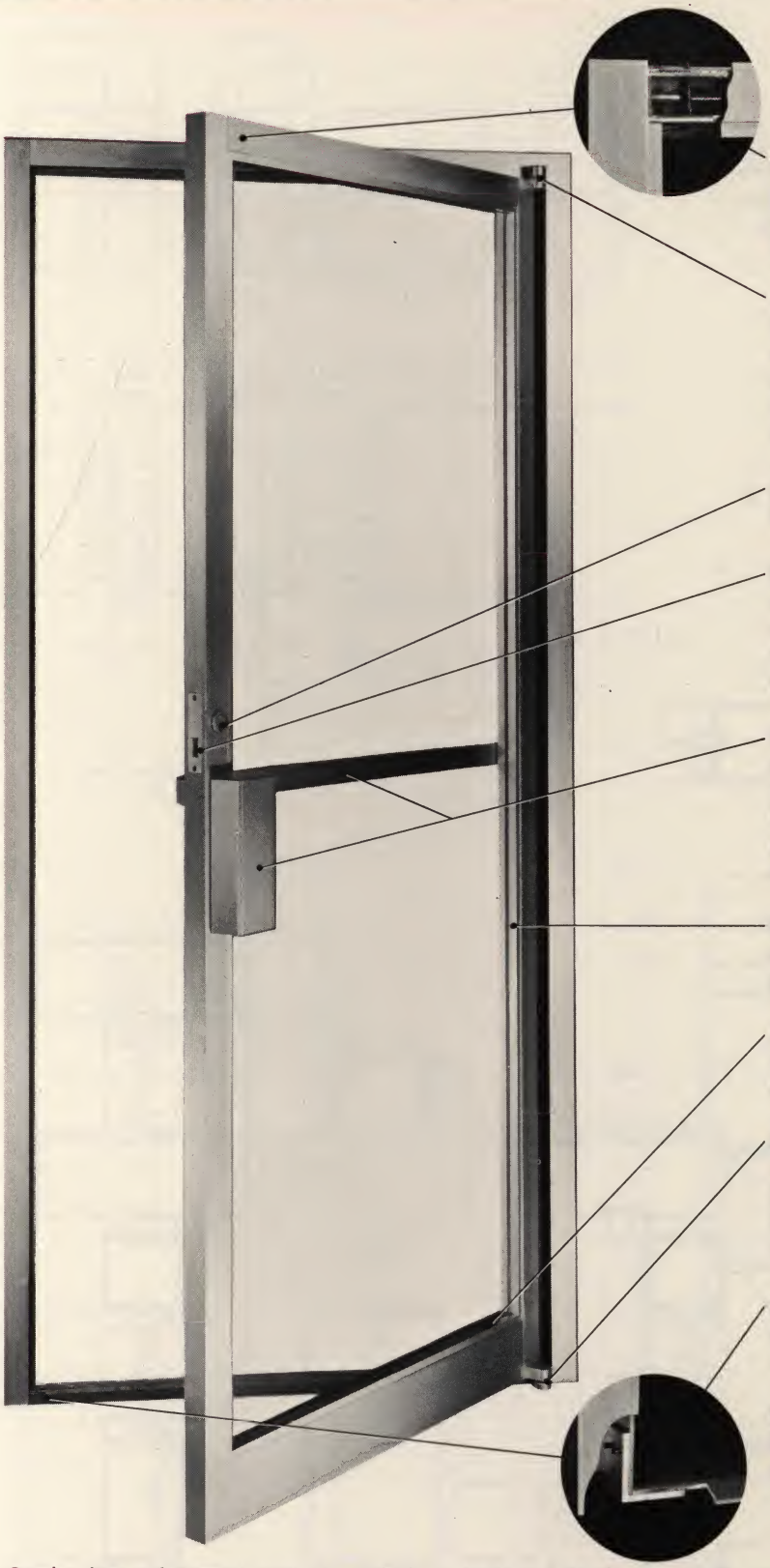








stock door and frame



ADJUSTABLE SETTING BLOCK
permits proper alignment of door after glazing. Necessary setting pads are secured in place, no shimming of glass is required.

OFFSET PIVOTS
for clean appearance and smooth operation, cast white bronze pivots with integral pin and oilite bearing. Tamper-proof design for overhead or floor type closer installation. Door available on butts if required.

STANDARD LOCK CYLINDER
for field servicing and master keying.

EXPANDING BOLT DEADLOCK
unique double hook design provides positive locking in both directions, will not bind and permits normal strike cut out for maximum strength. Interchangeable LATCH LOCK available if required.

STANDARD PUSH-PULL HARDWARE
is clean lined and contemporary in styling (illustrated). Interchangeable with custom styled entrance hardware to meet design requirements, thus permitting individualized entrances at nominal additional cost.

DRY GLAZING
with special vinyl section holds glass securely and permits rapid, clean, leak-proof installation.

GLASS SETTING BLOCK
is located to insure proper glass installation, thus eliminating strain that might cause glass breakage.

BOTTOM PIVOT
is of unique design that securely joins threshold to jamb section. For trouble-free operation made of cast white bronze with ball bearing and protective felt seal.

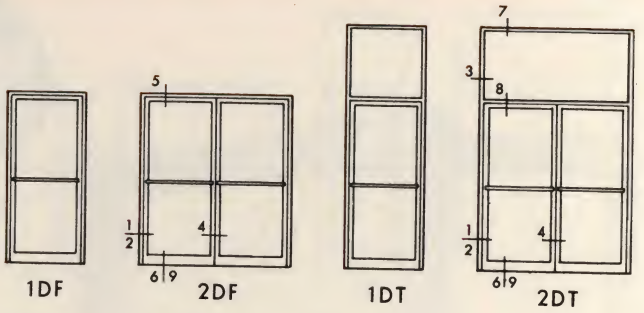
ANGLE CLIP
completes the rigid connection of threshold to jamb section.

FRAME ANCHORED TO FLOOR BY THRESHOLD
permits rapid and accurate entrance installation.

Cupples door and entrance units are available as single and double doors on the new style offset pivots, with overhead or floor type closer. Single doors are available for right or left hand operation. Double acting doors on floor closers are also available. Weather strip is furnished on meeting stiles of all double doors and on both stiles of all double acting doors. Standard hardware includes expanding dead-bolt lock, push bar, pull handle, threshold, pivot hinges, overhead or floor type closer. Fixed transom frames are available as standard, operating transom sash must be ordered special.

aluminum entrances no. 45 line

The Proven Cupples #45 Line of Stock Aluminum Entrances are available in the sizes listed in chart at the right. The same quality of material and workmanship used in the New Cupples #40 Line is used throughout. Standard hardware listed on page 2 applies.



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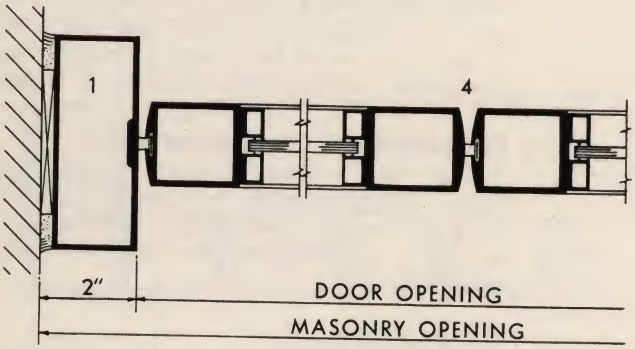
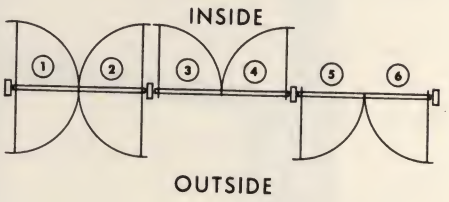
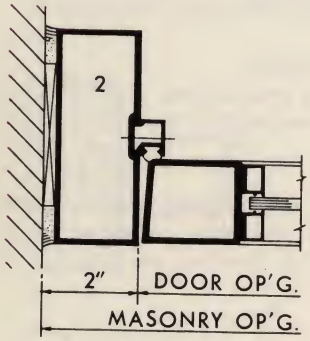
1DT	3′ 4″ x 10′2″ 3′10″ x 10′2″	3′0″ x 7′0″ 3′6″ x 7′0″
2DT	5′ 4″ x 10′2″ 6′ 4″ x 10′2″	5′0″ x 7′0″ 6′0″ x 7′0″

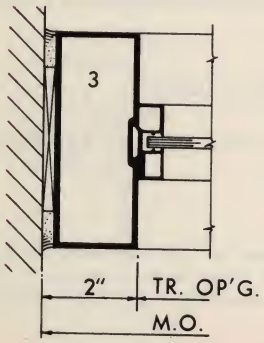
typical details/scale 3″ = 1′-0″

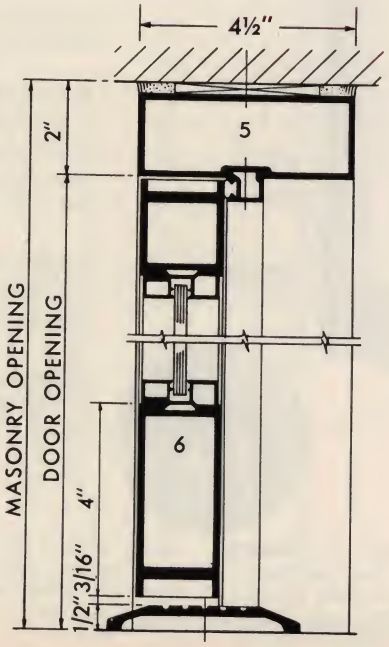


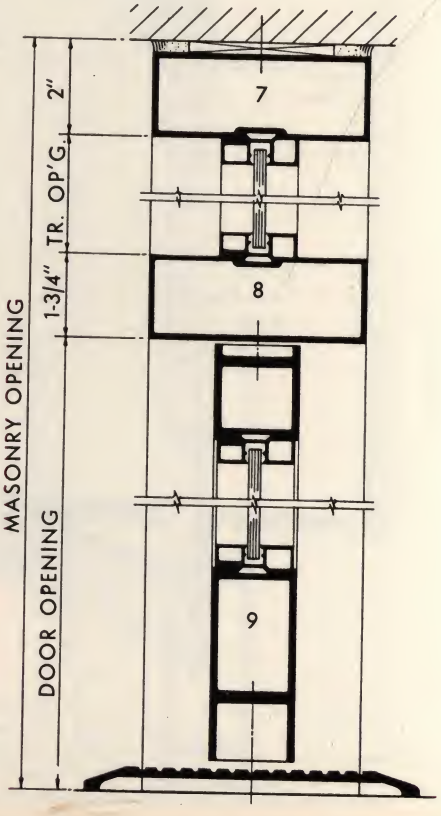
SPECIFY SWING OF DOOR BY NUMBER

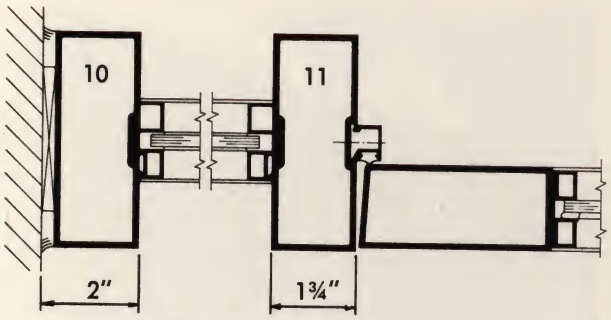




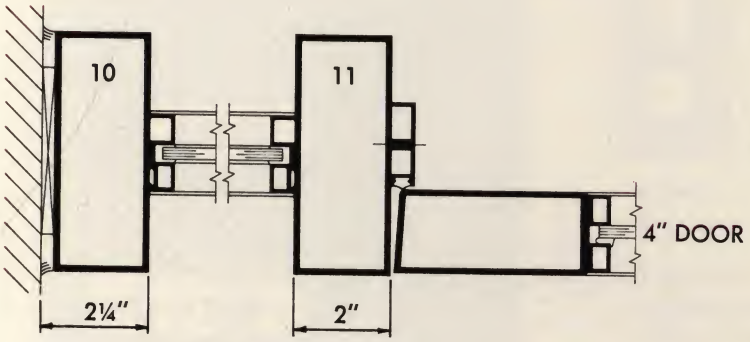




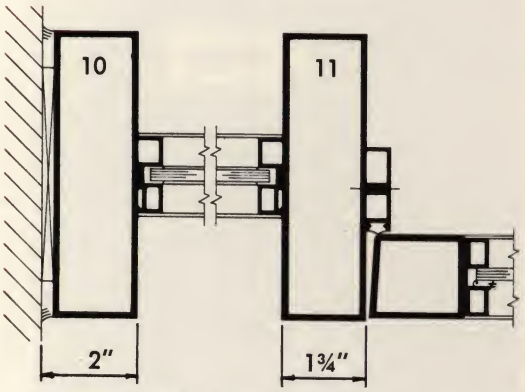




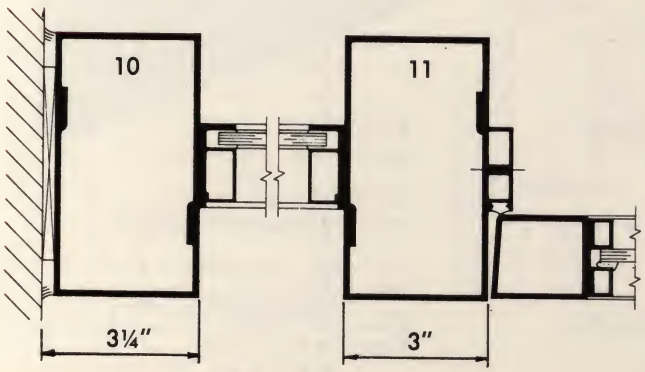
1¾" x 4½"



2" x 5"



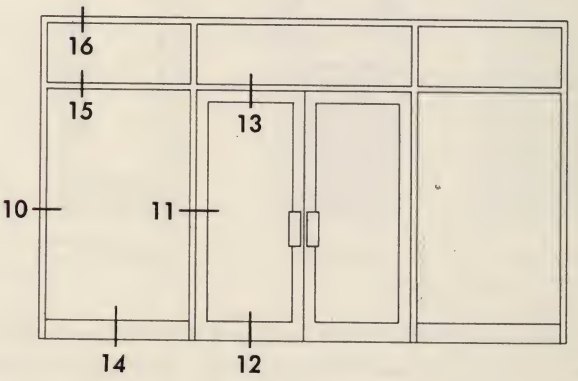
1¾" x 6"

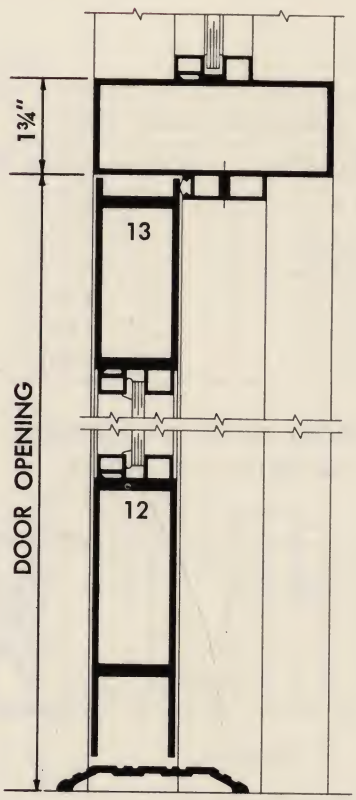


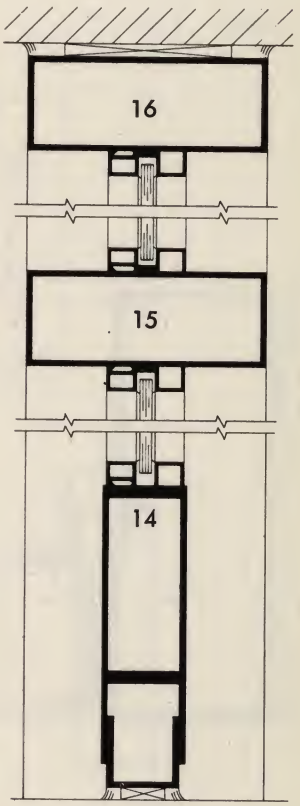
3" x 5½"

Custom built entrances available in virtually any combination of narrow or wide stile doors — flush doors with tube frames or split tube frames.

Hardware may be as specified either furnished by us or by others. If hardware is by others it should be sent to us for application.





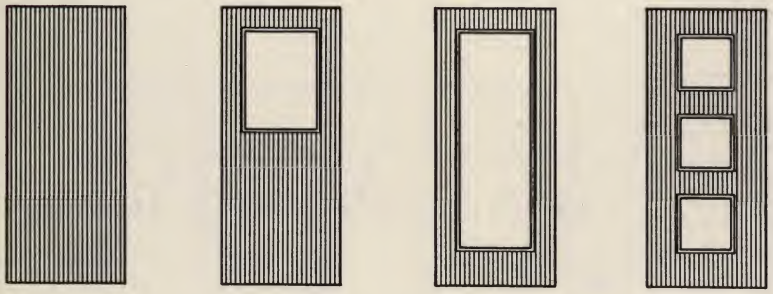


stock flush doors

Lightweight, rugged construction plus modern design make this a most versatile and practical flush door.

Dimensionally stable and warp free.

STANDARD TYPES

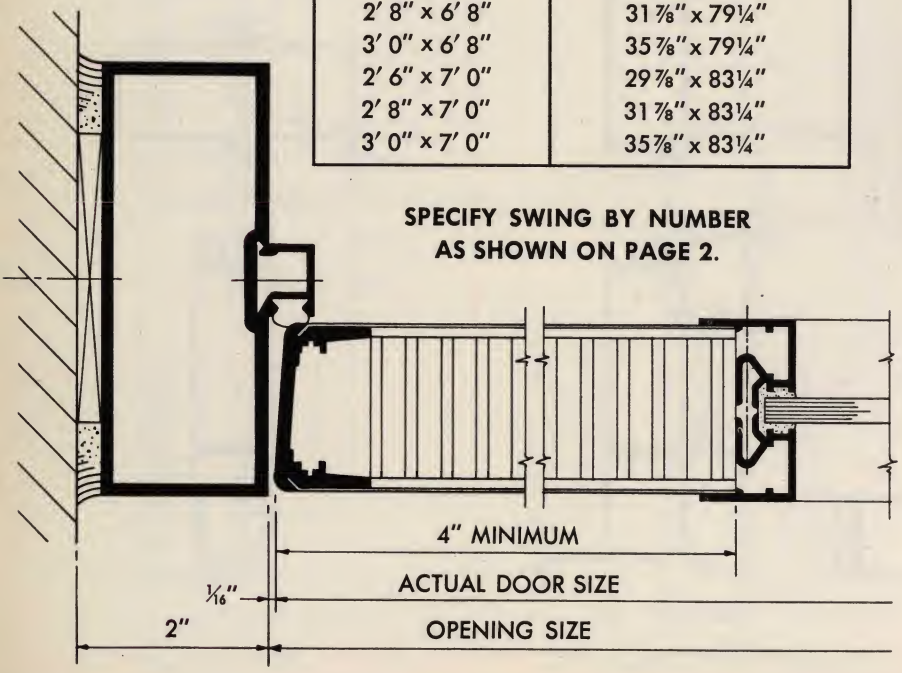


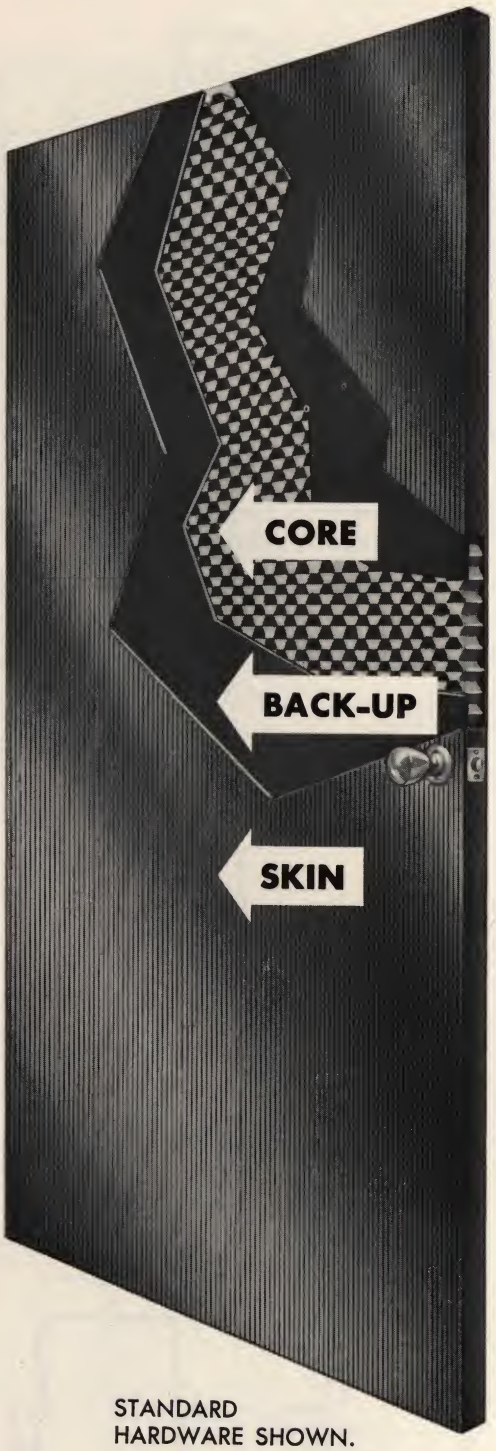
TYPE "A" TYPE "B" TYPE "C" TYPE "D"

Doors are laminated under heat and pressure on a resin impregnated Kraft Honeycomb core. Face sheets are laminated to hardboard back-up which is in turn bonded to honeycomb. Face sheets are bonded and mechanically locked to continuous aluminum extrusion forming edges of door.

STANDARD DOOR SIZES	
OPENING SIZE	**ACTUAL DOOR SIZE**
2′ 6″ x 6′ 8″	29⅞″ x 79¼″
2′ 8″ x 6′ 8″	31⅞″ x 79¼″
3′ 0″ x 6′ 8″	35⅞″ x 79¼″
2′ 6″ x 7′ 0″	29⅞″ x 83¼″
2′ 8″ x 7′ 0″	31⅞″ x 83¼″
3′ 0″ x 7′ 0″	35⅞″ x 83¼″

SPECIFY SWING BY NUMBER AS SHOWN ON PAGE 2.





STANDARD HARDWARE SHOWN.

CUSTOM HARDWARE AVAILABLE ON REQUEST.

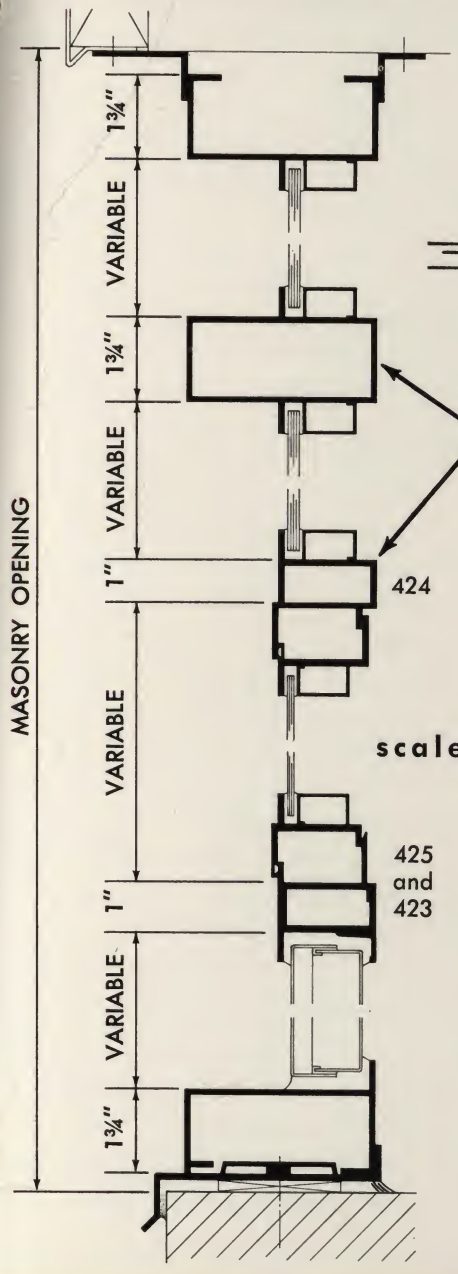
LOUVERS AVAILABLE WHICH SET IN GLAZING BEADS REPLACING GLASS.

Cupples aluminum curtain wall

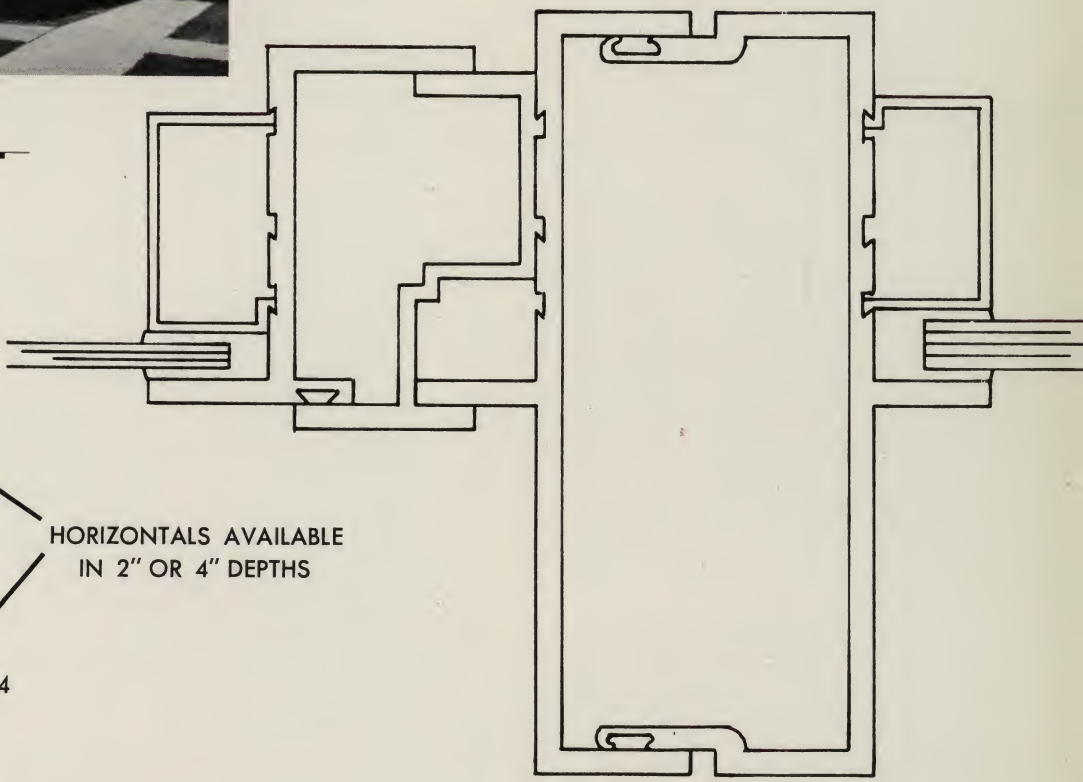
el-4 construction

Fishell Building
Grand Ledge, Michigan
Architect: Freeman & Smith
Lansing, Mich.

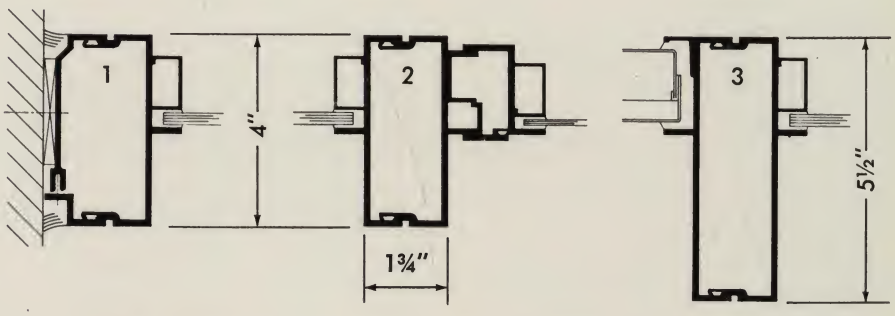
Available exterior or interior glazed sash — ♯800 or ♯900 Hoppers or Vents. Insulated panels as specified.



scale 3" = 1'-0"



FULL SIZE



MULLIONS AVAILABLE IN 4" OR 5½" DEPTH

custom styled stock hardware

Pull Handle 40-100-A2

Push Bar 40-101-A2

Pull Handle 40-100-A3

Push Bar 40-101-A3

Pull Handle 40-100-A4

Push Bar 40-101-A4

Pull Handle 40-100-A

Identification Engraved to Customer's Design

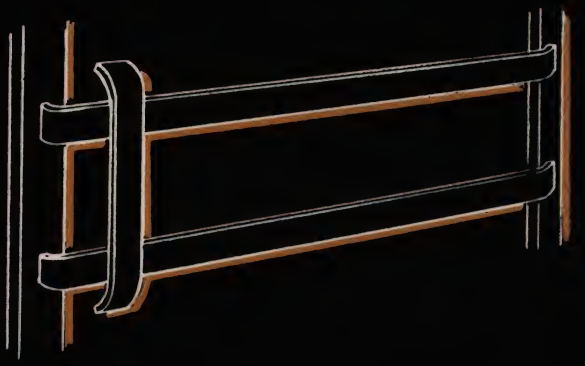
Push Bar 40-101-A

All surfaces are Lustrous Aluminum Anodized finish. Engraved pattern is available in Black or Red. Special Identification Design is colored to meet customer specifications. Custom Styled Stock Hardware may be applied to the stock Cupples doors as well as the Custom Entrances.

Pull Handle 40-2

Push Bar 40-1

Push Bar 40-53-AP



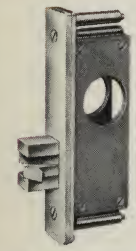
Pull Handle 40-100 12″ long
Stock Pull Handle 40-117 9″ long
(furnished with stock doors)

Push Bar 40-53-AEP

Pull Handle 40-53-090

All standard hardware is polished Aluminum-Anodized finish. Specify plain, push or pull on all orders.
Engraved identification colored black.

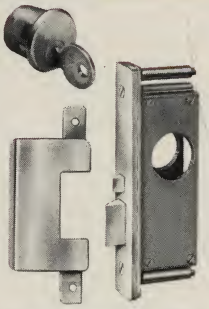
standard hardware



1 5/32" DIAMETER CYLINDER

THUMB TURN 40-3-TT

EXPANDING BOLT LOCK 40-132



LATCH LOCK 40-134

THUMB TURN 40-134-1

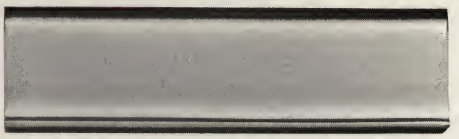
LEVER HANDLE 40-134-2

40-132 and 40-134 interchangeable on stock doors

Thumb turn may be substituted for cylinder on either lock. Lever handle is used only with latch lock.

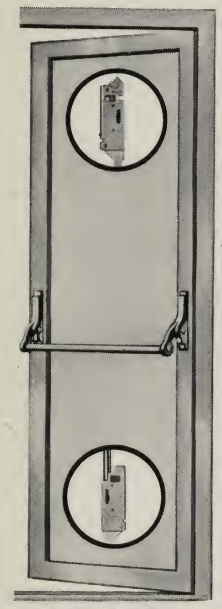
BUTT HINGE 40-7

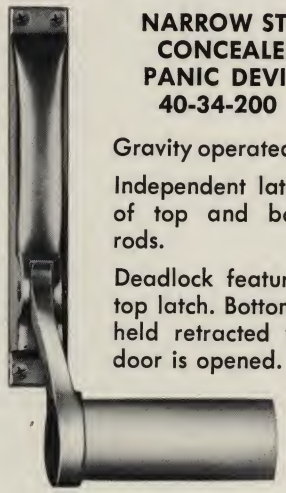
Heavy wrought bronze.
Dull chrome plated.
Non-rising pin.
Two self retaining ball bearings.



LETTER SLOT ASSEMBLY 40-55

Wrought aluminum-anodized.
Overall size: 3½" x 9".





NARROW STILE CONCEALED PANIC DEVICE 40-34-200

Gravity operated rod.

Independent latching of top and bottom rods.

Deadlock feature on top latch. Bottom rod held retracted when door is opened.

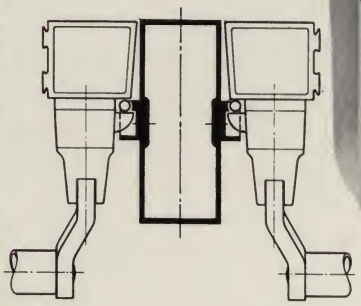
TUBULAR CROSS BAR

RIM LATCH PANIC DEVICE 40-34-300

Used on single doors only.

Center mullion can be made removable.

Mullion furnished with 5/16" roller strikes.

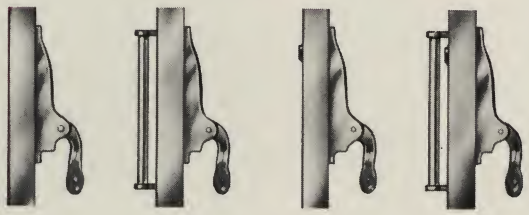


Simplicity of operation and installation.

Positive bolt retraction adjustment.

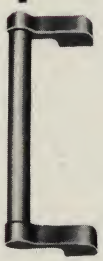
Cylinder is optional at any time.

1 5/32" DIAMETER RIM TYPE CYLINDER No. 40-35



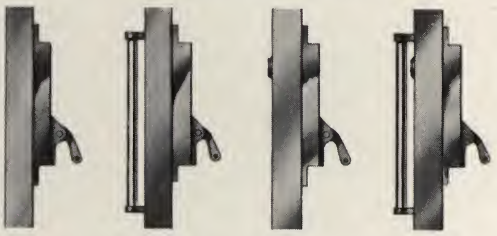
A B C D

SERIES 40-34-200



ALUMINUM PULL HANDLE 40-2

1 5/32" DIAMETER RIM TYPE CYLINDER No. 40-35



E F G H

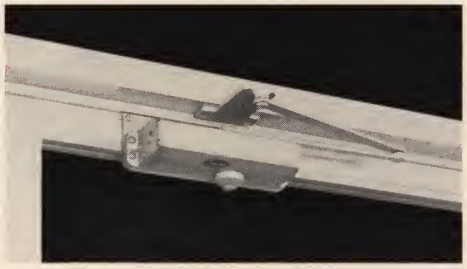
SERIES 40-34-300

A Panic exit only ---------- 40-34-200
B Panic exit with pull ---------- 40-34-200-2
C Panic exit with cylinder ---------- 40-34-200-35
D Panic exit with pull and cylinder ---------- 40-34-200-2-35

E Panic exit only ---------- 40-34-300
F Panic exit with pull ---------- 40-34-300-2
G Panic exit with cylinder ---------- 40-34-300-35
H Panic exit with pull and cylinder ---------- 40-34-300-2-35

FINISH — DULL CHROME PLATED

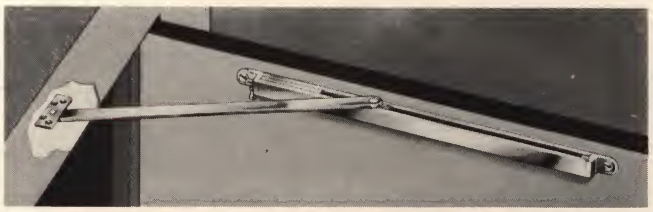
NORTON TRIMLINE
INSWINGING DOOR 40-159



NORTON TRIMLINE
OUTSWINGING DOOR 40-159

Size of checks will be determined by the size and location of doors.
Specify swing of doors on all orders.

FLUSH BOLT
40-8



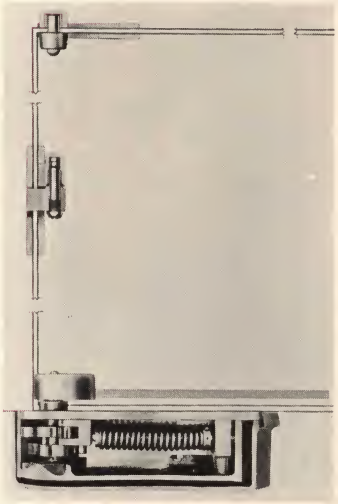
SURFACE TYPE DOOR HOLDER 40-54-90
(For single acting door)

Surface Type overhead door holder with safety release. For single acting doors, handed. Serves as door stop and shock absorbing cushion, as well as holder. Styles for offset, center and butt hung doors.

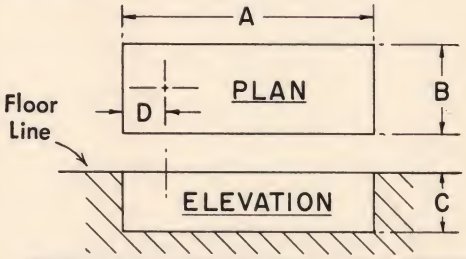
CONCEALED DOOR HOLDER
40-54-100 (For single acting door)
40-54-200 (For double acting door)

Concealed overhead door holder with safety release for single and double acting doors. Serves as door stop and shock absorbing cushion, as well as holder. Styles for offset, center hung and butt hung doors.

DOOR HOLDER
40-54-4



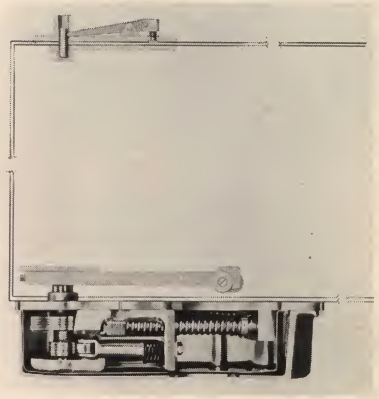
SINGLE ACTING (OFFSET)
FLOOR CLOSER



DOR	RIX	A	B	C	D
200	20	12 1/2"	6"	4"	2 1/2"
250	25	13"	6 3/4"	4 1/2"	2 3/4"
210	21	12 1/2"	6"	4"	2 1/2"
260	26	13"	6 3/4"	4 1/2"	2 3/4"
300	30	15 1/2"	6 1/8"	3 7/8"	2 3/4"
400	40	17 3/4"	6 3/4"	4 3/8"	3"

Table showing dimensions of cutout in floor for Dor-o-matic and Rixson floor closers.

NOTE: Threshold is furnished unless otherwise specified. Specify swing of doors.



SINGLE OR DOUBLE-ACTING
(CENTER HUNG) FLOOR CLOSER

Vandercook Hall
Ferris Institute
Big Rapids, Michigan
Architect: Roger Allen & Associates
Grand Rapids, Michigan

Hinsdale Oasis
Illinois Tollway
Architect: Pace Associates
Chicago, Illinois

Carlisle Hall
Ferris Institute
Big Rapids, Michigan
Architect: Roger Allen & Associates
Grand Rapids, Michigan

Library
Western Michigan College
Kalamazoo, Michigan
Architect: Ralph R. Calder
Detroit, Michigan

L. S. Donaldson Department Store
Edina, Minnesota
Architect: John Graham & Company
Seattle, Washington

Cupples

CUPPLES DOOR AND FRAME CORP.
DOWAGIAC . . . . . MICHIGAN

Litho in U.S.A.
RAD 1960

D-H "The Complete Door Line"

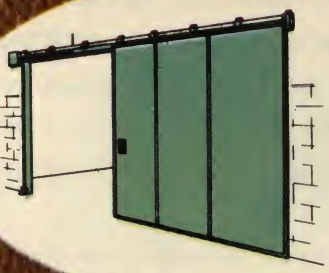
DécorDor

Mineral Core
FLUSH WOOD DOORS
(See Sweet's Architectural File 16c/Dui)

PyroDor®
INTEGRAL METAL DOOR and FRAME UNITS
(See Sweet's Architectural File 16b/Du)

D AND H
DécorDor

Beautiful
ALUMINUM
and
VINYL-ON-STEEL FLUSH DOORS

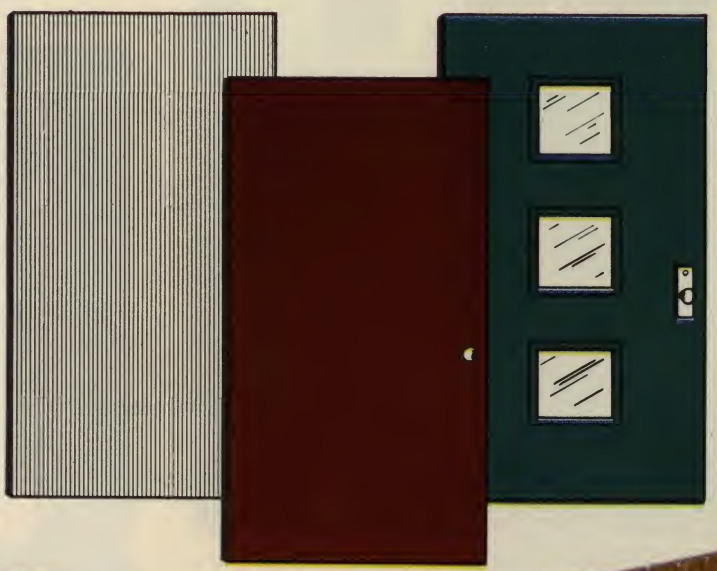


PyroDor®
SLIDING
UL Class "A"
Flush Design
(See Sweet's Architectural File 16b/Dui)

TEXTURED DESIGNS

RICH VINYL COLORS

SUITABLE FOR INTERIORS or EXTERIORS



A. I. A. FILE NO. 16-E

A. I. A. FILE NO. 16-E

DUSING and HUNT, INC., LE ROY, N. Y.

Alumilited ALUMINUM

D-H DécorDor

FUNCTIONAL DECORATIVE DOORS

VINYL-ON-STEEL . . . For SCHOOL ROOMS • OFFICES CLINICS • STUDIES • HOSPITALS • HOTELS • STORES

ALUMILITED ALUMINUM . . . For EXTERIOR or INTERIOR DOORS • COMMERCIAL, INDUSTRIAL BUILDINGS • OFFICES • THEATERS • INSTITUTIONAL

- *Suitable for Exterior or Interior*
- *Rich Vinyl Colors or Beautiful Aluminum*
- *Strength and Durability*
- *1,000,000 Cycle Slam Test Without Failure*
- *Full Range of Hardware Applications*
- *Exceptional Strength to Weight Ratio*
- *Top Quality—but, Economical too*

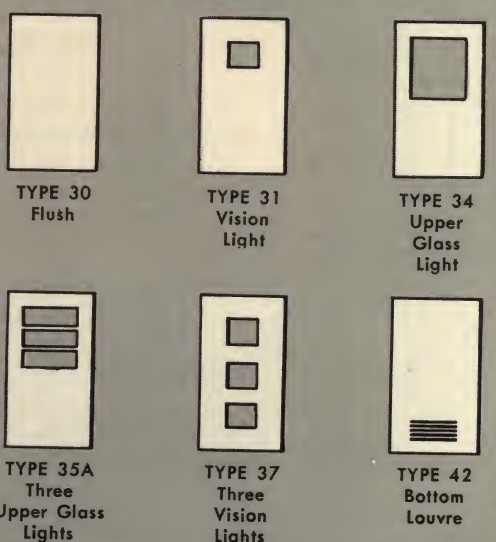
Many architects who prefer flush aluminum or vinyl decorative doors have been unable to use them because of the high cost for a product of high quality. Dusing and Hunt through standardization of types and sizes can offer the best quality available at a price you can afford.

The Model "DV" DécorDor is offered at the same price as the Model "DAL" Flush Aluminum Door. Heretofore such doors have been much more expensive. The basic core construction (See Page 4) is the same as that of the aluminum door with perimeter of aluminum extrusions. Liquid vinyl is rolled onto steel to give a permanent bond and a textured appearance.

This is a beautiful door, but strong and durably built to withstand heavy traffic.

DOOR TYPES

Special types and sizes can be furnished on special order.


TYPE 30 Flush
TYPE 31 Vision Light
TYPE 34 Upper Glass Light
TYPE 35 Two Upper Glass Lights
TYPE 35A Three Upper Glass Lights
TYPE 37 Three Vision Lights
TYPE 42 Bottom Louvre

© 1959 - Dusing and Hunt, Inc.

Dusing and Hunt Offers the Most Complete Line of Flush Doors - Steel • Alum

VINYL-ON-STEEL FLUSH DOORS

GENERAL PRODUCT INFORMATION
MODELS DAL and DV

STANDARD HARDWARE

Prepared for Cylindrical or Mortise Locks, Rim Panic Devices, Push and Pulls, Surface Door Closers, 4½" x 4½" Full Mortise Hinges (PF-55 Steel Frame) or 4" x 4" full mortise hinges (AF4D Aluminum Frame).

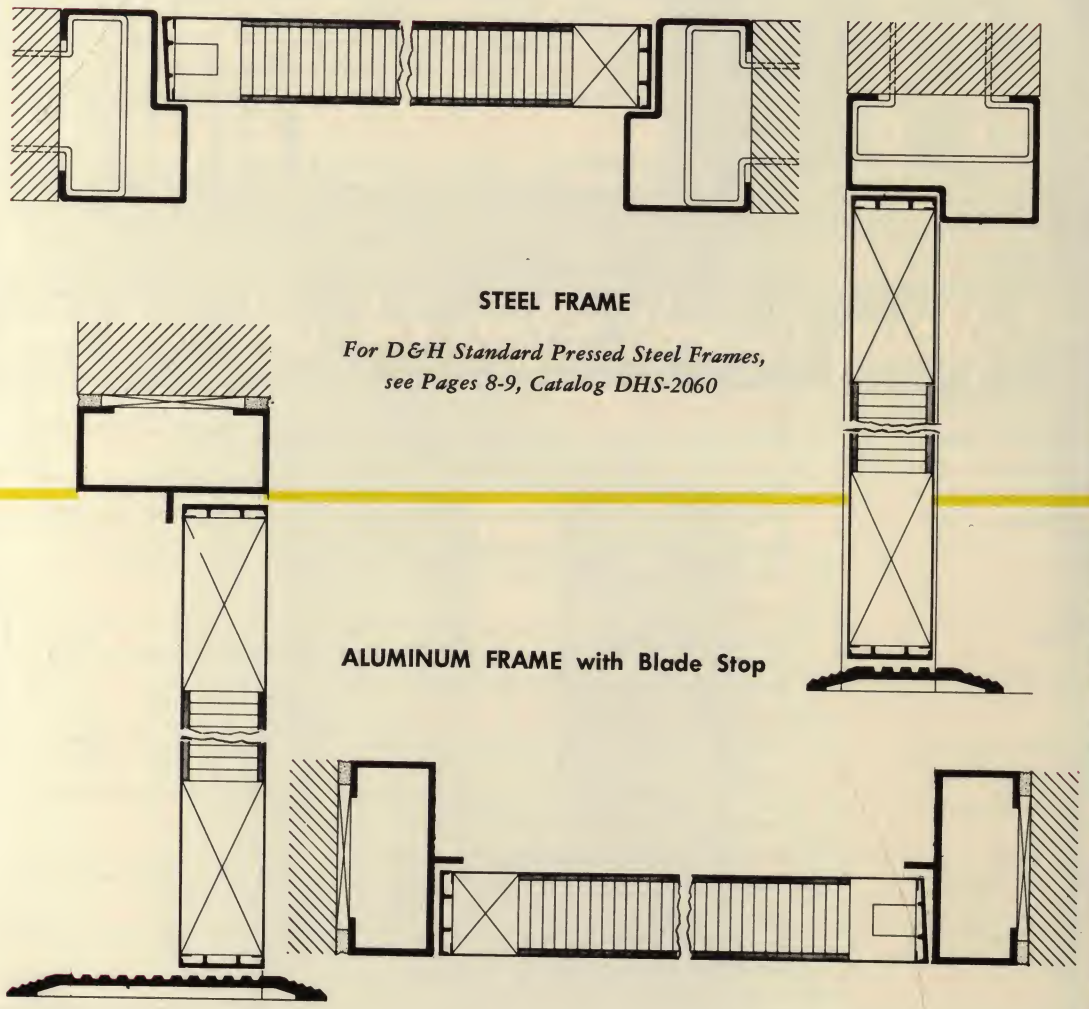
(Full information in D&H 20 page Catalog — Sweet's Architectural File)

DOOR SIZES

SINGLES	PAIRS
2668	5068
2670	5070
2868	6068
2870	6070
3068	
3070	

Other sizes available on Special Order

TYPICAL STEEL AND ALUMINUM FRAME APPLICATIONS



STEEL FRAME

For D&H Standard Pressed Steel Frames, see Pages 8-9, Catalog DHS-2060

ALUMINUM FRAME with Blade Stop

Scale: ¼ Size

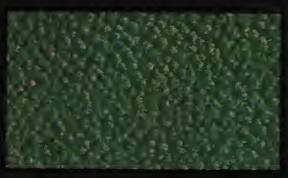
Construction Cutaway Detail on Page 4

STANDARD DECORATIVE **COLORS**

ALUMINUM

SADDLE TAN

WINE RED



SURF GREEN

NUGGET GOLD

TEAL GREEN

D&H DécorDor

ALUMINUM and VINYL-ON-STEEL DECORATIVE FLUSH DOORS

Cutaway of Aluminum Door

MODEL DAL

Alumilited ALUMINUM FLUSH DOOR

The D & H Aluminum DécorDor is constructed of strong, resin-impregnated honey-comb core — fluted aluminum sheet is laminated to hardboard, which in turn is laminated to the core — perimeter surrounded by aluminum extrusions. (See illustration above.)

MODEL "DV"

VINYL-ON-STEEL FLUSH DOOR

offers Colors and Textures in Full Door Designs

DécorDor Model DV . . . the first rational anwer to High Stylng vs. High Cost, presents new economy, achieved through standardization.

DécorDor Vinyl-on-Steel Doors are scratch-resistant, permanently bonded plastic in a variety of colors . . . simple and easy to blend for contemporary styling.

SUGGESTED SPECIFICATIONS

WORK REQUIRED

Furnish Dusing and Hunt 1-¾" thick Flush Aluminum Doors — DécorDor Model "DAL" - and/or Flush Vinyl-on-Steel Doors - DécorDor Model "DV" — or approved equal as called for on drawings and in schedule.

CORE

Core shall be constructed of 18% phenolic resin impregnated 99 pound Kraft honeycomb surrounded by 1 13/16" thick perimeter strips of kiln dried maple treated with pentachlorophenol preservative. Blocks of the same material shall be laminated within the core to accommodate the attachment of surface applied hardware. All wood members shall have a minimum screw holding power of 500 pounds per square inch. Core components to be bonded together under heat and pressure.

FACING MATERIALS

1. For Model "DAL" Doors surface sheets shall be .031" thick ribbed aluminum, 5005 alloy with alumilited finish Alcoa 204R-1. Each sheet shall be bonded to .10" hardboard and this assembly in turn laminated under heat and pressure to the core.
2. For Model "DV" Doors face sheets shall be cold rolled steel coated with .010" pigmented vinyl applied by the continuous rolling process to produce a finish thickness of 24 gauge. These sheets to be laminated under heat and pressure to the core.

Colors to be Dusing and Hunt standards as selected by the architect.

NOTE TO ARCHITECT: — DécorDors may be furnished with aluminum one side and vinyl the other at additional cost.

PERIMETERS

These shall be aluminum extrusions, 6063T5 alloy, alumilited finish attached to hardwood surrounds with countersunk flat head heat treated and alumilited aluminum wood screws. Front edges of single swing doors shall be beveled ⅛" in 2". Both leaves of pairs of doors to have rounded fronts recessed for felt insulation to be supplied with doors.

GLASS LIGHTS AND LOUVERS

Moulding frames for glass lights and louvers shall be identical extrusions and to be weather-sealed as detailed.

Muntin sections for divided lights to be Dusing and Hunt standard as indicated. All glass and glazing to be done by others in field.

Louvers shall be inverted V-blade type installed at factory.

All mouldings, muntins and louvers shall be alumilited.

HARDWARE

Hardware shall be as scheduled. If by others, it shall conform to Dusing and Hunt standards for types and application and shall be field installed by general contractor.

SHOP DRAWINGS AND SAMPLES

Vendor shall submit shop drawings for approval in (specify copies).

Corner section sample of door construction shall be submitted to architect for approval before fabrication.

INSTALLATION AND PROTECTION

Doors shall be erected by general contractor in proper operating condition.

Protection of doors shall be the responsibility of the contractor until the job is accepted by owner.

Distributors in Principal Cities. Consult the Yellow Pages, or Sweet's Architect File or write direct.

DUSING and HUNT, Inc.

Over 50 years Manufacturing Fireproof Doors and Metal Trim

LE ROY, N. Y.

Form No. DHSV-60

Litho in U.S.A.

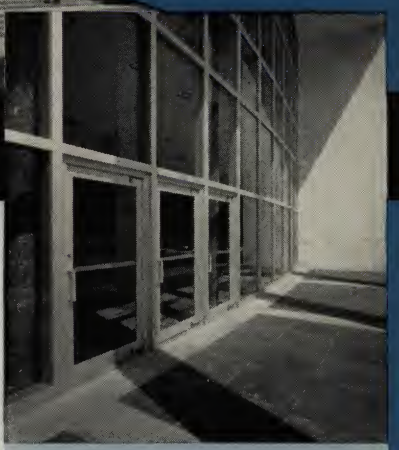
FOR MODERN and MODERNIZED BUILDINGS

16a
El

EDITION 46

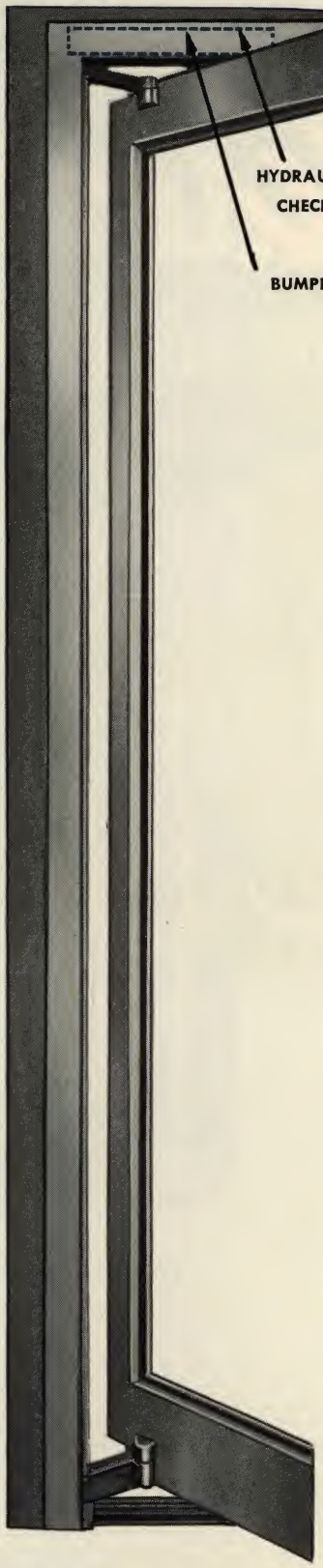
Ellison

the balanced door



the door that lets traffic through quickly!

ELLISON BRONZE CO., Inc. Jamestown, N. Y.



ELLISON Balanced Door
showing door partly open
Construction Details Pages 10 and 11

control mechanism

There are two mechanisms which control the action of the balanced door:

The first is a closer spring assembly mounted at the bottom and inside the continuous hinge shaft. By means of a concealed gear train the tension of the closer spring may be varied to give any desired door closing pressure.

To close the door under whatever conditions exist, it is recommended that the least possible tension be used. This assures an amazing ease of operation.

The second control mechanism is concealed in the head jamb. It is a compact hydraulic checking cylinder which controls the closing speed of the door. It has two speed adjustments and it also contains the bumper which prevents the door from slamming against the hinge jamb.

A semi-automatic hold-open device makes it easy to place the door in a hold-open position.

BALANCED DOORS in custom crafted entrances are available in gleaming stainless steel, aluminum, bronze and other metals. Each entrance unit meets your exacting specifications and is fabricated to Ellison's precise standards.

The balanced feature makes possible ease of operation with uninterrupted traffic flow under the most adverse conditions.

To understand the principle of the Balanced Door you need look only at the cover of this brochure. Thereupon is a plan which shows the Balanced Door in a closed position, a partially opened position and a fully opened position. This plan also demonstrates the movement of the stiles of the door in relation to the jambs.

When the Balanced Door begins to open the hinge stile swings inward. This movement instantly neutralizes any effects of exterior wind pressure or interior suction. The door then continues to its fully opened position with a minimum of effort. The Balanced Door is self-closing.

The shorter arc which the Balanced Door must travel permits faster opening and closing action and allows quick and uninterrupted traffic flow.

Most exterior doors must open out and outward projection is sometimes a problem. The Balanced Door reduces outward projection by nearly 50%. This saves lobby space and eliminates the danger of sidewalk obstruction.

APARTMENTS

AUDITORIUMS

BANK BUILDINGS

CHURCHES

DEPARTMENT STORES

FACTORY OFFICE BUILDINGS

FEDERAL, STATE, COUNTY and MUNICIPAL BUILDINGS

HOSPITALS

HOTELS & RESTAURANTS

LIBRARIES

OFFICE BUILDINGS

PUBLIC UTILITIES

RETAIL STORES

SCHOOLS & UNIVERSITIES

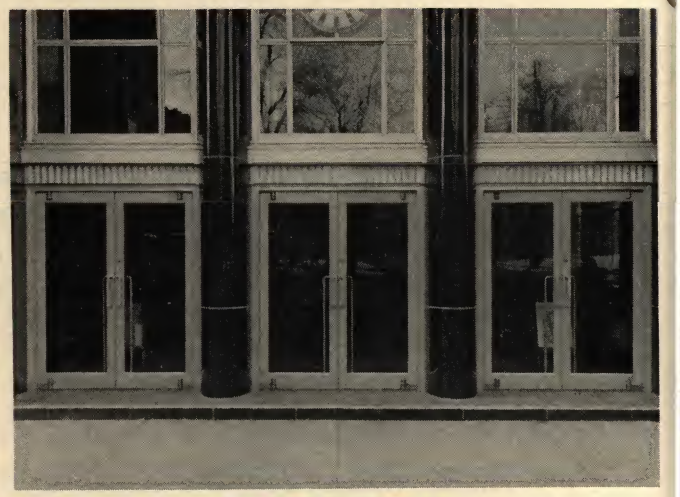
TELEPHONE COMPANIES

THEATERS

See Partial List of Installations on Pages 8 and 9

FOR MODERN and MODERNIZED BUILDINGS

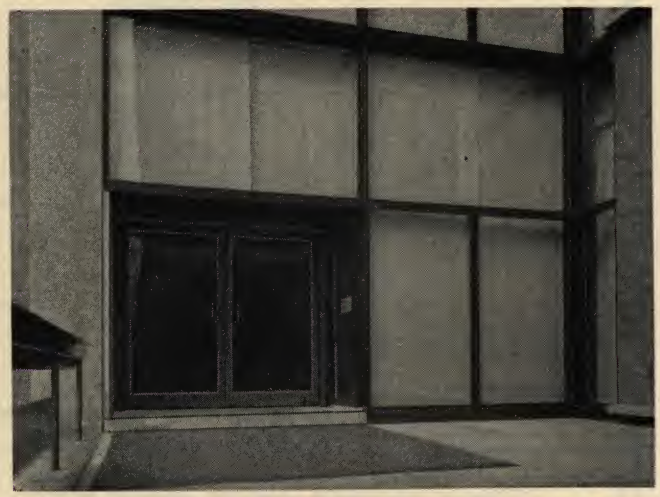
SUN LIFE INSURANCE CO. OF AMERICA
Baltimore, Maryland
Buckler, Fenhagen, Meyer & Ayers, Architects



BANK OF MONTREAL
London, Ontario
O. Roy Moore & Co., Architect

LOVETT MEMORIAL LIBRARY
Pampa, Texas
Cantrell & Company, Architects

QUAKER OATS COMPANY
Barrington, Illinois
Voorhees, Walker, Foley & Smith, Architects

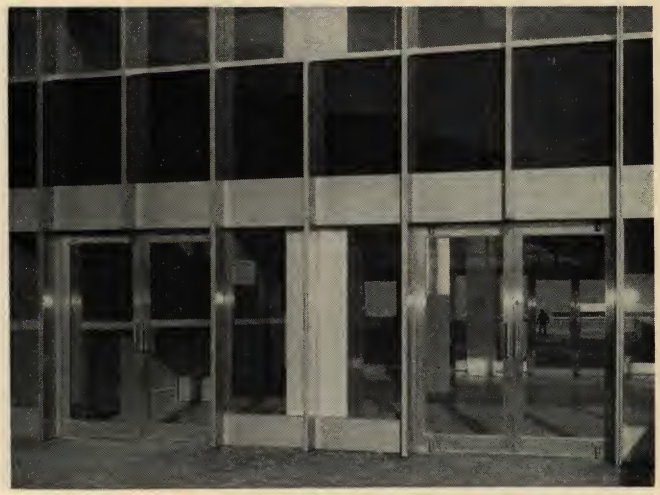


YALE UNIVERSITY ART GALLERY DESIGN CENTER
New Haven, Connecticut
Douglas Orr-Louis J. Kahn, Associate Architects

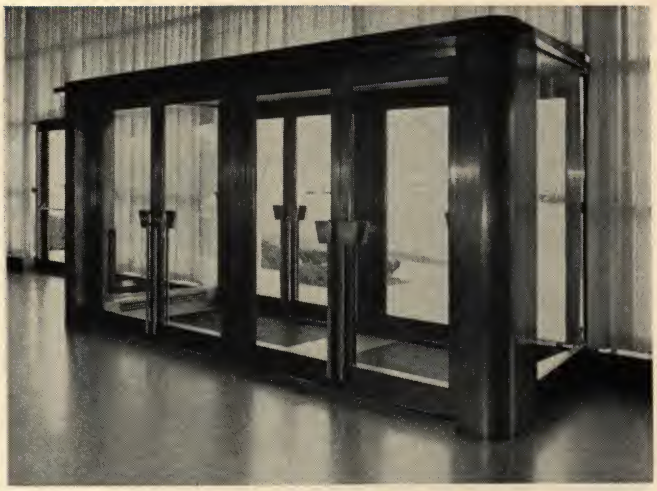
860 LAKE SHORE DRIVE APARTMENTS
Chicago, Illinois
Mies Van Der Rohe, Architect

Design Possibilities — see pages 5-6-7

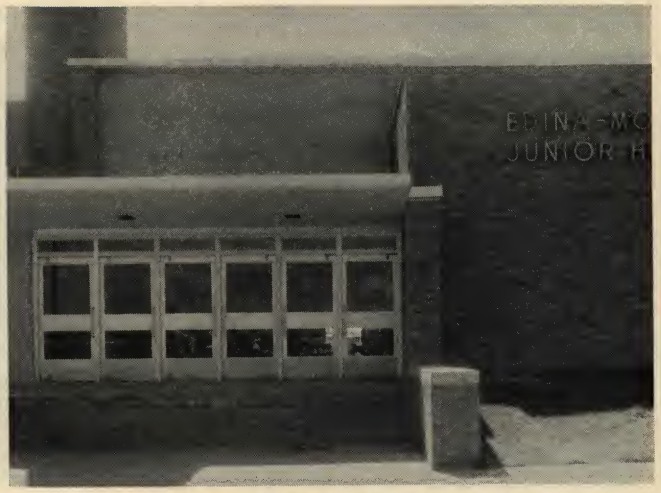
EDGEWATER BEACH APARTMENTS
Chicago, Illinois
Holabird & Root & Burgee, Architects



NEW YORK INTERNATIONAL AIRPORT
New York, N. Y.
Skidmore, Owings & Merrill, Architects



NATIONAL HEADQUARTERS BUILDING
INTERNATIONAL BROTHERHOOD OF TEAMSTERS UNION
Washington, D. C.
Holabird & Root & Burgee, Architects



EDINA-MORNINGSIDE JUNIOR HIGH SCHOOL
Robbinsdale, Minnesota
Bissell & Belair, Architects

BUFFALO BRANCH,
FEDERAL RESERVE BANK OF NEW YORK
Buffalo, N. Y.
James, Meadows & Howard — Eggers & Higgins, Architects

ARCHITECT'S BUILDING — 101 PARK AVENUE
North Entrance, 146 E. 41st St., New York City
R. B. O'Connor & W. H. Kilham, Jr., Architects

FOR MODERN and MODERNIZED BUILDINGS

425 PARK AVENUE
New York City
Kahn & Jacobs, Architects

LAKE SHORE NATIONAL BANK
Chicago, Illinois
Skidmore, Owings & Merrill, Architects

FEDERAL DEPARTMENT STORE
Detroit, Michigan
Charles N. Agree, Inc., Architect

WESTERN-SOUTHERN LIFE INSURANCE CO.
Cincinnati, Ohio
Harry Hake & Harry Hake, Jr., Architects

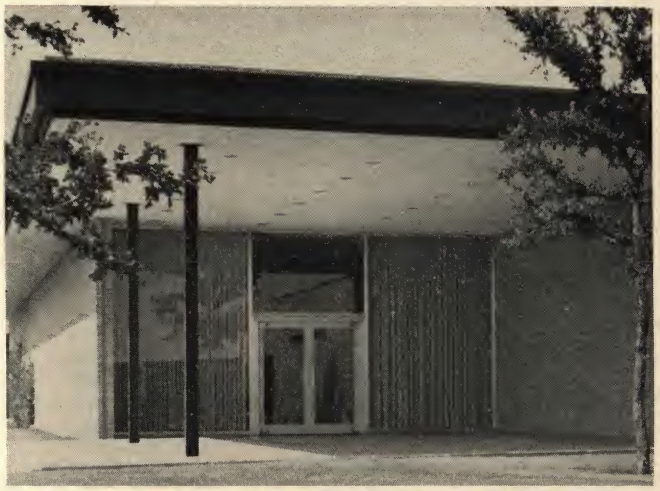
IMPERIAL OIL LIMITED
Toronto, Ontario
Mathers & Haldenby, Architects

UNIVERSITY OF BUFFALO, STATE TEACHERS COLLEGE
Buffalo, N. Y.
Mr. Teegan, State University Architect

Design Possibilities — see pages 4-5-7

THE BELL TELEPHONE COMPANY OF CANADA
Hamilton, Ontario
Prack & Prack, Architects

FIRST NATIONAL BANK OF ARIZONA
Phoenix, Arizona
William D. Reed, Architect



GENERAL TELEPHONE COMPANY OF THE SOUTHWEST
San Angelo, Texas
Pace Associates, Architect

ONE OF THE ENTRANCES N. Y. CITY BUS TERMINAL
Port of New York Authority

CONEY ISLAND HOSPITAL
New York, N. Y.
Andrew J. Thomas & Katz Waisman Blumenkranz Stein Weber, Architects

CANADA LIFE ASSURANCE BUILDING
Toronto, Ontario
Sproat & Ralph, Architects

FOR MODERN and MODERNIZED BUILDINGS

SPECIFICATIONS FOR ELLISON BALANCED DOORS

SCOPE:
All balanced entrance and vestibule doors shall be as manufactured by the Ellison Bronze Company, Inc. Each entrance shall be an integral unit and to consist of doors, jambs, frames, threshold, operating mechanism, and all finish hardware. Glass and glazing shall be furnished under another contract. Structural members are to be furnished and installed under another contract, but all structual members within the jambs, head jambs, transom bars and mullions are to be included as a part of these units.

MATERIAL:
All material shall be aluminum, with alumilite finish to match sample in architect's office. Doors and frames shall be .09 gauge. Frames shall be extruded aluminum.

DOORS:
Doors shall have an inner 16 gauge aluminum frame, welded all around and welded to the .09 faces and edges of the doors. Glass mouldings and trim are to be fastened in place without the use of exposed screws. There shall be no seam or joints on the face of the doors, doors are to be continuously welded on the edges. Top rail and stiles of doors shall be 3" and bottom rail 6". Jambs and heads and trim shall be constructed and erected without the use of exposed screws.

FRAMES:
Jambs and mullions shall have contours to provide strike for all doors and housing for shaft and arms operating the balanced door. Inner half of jambs are to be removable to provide access to operating devices. Head jambs are to be reinforced and mortised for operating hardware and guide box. Door frames and mullions are to be 3¼" on the face and to be 5" deep, all extruded. There shall be no exposed screws on any part of frames, mullions, mouldings or trim.

BUCKS:
Pressed steel 14 gauge (U.S.S.) bucks within jambs, mullions, transom bars and sidelights are to be a part of this work. When necessary the gauge of metal is to be increased to accommodate the specific details or requirement. Bucks shall be fastened to masonry or adjoining work with expansion bolts, toggle bolts, machine screws or whichever is best suited for the specific conditions all as approved. Bucks are to have a two coat prime finish.

THRESHOLDS:
Cast abrasive thresholds with polished grooves or extruded thresholds are to be provided by this contractor, each fastened to cast floor boxes, these boxes are to form an enclosed housing for spring tension mechanism, and the adjustment of same is to be through a series of gears readily accessible for adjustment outside of the jamb. Thresholds are to be a minimum of 5" and as detailed. Thresholds are to be set on finished floor requiring no cutouts in the floor, expansion bolt fastenings are to be 15" on center.

HARDWARE:
This contractor is to include as part of the complete unit and is to install all of the hardware and mechanisms required for the balanced doors. Operating mechanism is to be concealed in the head jamb with the exception of the closer spring assembly which will be concealed in jamb section. Top and bottom arms are to be one piece castings—a two piece arm will not be acceptable. The operating mechanism in head jamb is to include ball bearing pivots, hydraulic check, bumper and hold-open devices together with the guide box unit, which is solid cast bronze, minimum dimenson 2⅜" x ¾" thick, this guide box casting shall be 2¾" high at the door check mechanism. The mechanical device is to permit part of the door to swing out and part of the door to swing in, thereby equalizing the wind pressure and permitting uniform ease in operating the door at all times. Adjustments of spring tension and checking speed are to be accessible without the removal of the door. Provide cylinder locks, flush bolts, weatherstripping and any other hardware required; also, including push bar and pull, hardware set No. 43-1000 all of bronze or aluminum, and plated and finished as required.

QUALIFICATION:
This manufacturer of balanced doors must have been regularly engaged in the manufacture and installation of these specific requirements for the period of no less than seven years and satisfactory installations are to be inspected before acceptance and full size working samples are to be submitted likewise before approval as a manufacturer or contractor or subcontractor.

MATERIAL:
Bronze of Muntz metal, same as specified under Material in Column One, excepting doors and frames shall be 16 gauge, U.S.S. and the only visible screws permissible will be at the removable jamb. The glass mouldings shall be extruded.

MATERIAL:
Stainless steel, same as specified under Material in Column One, the only permissible exposed screws will be at glass mouldings and removable jambs, doors and frames shall be 16 gauge, U.S.S.

GENERAL:
Finishes of all materials are to be in accordance with architect's specific requirements. Adjacent side lights, transom sash or transom openings are to be considered a part of the door unit and are to be constructed in accordance with these specifications.

ERECTION:
All work to be erected in good workmanlike manner and installed at the proper time, coordinating all work with other trades as directed, all doors are to be adjusted after same have been completely glazed and again adjusted prior to owner's possession of the building. After work has been completed it is the responsibility of this contractor to leave same in a clean condition. Depending upon the nature of the material, the finish shall be completely protected as directed; however, this contractor shall not be responsible for any cleaning necessary because of mishandling or misuse by other trades.

A FEW ELLISON BALANCED DOOR INSTALLATIONS

BUILDING	LOCATION	ARCHITECT
BANK BUILDINGS		
Suburban Trust Co.	Silver Spgs., Md.	Arthur A. Anderson
Union National Bank	Kansas City, Mo.	Tracy Wood & E. B. Delk
Real Estate Trust Company	Philadelphia, Pa.	Max Bernhardt
State Bank of La Crosse	La Crosse, Wisc.	Schubert, Sorenson & Associates, Inc.
Federal Reserve Bank	Jacksonville, Fla.	Toombs & Co.
First National Bank	St. Paul, Minn.	H. Holger Martenson
Nashville Trust Co.	Nashville, Tenn.	Francis B. Warfield
Lincoln 1st Federal Svgs. & Ln.	Seattle, Wash.	McClelland Osterman
First National Bank	Phoenix, Arizona	William D. Reed
Connecticut Savings Bank	New Haven, Conn.	Douglas Orr
Kellogg Citizens National Bank	Green Bay, Wisc.	Foeller, Schober, Berners, Stafford & Jahn
National Bank & Trust	Sycamore, Ill.	Burnham & Hammond
Marquette National Bank	Minneapolis, Minn.	Larson & McLaren
Fifth-Third Bank	Cincinnati, Ohio	Harry Hake & Harry Hake, Jr.
Huntington National Bank	Columbus, Ohio	F. W. Austin
National Metropolitan Bank	Washington, D. C.	Irwin S. Porter & Sons
Albany Savings Bank	Albany, N. Y.	Gander, Gander & Gander
Third National Bank	Nashville, Tenn.	Clinton Parrent, Jr.—Woolwine Harwood & Clark
First National Bank	Lewiston, Me.	Alonzo J. Harriman, Inc.
Security Fed'l Svgs. & Loan	Pampa, Texas	Cantrell & Co., Inc.
National Bank of Norwalk	Norwalk, Conn.	York & Sawyer—Norton & Townsend
Marine Midland Trust Co.	Syracuse, N. Y.	Carl W. Clark
Westbrook Trust Co.	Westbrook, Maine	Alonzo J. Harriman, Inc.
Fed. Reserve Bank	Buffalo, N. Y.	Eggers & Higgins
National Lumberman's Bank	Muskegon, Mich.	Edwin E. Valentine
Bloomfield Savings Bank	Bloomfield, N. J.	Lapierre & Litchfield
M. & T. Branch Banks	Buffalo, N. Y.	Duane Lyman & Assoc.
Mechanics & Farmers Bank	Raleigh, N. C.	R. R. Markley
First National Bank of N. Y.	55 Wall St., N. Y.	McKim, Mead & White
Federal Reserve Bank of N. Y.	New York City	Kiff, Colean. Voss & Souder
First National Bank & Trust	Scranton, Pa.	George M. D. Lewis
Lake Shore National Bank	Chicago, Ill.	Skidmore, Owings & Merrill
Fargo National Bank	Fargo, N. D.	Johnson & Lightowler
LIBRARIES		
The Robbins Public Library	Arlington, Mass.	Stanley M. Ryerson
Lockwood Memorial Library	Buffalo, N. Y.	Green & James
University of Houston Library	Houston, Texas	Staub & Rather
Carnegie Library	Atlanta, Ga.	Toombs & Creighton
Aurora Public Library	Aurora, Ill.	Gray & Loz
Lovett Memorial Library	Pampa, Texas	Cantrell & Co., Inc.
CHURCH BUILDINGS		
R. C. Church of Assumption	Syracuse, N. Y.	H. P. Weber
First Church of Christ Scientist	New Haven, Conn.	Douglas Orr
First Baptist Church	Columbia, S. C.	Lafaye, Fair, LaFaye & Asso.
Chapel of Saints	New York City	Kiff, Colean, Voss & Souder

BUILDING	LOCATION	ARCHITECT
OFFICE BUILDINGS		
American Republican, Inc.	Waterbury, Conn.	Elbert J. Richmond
100 West Monroe	Chicago, Ill.	Gerald S. Adelman
Continental Can Co.	New York, N. Y.	York & Sawyer
Standard Oil Co.—General Office Bldg.	Chicago, Ill.	
California Oil Co. Bldg.	New Orleans, La.	Herbert A. Benson, Geo. J. Riehl
Shell Building	Houston, Texas	Hedrick Lindsley, Inc.
Continental Building	Dallas, Texas	T. P. Roberts
Produce Exchange Bldg.	Toledo, Ohio	Karl Buckingham Hake
Motorist Mut. Ins. Co.	Columbus, Ohio	Richards, McCarty & Bulf
Berkshire Life Ins. Co.	Pittsfield, Mass.	Carroll, Verge & Whipple
Garrett Bldg.	Baltimore, Md.	James R. Edmunds, Jr.
Roanoke Bldg.	Minneapolis, Minn.	Larson & McLaren
Architects Bldg.	New York City	
St. Oil Co. of Indiana	Whiting, Ind.	Skidmore, Owings & Merrill
Procter & Gamble	Cincinnati, Ohio	Voorhees, Walker, Smith & Smi
Int'l Union of Operating Engrs.	Washington, D. C.	Holabird & Root & Burgee
Boyd Bldg.	Winnipeg, Canada	Lloyd Finch & Assoc.
425 Park Ave.	New York City	Kahn and Jacobs
Life and Casualty Bldg.	Nashville, Tenn.	Edwin A. Keeble
Western & Southern Life Ins. Co.	Cincinnati, Ohio	Harry Hake & Harry Hake, Jr.
Imperial Oil Ltd.	Toronto, Canada	Mathers & Haldenby
650 Madison Ave.	New York City	Harrison and Abramovitz
Electro-Metallurgical	Niagara Falls, N. Y.	Fellheimer & Wagner
119 W. 57th St.	New York City	S. J. Miller & Assoc.
Badger Meter Co.	Brown Deer, Wisc.	Scott-Kloppenburg-Scott
Michigan-Superior Bldg.	Chicago, Ill.	Holabird & Root & Burgee
Warren Petroleum Corp.	Tulsa, Okla.	Skidmore, Owings & Merrill
Shell Oil Bldg.	Toronto, Canada	Marani & Morris
Prudential Life Ins. Co.	Newark, N. J	Voorhees, Walker, Smith & Smith
National Container Corp.	Chicago, Ill.	Skidmore, Owings & Merrill
N. Y. Life Assurance Bldg.	Toronto, Canada	Gordon S. Adamson & Assoc.
DEPARTMENT STORES		
Rich's Dept. Store	Atlanta, Ga.	Toombs & Creighton
Joske Bros.	San Antonio, Texas	Bartlett Cooke
Rike-Kumler Company	Dayton, Ohio	Schenck & Williams
Ivey's	Charlotte, N. C.	J. H. Pease & Company
Forbes & Wallace	Springfield, Texas	Charles Hamilton
Burdine's, Inc.	Miami, Florida	Eleanor LeMaire
G. Fox Company, Inc.	Hartford, Conn.	Taussig & Flesch
Federal Dept. Stores	Detroit, Mich.	Charles N. Agree, Inc.
Stewart Dry Goods Stores	Lexington, Ky.	John T. Gillig
John A. Brown Store	Oklahoma City	Parr & Aderhold
Davidson Bros.	Detroit, Mich.	Charles N. Agree, Inc.
Hudson Northland Center	Detroit. Mich.	Victor Gruen
Harvey Dept. Stores	Nashville, Tenn.	Marr & Holman
Carson-Pirie-Scott	Chicago, Ill.	Holabird & Root & Burgee
Epstein Dept. Store	Morristown, N. J.	Campbell Voorhees
Lansburgh & Bro.	Washington, D. C.	

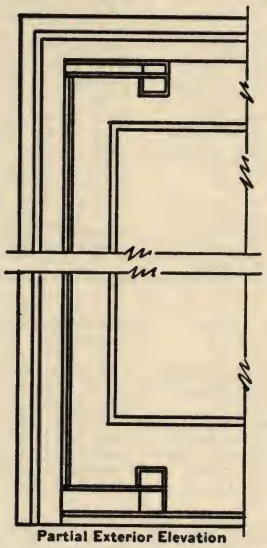
Specifications and a few Ellison Balanced Door installations on this page and page 9

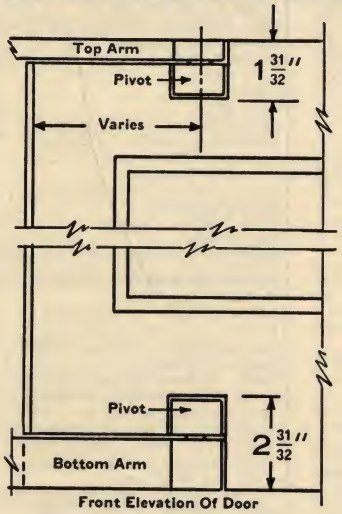
(Installations continued on next page)

BUILDING	LOCATION	ARCHITECT
RETAIL STORES		
J. C. Penney Store	Indianapolis, Ind.	Skidmore, Owings, Merrill
Cokesbury Book Store	Dallas, Texas	Mark Lemmon
Cartier Bldg.	New York, N. Y.	J. Gordon Carr
S. Sauer & Co.	Cincinnati, Ohio	Tietig & Lee
Meyer-Jonasson Store	Pittsburgh, Pa.	Henry M. Kropf
Capper & Capper Co.	Detroit, Mich.	Smith, Hinchman & Grylls
S. S. Kresge Store	Toronto, Canada	G. A. McElroy
Schwegman Super Markets	New Orleans, La.	Leonard M. Short
Beck Shoe Store	Chicago, Ill.	Sobel & Stein
Peoples Credit Jewelers Bertmar Bldg.	Edmonton, Alberta	Allward & Gouinlock
Livingston Furniture Store	Canton, Ohio	George B. Mayer
Fanny May Candy Shop	Chicago, Ill.	
Rich's Dept. Store	Atlanta, Ga.	Toombs & Creighton
TELEPHONE COMPANIES		
New England Tel. & Tel.	Boston, Mass.	Cram & Ferguson
Illinois Bell Tel. Co.	Chicago, Ill.	Holabird & Root
Indiana Bell Tel. Co.	Frankfort, Ind.	Alden, Meranda
Southern Bell Tel. Co.	Gastonia, N. C.	Shutze & Armistead
Northwestern Bell Tel. Co.	Omaha, Neb.	Noel S. Wallace
Mtn. States Tel. & Tel. Co.	Tucson, Ariz.	Place & Place, Arch. R. C. Bryant, Assoc.
Bell Tel. Co. of Canada	Toronto, Can.	Prack & Prack
S. W. Bell Telephone Co.	Salina, Kansas	Neville & Sharp
Illinois Bell Telephone Co.	Peoria, Ill.	Holabird & Root
Mtn. States Tel. & Tel. Co.	Salt Lake City, Utah	Ashton & Evans
Mtn. States Tel. & Tel. Co.	El Paso, Texas	Percy McGhee
S. W. Bell Telephone Co.	Houston, Texas	I. R. Timlin
S. W. Bell Telephone Co.	Dallas, Texas	I. R. Timlin
S. W. Bell Telephone Co.	Corpus Christi, Texas	I. R. Timlin
Ohio Bell Telephone Bldg.	Toledo, Ohio	
Ohio Bell Telephone Bldg.	Steubenville, Ohio	Rich'ds, McCarty & Bulfd.
Ohio Bell Telephone Bldg.	Ironton, Ohio	R. R. Reeves
Michigan Bell Telephone Co.	Lansing, Mich.	Smith, Hinchman & Grylls
Wabash Telephone Co.	Bloomington, Ill.	Lundeen & Hilfinger
Illinois Bell Telephone Co.	Alton, Ill.	Holabird & Root
S.N.E. Telephone Co.	New Haven, Conn.	Douglas Orr
S.N.E. Telephone Co.	New Britain, Conn.	Douglas Orr
S.N.E. Telephone Co.	Norwich, Conn.	Douglas Orr
Wisconsin Telephone Co.	Milwaukee, Wisc.	Grassold-Johnson & Asso.
Gen. Telephone Co. of the S.W.	San Angelo, Texas	Pace Associates
So. New England Telephone Co.	Hartford, Conn.	Wescott & Mapes
Southwestern Bell Telephone	Wichita, Kansas	
General Telephone Exchange	Ashland, Ky.	Pace Associates
N. J. Bell Tel. Co.	Newark, N. J.	Voorhees, Walker, Smith & Smith
PUBLIC UTILITIES		
Cincinnati Gas Co.	Cincinnati, Ohio	
Ohio Fuel Gas Company	Zanesville, Ohio	
Ohio Fuel Gas Company	Columbus, Ohio	
Consolidated Gas Co.	New York, N. Y.	Walker & Gillette
Peoples Gas, Light & Coke Co.	Chicago, Ill.	
Iroquois Gas Company	Buffalo, N. Y.	
Detroit Edison Company	Port Huron, Mich.	
Detroit Edison Company	Detroit, Mich.	
Detroit Edison Company	Ann Arbor, Mich.	
Georgia Power Company	Atlanta, Georgia	I. Moscowitz
Pittsfield Electric Building	Pittsfield, Mass.	Bley & Lyman
United Illuminating Co.	Bridgeport, Conn.	Edward B. Caldwell
Southern County Gas	Santa Monica, Cal.	
Northern States Power	St. Paul, Minn.	Pioneer Service & Engr.
Ottertail Power Co.	Fergus Falls, Minn.	Larson & McLaren
Milwaukee Gas Light Co.	Milwaukee, Wisc.	
Penna. Power & Light	Allentown, Pa.	
HOSPITALS		
Presbyterian Hospital	New York, N. Y.	V'rh's, Wlkr., Foley & Smith
Univ. of Ill. Research Hosp.	Chicago, Ill.	Holabird & Root & Burgee
James Ewing Memorial Hosp.	New York, N. Y.	Skidmore, Owings, Merrill
Eastern T. B. Hospital	Wilson, N. C.	Walter Hook & Asso.
Mary Hitchcock Mem'l Hosp.	Hanover, N. H.	Ellerbe & Co.
Grace New Haven Hosp.	New Haven, Conn.	Douglas Orr
Johns Hopkins Hospital	Baltimore, Md.	James R. Edmunds, Jr.
Mercy Hospital	New Orleans, La.	Favrot, Reed, Mathes, Brgn.
Children's Hospital	Buffalo, N. Y.	James A. Meadows
Maryland General Hospital	Baltimore, Md.	James R. Edmunds, Jr.
St. Elizabeth Hospital	Hannibal, Mo.	C. L. Monnot
Woodstock General Hospital	Woodstock, Ont., Can.	Douglas E. Kertland
Veterans' Adm. Research Hospital	Chicago, Ill.	Schmidt, Garden & Erikson
Millard Fillmore Hospital	Buffalo, N. Y.	F. J. & W. A. Kidd
St. Francis Hospital	Wichita, Kansas	Forsblom & Parks
Rogue Valley Memorial Hospital	Medford, Oregon	Rogers & Butler
Army Air Force Hospital	Grandview, Missouri	Burns & McDonnell
Bryn Mawr Hospital	Bryn Mawr, Pa.	Kneedler, Mirick & Zantzinger
Hosp. for Spec. Surgery— Caspary Research Bldg.	New York City	Rogers & Butler
Grasslands Hospital	Valhalla, N. Y.	Kiff, Colean, Voss & Souder
Lenox Hill Hospital	New York City	Rogers & Butler
FEDERAL, STATE, COUNTY AND MUNICIPAL BLDGS.		
Port of N. Y. Authority		
Midtown Bus Terminal	New York, N. Y.	
Freight Station No. 2	New York City	
Freight Station No. 3	Newark, N. J.	
Battery Park Underpass	New York, N. Y.	
N. Y. Int. Airport	New York, N. Y.	
State Office Bldg.	Helena, Mont.	V. H. Walsh
City Hall	Birmingham, Ala.	Chas. H. McCauley
Museum of Fine Arts	Houston, Texas	Mies Van Der Rohe
Appraisers' Building	San Francisco, Cal.	Federal Works Agency
Smithsonian Institute	Washington, D. C.	General Services Adm.
U. S. Coast Guard Bldg.	Washington, D. C.	George L. Walling
Supreme Court Bldg.	Austin, Texas	Jessen, Jessen, Millhouse & Greeven
State Capital Bldg.	Atlanta, Ga.	A. Thomas Bradbury
U.S. Soldiers Home	Washington, D. C.	Irwin S. Porter & Son
City Hall	Kansas City, Mo.	Wight and Wight

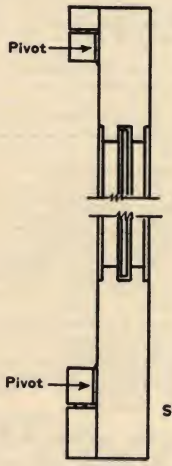
BUILDING	LOCATION	ARCHITECT
No. Ill. Toll Hgw.-Service Stations & Restaurants		Pace Associates
State Public Health Bldg.	Atlanta, Ga.	A.ThomasBradbury&Assoc.
No. Indiana Public Service	Hammond, Ind.	L. Cosby Bernard & Co.
Fulton County Court House	Atlanta, Ga.	Barili & Humphrey & Wm. Creighton Asso.
Uplands Air Terminal	Ottawa, Canada	Gilleland & Strutt
Ohio Turnpike Restaurants & Service Plazas		Bellman Grille & Richards
State Library & Archives	Nashville, Tenn.	H. Clinton Parrent, Jr.
Municipal Building	Longview, Texas	Zimmerman & Morgan
City Hall	Sioux Falls, S. D.	J. Schwartz & H. Spitznagel
City Hall	Holdrege, Nebr.	John Latenser & Sons
City Hall	Torrington, Conn.	Carl Victor Johnson
Erie County Court House	Sandusky, Ohio	Henry Millott
Municipal Airport Terminal	Wichita, Kansas	Thomas, Harris, Colvin & Asso.
Judicial, Office, Labor & Lab.	Atlanta, Ga.	A. Thomas Bradbury
Supreme Court Bldg.	New Orleans, La.	August Perez & Associates
Duval County Courthouse	Jacksonville, Fla.	Reynolds, Smith & Hills
Municipal Bldg.	Xenia, Ohio	Harsh & Davies
Post Office	Wilmington, Del.	Federal Works Agency
Post Office	Boston, Mass.	
SCHOOLS AND UNIVERSITIES		
S. Methodist Univ.	Dallas, Texas	Holabird & Root
State College for Teachers	Buffalo, N. Y.	James Wm. Kideney & Asso.
Illinois Inst. of Technology	Chicago, Ill.	Mies Van Der Rohe
Littaurer Bldg., Harvard Univ.	Cambridge, Mass.	Coolidge, Shepley, Bullfinch
Anahuac School	Anahuac, Texas	C. G. Curtis
Univ. of Neb. Agronomy Bldg.	Lincoln, Neb.	Steele, Sandham & Steele
U. of Md. Psychiatric Inst.	Baltimore, Md.	James R. Edmunds, Jr.
Univ. of Michigan	Ann Arbor, Mich.	Giffels & Vallet, Inc.
Yale Uni. School of Design	New Haven, Conn.	Douglas Orr-Louis J. Kahn
Vanderbilt Univ. Dining Hall	Nashville, Tenn.	Warfield & Asso.
Hopkins Senior High School	Hopkins, Minn.	Bissell & Belair
Univ. of Michigan— Automotive Engr. Bldg.	Ann Arbor, Mich.	Lynn W. Fry
Univ. of Mich.—Union Bldg.	Ann Arbor, Mich.	Eberle M. Smith Associates
St. Louis Park High School	St. Louis Park, Minn.	Bissell & Belair
Univ. of Oklahoma	Norman, Okla.	Coston-Frankfort-Short
University of Wyoming	Laramie, Wyo.	Porter & Bradley
Undergraduate Library	Ann Arbor, Mich.	Albert Kahn Associated Architects&Engineers, Inc.
Univ. of W. Va.—Dorm. for Men	Morgantown, W. Va.	Alex B. Mahood
Univ. of Buffalo—Chem. Bldg.	Buffalo, N. Y.	Duane Lyman & Assoc.
State Univ. Teach. Col. Dorm.	Cortland, N. Y.	Carl W. Clark
Harvard Univ. Chem. Lab.	Cambridge, Mass.	Voorhees, Walker, Smith & Smith
Fordham Univ.—Stu. Fac. Cen.	Bronx, N. Y.	Voorhees, Walker, Smith & Smith
HOTELS AND RESTAURANTS		
Atlantan Hotel	Atlanta, Ga.	Cooper, Bond & Cooper
Lake Shore Drive Hotel	Chicago, Ill.	L. W. Harrell
West Virginian Hotel	Bluefield, W. Va.	Alex B. Mahood
Statler Center	Los Angeles, Cal.	Holabird & Root & Burgee
Hotel Statler	Washington, D. C.	Holabird & Root & Burgee
Hotel Statler	Buffalo, N. Y.	The Trylon Studios, Inc.
Hotel Sherman	Chicago, Ill.	Holabird & Root & Burgee
Annapolis Hotel	Washington, D. C.	William F. Jenter
Manger-Savannah Hotel	Savannah, Ga.	William F. Jenter
South Shore View Hotel	Chicago, Ill.	
Knife & Fork Inn	Atlantic City, N. J.	
Horn & Hardart	New York City	
Royal Alexandra Hotel	Winnipeg, Canada	
FACTORY OFFICE BUILDINGS		
American Tobacco Co.	Louisville, Ky.	D. X. Murphy & Bros.
Dupont de Nemours	Wilmington, Del.	Voorees, Walker, Foley & Smith
Standard Brewing Co.	Cleveland, Ohio	J. C. Schultz & Son
Carbon Carbide Corp.	Charleston, W. Va.	William York Cocken
Larkwood Hosiery Mills	Charlotte, N. C.	H. V. Biberstein
Carrier Corp.	Dewitt, N. Y.	Schmidt, Garden & Erickson
Allen-Bradley Company	Milwaukee, Wisc.	Fitzhugh Scott
Hamilton Watch Company	Lancaster, Pa.	Prack & Prack
Owens-Illinois Glass Co.	Toledo, Ohio	Walker & Weeks
Harris-Calorific Company	Cleveland, Ohio	Ernest McGeorge
Cincinnati-Bickford Tool Co.	Cincinnati, Ohio	The Austin Company
Electro-Metallurgical Co.	Niagara Falls, N. Y.	J. Fruchtbaum
I.B.M. Research Center	Poughkeepsie, N. Y.	Voorhees, Walker, Foley & Smith
General Electric Industrial Clinic	Schenectady, N. Y.	York & Sawyer
Continental Can Co.	Chicago, Ill.	Schmidt, Garden & Erickson
Quaker Oats Co.	Barrington, Ill.	Voorhees, Walker, Foley & Smith
Northern Illinois Gas	Bellwood, Ill.	Victor L. Charn
General Motors Techn. Center	Detroit, Mich.	Saarinen, Saarinen & Asso.- Smith, Hinchman & Grylls, Inc
Ford Credit Union	Dearborn, Mich.	
American Tobacco	Owensboro, Ky.	Am. Tobacco Engineering
Victor Chem. Wks.— Research Center	Chicago Heights, Ill.	Pace Associates
Esso Research & Eng. Center	Florham Park, N. J.	Voorhees, Walker, Smith & Smith
APARTMENTS		
Phelps Apartment	Cincinnati, O.	George H. Godley
The Everglades, 23rd & H Sts.	Washington, D. C.	Joseph H. Abel
Apt. Bldg., 2000 F St. N.W.	Washington, D. C.	Harry Edwards
860 Lake Shore Drive Apts.	Chicago, Ill.	Mies Van Der Rohe
3500 Lake Shore Drive	Chicago, Ill.	
Edgewater Beach Apts.	Chicago, Ill.	Holabird & Root & Burgee
Drake Tower Apts.	Chicago, Ill.	
AUDITORIUMS AND THEATRES		
Masonic Temple	Dallas, Texas	Flint & Broad
WGN Studio, Tribune-Tower	Chicago, Ill.	JohnHowells, Hood & Fouilhoux
Colonial Theatre	Akron, Ohio	
Masonic Temple	Columbus, Ohio	George A. Bulford
Swope Art Gallery	Terre Haute, Ind.	Miller & Yaeger
Klein Memorial Auditorium	Bridgeport, Conn.	Leonard Asheim
Hancock Hall	Boston, Mass.	Cram & Ferguson
Museum of Modern Art	New York City	MariosA. Contopoulos
The Museum of Fine Arts	Houston, Texas	Mies Van Der Rohe

CONSTRUCTION DETAILS of Ellison the Balanced Door

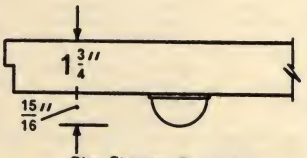

Partial Exterior Elevation



Front Elevation Of Door

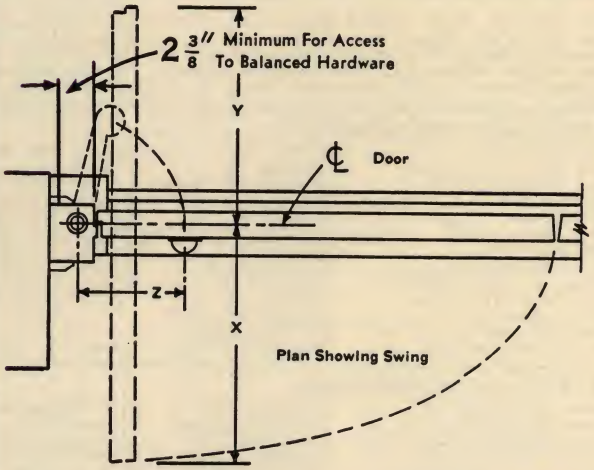


Section Showing Projection Of Pivots & Arms



Plan Showing Projection Of Pivots & Arms

DETAILS SHOWING SPACE REQUIREMENTS FOR BALANCE ARMS & DOOR PIVOTS

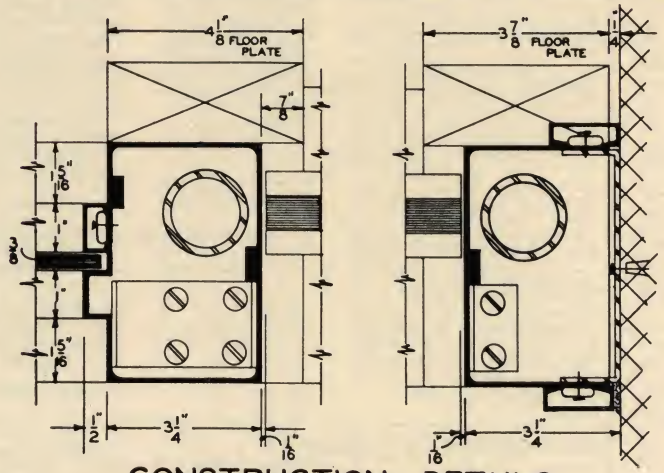


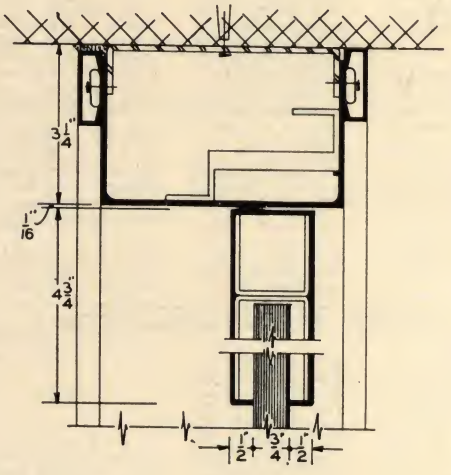
DOOR SCHEDULE

	DOOR WIDTH	X	Y	Z	ARM SIZE
Recommended Door Widths	30"	19"	11"	6 1/4"	AA
	31"	20"			
	32"	21"			
	33"	20 1/2"	12 3/4"	7 1/8"	A
	34"	21 1/2"			
	35"	22 1/4"			
	36"	23 1/2"			
	37"	22 1/2"	14 1/2"	8"	B
	38"	23 1/2"			
	39"	24 1/2"			
	40"	25 1/2"			
	41"	24 3/4"	16 1/4"	8 7/8"	C
	42"	25 3/4"			
	43"	26 3/4"			

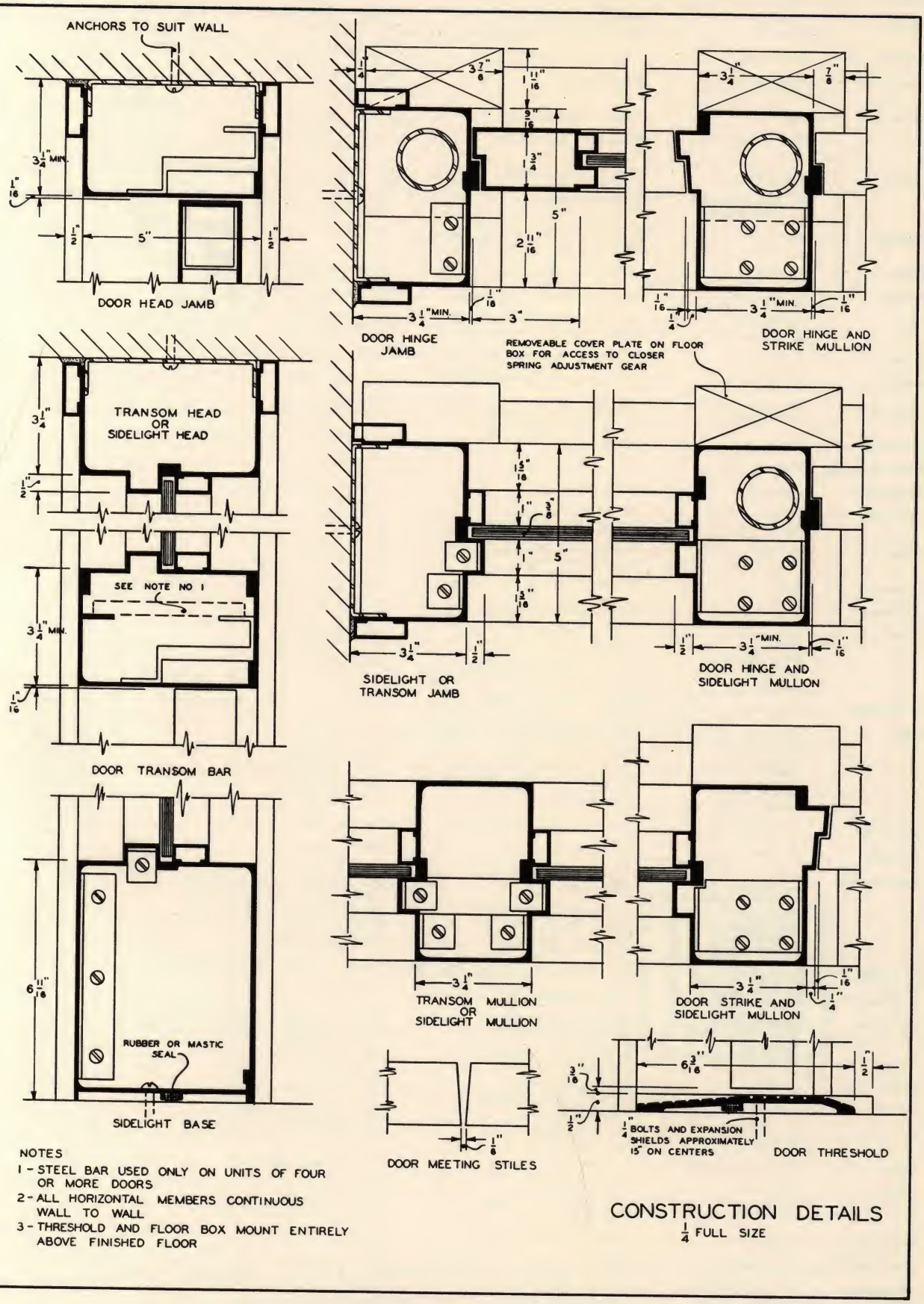
For Information On Other Door Sizes Write Ellison Bronze Company

DETAIL SHOWING INWARD & OUTWARD PROJECTION OF BALANCED DOOR





CONSTRUCTION DETAILS
TEMPERED GLASS DOORS 1/4 FULL SIZE


ANCHORS TO SUIT WALL
DOOR HEAD JAMB
DOOR HINGE JAMB
REMOVEABLE COVER PLATE ON FLOOR BOX FOR ACCESS TO CLOSER SPRING ADJUSTMENT GEAR
DOOR HINGE AND STRIKE MULLION
TRANSOM HEAD OR SIDELIGHT HEAD
SEE NOTE NO 1
DOOR TRANSOM BAR
SIDELIGHT OR TRANSOM JAMB
DOOR HINGE AND SIDELIGHT MULLION
RUBBER OR MASTIC SEAL
SIDELIGHT BASE
TRANSOM MULLION OR SIDELIGHT MULLION
DOOR STRIKE AND SIDELIGHT MULLION
DOOR MEETING STILES
BOLTS AND EXPANSION SHIELDS APPROXIMATELY 15" ON CENTERS
DOOR THRESHOLD

NOTES

1 - STEEL BAR USED ONLY ON UNITS OF FOUR OR MORE DOORS
2 - ALL HORIZONTAL MEMBERS CONTINUOUS WALL TO WALL
3 - THRESHOLD AND FLOOR BOX MOUNT ENTIRELY ABOVE FINISHED FLOOR

CONSTRUCTION DETAILS

$\frac{1}{4}$ FULL SIZE

ELLISON REPRESENTATIVES

State	City	Name	Address	Telephone
Arizona	Phoenix	Beach Bldg. Specialties, Inc.	1040 E. Camelback Rd., P.O. Box 10236	CR 4-3555
	Tucson	Arizona Glass & Mirror Co.	403 N. 6th Ave.	Main 3-5711
Arkansas	Little Rock	Arkansas Bldrs. Supply, Inc.	1118 W. Markham St., P.O. Box 2996	FR 5-5397
California	Los Angeles 22	Carl E. Gylfe	2515 So. Yates Ave.	RA 3-5331
	San Francisco 3	R. A. Parker Co.	250 7th St.	UN 1-2760
Colorado	Denver 4	United Materials, Inc.	814 W. 14th Ave.	KE 4-3239
D. C.	Washington 5	McDorman & Brannock	701 Metropolitan Bank Bldg. 613—15th St., N.W.	NA 8-3860
Florida	Jacksonville 3	Geo. P. Coyle & Sons	2361 Dennis St., P.O. Box 2267	EL 6-4821
	Miami 35	S. C. Brockell	810 N.W. 17th Court	FR 9-6022
	St. Petersburg 33	Building Specialties, Inc.	2534 22nd St. N, P.O. Box 10969	5-4613
	W. Palm Beach	Harold M. Gordon	501 Roseland Dr., P.O. Box 6518	TE 2-0539
Georgia	Atlanta 13	Architectural Products Division Atlanta Steel Erectors, Inc.	285 Hull St., N.W.	JA-3-8241
Illinois	Chicago 6	Walter W. Mitchell Co., Inc.	549 W. Randolph St.	CE 6-3085
Indiana	Indianapolis 7	Emrok Metal Products Corp.	620 So. Belmont Ave.	Melrose 2-6592
Iowa	Davenport	The Building Products Co.	403 S. Howell St.	3-5708
	Des Moines 9	Lemke Builders Supply Co.	610 Walnut Bldg.	AT 2-9611
Kansas	Wichita 1	Chester L. Anderson Co., Inc.	700 So. Emporia, P.O. Box 2254	HO 4-9354
Kentucky	Louisville 2	The Equipment & Specialties Co.	627 S. Jackson St.	JU 4-7114
Louisiana	New Orleans 16	J. T. Mann & Co.	800 Audubon Bldg.	JA 5-8587
	Shreveport	Ideal Building Materials, Inc.	1730 Claiborne Ave., P.O. Box 1545	7-0521
Maryland	Baltimore 11	Consolidated Supply Co., Inc.	2800 Sisson St., P.O. Box 4817	HO 7-6108
Massachusetts	Melrose 76	H. A. Seeley	37 Grandview Ave.	NO 5-8898
Michigan	Detroit 21	Nielsen-Dohmen	10130 W. McNichols Rd.	DI 1-9390
Minnesota	Duluth 2	Robert G. Dunlop, Inc.	15 E. First St.	RA 7-2929
	Minneapolis 15	Ramsey Building Materials, Inc.	605 4th Ave. So.	FE 5-2127
Missouri	Kansas City 11	Howard & Arnold Co.	226 W. 39th St.	PL 3-3980
	St. Louis 20	W. Wallace Way	7130 Florian Ave.	Evergreen 5-2454
Montana	Butte	Archie W. Adams	1313 W. Platinum St., P.O. Box 186	3869
Nebraska	Omaha 2	Earl S. Lewis & Co., Inc.	708 W.O.W. Bldg.	AT 1633
New York	Buffalo 7	Dusing & Hunt, Inc.	1927 Elmwood Ave.	DE 7070
	Elmira	H. N. Forbes	405 W. Clinton St.	RE 4-6416
	New York 17	Charles I. Brandin, Inc.	100 E. 42nd St., Room 810	MU 7-4676
	Rochester 8	Carberry Bldg. Specialties, Inc.	135 Spring St.	BA 5-2944
	Syracuse 1	F. P. Arnold Corp.	1718 Erie Blvd. East, P.O. Box 1116	GR 2-3306
N. Carolina	Charlotte 3	Walter L. Hoover & Sons	938 Berkeley Ave., P.O. Box 3145	ED 2-4280
Ohio	Akron 10	Fred J. Crisp, Inc.	720 N. Main St.	BL 3-5103
	Cincinnati 10	Durbrow-Otte Associates, Inc.	1426 Clay St.	PA 1-0068
	Cleveland 14	R. F. Reske & Asso.	451 The Arcade	MA 1-3166
	Columbus 8	Condit Construction Products, Inc.	1026 W. Goodale Blvd.	AX 4-3791
	Dayton 3	Condit Construction Products, Inc.	2800 E. Third St., P.O. Box 26, Sta. A	CL 3-1178
	Toledo 2	The George J. Haase Co.	1118 Madison Ave.	CH 3-7129
	Youngstown 2	Doeright-Davison, Inc.	355 E. Wood St.	RI 7-6625
Oklahoma	Oklahoma City 1	Campbell Glass & Mirror Co.	824 S.W. 2nd, P.O. Box 36	CE 6-4578
Oregon	Portland 17	McCraken-Ripley Co.	2221 N. Albina Ave.	AT 4-2133
Pennsylvania	Erie	George H. Kraft Assoc.	121 East 29th St., P.O. Box 628	5-2648
	Harrisburg	Harry Mason Co.	915 Ohio Ave., Lemoyne, Pa. P.O. Box 852 Harrisburg, Pa.	RE 7-0439
	Pittsburgh 8	P. Larsen Company, Inc.	503 N. Homewood Ave.	FR 1-4900
	Scranton 5	John J. Weis & Son, Inc.	901 Crown Ave., P.O. Box 1286	DI 7-4825
	Upper Darby	Mackay & Walls, Inc.	60 Sherbrook Blvd.	CL 9-5666
	Wilkes-Barre	William H. Pierce, Jr.	402 Bennett Building	VA 3-7123
S. Carolina	Greenville	The J. Edgeworth Beattie Co., Inc.	106 Masonic Temple, P.O. Box 82	CE 3-1721
S. Dakota	Sioux Falls	Builders Supply Co.	113 N. Main	ED 4-7757
Tennessee	Johnson City	Lancaster Associates	Roan St. at Fonde Circle, P.O. Box 629	3200
	Knoxville 17	Chavannes Lumber Co.	525 Oldham Ave. N.W., P.O. Box 3085	5-6135
	Memphis 7	W. H. Coats	1051 Stonewall	BR 5-3629
	Nashville 12	Whittemore Products Co.	4012 Hillsboro Rd., P.O. 6003	CY 7-7509
Texas	Austin 1	L. B. Shifflett Co.	710 West Ave.	GR 7-8116
	Dallas 8	Metal Products Company	2326 Topeka St.	RI 8-3775
	El Paso	Electrical & Mechanical Supply Co., Inc.	2000 Texas St., P.O. Box 137	KE 2-4614
	Houston 1	Dewitt A. Sanders	2314 Preston Ave., P.O. Box 366	CA 7-9204
	San Antonio 12	F. J. Bublitz Co.	416 Cornell St., P.O. Box 8356	PE 5-4221
Utah	Salt Lake City 1	S. A. Roberts & Co.	109 West 2nd South St.	EM 4-4431
Virginia	Norfolk 8	Lewis & Sale, Inc.	1073 W. 38th St., P.O. Box 6155	MA 7-9091
	Richmond 19	J. S. Archer Company	328 W. Cary St.	MI 4-7846
	Roanoke	A. L. Horwitz	207 Boxley Bldg., P.O. Box 496	DI 4-6902
Washington	Seattle 3	Builders Specialties, Inc.	3601 Greenwood	ME 3-4000
West Virginia	St. Albans	James L. Durrett	2710 Knox Ave.	Parkway 7-8622
Wisconsin	Hales Corners	Smith & Smith, Inc.	5830 S. 108th St., P.O. Box 277	Milwaukee GA 5-4520
Canada	Toronto 9, Ont.	Horsfall Engineering	2696 St. Clair Ave. W.	RO 7-1151
Puerto Rico	Guaynabo	R. Ruiz Cestero & Co.		Guaynabo 3786

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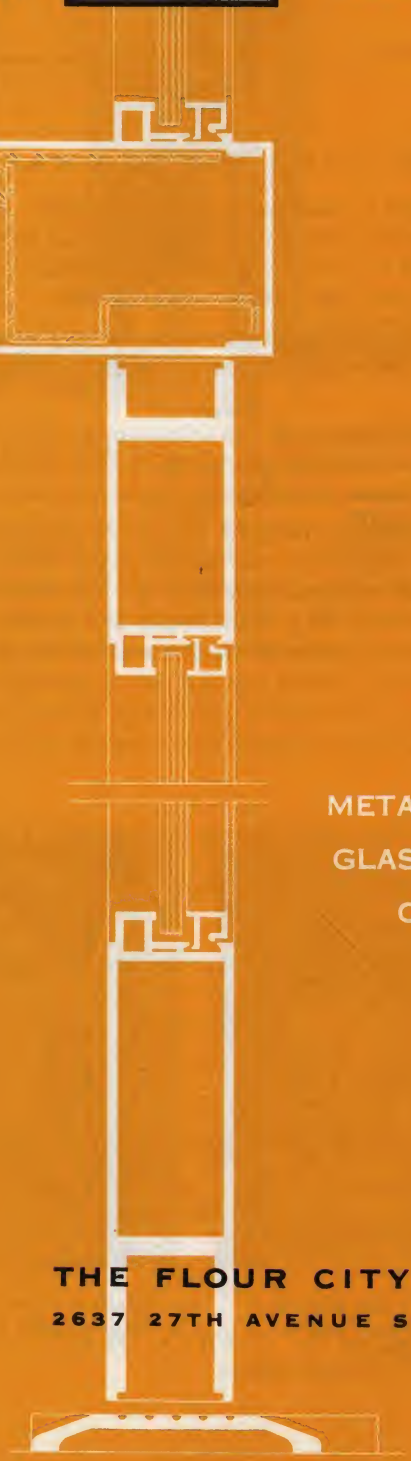
ELLISON BRONZE CO., Inc., Jamestown, N.Y.

FLOUR CITY

METAL DOORS

ALUMINUM • BRONZE
STEEL • STAINLESS STEEL



METAL BALANCED DOORS
GLASS BALANCED DOORS
ORNAMENTAL DOORS
SWING DOORS

1960

THE FLOUR CITY ORNAMENTAL IRON COMPANY
2637 27TH AVENUE SOUTH • MINNEAPOLIS 6, MINNESOTA

A.I.A. FILE NO. 16E

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SIXTY-SEVEN YEARS OF FINE METALCRAFT

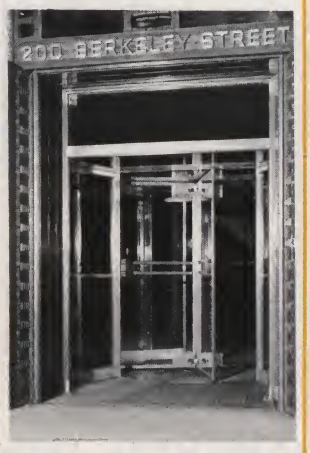
Since 1893, FLOUR CITY has been engaged in the design and fabrication of architectural metal work of the finest quality. We have been a vigorous part of the development of architectural metal from the wrought iron products of our founders to the light metal curtain walls and other products we make today.

This growth has been an organic development, with the skills and knowledge of long-time employees being passed on to the younger men so that there exists a tradition of fine craftsmanship, unbroken since 1893.

As custom fabricators, our prime consideration has always been the achievement of the architect's plans and ideas. FLOUR CITY today stands unchallenged as the leader in our industry, devoted solely to the fabrication of the finest architectural metal products.

One of the many phases of architectural metal production at FLOUR CITY is the fabrication of special doors such as the four examples on this page. Here the artistic skills of our staff designers, sculptor, modellers and pattern makers combine with those of engineering and production staffs to produce doors of the highest quality in materials and artistic achievement. We welcome the opportunity to assist architects in the realization of similar fine doors.

Iberia Parish
Court Building
New Iberia, Louisiana
Architect:
A. Hays Town



John Hancock Life
Insurance Company
Boston, Massachusetts
Architects:
Cram and Ferguson

St. Peters Church
Chicago, Illinois
Architects:
Vitzthum and Burns

Basilica of Saint Mary
Minneapolis, Minnesota

FLOUR CITY BALANCED DOORS

FEATURES

Door and frame are an integral unit.

No bulky projections on door or frame.

No cutouts for closers in head or floor of surrounding construction.

Opens easily; closes rapidly and quietly.

Folding arm action provides less projection onto sidewalk or into vestibule.

Hydraulic check and bumper.

Hold-open device.

Two speed adjustments.

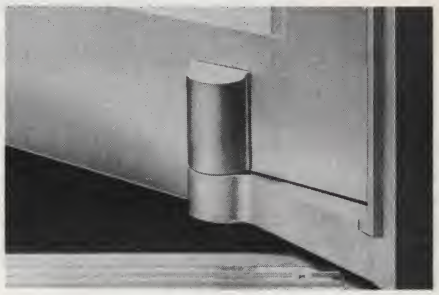
Door of welded construction throughout.

Panic exit devices can be used.

No customer maintenance of mechanical features.

Repairs by factory personnel.

CUSTOM FABRICATED from the finest materials available and erected by Flour City's own skilled erectors, this door will give years of convenient service. Flour City particularly recommends selection of the balanced door for large buildings—auditoriums, department stores, office buildings, churches, libraries and bank buildings—where the comfort and convenience of the user is a prime consideration. All Flour City balanced doors are equipped for two closing speeds. The initial closing operation is very rapid. The speed is checked in the last few inches, and the door closes slowly and quietly. Fast opening and closing reduces the load on heating and cooling systems as well as adding to the comfort of people near the door.



OPERATING ARMS are made of heavy bronze. Chrome plating meets Federal Specifications FF-H-106A.

REASONS FOR SPECIFYING FLOUR CITY BALANCED DOORS:

Produced by competent, experienced, engineering and production staffs from design to erection.

100% inspection of every part, including pressure testing of each hydraulic cylinder.

Hydraulic fluid of a viscosity to permit easy operation winter or summer.

A lubricant with a performance range of —100° F. to +250° F.

Erection by Flour City's skilled erection crews.

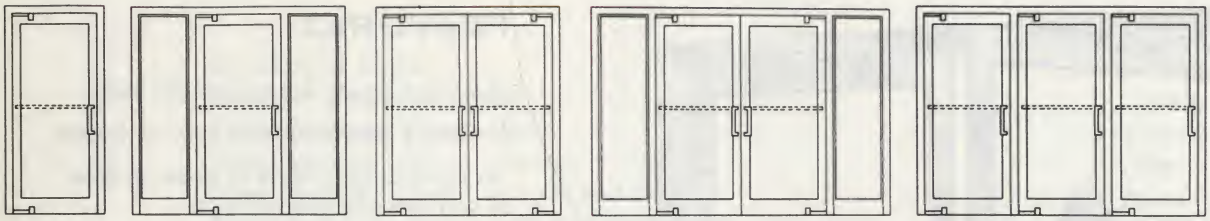
Factory representatives available when required.

The craftsmanship and integrity of a firm producing only architectural metalwork of quality since 1893.

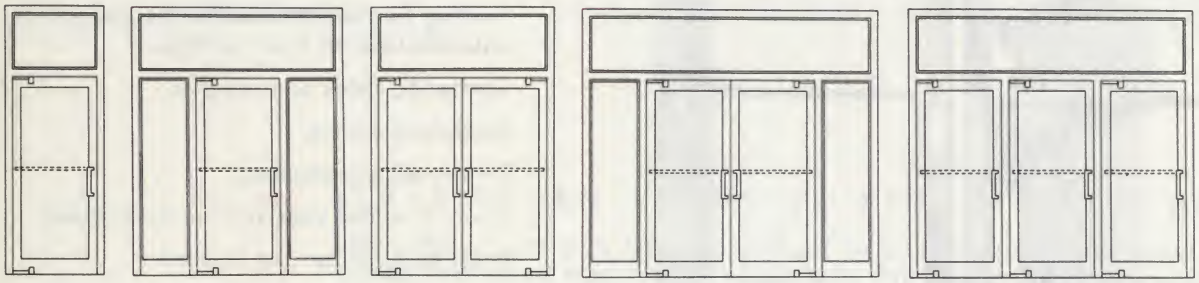
PRESSURE with one finger operates the hold-open device. Door is easily released by opening it slightly more to disengage device.

THE FLOUR CITY ORNAMENTAL IRON COMPANY

FLOUR CITY METAL



SOME OF THE MANY POSSIBLE COMBINATIONS



SPECIFICATIONS

STANDARD BALANCED DOOR

Aluminum • Stainless Steel • Steel • Bronze • White Bronze

GENERAL

Balanced doors (and sidelights) of the type and size shown on the plans shall be as manufactured by The Flour City Ornamental Iron Company. Doors and frames shall be furnished with all necessary hardware and anchors and shall be equipped with a hydraulic check, bumper, hold-open device and adjustment for two closing speeds.

MATERIAL

SERIES	MATERIAL	THICKNESS (door)	THICKNESS (frame)
BD 100A	Aluminum	.125″ Sheet or Extruded	.081″ min. Sheet; .093″ Extruded
BD 100B	Bronze	.064″ Sheet	.064″ Sheet
BD 100WB	White Bronze	.064″ Sheet	.064″ Sheet
BD 100S	Steel	.074″ Sheet	.062″ Sheet
BD 100SS	Stainless Steel	.062″ Sheet	.062″ Sheet

CONSTRUCTION

Frame: Frames shall consist of extruded or sheet material (as specified) applied to a steel sub-frame in the manufacturer's plant. One jamb section shall be removable for access to the torque tube.

Door: Doors shall be fabricated of extruded or sheet material (as specified) with top and bottom rails welded to the stiles.

HARDWARE

Push and pull bars, or plates, shall be Flour City's standard hardware (or as shown on the plans and specified). Lock schedule to meet various job conditions shall be submitted by the manufacturer for architect's approval.

THRESHOLDS

Thresholds shall be Flour City standard as follows:

Aluminum doors: Extruded aluminum or cast aluminum with abrasive surface. (Specify option).

Bronze doors: Extruded bronze or cast bronze with abrasive surface. (Specify option).

Steel doors: Specify.

Stainless steel doors: Extruded white bronze or cast white bronze with abrasive surface. (Specify option).

GLAZING PROVISIONS

Glass stops shall be on the interior side of the door. For aluminum doors a snap-on type shall be used; for other materials, channel stops assembled with screws.

FINISH

Finish of doors and frames shall match samples submitted to the architect by the manufacturer.

Finish for operating arms shall be as follows:

Aluminum doors: Dull chrome plated
Bronze doors: Bronze plated
White bronze doors: Nickel plated
Steel doors: As specified
Stainless steel doors: Nickel plated

SHOP DRAWINGS

Shop drawings shall be submitted, in triplicate, for architect's approval. Drawings shall show sections of doors and frames, details of construction, hardware, and methods of anchoring frame in the opening.

ERECTION

All balanced doors shall be erected by men employed by the door manufacturer, skilled in this type of work, and shall include final adjustment for proper and easy operation of the door after glazing.

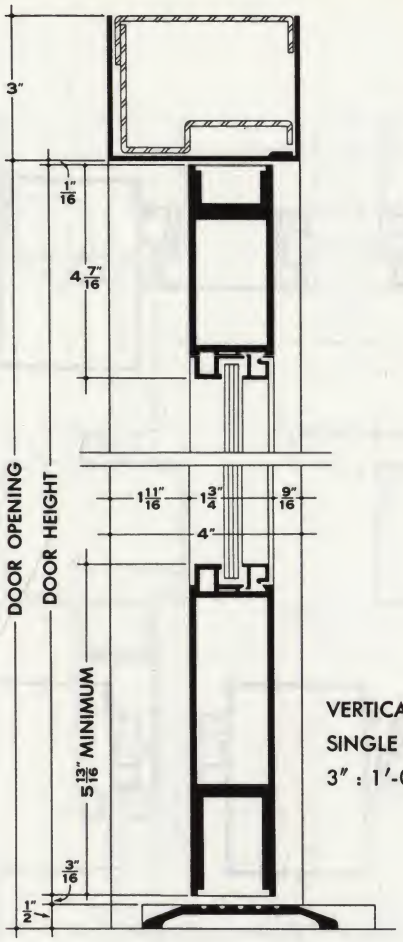
GUARANTEE

Doors shall be guaranteed for a period of one year against defective material and workmanship.

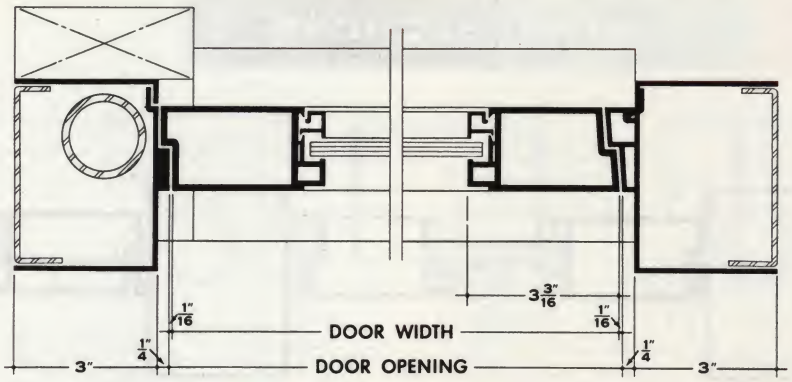
GLAZING, GROUTING AND CAULKING

Glass and glazing, grouting and caulking shall be furnished under another contract.

BALANCED DOORS



VERTICAL SECTION
SINGLE DOOR
3" : 1'-0"



PLAN SECTION
SINGLE DOOR
3" : 1'-0"

FULL SIZE DETAIL

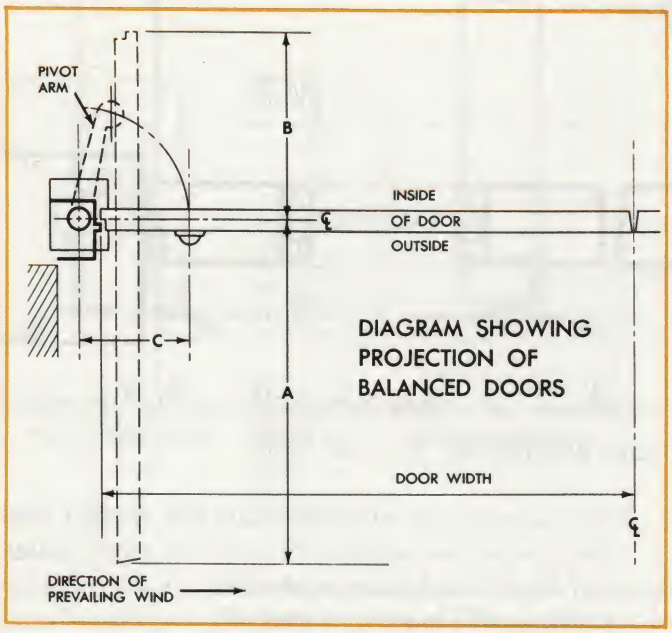


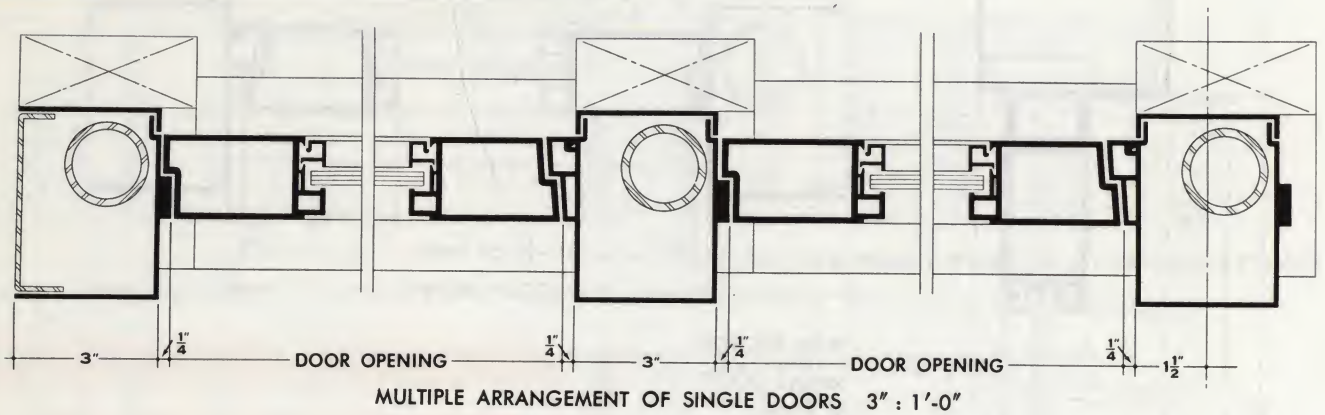
DIAGRAM SHOWING
PROJECTION OF
BALANCED DOORS

RECOMMENDED DOOR WIDTHS

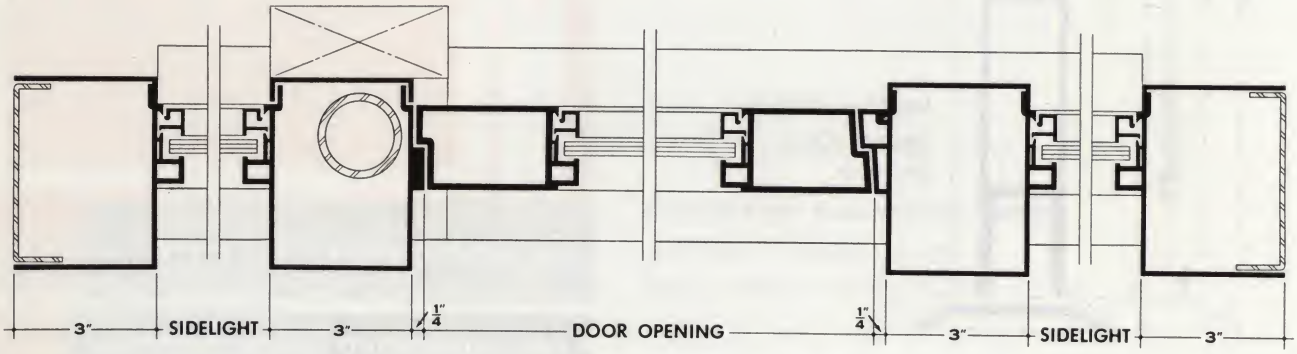
DOOR WIDTH	A	B	C
30"	18¾"	11¼"	6¼"
31"	19¾"	11¼"	6¼"
32"	20¾"	11¼"	6¼"
33"	19⅞"	13⅛"	7⅛"
34"	20⅞"	13⅛"	7⅛"
35"	21⅞"	13⅛"	7⅛"
36"	22⅞"	13⅛"	7⅛"
37"	22⅛"	14⅞"	8"
38"	23⅛"	14⅞"	8"
39"	24⅛"	14⅞"	8"
40"	23¼"	16¾"	8⅞"
41"	24¼"	16¾"	8⅞"
42"	25¼"	16¾"	8⅞"
43"	26¼"	16¾"	8⅞"

THE FLOUR CITY ORNAMENTAL IRON COMPANY

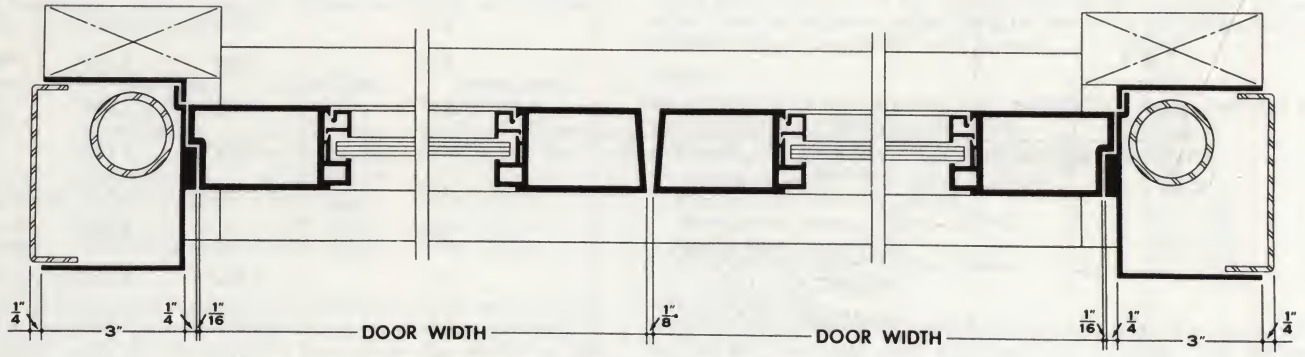
PLAN SECTIONS



MULTIPLE ARRANGEMENT OF SINGLE DOORS 3" : 1'-0"



DOOR AND SIDELIGHT 3" : 1'-0"



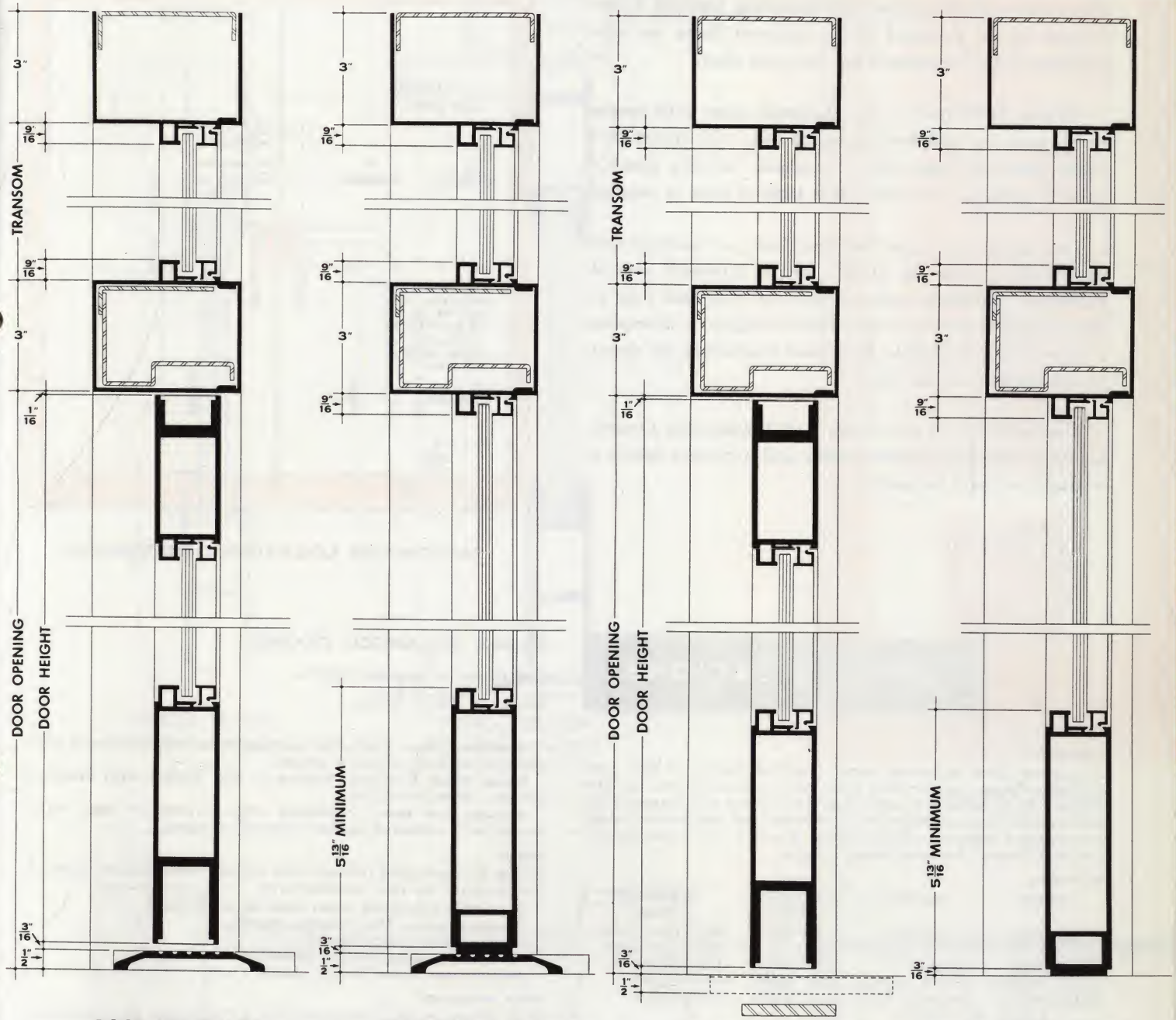
PAIR OF DOORS WITHOUT WEATHERSTRIP 3" : 1'-0"

All of **FLOUR CITY'S** Metal Balanced Doors can be furnished with weatherstripped frames. Full size details will be sent on request.

THE FLOUR CITY ORNAMENTAL IRON COMPANY

BALANCED DOORS

VERTICAL SECTIONS



DOOR AND TRANSOM WITH THRESHOLD
3" : 1'-0"

SIDELIGHT AND TRANSOM WITH THRESHOLD
3" : 1'-0"

DOOR AND TRANSOM WITHOUT THRESHOLD
3" : 1'-0"

SIDELIGHT AND TRANSOM WITHOUT THRESHOLD
3" : 1'-0"

ONLY TYPICAL INSTALLATIONS have been shown in this catalog. Since all Flour City doors are custom made, many designs and arrangements are available to meet special conditions. The assistance of our Design and Engineering Departments is available without obligation.

Full size details and half size tracing sheets of arrangements shown in this catalog are available upon request.

THE FLOUR CITY ORNAMENTAL IRON COMPANY

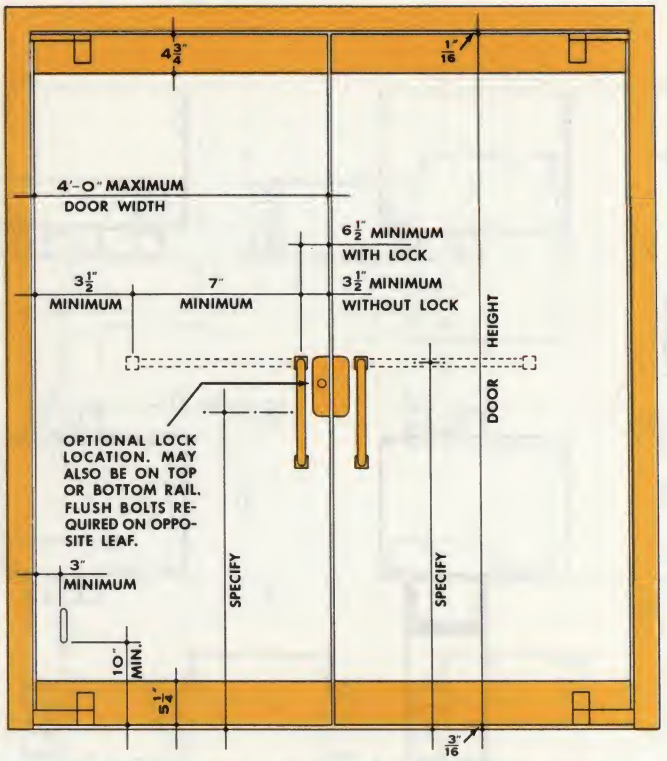
FLOUR CITY GLASS

All of the quality service and operating features incorporated in our standard metal balanced doors are also available in the tempered glass balanced door.

Custom fabricated of ¾″ tempered glass with special continuous top and bottom metal rails, the FLOUR CITY Glass Balanced Door affords increased visibility plus the ease of operation for which this type of door is famous.

The FLOUR CITY Glass Balanced Door is a package unit consisting of door (or doors), frame, threshold and all hardware. Hardware such as push and pull bars may be one of several FLOUR CITY standard designs or fabricated to the architect's details. Hardware limitations are shown on the diagram to the right.

The assistance of our Design and Engineering Departments in developing special frame and hardware details is available without obligation.



HARDWARE LOCATION DIMENSIONS

SPECIFICATIONS

GLASS BALANCED DOORS

Aluminum • *Stainless Steel* • *Bronze* • *White Bronze*

GENERAL

Tempered glass balanced doors (and sidelights) of the type and size shown on the plans shall be as manufactured by The Flour City Ornamental Iron Company. Doors and frames shall be furnished with all necessary hardware and anchors and shall be equipped with a hydraulic check, bumper, hold-open device and adjustment for two closing speeds.

MATERIAL

SERIES	MATERIAL	THICKNESS (door)	THICKNESS (frame)
GBD 100A	Aluminum	.125″ Sheet or Extruded	.081″ min. Sheet; .093″ Extruded
GBD 100B	Bronze	.064″ Sheet	.064″ Sheet
GBD 100WB	White Bronze	.064″ Sheet	.064″ Sheet
GBD 100SS	Stainless Steel	.062″ Sheet	.062″ Sheet

CONSTRUCTION

Frame: Frames shall consist of extruded or sheet material (as specified) applied to a steel sub-frame in the manufacturer's plant. One jamb section shall be removable for access to the torque tube.

Door: Top and bottom rails of extruded or sheet material (as specified) shall be permanently assembled to ¾″ tempered glass.

HARDWARE

Push and pull bars, or plates, shall be Flour City's standard hardware (or as shown on the plans and specified). Lock schedule to meet various job conditions shall be submitted by the manufacturer for architect's approval.

THRESHOLDS

Thresholds shall be Flour City standard as follows:

Aluminum doors: Extruded aluminum or cast aluminum with abrasive surface. (Specify option).

Bronze doors: Extruded bronze or cast bronze with abrasive surface. (Specify option).

Stainless steel doors: Extruded white bronze or cast white bronze with abrasive surface. (Specify option).

FINISH

Finish of doors and frames shall match samples submitted to the architect by the manufacturer.

Finish for operating arms shall be as follows:

Aluminum doors: Dull chrome plated
Bronze doors: Bronze plated
White bronze doors: Nickel plated
Stainless steel doors: Nickel plated

SHOP DRAWINGS

Shop drawings shall be submitted, in triplicate, for architect's approval. Drawings shall show sections of doors and frames, details of construction, hardware, and methods of anchoring frame in the opening.

ERECTION

All balanced doors shall be erected by men employed by the door manufacturer, skilled in this type of work, and shall include final adjustment for proper and easy operation of the door after glazing.

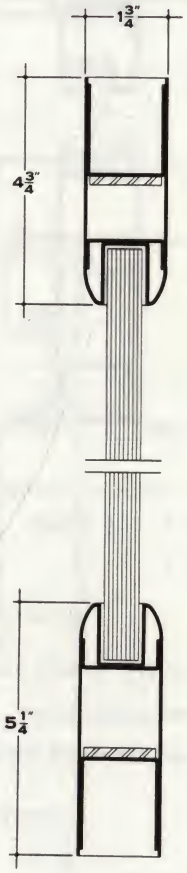
GUARANTEE

Doors shall be guaranteed for a period of one year against defective material and workmanship.

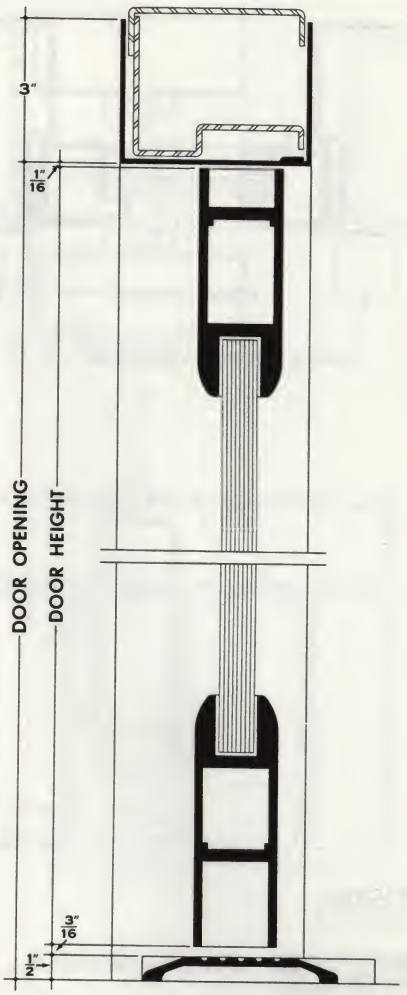
GROUTING AND CAULKING

Grouting and caulking shall be furnished under another contract.

BALANCED DOORS

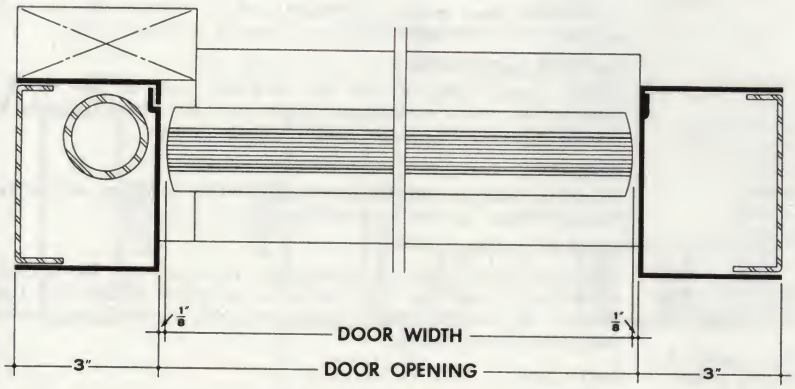


VERTICAL SECTION
SHEET MATERIALS
3" : 1'-0"

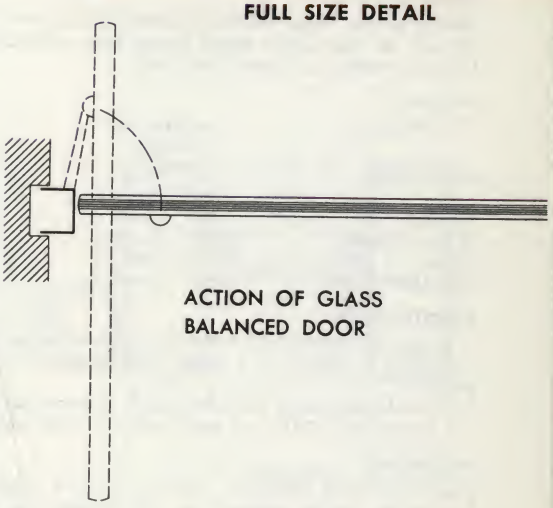


VERTICAL SECTION
EXTRUDED ALUMINUM
3" : 1'-0"

FULL SIZE DETAIL



PLAN SECTION 3" : 1'-0"

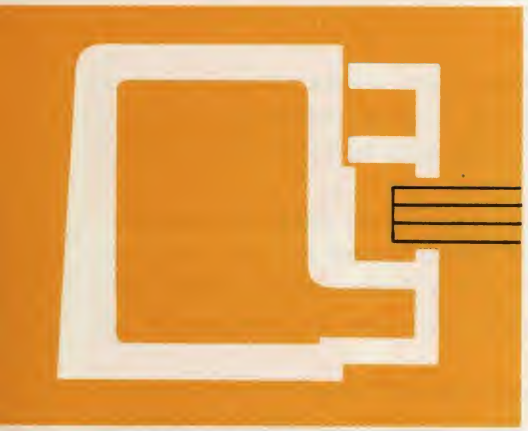


ACTION OF GLASS
BALANCED DOOR

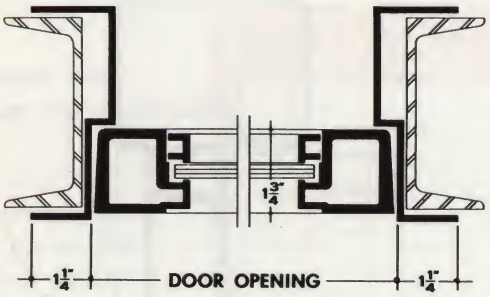
Full size details and half-size tracing sheets are available upon request.

THE FLOUR CITY ORNAMENTAL IRON COMPANY

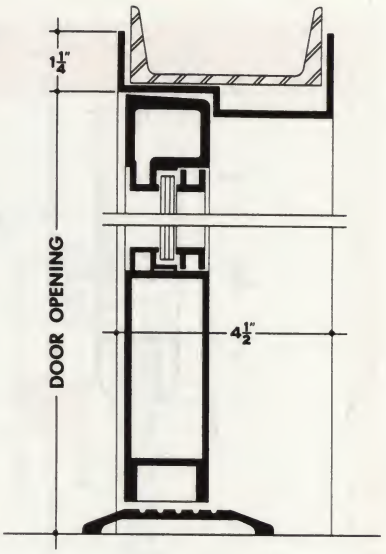
FLOUR CITY METAL



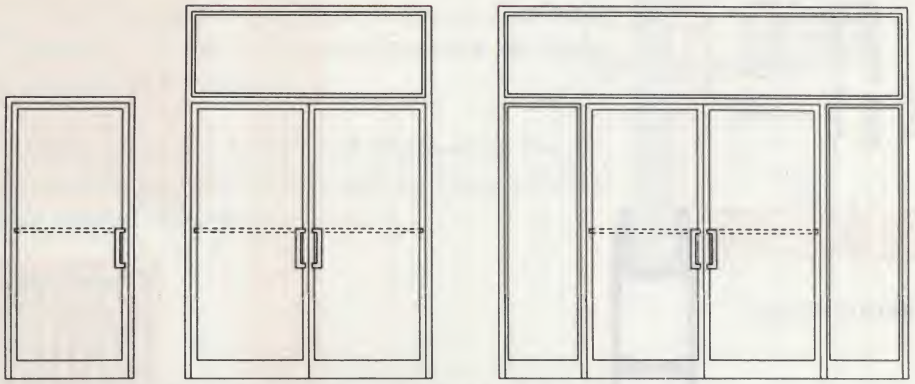
FULL SIZE DETAIL



PLAN • SINGLE DOOR • 3″ : 1′-0″



VERTICAL SECTION
SINGLE DOOR
3″ : 1′-0″



SOME AVAILABLE COMBINATIONS

Full size details and half-size tracing sheets are available upon request.

SPECIFICATIONS

SWING DOORS

Aluminum • Stainless Steel • Steel • Bronze • White Bronze

GENERAL

Swing doors (and sidelights) and frames of the type and size shown on the plans shall be as manufactured by The Flour City Ornamental Iron Company.

MATERIAL

MATERIAL	THICKNESS (door)	THICKNESS (frame)
Aluminum	.125″ Sheet or Extruded	.081″ min. Sheet; .093″ Extruded
Bronze	.064″ Sheet	.064″ Sheet
White Bronze	.064″ Sheet	.064″ Sheet
Steel	.074″ Sheet	.062″ Sheet
Stainless Steel	.062″ Sheet	.062″ Sheet

CONSTRUCTION

Frame: Frames shall consist of extruded or sheet material (as specified) applied to a steel sub-frame in the manufacturer's plant.

Door: Doors shall be fabricated of extruded or sheet material (as specified) with top and bottom rails welded to the stiles.

HARDWARE

Push and pull bars, or plates, shall be Flour City's standard hardware (or as shown on the plans and specified). Locks, closers, hinges, etc., if furnished under the Hardware contract, shall be supplied to the door fabricator for shop fitting to doors and frames.

THRESHOLDS

Thresholds shall be Flour City standard as follows:

Aluminum doors: Extruded aluminum or cast aluminum with abrasive surface. (Specify option).

Bronze doors: Extruded bronze or cast bronze with abrasive surface. (Specify option).

Steel doors: Specify.

Stainless steel doors: Extruded white bronze or cast white bronze with abrasive surface. (Specify option).

GLAZING PROVISIONS

Glass stops shall be on the interior side of the door. For aluminum doors a snap-on type shall be used; for other materials, channel stops assembled with screws.

FINISH

Finish of doors and frames shall match samples submitted to the architect by the manufacturer.

SHOP DRAWINGS

Shop drawings shall be submitted, in triplicate, for architect's approval. Drawings shall show sections of doors and frames, details of construction, hardware, and methods of anchoring frame in the opening.

ERECTION

All doors shall be erected by men employed by the door manufacturer, skilled in this type of work, and shall include final adjustment for proper and easy operation of the door after glazing.

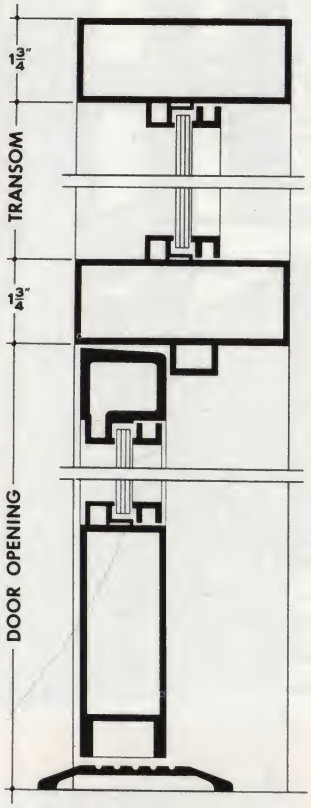
GUARANTEE

Doors shall be guaranteed for a period of one year against defective material and workmanship.

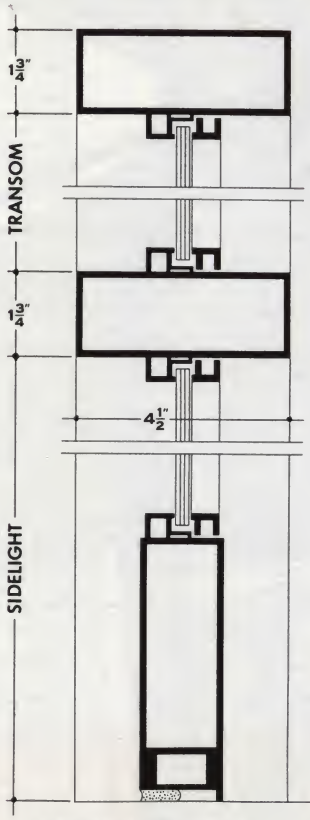
GLAZING, GROUTING AND CAULKING

Glass and glazing, grouting and caulking shall be furnished under another contract.

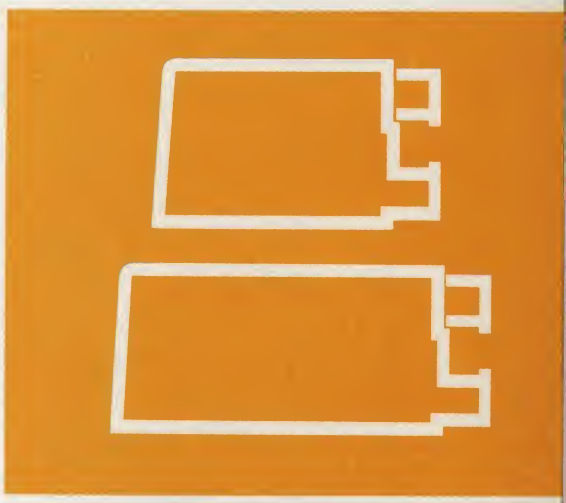
SWING DOORS



VERTICAL SECTION
DOOR AND TRANSOM
3" : 1'-0"



VERTICAL SECTION
SIDELIGHT AND TRANSOM
3" : 1'-0"

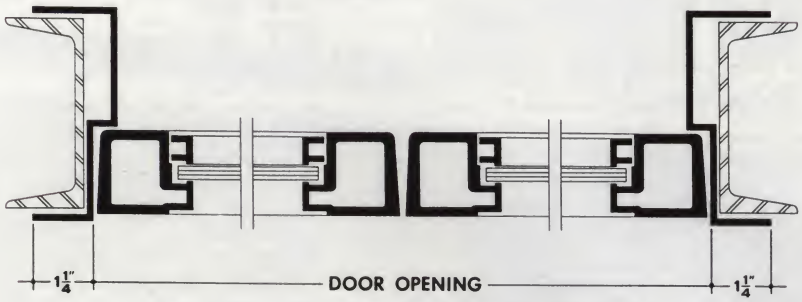


HALF-SIZE DETAIL OF OTHER
AVAILABLE STILE SECTIONS

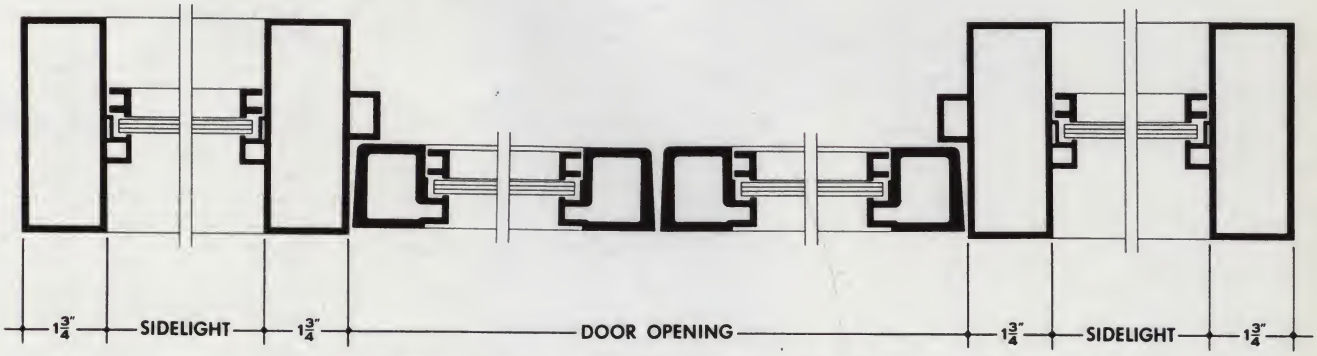
Since all FLOUR CITY swing doors are custom made, each is designed to meet precise requirements for its particular function. Shown on pages 10 and 11 are some of many available sections and arrangements. Special sections can be produced when the quantity warrants new dies.

FLOUR CITY standard pulls and push bars are available, or special designs will be faithfully executed to the architect's details. Careful engineering permits the use of almost any type of hinge and lock in such a manner that it becomes an integral part of the door.

Full size details and half-size tracing sheets are available for any particular door combination.



PLAN SECTION • PAIR OF DOORS • 3" : 1'-0"



PLAN SECTION • PAIR OF DOORS WITH SIDELIGHTS • 3" : 1'-0"

THE FLOUR CITY ORNAMENTAL IRON COMPANY

TYPICAL INSTALLATIONS

JOB NAME	LOCATION	ARCHITECT
STAINLESS STEEL		
Travelers Insurance Co.	Hartford, Conn.	Voorhees, Walker, Smith & Smith
Bank of New York Building	New York, New York	Voorhees, Walker, Smith & Smith
20 Broad Street	New York, New York	Kahn & Jacobs
Henry S. Frieze Building	Ann Arbor, Michigan	Sydney Goldstone
Physics Laboratory, Pomona College	Claremont, California	Calvin-Robinson & Associates
Manufacturers National Bank	Detroit, Michigan	Smith, Powell & Margridge
First National Bank	Minneapolis, Minn.	John J. Kallmes
39—Broadway, Office Building	New York, New York	Holabird, Root & Burgee
Atlantic Building	New York, New York	Thorshov & Cerny
Citizens Bank	Hutchinson, Minn.	Sylvan Bien, Robert Bien
Dayton-Radisson Ramp	Minneapolis, Minn.	Voorhees, Walker, Smith & Smith
Resurrection Hospital	Chicago, Illinois	Magney-Tusler & Setter
		Larson & McLaren
		Schmidt, Garden & Erikson
BRONZE		
Federal Reserve Bank	Minneapolis, Minn.	Larson & McLaren
Bryn Mawr Country Club	Chicago, Illinois	Holabird & Root & Burgee
U. S. Court House	Des Moines, Iowa	Edward P. Steinberg Architects Associated
ALUMINUM		
Ford Scientific Laboratory & Research Building	Dearborn, Michigan	Voorhees, Walker, Smith & Smith
Minneapolis Athletic Club	Minneapolis, Minn.	Lang & Raugland
General Mills Office Building	Golden Valley, Minn.	Skidmore, Owings & Merrill
Newark Airport Building	Newark, New Jersey	Port of New York Authority
County City Building	Stevens Point, Wisc.	Ray R. Gauger & Co.
General Motors Technical Center	Warren, Michigan	Eero Saarinen & Associates
Engineering Staff Office Building	Colorado Springs, Colo.	Skidmore, Owings & Merrill
U. S. Air Force Academy	Montclair, New Jersey	Voorhees, Walker, Smith & Smith
Mountain Side Hospital	Atlanta, Georgia	A. Thomas Bradbury & Associates
Civil-Criminal Court Building	Fort Wayne, Indiana	Holabird & Root & Burgee
Lincoln National Life Building	Webster, New York	Voorhees, Walker, Smith & Smith
Haloid-Xerox, Inc.	Chicago, Illinois	Skidmore, Owings & Merrill
Medical Research Laboratory, University of Illinois		
GLASS		
Eastman Kodak Company	Rochester, New York	Eastman Kodak Company
Union Savings & Loan Building	Racine, Wisc.	Frank J. Hoffman
Halifax Air Terminal	Halifax, Nova Scotia Canada	Gilleland & Strutt
Minneapolis Public Library	Minneapolis, Minn.	Lang & Raugland

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DISTRICT of COLUMBIA
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Washington 7, D. C.

FLORIDA
Builders Products Company
221 East 8th Street
Jacksonville, Florida

GEORGIA
Gerald F. Wible
29 Pryor Street N. E.
Atlanta, Georgia

IDAHO
Joel P. Paulson & Co.
963 East 33rd South
Salt Lake City 6, Utah

ILLINOIS
Kaufman and Brodt, Inc.
1549 Builders Building
Chicago, Illinois

INDIANA
M. S. Churchman Co., Inc.
1107 Burdsal Parkway
Indianapolis, Indiana

IOWA
A. J. Crawford
4610 Urbandale Avenue
Des Moines, Iowa

KANSAS
Chester L. Anderson Company
700 South Emporia
Wichita, Kansas

LOUISIANA
Flynn Building Specialties, Inc.
P. O. Box 668
Alexandria, Louisiana

MASSACHUSETTS
J. J. Owens
New Century Kraftsmen Co.
620 Commonwealth Ave.
Boston, Massachusetts

MICHIGAN
Saunders and Company
18263 W. McNichols Road
Detroit 19, Michigan

MISSOURI
Mid-States Ornamental Iron Co.
5321 East 9th Street
Kansas City 1, Missouri

William E. Peterson Company
7818 Forsyth
St. Louis 5, Missouri

NEBRASKA
Builders Products Company
3420 Vinton Street
Omaha, Nebraska

NEW YORK
Brodsky & Norris
55 West 42nd St.
New York 36, New York

Thomas H. Sackett
Building Material Co.
320 South Avenue
Rochester 4, New York

NORTH CAROLINA
Jones-Lacey, Inc.
P. O. Box 6167
Charlotte 7, North Carolina

OHIO
H. L. Walters
P. O. Box 8256
North Royalton 33, Ohio

Henry P. Howe Co.
8 E. Long Street
Columbus 15, Ohio

OKLAHOMA
Midwest Marble & Tile Co.
510 South Quincy
Tulsa 1, Oklahoma

OREGON
Marion Butler Company
5435 North Lagoon Avenue
Swan Island
Portland 18, Oregon

PENNSYLVANIA
Charles G. Noska
501 West Chelten Avenue
Philadelphia 44, Pennsylvania

Tom Brown, Inc.
Library Road & Killarney Drive
Pittsburgh 1, Pennsylvania

TENNESSEE
Maury & Company
1612 Lamar Avenue
Memphis 14, Tennessee

TEXAS
Southern Industrial Steel Company
Arlington, Texas

Southern Industrial Steel Company
1903 Afton
Houston, Texas

Vernon C. Liles
P. O. Box 8798
Dallas, Texas

Stepco
Mr. A. L. Washburn, Manager
Construction Department
P. O. Box 3626
El Paso, Texas

Houston Iron & Steel Company
2814 Pease Avenue
Houston, Texas

UTAH-WYOMING
Joel P. Paulson & Company
963 East 33rd South
Salt Lake City 6, Utah

WASHINGTON
Foster-Bray Co., Inc.
174 Denny Way
Seattle 9, Washington

WEST VIRGINIA
Ira F. Kuhn Company
P. O. Box 5176
Charleston, West Virginia

WISCONSIN
J. F. Cook Company
2320 West Greenfield Avenue
Milwaukee 4, Wisconsin

CANADA
Pilkington Brothers (Canada) Ltd.
165 Bloor St. East
Toronto 5, Ontario
Canada

COLOMBIA, SOUTH AMERICA
Erwin Schottlaender
Apartado Aereo 3489
Bogota, Colombia, S. A.

CUBA
Robert J. McArdle
American Club
Havana, Cuba

NATIONAL ASSOCIATION OF ARCHITECTURAL METAL MANUFACTURERS

THE FLOUR CITY ORNAMENTAL IRON COMPANY

2637 27TH AVENUE SOUTH • MINNEAPOLIS 6, MINNESOTA

PRINTED IN U.S.A.

16a
Ha

ALUMINUM ENTRANCES

Bank of Virginia, Portsmouth, Va.
Architect: Bank Building & Supply Co., St. Louis, Mo.
Contractor: Doyle & Russell

HANKINS & JOHANN, Inc.
MANUFACTURERS OF ARCHITECTURAL METAL PRODUCTS
P. O. BOX 7147 RICHMOND 21, VIRGINIA COLONY 6-2421

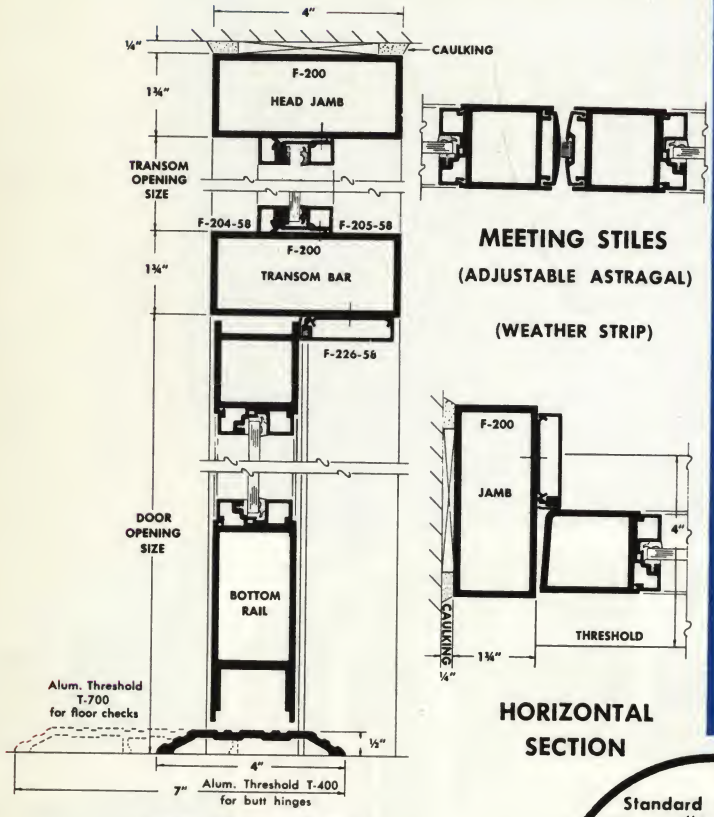
SINCE 1919

1960

STANDARD ENTRANCES • Narrow Stile

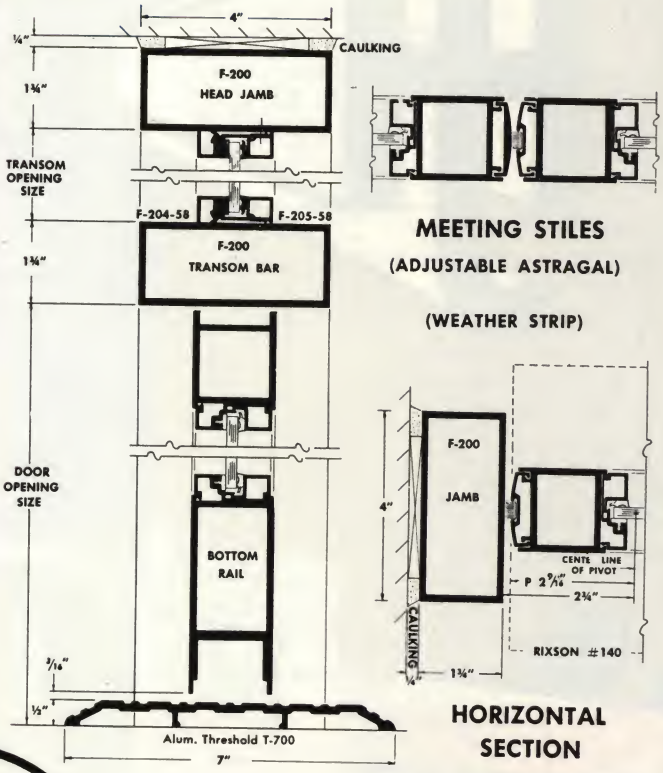
SINGLE ACTING

details 3"= 1' 0"



VERTICAL SECTION

DOUBLE ACTING



VERTICAL SECTION

Standard Door Pull
#P-109

Color and Engraving Optional

HARDWARE SCHEDULE

overhead door closer—type A

NO. 94 TO 3'-0" WIDE NO. 95 FOR 3'-6" WIDE

1—Cylinder dead lock in stile of each active leaf. Cylinders may be had to master-key with any standard cylinder.
2—Flush bolts mounted in edge of each inactive leaf.
1—Surface mounted overhead closer on each door leaf. Brackets furnished for out-swinging doors.
2—Extra heavy polished alumilited aluminum butts
1—Threshold, mill finished aluminum.
1—Door Pull per leaf. #P-109.
1—Push Bar per leaf. #PB-201 x 1¼".
Weather stripping on lock stile of active leaf of double doors only.

floor check—type B

NO. 20 FOR 2'-6" WIDE NO. 25 TO 3'-6" WIDE

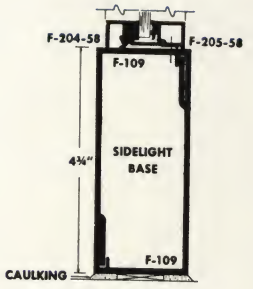
1—Cylinder dead lock in stile of each active leaf. Cylinders may be had to master-key with any standard cylinder.
2—Flush bolts mounted in edge of each inactive leaf.
1—Floor check per leaf (single acting offset pivot type).
1—Threshold, mill finished aluminum.
1—Door Pull per leaf. #P-109.
1—Push Bar per leaf. #PB-201 x 1¼".
Weather stripping on lock stile of active leaf of double doors only.

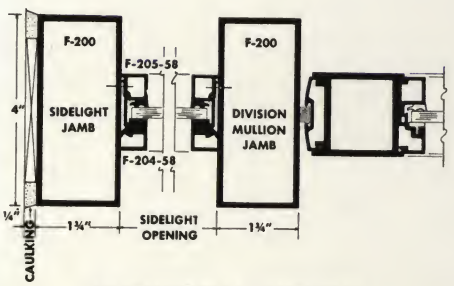
floor check—type C

NO. 130 FOR 2'-6" WIDE NO. 140 TO 3'-6" WIDE

1—Cylinder dead lock in stile of each active leaf. Cylinders may be had to master-key with any standard cylinder.
2—Flush bolts mounted in edge of each inactive leaf.
1—Floor check per leaf (center pivot double acting).
1—Threshold, mill finished aluminum.
2—Push Bars per leaf. #PB-201 x 1¼".
Weather stripping on hinge stile of active and inactive leaves, also lock stile of active leaves.

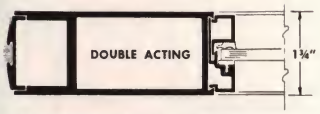
STANDARD SIDELIGHT UNITS



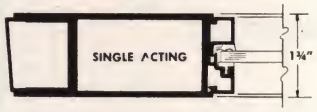


HORIZONTAL SECTION

WIDE STILE ENTRANCES



HORIZONTAL SECTIONS



Our Alumiliting Facilities Offer:

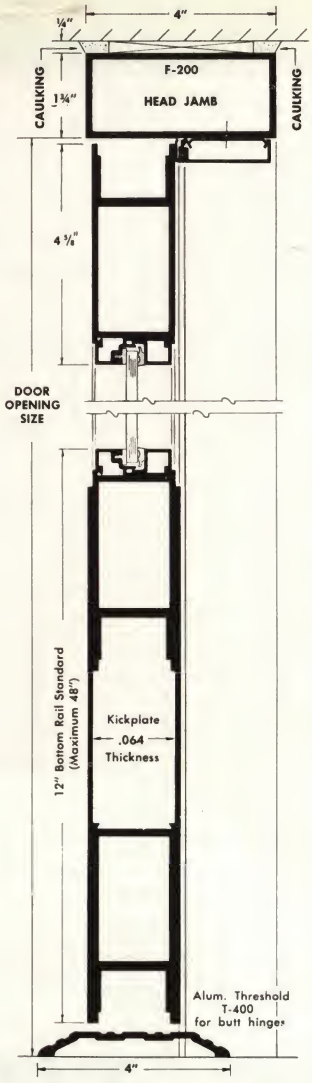
*Both plain and color work in accordance with the Aluminum Company of America specifications.

*Our equipment is designed so that we can handle efficiently large and small jobs in extrusions, spandrels, etc.

*Alcoa's architectural colors (such as #4010 gold color, etc.) are available in all Hankins & Johann extruded or sheet aluminum products. Further information upon request.

*Exposure tests have been conducted by Alcoa for nearly a quarter of a century and results indicate no perceptible sign of fading.

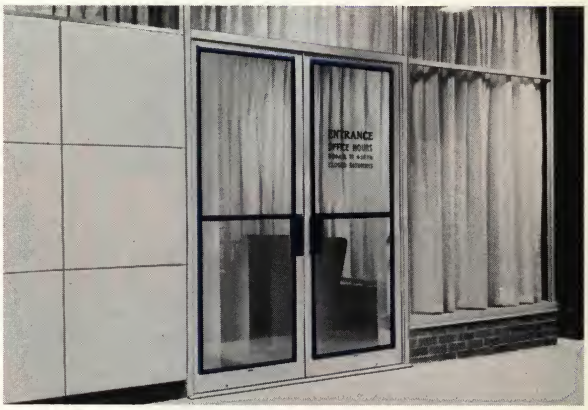
*Costwise you will find color alumiliting most attractive.



VERTICAL SECTION

The New COLOR-LITE Door

Another "First" for



THREE YEAR GUARANTEE

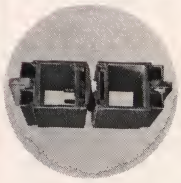
Hankins & Johann guarantees to supply at no cost to their *selected dealers* any or all components that show color fading within THREE YEARS. Replacement will be in your choice of either the same color or standard alumilite finish. (204 A1)

The Hankins & Johann reputation for outstanding craftsmanship stands behind any product they produce.

The manufacturer furnishes at no cost a new and improved vinyl glazing bead which makes glazing of the door fast, clean and economical.

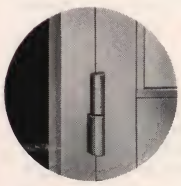
WE INVITE YOUR INQUIRIES FOR MORE DETAILED INFORMATION

OUTSTANDING FEATURES OF H & J ENTRANCES:



WEATHERSTRIP ASTRAGAL

H & J metal backed pile weathering and adjustable astragal combine to assure a weather conditioned entrance regardless of extreme temperature changes. Also added protection against wind and dust.



BUTT HINGES

H & J extra heavy polished alumilited aluminum butt hinges assure smooth, long lasting operation of door. No removable pins.

DOOR CONSTRUCTION

Tie rods full width inside top and bottom rails give added rigidity and increased tensile strength. Corners of door accurately fitted and milled to flush, hairline joints. Each component is a single extruded section.

LOCK

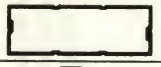
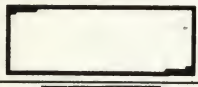
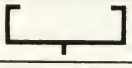
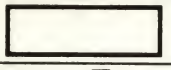
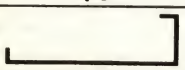
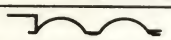
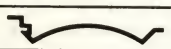
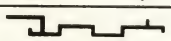
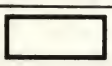
Outstanding in styling, durability and functional efficiency. H & J cylinders may be had to master-key or grand master-key with any standard cylinder. Adams-Rite maximum security lock available.

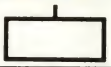
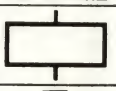
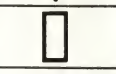
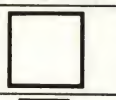
FLUSH BOLTS

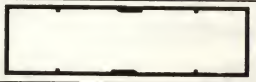
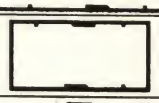
Concealed in door stile and easily operated by handle in edge of stile. Cannot be unbolted when doors are locked.

STOCK SHAPES

All shapes listed are furnished with the same high quality Alumilite Finish 204-A1 as found on all H & J Entrances. Other alumilite finishes both plain and color are available.

H & J Number	Shape	Description	Stock Length
F-100		2"x5¾"	22'
F-102		Glass Stop	22'
F-103		Glass Stop	22'
F-106		½"x2"	21'
F-107		½"x2"	16'
2 Pcs. F-108		2¾"x7½" Split	22'
2 Pcs. F-109		2"x4¾" Split	22'
F-110 F-112		2"x4¾" Split	22'
F-111 F-112		2½"x4¾" Split	22'
F-119		1¾"x4"	22'
F-120		2"x6"	22'
F-121		Glass Stop	22'
F-122		Glass Stop	22'
F-140		2"x6¾"	22'
F-145		¾"x5"	22'
F-146		1⅛"x5 1/16"	22'
F-147		¾"x5"	22'
F-200		1¾"x4"	22'

H & J Number	Shape	Description	Stock Lenath
F-201		1¾"x4"	22'
F-202		1¾"x4"	22'
F-203		1"x2"	21'1"
F-204		Glass Stop	22'
F-205		Glass Stop	22'
F-206		4"x4"	21'1"
F-207		1¾"x1¾"	21'1"
2 Pcs. F-208		4"x4" Split	22'
F-209		3"x3"	21'1"
F-210		2"x5"	21'1"
2 Pcs. F-215		5"x5" Split	22'

H & J Number	Shape	Description	Stock Length
F-250		1¾"x5"	21'1"
2 Pcs. F-300		2¾x9½" Split	22'
F-301 F-300		2¾"x7½" Split	22'
2 Pcs. F-301		2¾"x5½" Split	22'
F-305		Stop For D'bl Glazing	22'
F-306		1"x1"	16'
2 Pcs. F-310		5½"x5½" Split	22'
M-3		1"x½"	16'
M-4		1"x½"	16'
M-5		½"x¾"	20'
M-6		½"x¾"	16'
M-8		H Divider	16'
F-204 -58		Glass Stop	22'
F-205 -58		Glass Stop	22'
F-226 -58		Door Stop	22'

OUTSTANDING FEATURES OF H & J ENTRANCES

to the specification writer

On this page the suggested specifications are written to aid in insuring a high standard of quality.

general

Aluminum narrow line entrances shall be H & J Type NA (or NB, NC) as manufactured by Hankins & Johann, Inc., Richmond, Virginia.

material

Doors and frames shall be extruded aluminum alloy 6063 T5. Door stile section shall not be less than ⅛" or .125" in thickness and frame section shall not be less than .125" in thickness. On extruded work, edges, angles and corners shall be square, clean and sharp.
All materials must be carefully selected for color-matching qualities. Screws shall be of 2024 T4 aluminum alloy, stainless steel, or cadmium plated brass or bronze.

workmanship

All workmanship to be of the highest quality and performed by mechanics skilled in fabrication of high quality architectural metalwork. Corners of doors shall be accurately joined and fitted to flush hairline, watertight joints. Mechanical fastenings shall be the preferred method of assembly. All fastenings shall be concealed wherever possible. All exposed screws shall be on the interior of the building. All glazing shall be with aluminum glazing members and no putty or mastic used in setting of the glass shall be exposed to view from interior or exterior. All cutouts, recesses, mortising or milling operations required for hardware shall be accurately made and reinforced with backing plates as required to insure adequate strength of the connection.

hardware

All stock doors shall have standard hardware furnished by the door manufacturer. Hardwore for custom built doors and special entrances shall be specified by the architect. Hardware furnished by others shall he sent to the door manufacturer for application to the door.

finish

Exposed surfaces on all aluminum sections except thresholds shall be finished to a polished high lustre (free from die markings, scratches, and blisters), then alumilited. Preparation for alumiliting and the alumiliting to be in accordance with Aluminum Company of America specifications for alumilite process No. 204-A-1. Samples of the finish will be submitted to architect (upon request) for approval. Color alumiliting sholl be in accordance with Aluminum Company of America specifications on architectural colors.

erection

All openings shall be prepared plumb and square by others. All items under this heading shall be set plumb, square, level and at their proper elevation and plane and located in proper alignment with all other work. They shall be securely anchored and ready for operation in every respect. All joints between metal and masonry shall be fully caulked in order to secure a watertight job. After erection, the general contractor shall adequately protect all exposed portions of the doors, frames and other alumilited parts from damage by grinding and polishing machines, plaster, lime, acid, cement or other harmful compounds.

HANKINS & JOHANN, INC.
MANUFACTURERS OF ARCHITECTURAL METAL PRODUCTS
P. O. BOX 7147 RICHMOND 21, VIRGINIA COLONY 6-2421

Himco

aluminum entrances

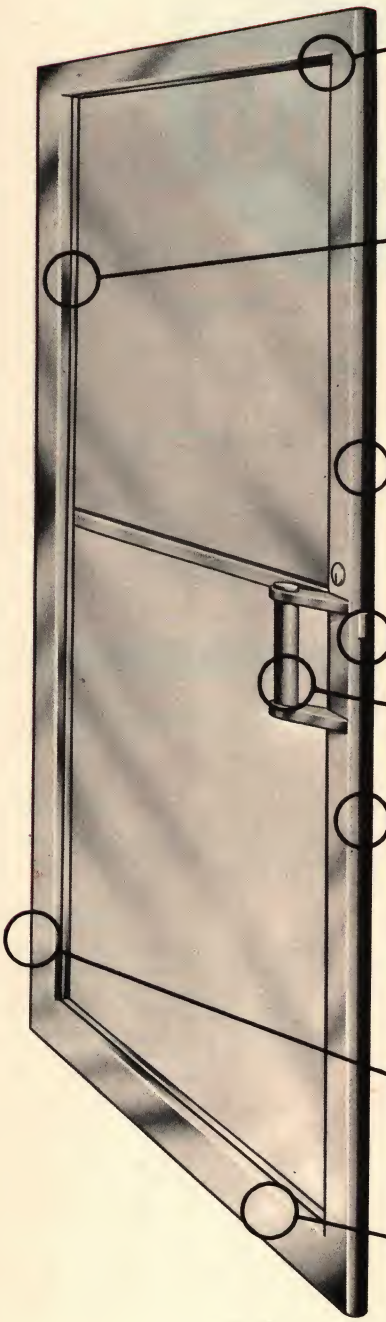
tubular shapes

THE HIMMEL BROTHERS COMPANY

1409-15 DIXWELL AVENUE
HAMDEN, CONNECTICUT
suburb of NEW HAVEN

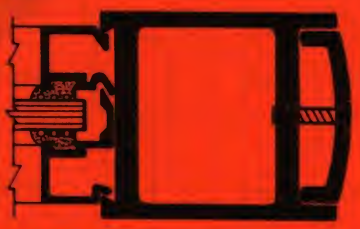
entrances features and construction

narrow stile welded



welded construction:
Heliarc welded to obtain maximum penetration of weld for a strong construction in modern door design.

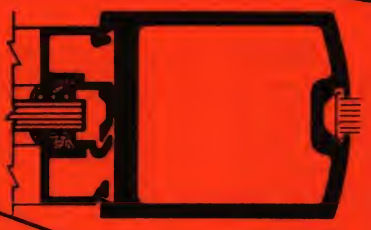
snap-in glass bead with vinyl glazing:
The new design in snap-in glazing provides maximum glass protection through the resilience of the special extruded glass bead and vinyl glazing cushion which also eliminates all exposed screws in the glass bead.



adjustable astragal:
The adjustment is obtained by taking up or letting out on the astragal which is backed up by rubber bushings. For weather protection and on the job adjustment where doors are put into wood frames or other types than those furnished by the manufacturer.

extra long bolt travel:
This extra long bolt travel assures maximum safety along with the hardened steel dowels to prevent forcible entrance.

modern hardware design:
New designs in hardware give a wide selection in door designs.



weatherstrip astragal:
The wool pile assures maximum weather protection between frame and door stile and meeting rails of double doors.

hinges:
Full 4½" Ballbearing Butt hinges.

off-set pivots:
New off-set pivot hinge designed especially for Himco.

finish:
The Himco finish is processed to give a lasting lustrous appearance for years because of its high quality aluminum alloy.

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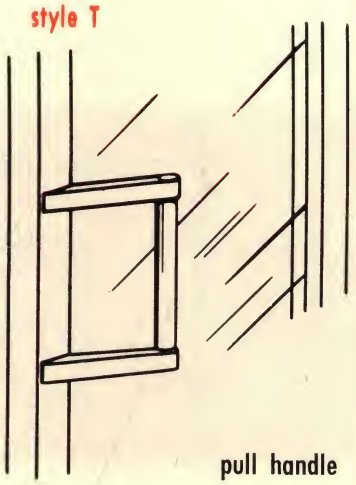
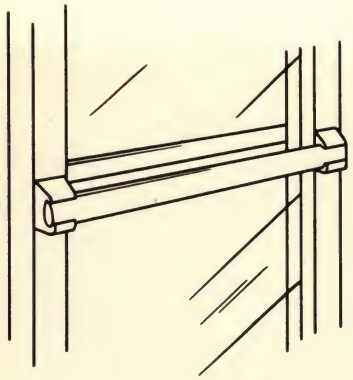
hardware

style T



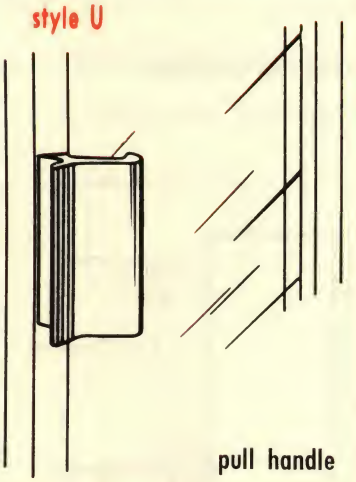
pull handle

style X



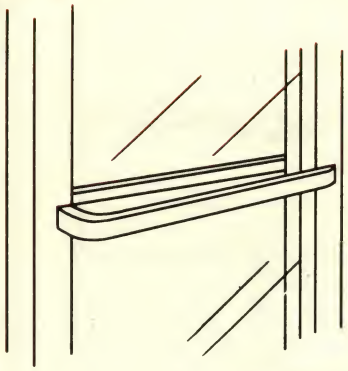
push bar

style U



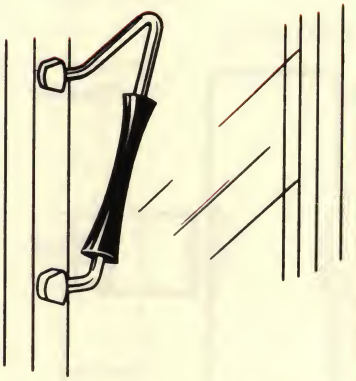
pull handle

style Y



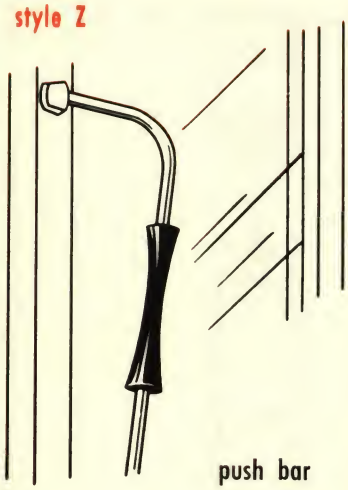
push bar

style W



pull handle

style Z



push bar

specifications

general:

Aluminum entrances, doors, frames and transoms, including side lights, shall be Himco, as manufactured by The Himmel Brothers Company, Hamden, Connecticut.

material:

Sections of doors and frames shall be extruded from 6463-T5 aluminum alloy. This alloy is a 6063 type alloy with superior mechanical properties and anodizing qualities.

Wall thickness of extruded door sections shall not be less than .125" and .188" where hinges are mounted to door. Glazing mouldings shall be not less than .055" thick.

Fastening shall be of aluminum alloy, stainless steel or steel cadmium or chromium plated.

finish:

All exposed surfaces shall have Alumilited Finish 204-R1-A1 (30 minutes) free from any blemishes. Samples of finish shall be submitted to architects upon request for approval.

workmanship:

All joints shall be accurately joined and fitted to flush hairline joints, the bottom and top rails shall have reinforcements at corners and heliarc welded at stress points along the concealed lines of contact.

Glass stops of the doors shall be of the snap-in type. No exposed screws shall be required to secure them in place; the leading edge of the glass stop in contact with the glass shall contain a vinyl glazing bead eliminating the necessity of putty or mastic.

weather-stripping:

The weather-stripping shall be of wool pile with an aluminum back, and shall be installed in the astragal part of the door stile of the center hung doors and in one meeting stile of a pair of doors.

hardware:

Standard hardware shall be furnished by The Himmel Brothers Company on all stock doors. Hardware for custom built doors and special entrances may be specified by the architect. Hardware furnished by others must be sent to the door manufacturer for proper application to the door. Finish of hardware shall closely match the finish of the doors.

erection:

All items under the heading of aluminum entrances shall be installed in prepared openings which are to be plumb, square, level and in the proper alignment with all other work. The entrances shall be securely anchored and ready for operation in every respect.

In order to prevent weather leakage all the joints between the metal and masonry shall be fully caulked and neatly pointed and excess material removed.

entrance details

SCALE: quarter full size

HIMCO'S AVAILABLE: large variety of framing and split tube sections provides a wide selection for the many requirements of today's modern door design.

- Wide Stile Doors with welded and tie-rodded construction
- Panic Devices
- Automatic Door Operators

custom styles

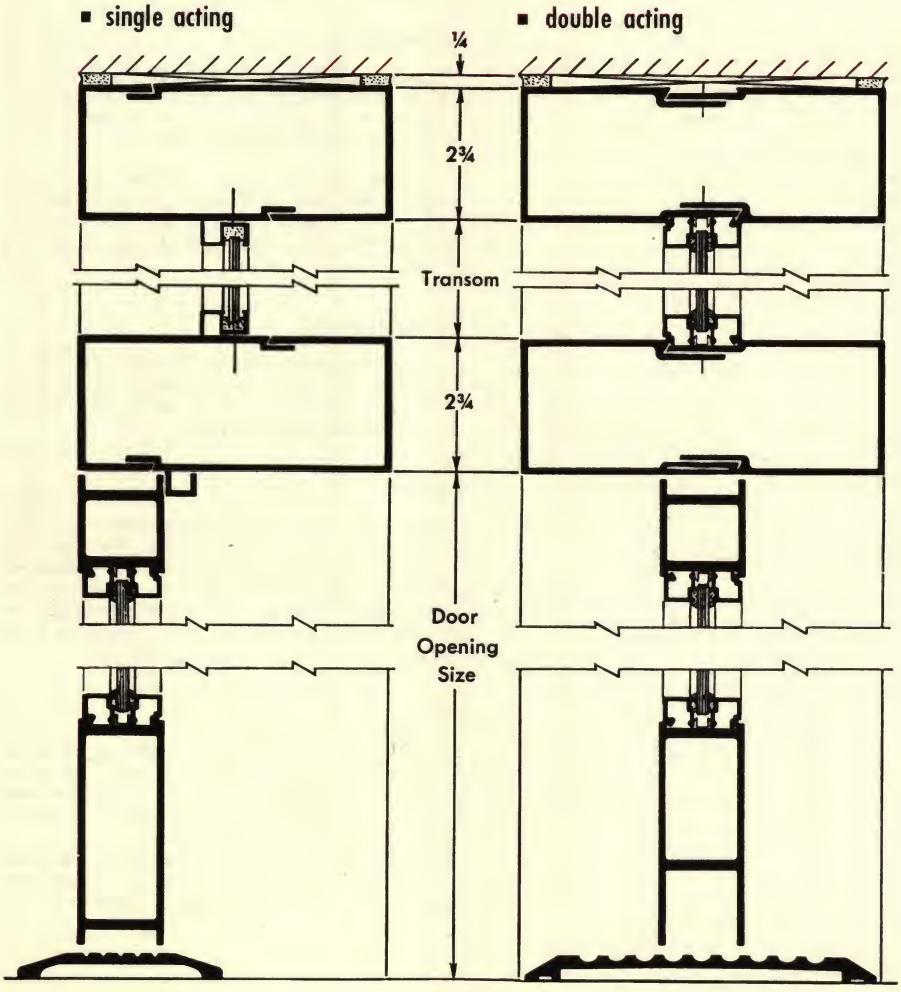
standard styles

NF

■ custom sections

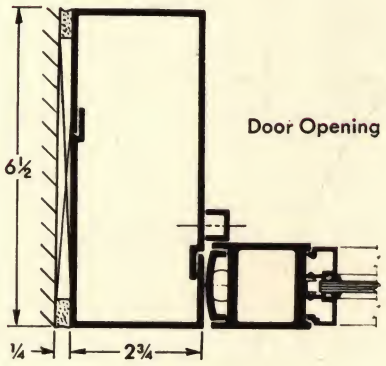
VERTICAL SECTIONS

■ single acting ■ double acting

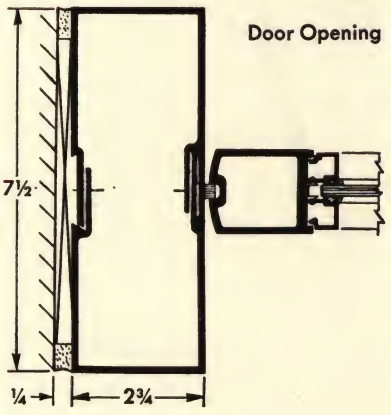


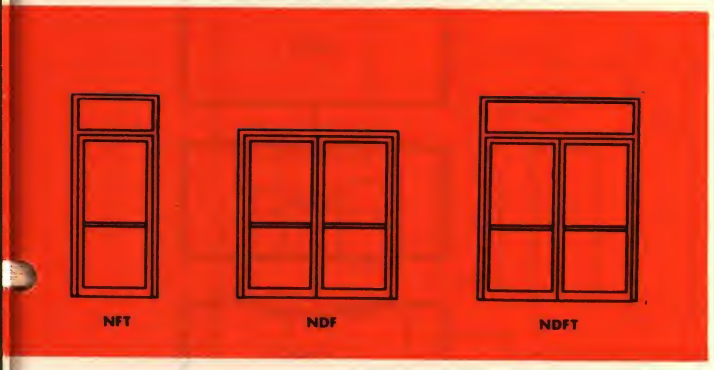
HORIZONTAL SECTIONS

■ single acting



■ double acting





sizes

standard stock units	door opening	recommended masonry opening
NF single door leaf and frame	2'6" x 7'0"	2'10" x 7'2"
	3'0" x 7'0"	3' 4" x 7'2"
	3'6" x 7'0"	3'10" x 7'2"
NFT single door leaf and frame with transom	2'6" x 7'0"	2'10" x 10'6¼"
	3'0" x 7'0"	3' 4" x 10'6¼"
	3'6" x 7'0"	3'10" x 10'6¼"
NDF pair door leaves and frame	5'0" x 7'0"	5'4" x 7'2"
	6'0" x 7'0"	6'4" x 7'2"
	7'0" x 7'0"	7'4" x 7'2"
NDFT pair door leaves and frame with transom	5'0" x 7'0"	5'4" x 10'6¼"
	6'0" x 7'0"	6'4" x 10'6¼"
	7'0" x 7'0"	7'4" x 10'6¼"

This Schedule is applicable to Entrance Types A, B and C

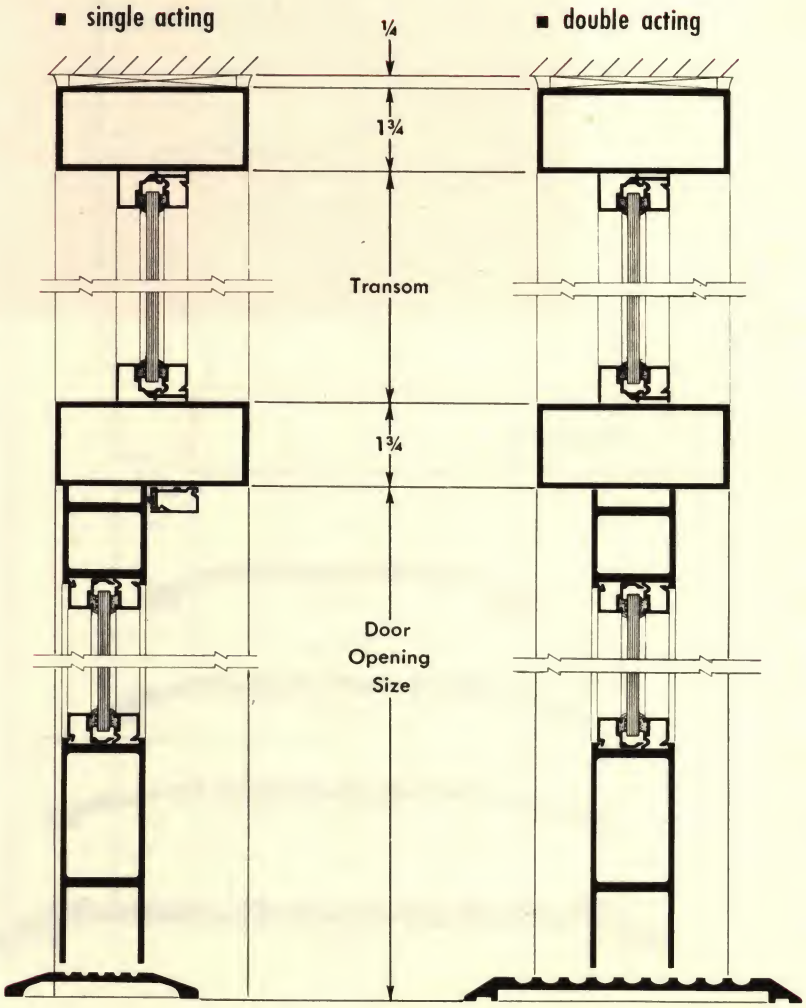
TYPE "A" With BUTT HINGES for Overhead Closer	TYPE "B" With OFFSET PIVOT for Single Acting Floor Check	TYPE "C" With CENTER PIVOT for Double Acting Floor Check

■ standard sections

VERTICAL SECTIONS

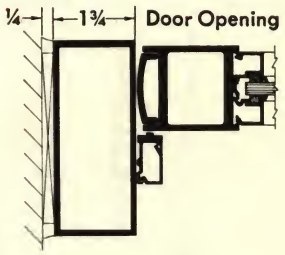
■ single acting

■ double acting

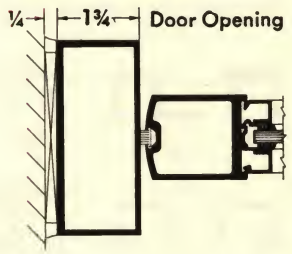


HORIZONTAL SECTIONS

■ single acting



■ double acting

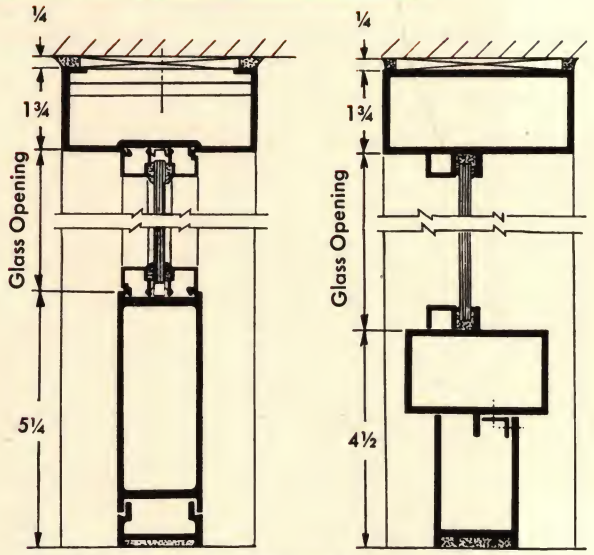


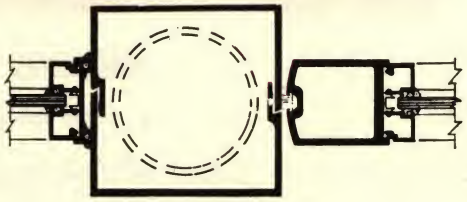
■ typical meeting rails

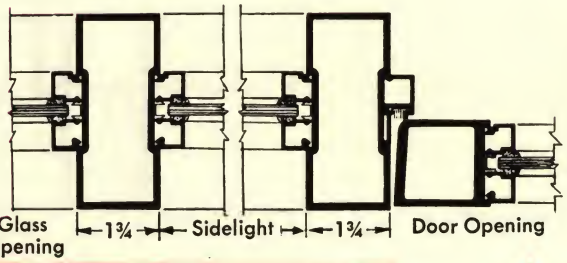
entrance details

SCALE: quarter and half full size

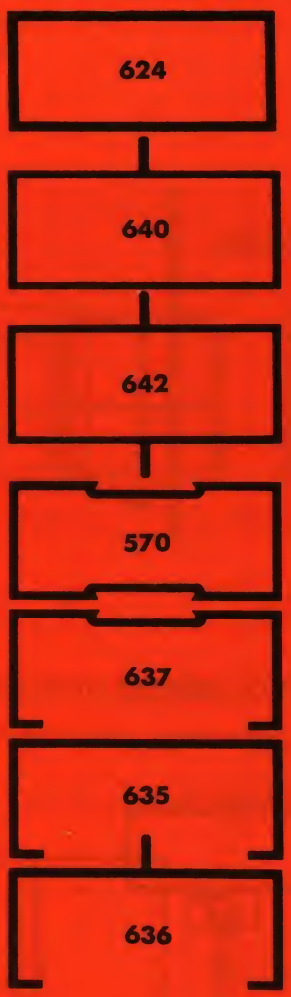
sidelight bases



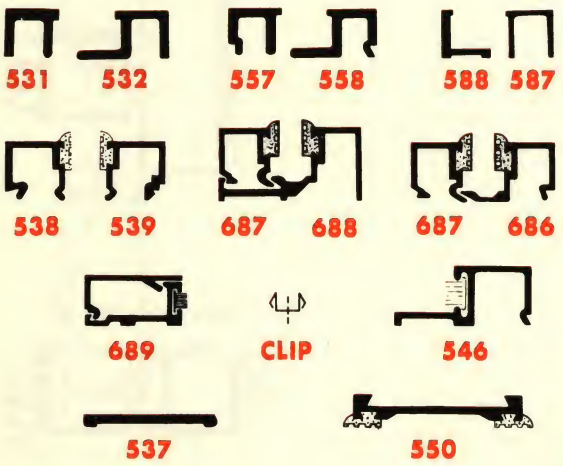




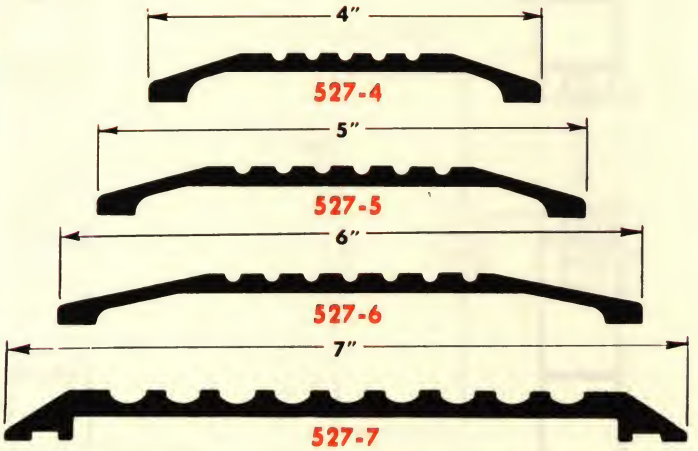
1¾″ x 4″ framing sections



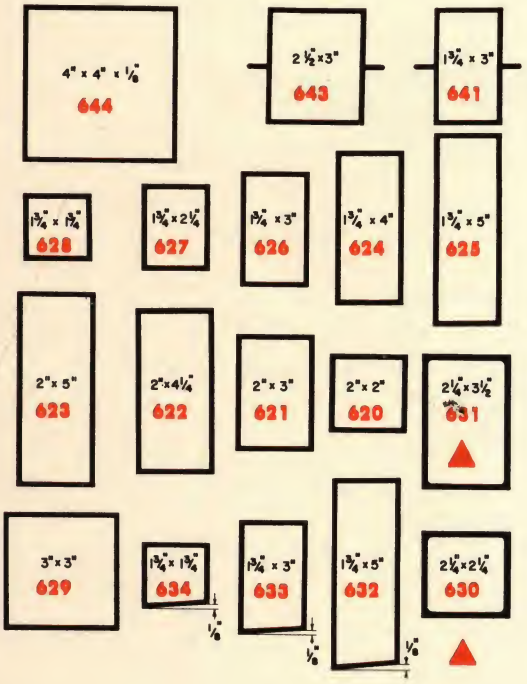
glass beads and stops

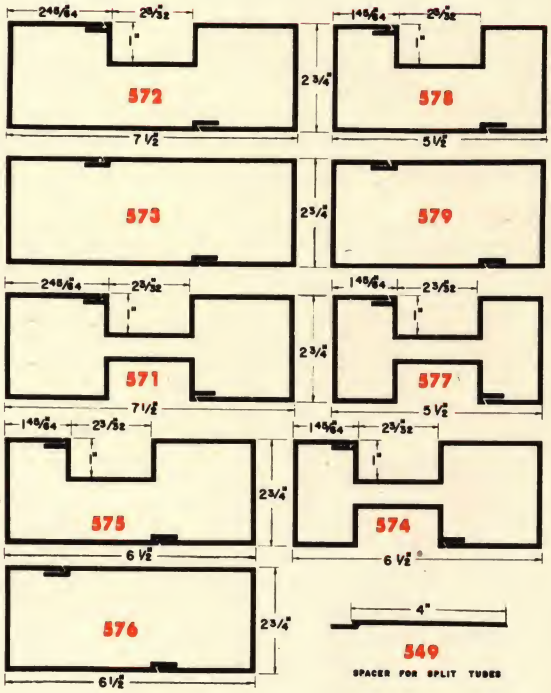


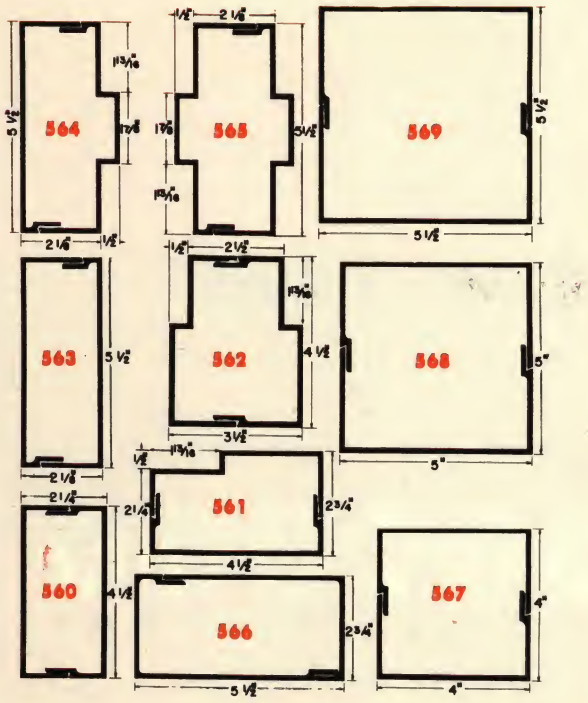
thresholds

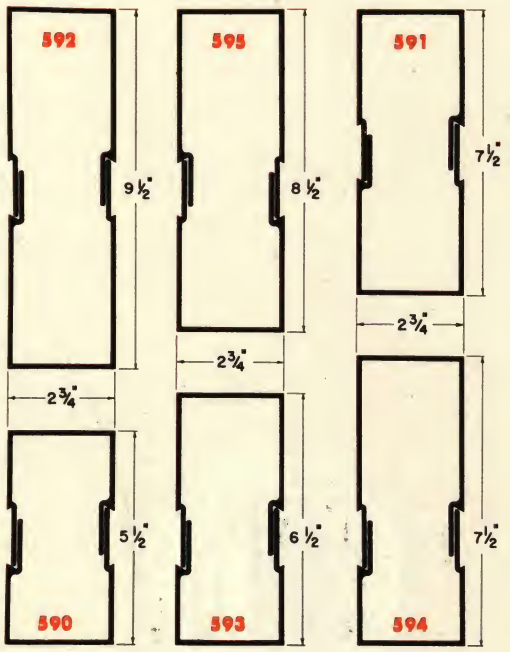


▲ 630 and 631, 5/32″ thick—all others 1/8″ thick
drawings not to scale









Himco

store fronts

facings

entrances

tubular shapes

THE

HIMMEL

BROTHERS COMPANY

1409-15 DIXWELL AVENUE
HAMDEN, CONNECTICUT
suburb of NEW HAVEN

A.I.A. File No. 16-E

16a
Kaw

ALUMINUM ENTRANCES

Kawneer Architectural Products

- Aluminum Wall Systems
- Aluminum Entrances
- Aluminum Store Fronts
- Aluminum Sealair Windows
- Wall Facings
- Aluminum Canopies/Louvers

1960
catalog

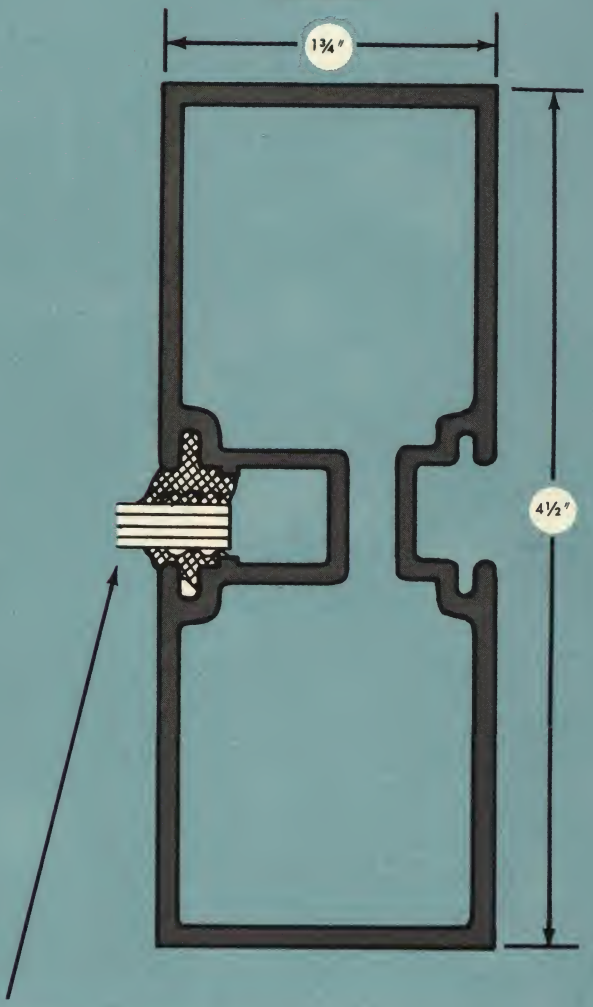
KAWNEER

KAWNEER narrow line

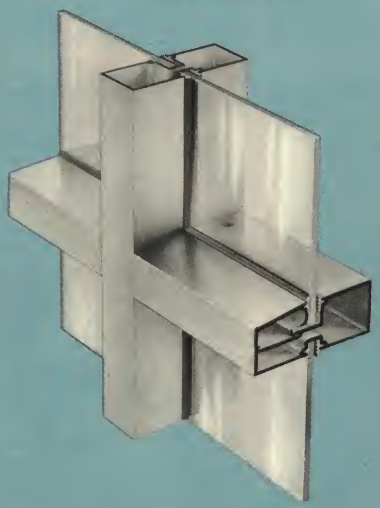
THE COMPLETE STOCK ENTRANCE PACKAGE FROM ONE SOURCE

Now Kawneer provides this most important innovation in todays entrances. It is now possible to specify the complete entrance – all aluminum, Narrow Line door, frame and concealed overhead closer – by Kawneer and installed by your Kawneer Installing Dealer. This assures you of undivided responsibility.

FRAMES



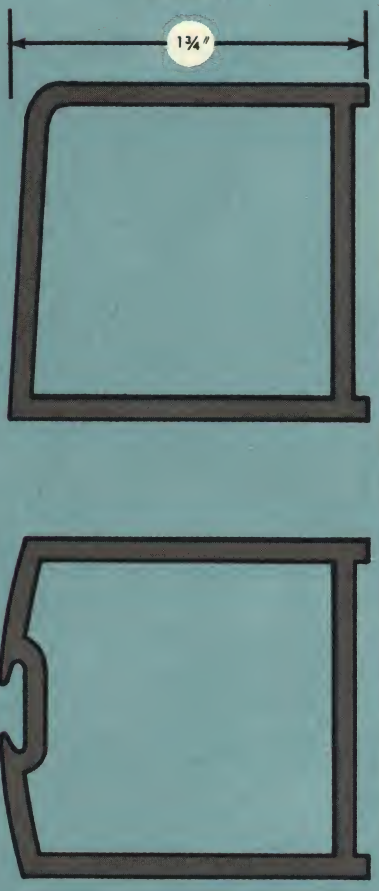
FLUSH GLAZING

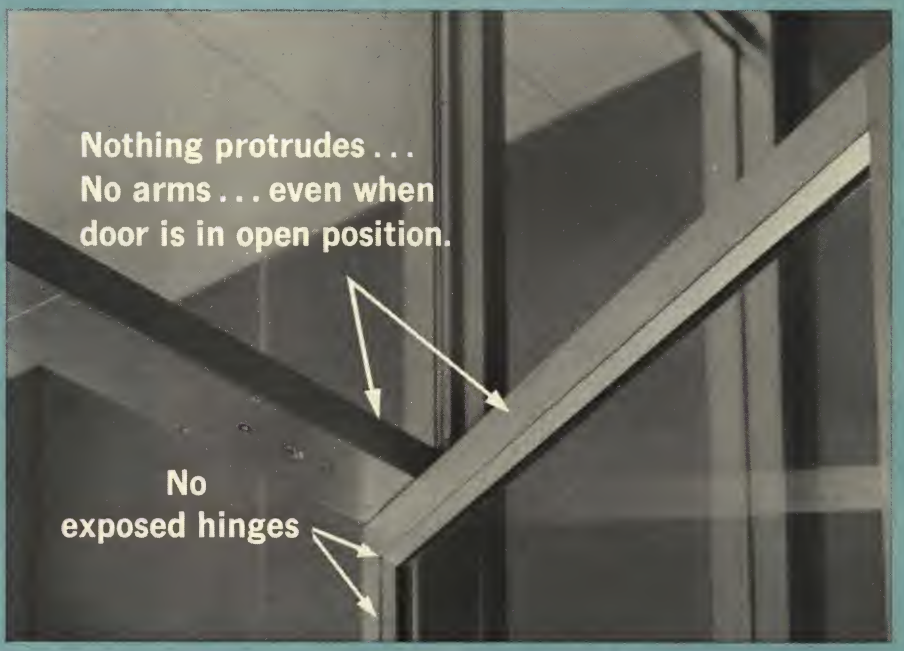


Simple design provides true flush glazing and clean modern appearance pleasing to the eye. Resilient dry glazing throughout.

Copyright 1959 Kawneer Company

DOORS with EXCLUSIVE KAWNEER *concealed* overhead closer





First entrance with a totally concealed overhead closer!

You can't see it, you can't find it. It's completely concealed . . . not on the door or in the floor, but *inside* the transom bar. (See page 10.)

PLUS YOUR SELECTION OF CUSTOM HARDWARE ON A STOCK DOOR

Maximum Security Locks

The exclusive Maximum Security dead lock makes Kawneer doors more secure than ordinary narrow stile doors.
The exclusive full length weathering helps eliminate drafts and heat loss in cold weather . . . seals in air conditioned air during hot summer months.

Push Bars and Pull Handles

Identification Hardware:
To highlight your entrance and to give the personalized touch, Kawneer offers a wide range of push-pull hardware options for your selection. (See pages 20 and 23.)

OTHER ENTRANCE TYPES

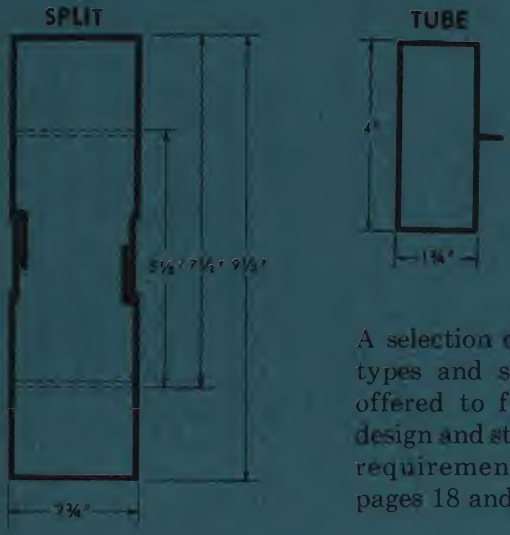
CONTINENTAL HARDWARE

The rich black push-pull grips featured with Continental hardware add a look of elegance to Kawneer's narrow or wide stile doors. (See page 23.)

COLORWARE

Narrow line doors may be accented with colorful push-pulls and glass stops. (See page 23.)

OPTIONAL FRAMES



A selection of frame types and sizes are offered to fill your design and structural requirements. (See pages 18 and 19.)

AUTOMATIC

A totally new concept in automatic entrance design, operation and installation.

For the first time you can specify an automatic entrance with an electric operating mechanism engineered for use with the door it operates. (See pages 14 and 15.)

WIDE STILE

For jobs requiring a more massive and bold design the Kawneer wide stile door is a logical selection. Entrances for institutional, educational or monumental building types requiring special hardware application can best be handled by this exceptionally rugged yet proportionately styled door. (See pages 16 and 17.)

PANEL

The Kawneer Panel Door offers unlimited color and design opportunities. Design it in *your* choice of colors with *your* choice of cutout arrangements. The basic door is the Kawneer deep weld narrow line door. The wide stile door may also be used. (See page 19.)

PANIC

Underwriter's Laboratory listed—the rugged Kawneer Concealed Panic Device can be your solution to clean design to handle heavy school or public building traffic. Engineered and designed specifically for Kawneer doors. (See page 22.)

narrow line ENTRANCES 6 - 15

Flushed Glazed Entrance Walls 6 - 7
Wind Limitations 8
Specifications 9
Stock Entrances 10 - 13
Automatic Entrances 14 - 15
Wide Stile Entrances 16 - 17

Optional Frames 18 - 19

Panel Doors 19

Hardware Selection
- stock hardware 20 - 21
- panic device 22
- colorware 23
- continental hardware 23

District Offices 24

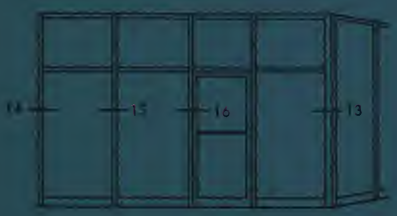
FLUSH GLAZED ENTRANCE WALLS

DETAILS ¼-SIZE
(3″ = 1′-0″)

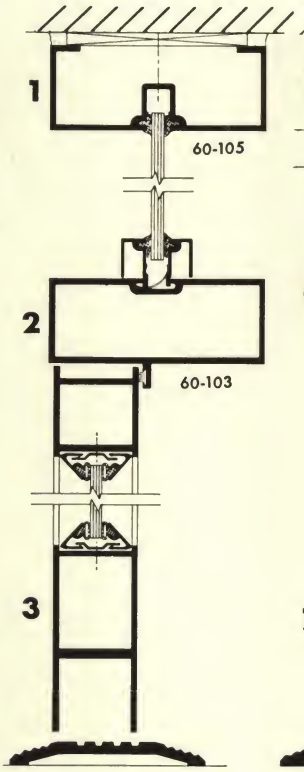
Developed in answer to architect demands for clean unencumbered lines – Kawneer Narrow Line Framing System.

This system is ideally suited for single story curtain wall and entrance walls where economy must be achieved without sacrificing architectural standards of quality.

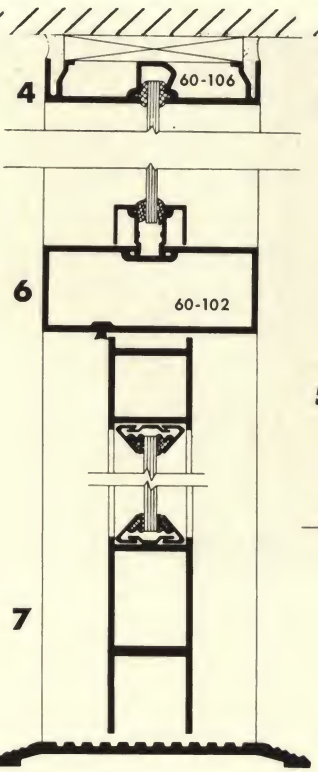
Narrow Line is Kawneer's standard framing.



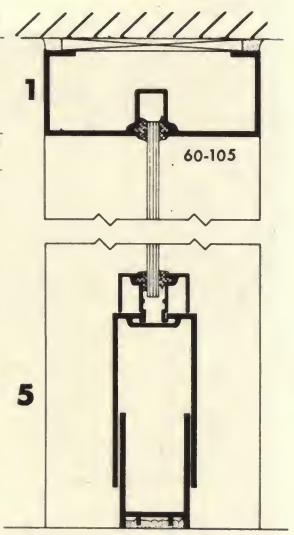
single acting

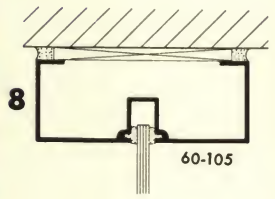


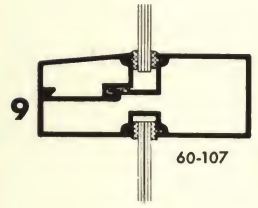
double acting

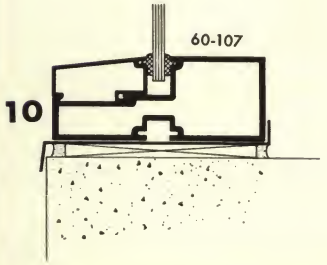


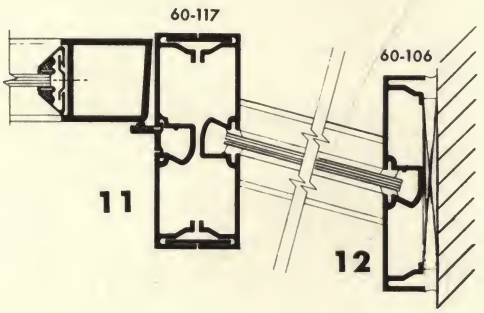
side light base

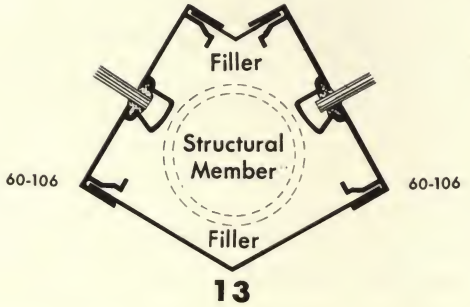


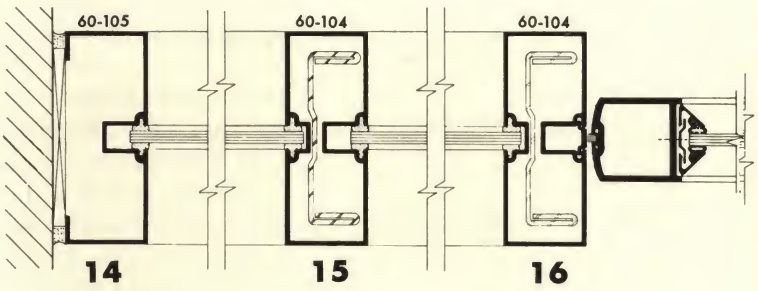


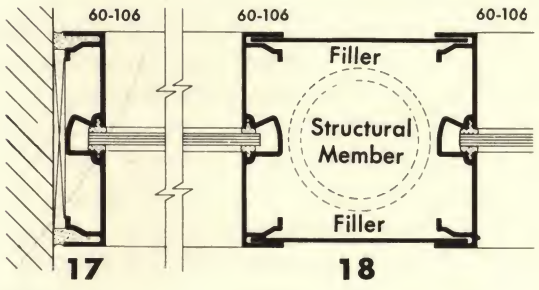


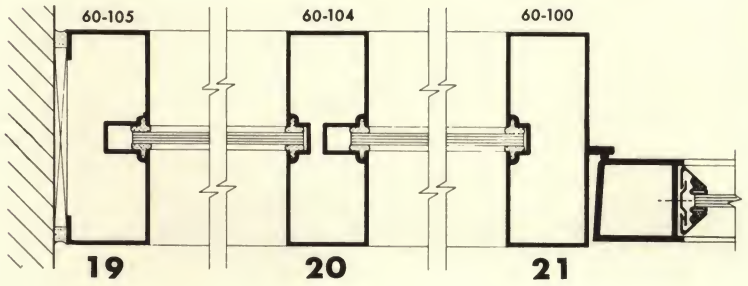


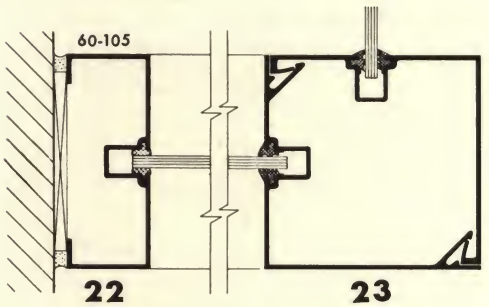


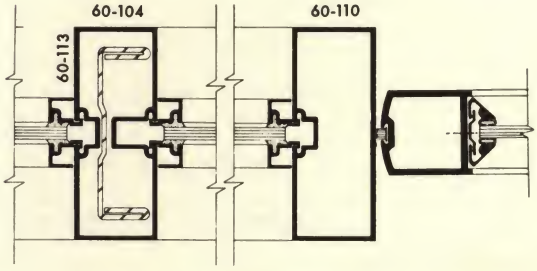




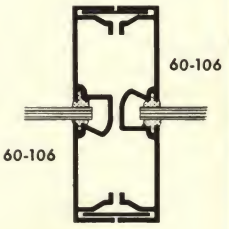




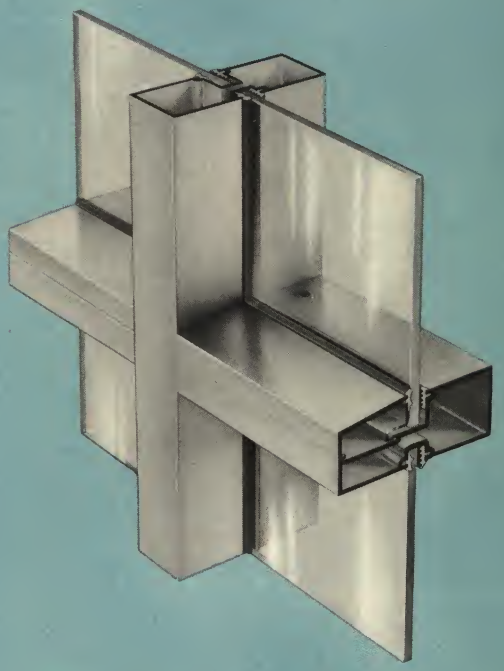




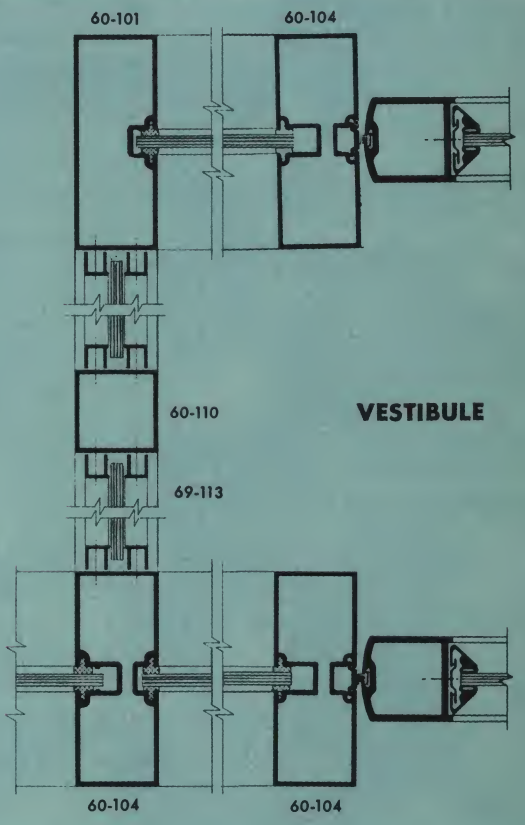
GLASS STOPS OPTIONAL WITH PUTTY OR VINYL GLAZING



EXPANSION JOINT USE APPROX. EVERY 30′

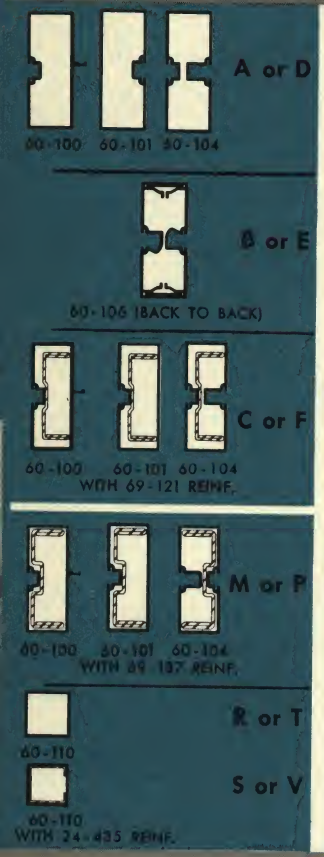


The photo illustrates the flush glazed cleanliness possible with narrow line framing. Note the beveled exterior horizontal stop to keep the weather outdoors.



WIND LIMITATIONS

VERTICAL—Mullion spacing vs glass heights



Verticals with Intermediate Horizontals

1. Select vertical member and use Chart No. 1.
2. Select horizontal and use Chart No. 3, 4 or 5 to verify.

Verticals without Horizontals

1. Select vertical member and use Chart No. 2.

CHART 1 USED VERTICALLY WITH INTERMEDIATE HORIZONTALS

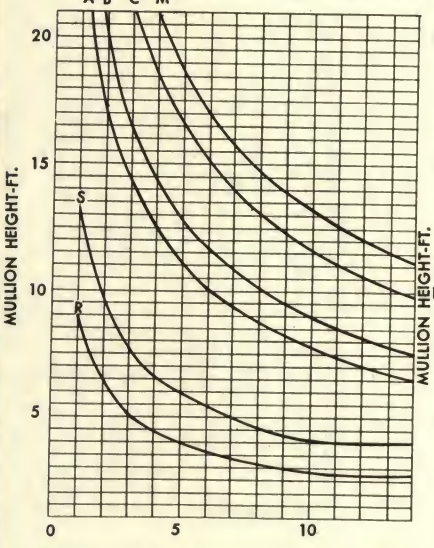
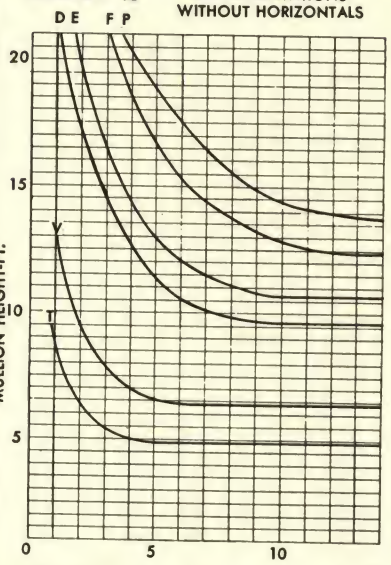


CHART 2 VERTICAL LIMITATIONS WITHOUT HORIZONTALS



NOTES:

Curves based upon 15 lb. per sq. ft. or 65 mph wind-load. Curves for horizontal members are based on ¼" plate glass supported at the quarter points, with ⅛" allowable deflection at the midpoint.

Curves for vertical members are based on the allowable stress.

HORIZONTAL—horizontal span vs glass height and deflection

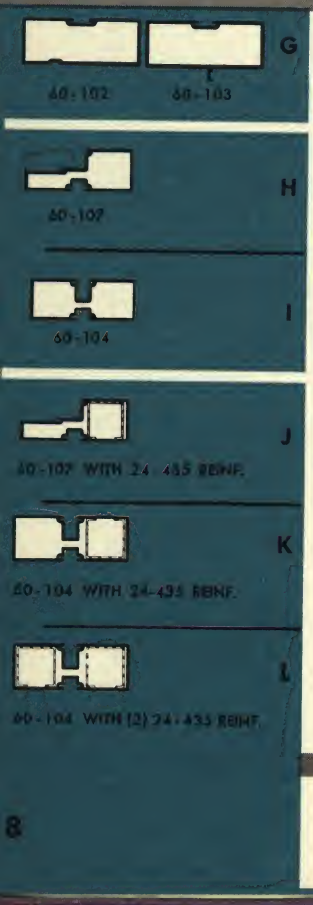
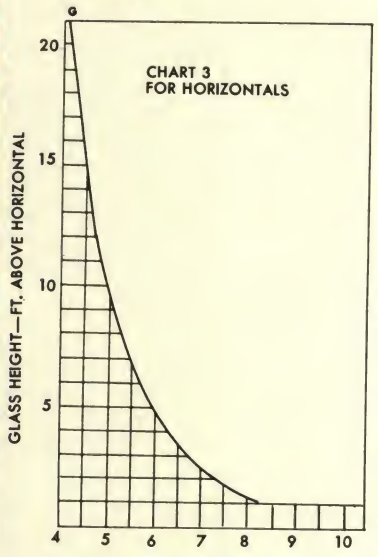


CHART 3



Transom bar deflection allowance 1/16"

CHART 4

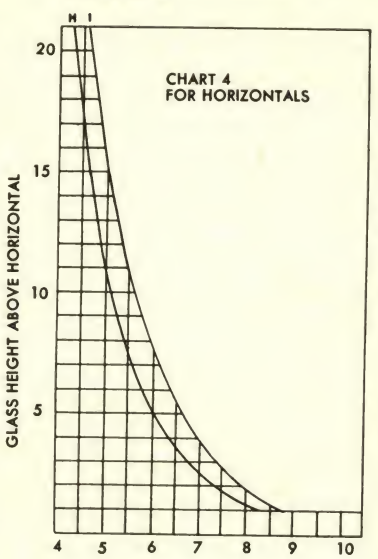
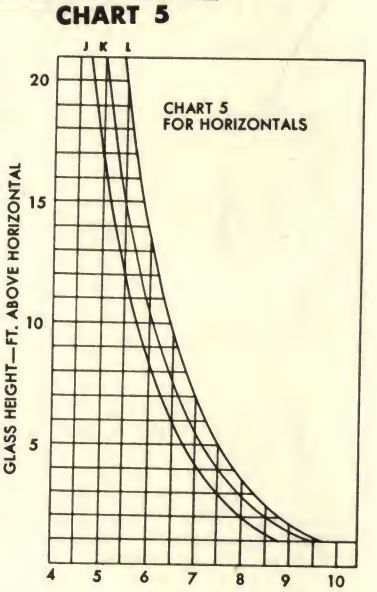


CHART 5



Horizontal deflection allowance ⅛".

For horizontals located over doors take ½ of height for a given span based on maximum deflection of 1/16".

SPECIFICATIONS—for glazed entrance walls

1. GENERAL CONDITIONS:
The general conditions of the contract for the construction of buildings, standard form of the American Institute of Architects and the supplementary general conditions are part of this specification.

2. SCOPE:
Furnish labor, material and other services to complete the fabrication and installation of Narrow Line Flush Glazing System and accessory systems as shown on the drawings.

3. WORK REQUIRED:
Aluminum Narrow Line System and related items shall be as manufactured by the Kawneer Company, Niles, Michigan; Richmond, California; and Toronto, Ontario, Canada.

4. WORK NOT INCLUDED:
Glass and glazing will be done under "Glass and Glazing Section" of these specifications.

5. MATERIALS:
Sections shall be extruded from 6063-T5 aluminum alloy (A.S.T.M., B221-54T alloy GS10A-T5).
Sections shall be formed true to details with clean, straight, sharply defined profiles, and free from defects impairing strength or durability.
Major portions of the framing extrusions shall be not less than .093″ in thickness and glazing moldings shall be not less than .060″ thick. In all cases, the above shall fall within commercial tolerances.
Screws, nuts, washers, bolts, rivets, clips and other miscellaneous fastening devices shall be of aluminum, stainless steel or other corrosive resistant materials.
Vinyl used for glazing shall be light gray in color and closely match the extruded aluminum in color.

6. WORKMANSHIP:
Aluminum Narrow Line shall be so fabricated that when field assembled, joints will be accurately fitted and securely joined to make a tightly closed joint.

7. FINISH:
All exposed materials specified in this Section shall be polished to a mirror-like surface, free from defects, or other surface blemishes and shall be given an anodic oxide treatment in accordance with Alcoa Specification "Alumilite 204A1 R1." (30 minute).
Samples of finish shall be submitted for approval by the architect.

8. SHOP DRAWINGS:
Before executing any of the work in the contract, if requested by the architect, this contractor shall prepare and submit complete shop drawings, in triplicate, for approval.

9. PREPARATION FOR ERECTION:
Where aluminum is to be placed in contact with steel, concrete, cinder block, tile, plaster or other similar masonry construction, the aluminum shall be back painted before erection with an approved bituminous paint.

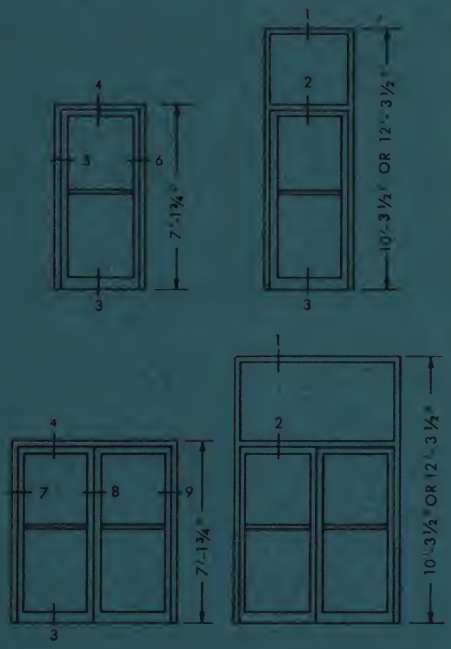
10. ERECTION:
All items under this heading shall be installed in prepared openings to be set plumb, square, level and at their proper elevation and plane and located in proper alignment with all work, according to the manufacturer's recommended installation instructions. All members shall be securely anchored.
No applied glass stops shall be permissible except at the transom bar above an entrance unit. Exposed screws to fasten these glass stops in place are not permitted. All glazing shall be flush including the horizontal muntins and sill. The sill and horizontal members shall have a snap-in face member that slopes to the exterior to provide adequate run-off of water.
Butt joints of horizontal and vertical members shall be made with one piece contour type clips with sufficient area to apply mastic to give the best watertight joint.
Glass shall be held in place with two vinyl glazing members. One will be prefixed in position in the flush glazing pocket, the other to be rolled in place after the glass is installed to provide a watertight, resilient type setting.
An expansion mullion shall be provided for every 20 lineal feet of continuous glass area.
All joints between the metal and masonry shall be fully caulked in order to secure a watertight job. Joints shall be neatly pointed and excess material removed.
After erection, the General Contractor shall adequately protect all exposed portions of the alumilited parts from damage by grinding and polishing machines, plaster, lime, acid, cement or other harmful compounds.

11. CLEANING:
The General Contractor shall be responsible for removal of protective materials and cleaning of aluminum.
All aluminum shall be thoroughly cleaned with plain water or a petroleum product such as white gasoline, kerosene or distillate. No abrasive cleaning agents shall be used. The General Contractor shall be held responsible for damages resulting from the use of other cleaning materials.
NOTE: See separate additional specifications for Entrances, Color Wall, etc. to be used in conjunction with this system.

STOCK ENTRANCES with concealed overhead closer

The new Kawneer Entrance – door, frame and *new* concealed overhead closer – all in one package, satisfies practically all functional requirements. Because it is center hung, the one door can be used either double or single acting, swinging right or left.

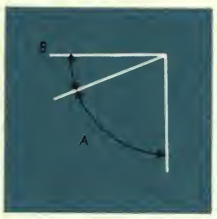
All this for the price of a conventional single acting door.



Entranceways of true architectural beauty. Nothing projects out or down to clash with crisp, orderly design. There are no surface mounted checking mechanisms to detract from the sleek simplicity of classic "narrow line" construction. No jutting arms, exposed offset pivots or conventional butt hinges.

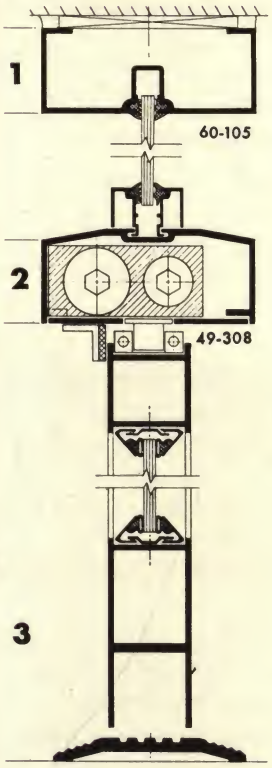
Speed adjustments are easy.

Built-in hold-open feature.

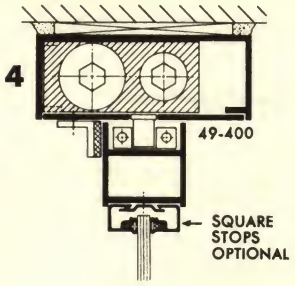


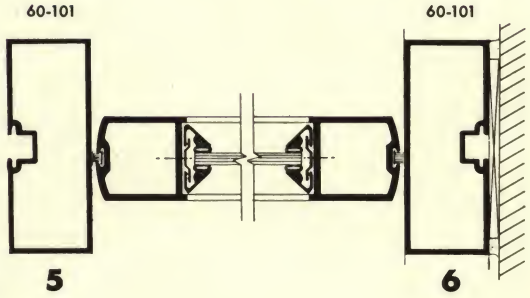
Although combined spring and hydraulic operation, the checking mechanism of the Kawneer closer has independent adjustments for (a) closing speed and (b) latching (dampening) speed. It also has a special spring tension adjustment – independent of the hydraulic action of the other two speeds – for severe wind conditions.

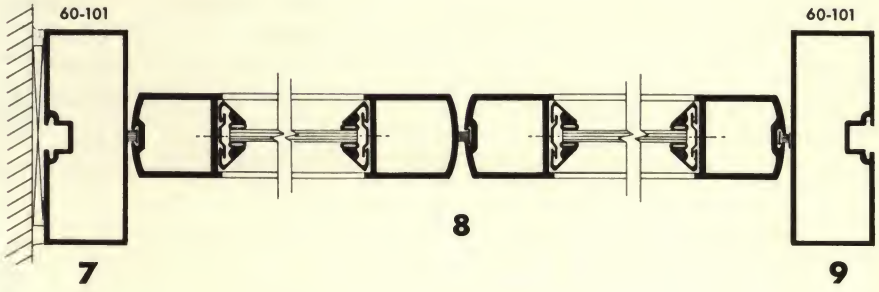
Door has either 90° or 105° hold-open that holds door open automatically, without special adjustments in head jamb or rail. Also available without hold-open.

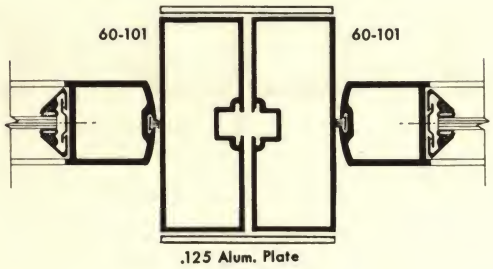


DETAILS ¼-SIZE
(3″ = 1′-0″)



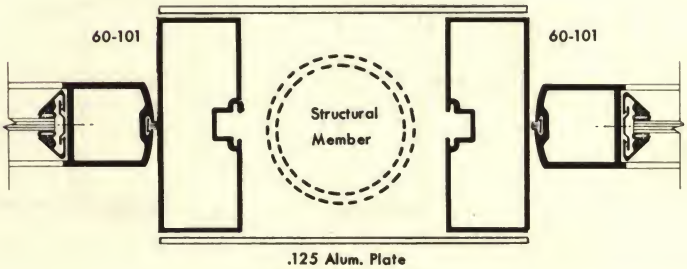






.125 Alum. Plate

MULLION



.125 Alum. Plate

STRUCTURAL MULLION

HARDWARE ON SINGLE DOOR INSTALLATION

1. (2) push bars—Style A, B, C, D, M, K or G
2. 1⅝₃₂″ cylinder deadbolt MS lock
3. Threshold
4. Bottom center pivot
5. Concealed Overhead closer (See Schedule below)
6. Weathered pile on vertical stiles
7. Door stop on frame for single acting door

HARDWARE ON PAIR OF DOORS INSTALLATION

1. (4) Push bars—Style A, B, C, M, K or G
2. 1⅝₃₂″ cylinder deadbolt MS lock
3. Threshold
4. (2) Bottom center pivots
5. (2) Concealed Overhead Closers (See Schedule below)
6. Pair flush bolts
7. Weathered pile on vertical stiles.
8. Door stops on frame for single acting door

FOR STANDARD OR OPTIONAL HARDWARE SEE PAGES 20-23

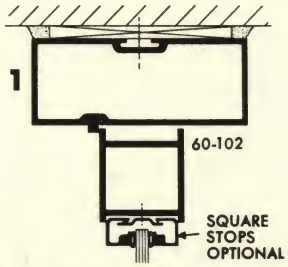
Closer Schedule

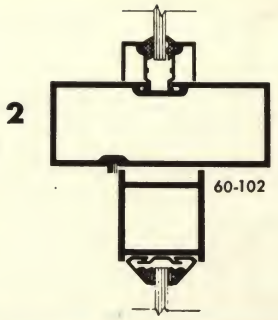
Door Opening Size	Frame Size	Masonry Opening Size	Overhead Concealed Closer Type and Number
5′0″ x 7′0″	5′3½″ x 7′1¾″	5′4″ x 7′2″	No hold-open 624 90° hold-open 625 105° hold-open 626
6′0″ x 7′0″	6′3½″ x 7′1¾″	6′4″ x 7′2″	No hold-open 627 90° hold-open 628 105° hold-open 629
3′0″ x 7′0″	3′3½″ x 7′1¾″	3′4″ x 7′2″	No hold-open 627 90° hold-open 628 105° hold-open 629
3′6″ x 7′0″	3′9½″ x 7′1¾″	3′10″ x 7′2″	No hold-open 630 90° hold-open 631 105° hold-open 632
Special Door Widths over 3′6″ to 4′0″ max.			No hold-open 633 90° hold-open 634 105° hold-open 635
	Also 10′3½″ and 12′3½″ heights	Also 10′3¾″ and 12′3¾″ heights	

STOCK ENTRANCES—with surface or floor closer

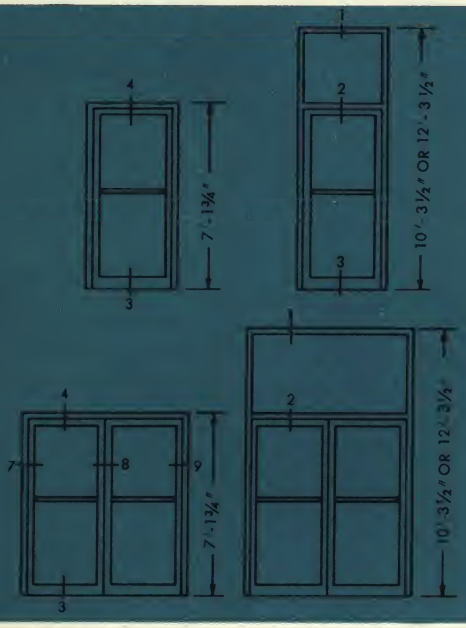
Double Acting

For other Double Acting Sections refer to page 11.





DETAILS ¼-SIZE (3″ = 1′-0″)



HARDWARE ON SINGLE DOOR INSTALLATION

*1. Push bar—Style A, B, C, D, M, K or G
2. Pull handle—Style A, B, C, D, M, K or G
3. 1⅝₂″ cylinder deadbolt MS lock
4. Threshold
*5. Offset pivot or butt hinges
6. Floor or overhead closer (Hold open feature optional)

*For double acting door, use (2) push bars and top center pivot.

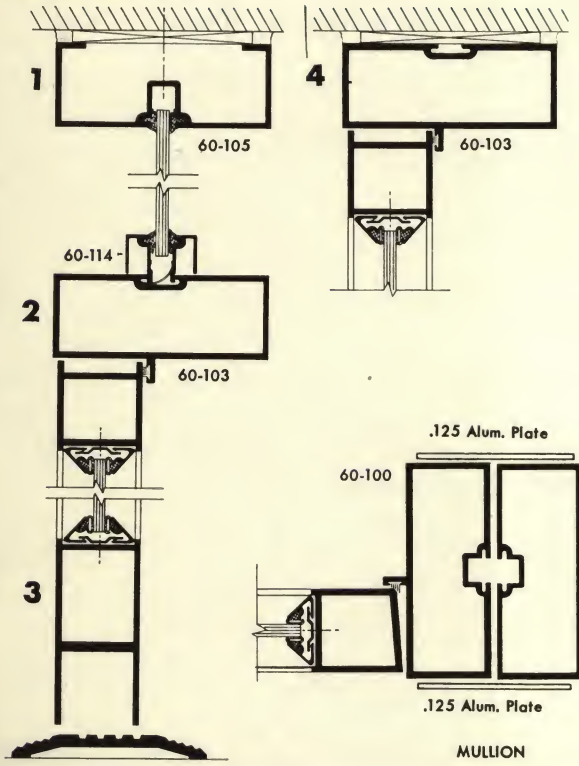
HARDWARE ON PAIR OF DOORS INSTALLATION

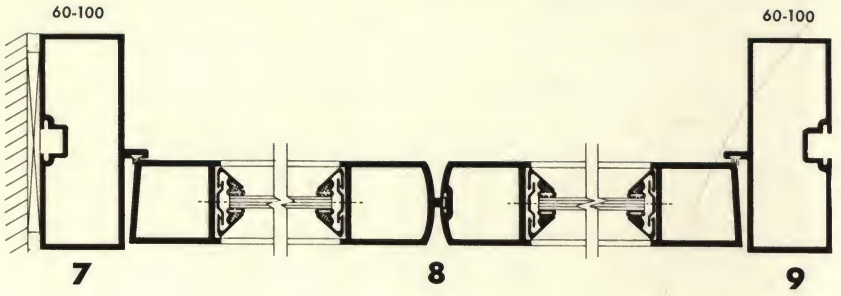
*1. (2) Push bars—Style A, B, C, D, M, K or G
2. (2) Pull Handles—Style A, B, C, D, M, K or G
3. 1⅝₂″ cylinder deadbolt MS lock
4. Threshold
*5. Offset pivots or butt hinges
6. (2) Floor or overhead closers (Hold open feature optional)
7. Pair flush bolts
8. Weathering pile for meeting stiles

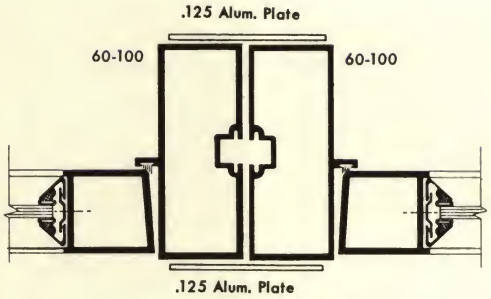
*For double acting doors use (4) push bars and (2) top center pivots.

For standard and Optional Hardware See Page 20-23

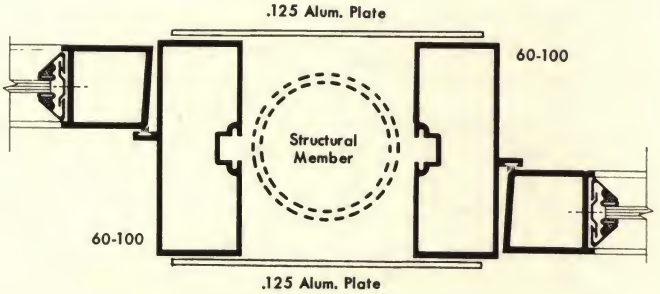
Single Acting







MULLION



STRUCTURAL MULLION

SPECIFICATION—narrow line stock entrances

NOTE: The following items shall be added to the General Specifications for Narrow Line on Page 9.

3. WORK REQUIRED:

Aluminum narrow line entrance doors, frames, transoms, side lights, trim moldings and other related items, shall be as manufactured by Kawneer Company, Niles, Michigan; Richmond, California; and Toronto, Ontario, Canada.

5. MATERIALS:

Major portions of the door stiles shall be not less than .125″ in thickness with door glazing moldings not less than .050″ thick. Transom bars shall be not less than .125″.

6. WORKMANSHIP:

Corners of doors shall be accurately joined and fitted to flush hairline joints, and welded along the concealed lines of contact. All welding shall be on unexposed sides in order to prevent pitting, discoloration, weld halo or other surface imperfections after finishing.

The weld shall thoroughly penetrate the material and produce a complete fusion of metal between stiles and rails. Mechanically joined corners, or those developed by tie rods or superficial surface welding shall not be permitted.

Bottom rail of door shall be a single extruded section, joined and fitted to a flush hairline joint and welded along the concealed lines of contact.

Glazing stops for doors shall be a snap-in type with neoprene bulb-type glazing and no exposed screws shall be required to secure them in place. Stops on exterior side shall be a lock-in tamperproof type.

Each door leaf shall be equipped with an adjusting mechanism located in the top rail near the lock stile which will provide for minor clearance adjustments after installation.

Entrances shall be weatherstripped on three sides and at meeting rails of pairs with metal backed pile cloth installed in the door and/or frame. The bottom of the entrance may also be weathered by applying a vinyl sweep strip to the door.

All cutouts, recesses, mortising or milling operations required for hardware shall be accurately made and reinforced with backing plates as required to insure adequate strength of the connection.

Doors and operating transoms shall be accurately fitted to the frames.

10. ERECTION:

After erection and glazing, this Contractor shall check and readjust as required all items of operating hardware on doors installed under this Section.

12. HARDWARE:

Hardware for aluminum entrances shall be furnished by the door manufacturer.

Finish of hardware shall closely match the finish of the doors.

Doors shall be equipped with the door manufacturer's standard items of hardware as follows:

NOTE: Select items of hardware from this Catalog (Pages 11, 12, 14, 17, 20, 21, 22, 23) and list here by name and number.

(Additional Specification for Kawneer Concealed Overhead Closer)

The completely concealed double acting overhead closer shall be as manufactured by Kawneer Company. The closer shall be of rack and pinion construction with fully enclosed spring. It is available with built-in hold-open device at 90° or 105° (specify degree) or with no hold-open. Applied hold-open devices will not be acceptable.

Door closer shall have a positive adjustable two-speed closing action easily regulated after installation. Spring adjustment where required shall be accessible after installation. The proper sized closer shall be furnished for each door according to the schedule (specify type and size), and installed in strict accordance with manufacturer's recommendations.

NOTE: If single acting operation is desired, a door stop will be applied to the frame.

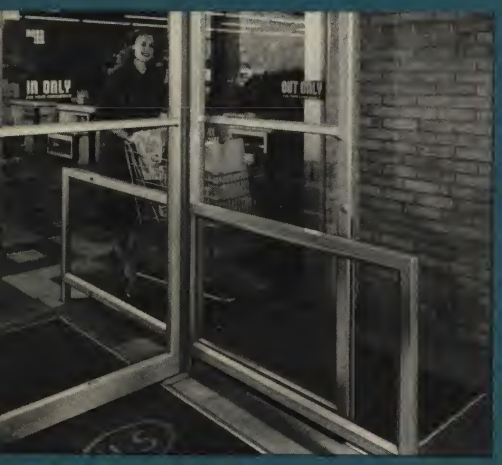
12a. Alternate HARDWARE Clause:

Hardware for aluminum entrances is specified under "Hardware Section" of the Specifications, and shall be furnished to the door manufacturer for installation at the factory. Templates of all hardware shall be furnished to the door manufacturer by the Hardware Contractor. Hardware manufacturer shall assume responsibility for correctness of templates if door manufacturer is to fabricate from hardware template.

AUTOMATIC ENTRANCES

Here is the first automatic entrance that comes as a complete package . . . ready to install, and offering the following quality features:

- electrically controlled
- trim appearance – entire unit concealed in transom bar
- quiet operation
- safety features
  - Protector frame
  - Panic break-a-way
- easily serviced by the authorized Kawneer dealer



STANDARD TYPES

TYPE 2

TYPE 1 (without transom)

TYPE 4

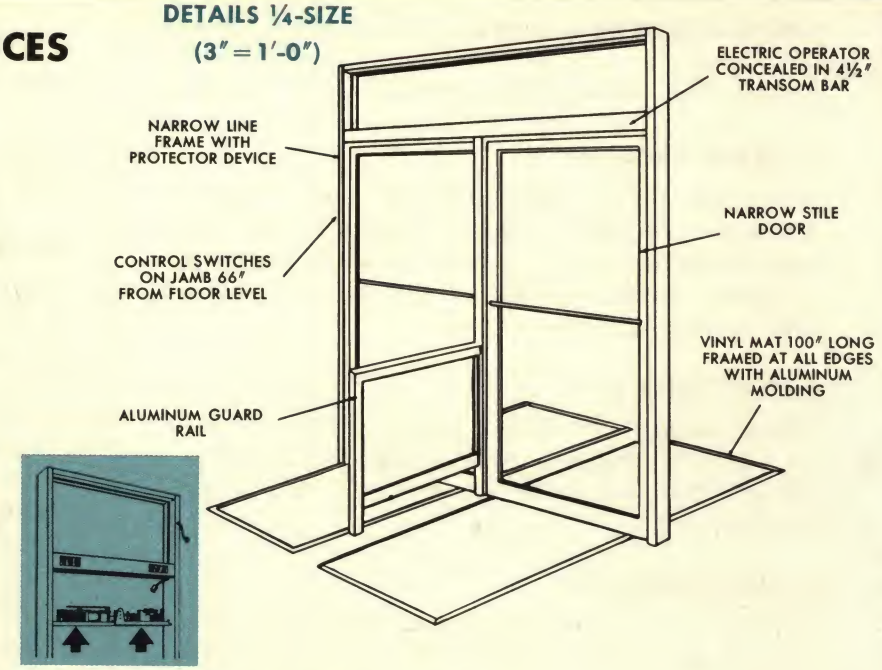
TYPE 3 (without transom)

TYPES 5 AND 6 INCLUDE MANUAL "IN" DOOR AND AUTOMATIC "OUT" DOOR.

TYPE 6

TYPE 5 (without transom)

DETAILS ¼-SIZE
(3″ = 1′-0″)


ELECTRIC OPERATOR CONCEALED IN 4½″ TRANSOM BAR
NARROW LINE FRAME WITH PROTECTOR DEVICE
NARROW STILE DOOR
CONTROL SWITCHES ON JAMB 66″ FROM FLOOR LEVEL
VINYL MAT 100″ LONG FRAMED AT ALL EDGES WITH ALUMINUM MOLDING
ALUMINUM GUARD RAIL

SPECIFICATIONS—Automatic Entrance

NOTE: The following items shall be added to the General Specifications for Narrow Line on Page 9 and Narrow Line Entrance on Page 13.

3. WORK REQUIRED:

The Automatic Entrance unit(s) consisting of Aluminum Narrow Line Door(s) and Frame(s) and Electric Door Operator(s), shall be as manufactured by the Kawneer Company, Niles, Michigan; Richmond, California; and Toronto, Ontario, Canada.

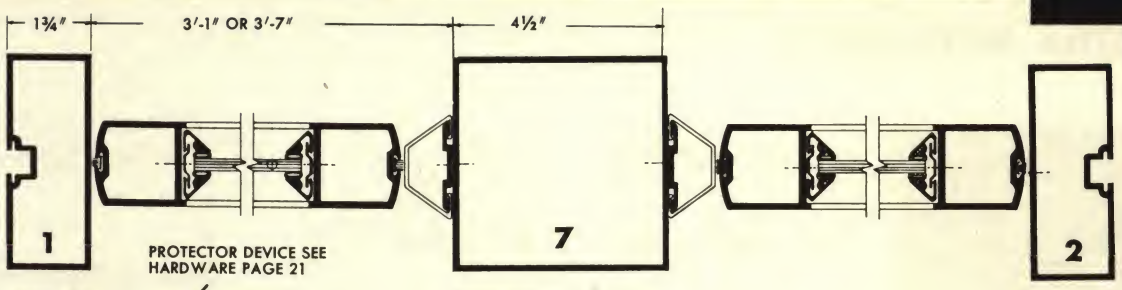
The frame shall contain the operator and all necessary wiring, equipment and switches for the control and operation of the operator. A grounded plug extending from the frame shall be provided for connection to the building electrical system. To prevent finger accidents, a collapsible neoprene protector molding shall be provided on the pivot jamb.

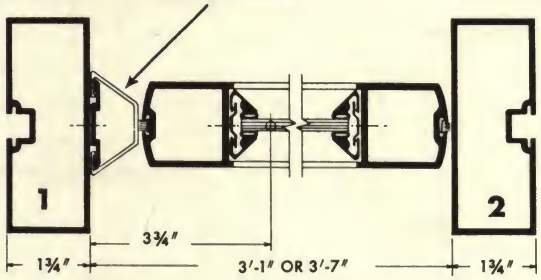
The operating mechanism shall be completely electric with no hydraulic or pneumatic components or attachments and shall be electrically powered in both the opening and closing cycles. The operator shall be completely concealed within the transom bar or frame header and shall require no special floor or structural alterations or preparation. Both entrance and exit doors shall operate in the exit direction with power on or power off. No mechanical or electrical adjustments shall be necessary to restore normal operation after power failure or after operation in the panic exit direction. Three control switches shall be provided in the frame to give: (1) Automatic operation by mat actuation, (2) Positive hold-open at 90° and (3) Normal checking action with manual operation.

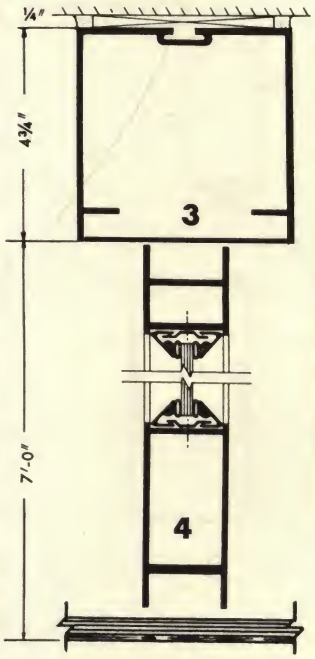
The mat shall be of bonded vinyl construction including an actuating and a safety side.

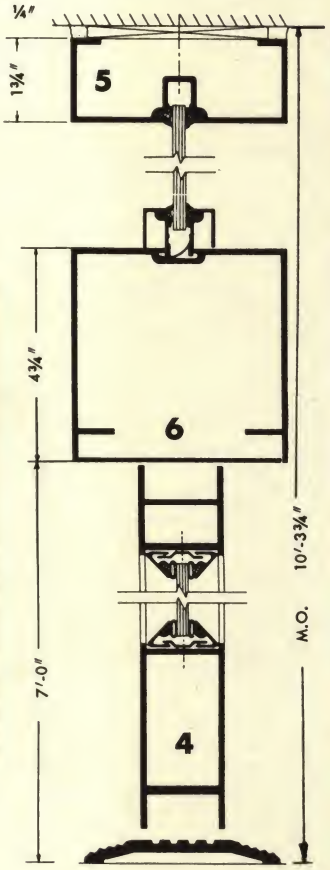
4. WORK NOT INCLUDED:

A three-wire grounding outlet supplying 115 volt 60 cycle alternating current (350 watts per operator) shall be provided by others. This outlet shall be located within eight inches of the frame outlet and to the interior side of the frame.





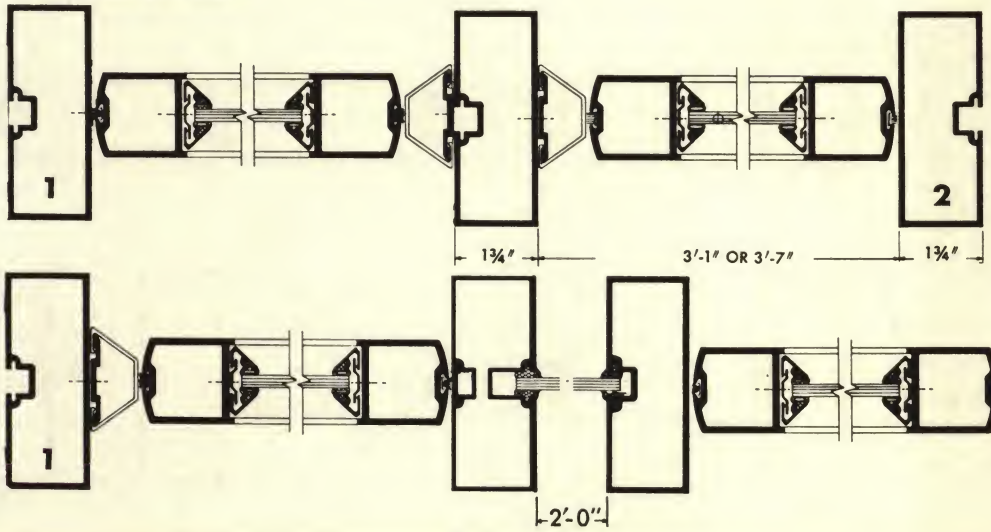




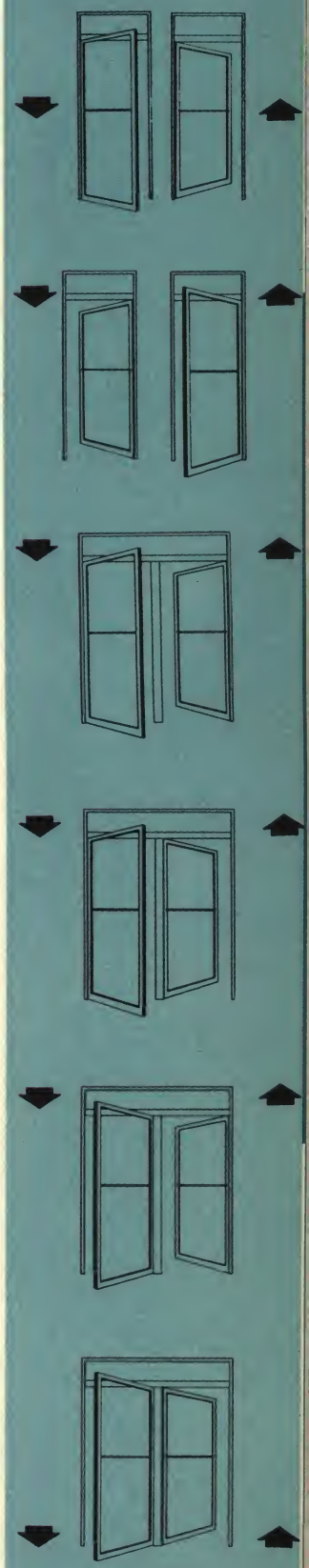
OPTIONAL ACCESSORIES

(A) Store identification face plate, (B) Store identification on vinyl floor mat, (C) Choice of alternate standard guard rails, 1, 2, and 3.

OPTIONAL DETAILS



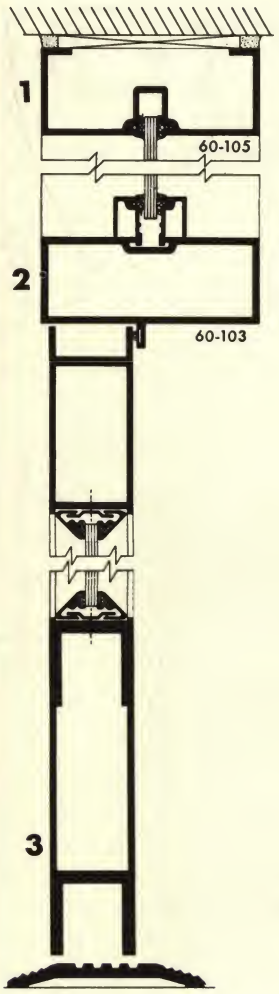
VARIOUS ARRANGEMENTS (INTERIOR VIEW)

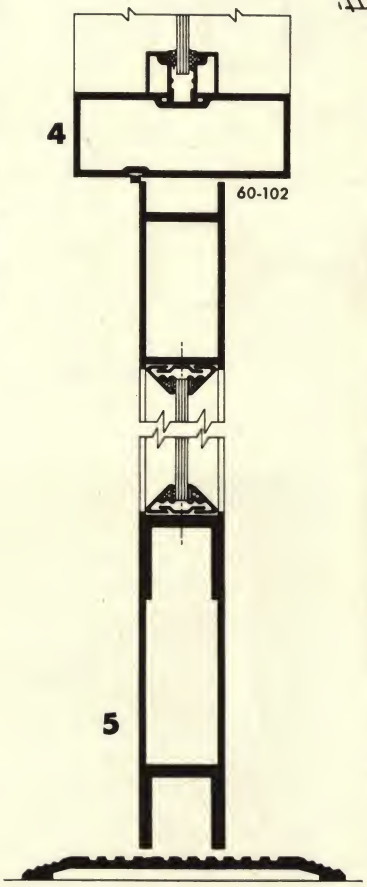


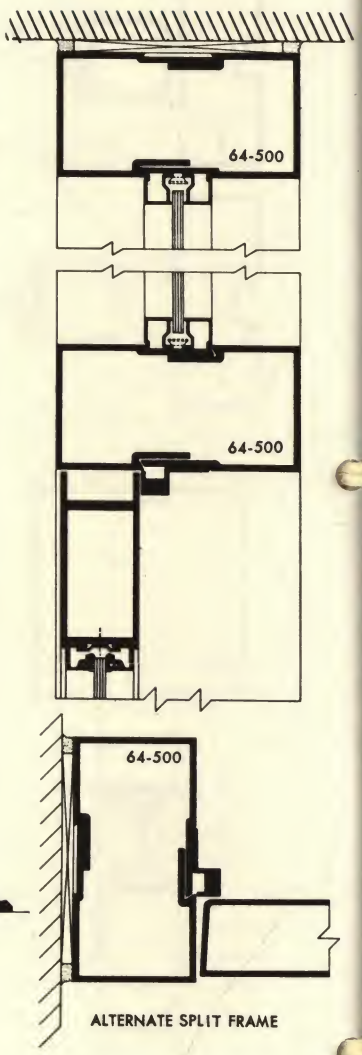
WIDE STILE ENTRANCES

DETAILS ¼-SIZE
(3″ = 1′-0″)

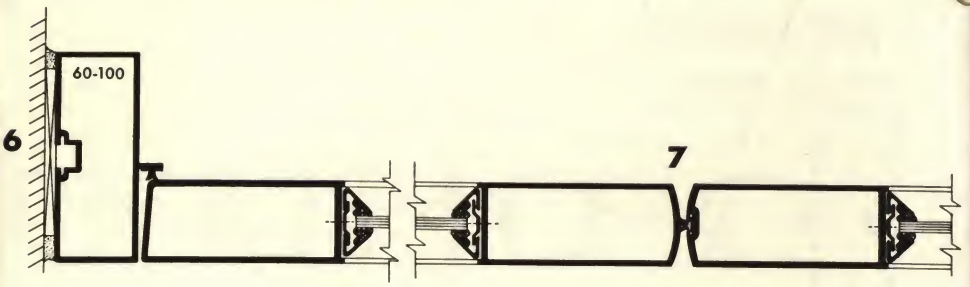
For those school projects which dictate use of an extra heavy duty door specify Kawneer deep weld wide stile doors. Designed for use – engineered to last. The wide stile door will accommodate any panic exit hardware – concealed or surface applied – that is available today.

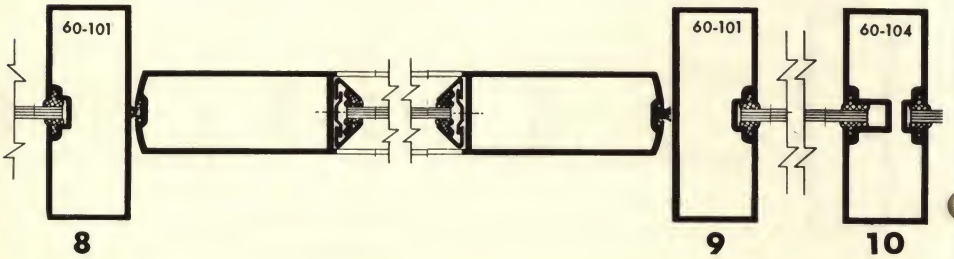






ALTERNATE SPLIT FRAME





SINGLE ACTING

DOUBLE ACTING

SINGLE ACTING

HARDWARE ON SINGLE DOOR INSTALLATION

*1. Push bar—Style A, B, D, M, G or H
2. Pull handle—Style A, B, D, M, G or H
3. 1⅝₃₂" cylinder deadbolt MS lock
4. Threshold
*5. Offset pivot or butt hinges
6. Concealed Overhead, floor or surface overhead closer
(Hold open feature optional)

*For double acting door use (2) push bars and center pivot.

HARDWARE ON PAIR OF DOORS INSTALLATION

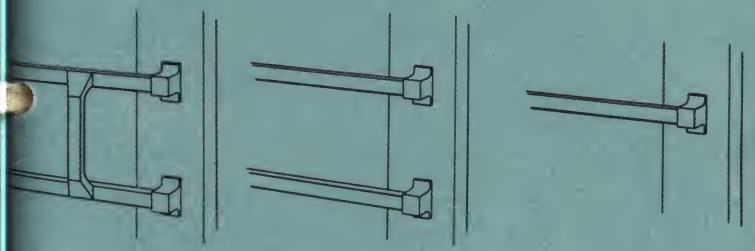
*1. (2) Push bars—Style A, B, D, M, G or H
2. (2) Pull handles—Style A, B, D, M, G or H
3. 1⅝₃₂" cylinder deadbolt MS lock
4. Threshold
*5. Offset Pivots or Butt Hinges
6. (2) Concealed Overhead, Floor or Surface Overhead Closers
(Hold open feature optional)
7. Pair flush bolts
8. Weathered pile on meeting stiles

*For double acting door use (4) push bars and center pivots.

For further selection of standard or optional hardware see Pages 20-23.

FOR FURTHER SELECTION OF STANDARD OR OPTIONAL HARDWARE SEE PGS. 20-23

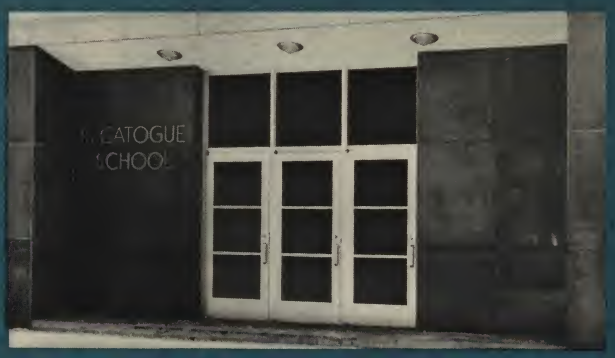
PUSH-PULL BARS



STYLE "H"

37-117 37-131 37-137

The Kawneer Wide Stile Door is ideally suited to the monumental type structure. Whether used in curtain walls or masonry openings, the effect is one of stability and endurance. Whatever your monumental hardware requirements, they may be economically accommodated.



SPECIFICATIONS—Wide Stile Entrances

NOTE: The following item shall be added to General Specifications for Narrow Line on Page 9 and Narrow Line Entrances on Page 13.

3. WORK REQUIRED:

Aluminum wide stile entrance doors, frames, transoms, side lights, trim moldings and other related items, shall be as manufactured by Kawneer Company, Niles, Michigan; Richmond, California; and Toronto, Ontario, Canada.

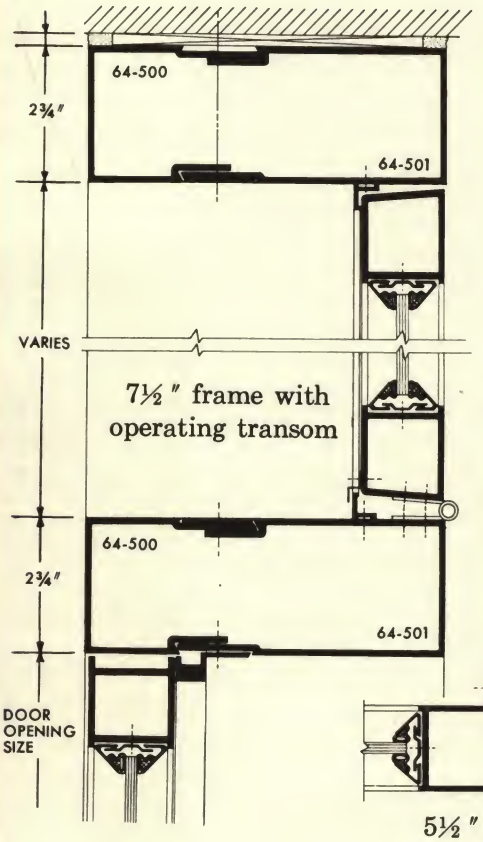
OPTIONAL FRAMES

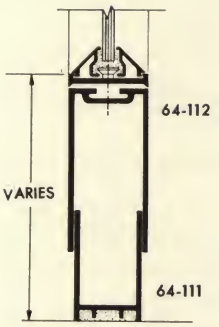
For your projects requiring more massive frames – because of design or structural requirements – Kawneer offers custom split tube sections. Kawneer offers versatility in framing. In addition to the 1¾ x 4½" Narrow Line, you may choose 1¾ x 4" tube or 2¾ x 5½", 7½" or 9½" split tube.

SPLIT TUBE

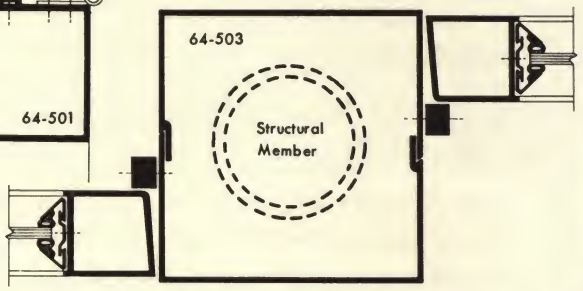
Split Frames 2¾" x 5½", 7½", 9½"

DETAILS ¼-SIZE
(3" = 1'-0")

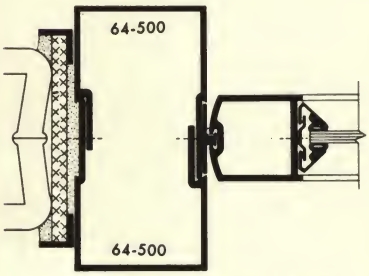




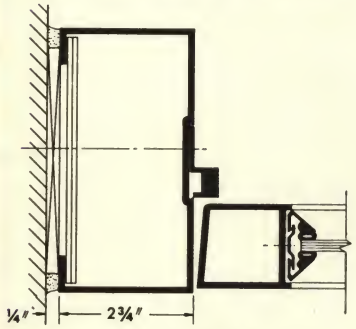
Sidelite Base



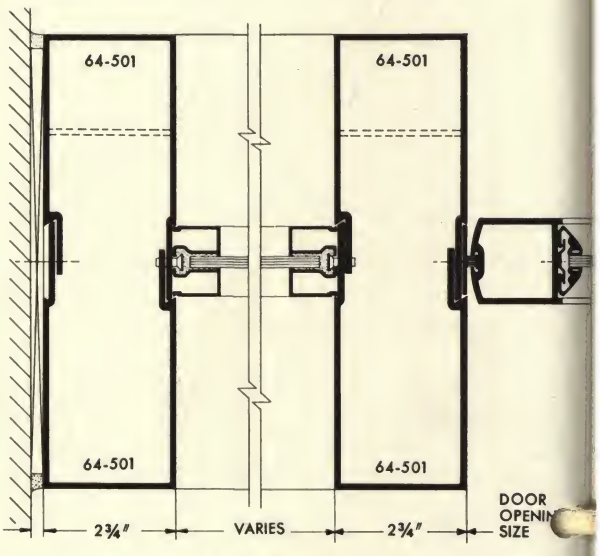
5½" post (for corners or enclosing structural members)



5½" frame at glass block



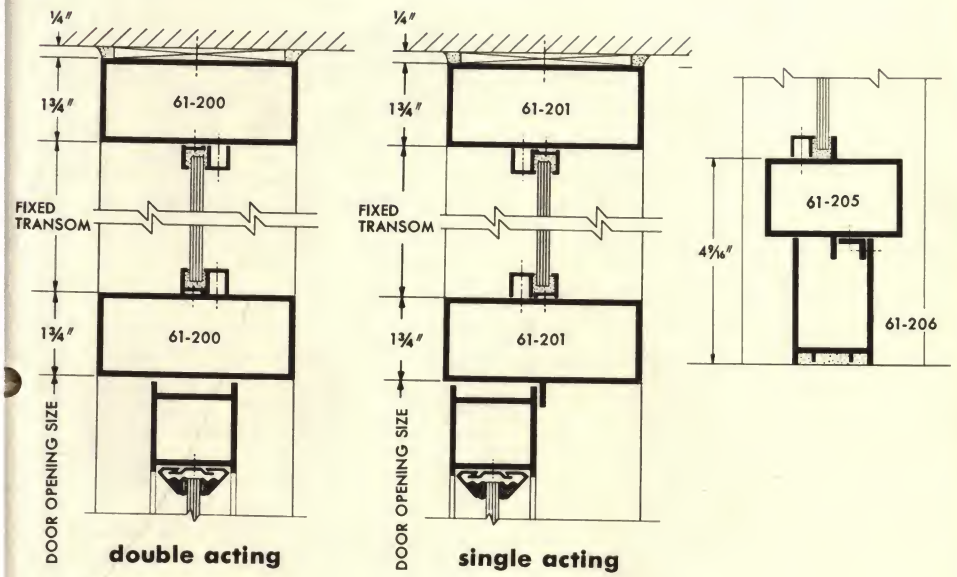
5½" open back frame (use at masonry perimeters)



9½" frame at sidelite

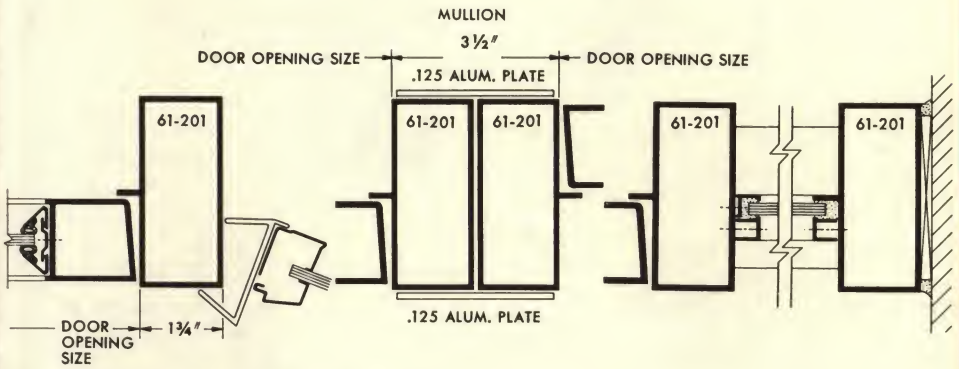
PANEL DOORS

Tube Frames—1¾″ x 4″

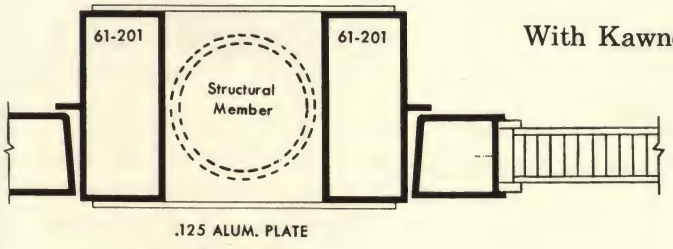


double acting

single acting

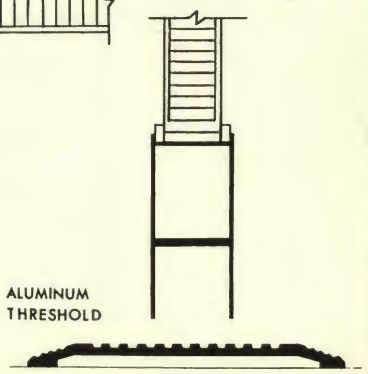


Sash adapter adjustable to required angle



Variable

With Kawneer Panel Doors



Illustrated below are just a few of the many design possibilities afforded by the use of the Kawneer Panel Door.

The panels illustrated may be faced with ribbed aluminum or porcelain on steel.

Narrow stile door hardware must be used.

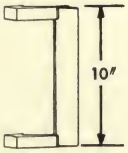
Types of Panels

suggested designs

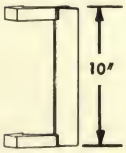
NOTE: The 1″ panel must be used if glass or louver cutouts are required.

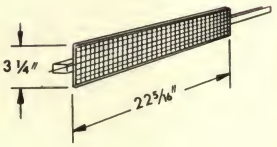
Push and Pull Bars

style "A"

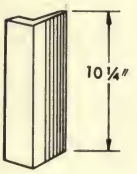


style "B"

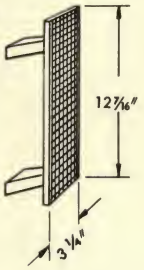


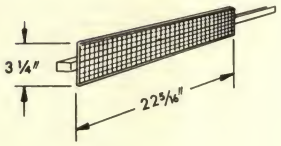


style "C"

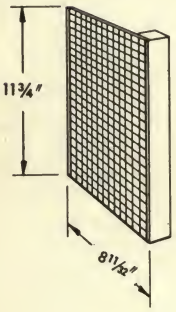


style "D"

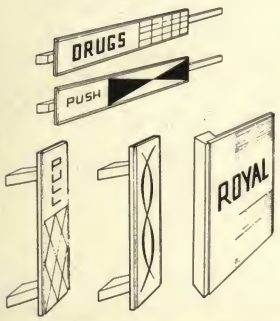


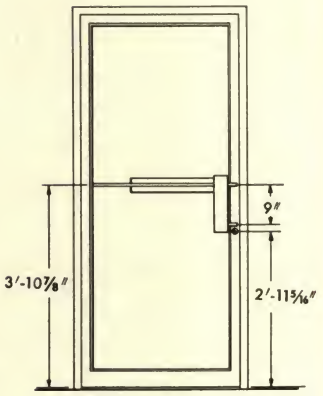


style "M"



identification inserts





Locks, Pivots, Butts, Holders

Locks

MAXIMUM SECURITY LOCK
37-166 LH
37-167 RH
37-168 Round face

THUMBTURN
(For MS lock)
37-176

1 5/32" CYLINDER
(For MS lock)
37-175

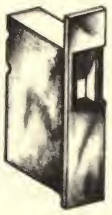
DEAD BOLT LOCK
37-163 Round Face
37-164 RH
37-165 LH

THUMBTURN
(for deadbolt lock 163, 164 and 165)
37-169

1 5/32" CYLINDER
(for deadbolt lock 163, 164 and 165)
37-172

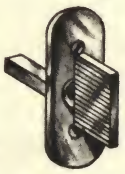
3/4" CYLINDER
DEAD BOLT LOCK
37-141

LATCH LOCK
(1 5/32" CYLINDER)
37-157



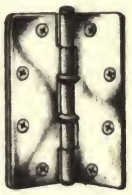
ELECTRIC STRIKE
37-225

ROLLER LATCH
37-219

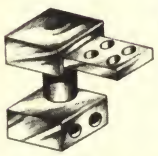


THUMBTURN
47-286

Butt Hinge
37-232



Pivots



TOP OFFSET
FRAME HALF
47-176

DOOR HALF
47-177

INTERMEDIATE
37-233 RH
37-234 LH

BOTTOM OFFSET
DOOR HALF
47-192 RH
47-193 LH

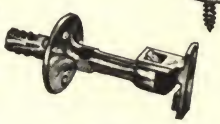
FRAME HALF
37-598 RH
37-599 LH

CENTER HUNG TOP

Flush Bolts and Door Holders

CONCEALED FLUSH BOLT
37-227
Round Face
37-226
Flat Face

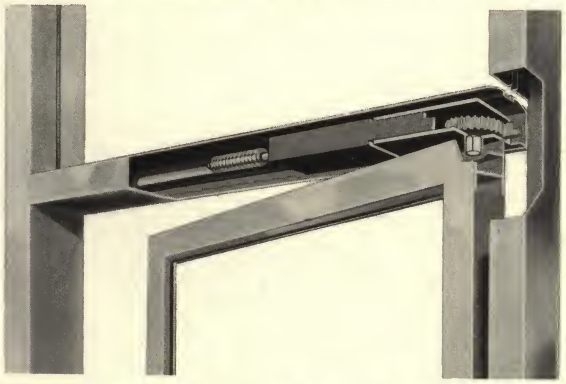
FLOOR TYPE
37-214



WALL TYPE
37-215

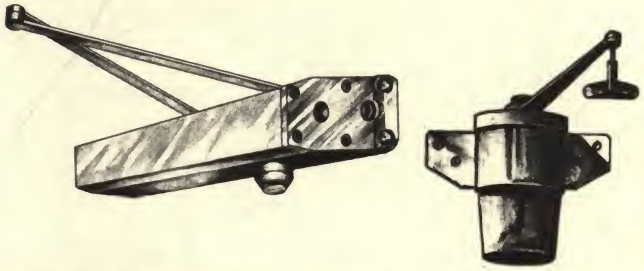
DROP ARM TYPE
37-216

Concealed Overhead Closer



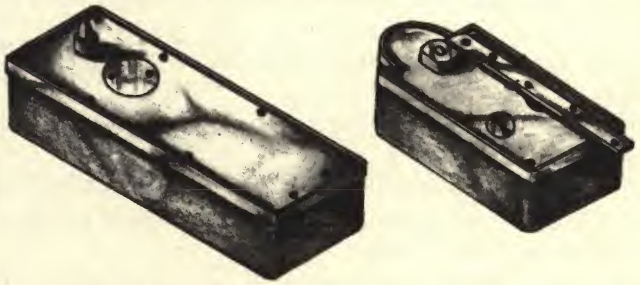
Kawneer's Concealed Overhead Closer is contained entirely within the narrow line (1¾ " high) transom bar and used exclusively with Kawneer doors. See Page 13 for Specifications.

Overhead Door Closer



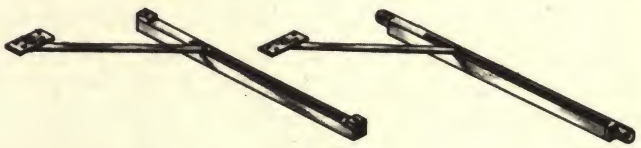
Streamlined and conventional types surface mounted overhead door closers for single acting doors on butt hinges or offset pivots, with or without hold-open feature.

Concealed Floor Closer



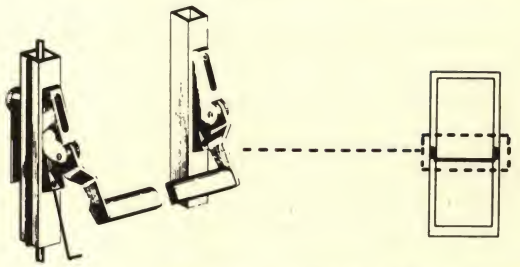
Concealed floor closers, center hung type, for single and double acting doors and offset type for single acting doors, with or without hold-open feature.

Door Holders



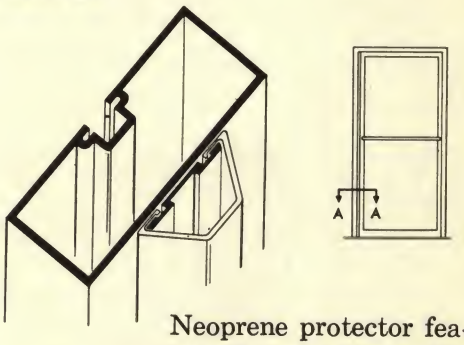
Concealed or surface type auxiliary door holders available.

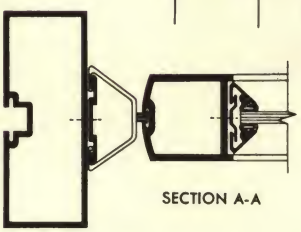
Panic Device



Kawneer Concealed panic exit hardware available on narrow and wide stile doors. See page 22. Surface applied vertical rod or rim types also available.

Protector Device

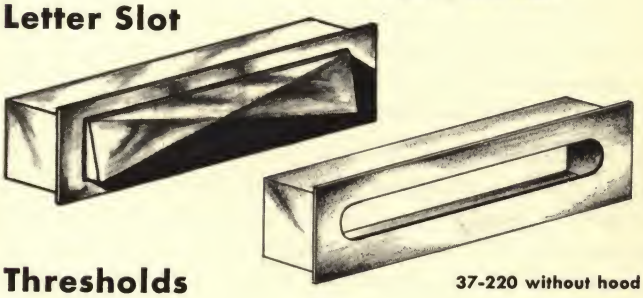




Neoprene protector featured on automatic entrances and stock protector frames.

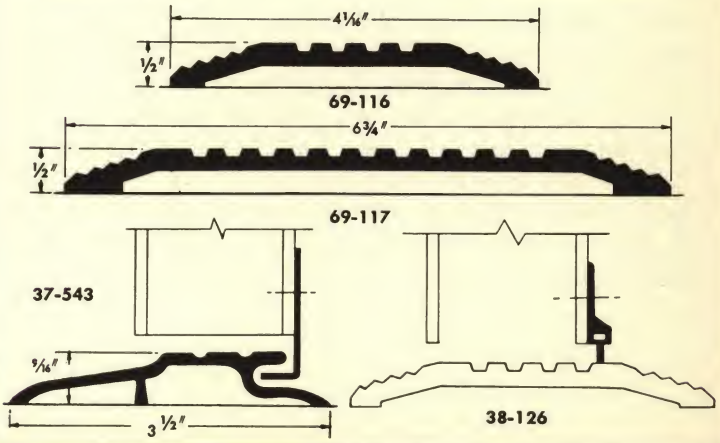
Letter Slot

37-217 with hood



Thresholds

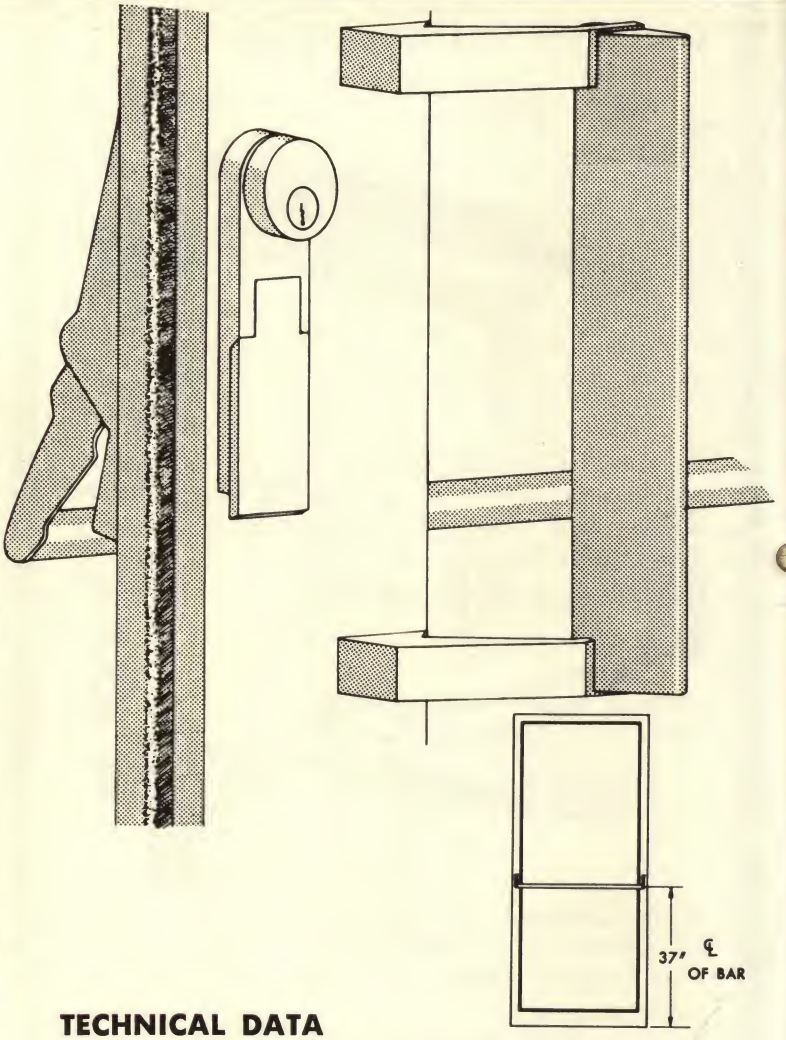
37-220 without hood



Concealed Panic Device

Designed and engineered by Kawneer for use with Kawneer narrow or wide stile doors—your assurance of performance and finish match.

The Kawneer Concealed Panic device features comparatively low initial cost and fewer parts than most concealed devices—lessening possibility of annoying service requirements.



SPECIFICATION—Concealed Panic Device

NOTE: the following items shall be added to the General Specifications for Narrow Line on Page 9 and either Narrow Line Entrances Page 13 or Wide Stile Entrances Page 17.

12. HARDWARE:

Doors shall be equipped with Kawneer Concealed Panic Hardware as manufactured by Kawneer and applied at the factory. This device shall meet all requirements listed by Underwriters Laboratories, Inc.

The panic mechanism shall be operable by means of a crash bar. The concealed top and bottom bolts shall be retractable and positively dogged when desired to permit unrestricted entry from the outside. Exit from within shall be possible at all times. Lock housing and standard $1\frac{5}{32}$" mortise type cylinder shall be removable for master keying without dismantling or removing any other parts. A standard Style "A" pull handle shall be furnished for exterior side of door.

TECHNICAL DATA

Crash bar shall be a solid extrusion of aluminum alloy 6063-T5.

Crash bar pivot arm shall be forged of aluminum alloy 6061-T6.

Crash bar housing and lock housing shall be cast from aluminum alloy A214.

Top bolt shall be of stainless steel. The bottom bolt shall be of bronze and vertical bolt rods shall be of galvanized or cadmium plated steel.

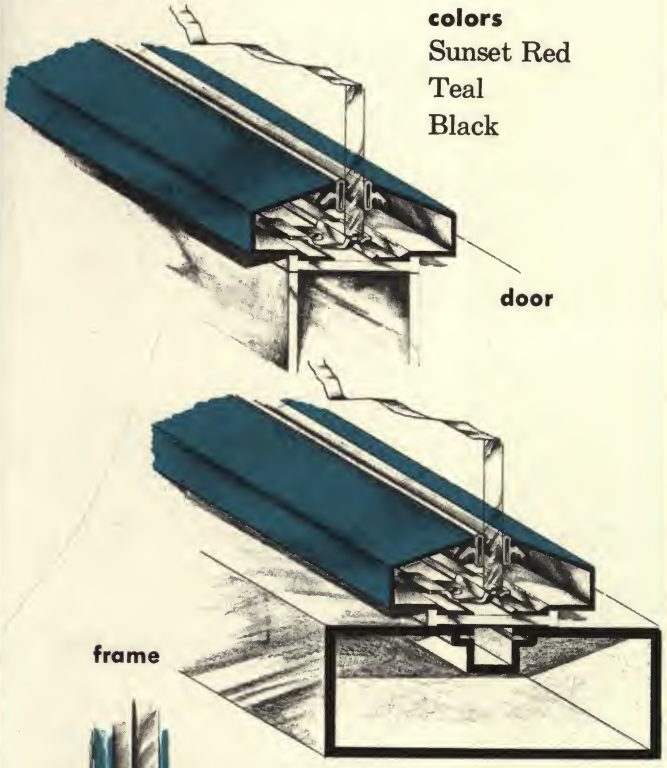
All critical wearing surfaces shall be protected by nylon bearings and bushings.

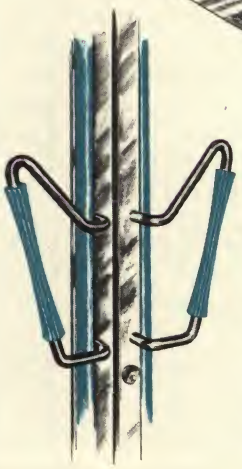
All exposed screws, miscellaneous fastening devices, and internal components shall be of stainless steel, aluminum or other plated or non-corrosive materials.

Bolts shall be concealed and shall be retracted and positively dogged by tightening a semi-concealed socket head screw mounted in the crash bar housing. Bottom bolts shall be constructed and installed in the door so as to compensate for any restriction in the threshold or bolt pocket and allow the top bolt to engage independently. Listed by Underwriters Laboratories, Incorporated.

All exposed materials shall be given an anodic oxide treatment in accordance with Alcoa Specification "Alumilite 204 A1 R1."

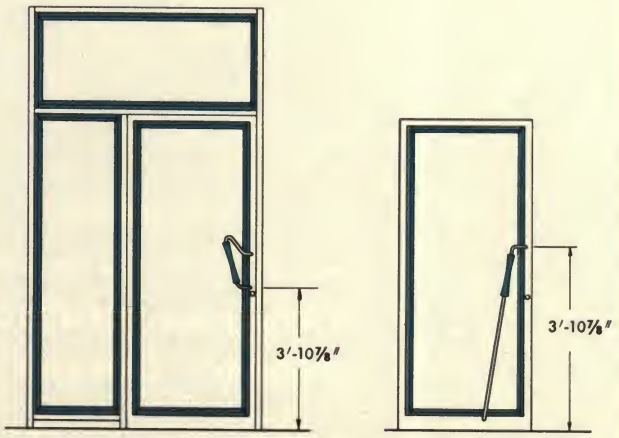
Color Ware



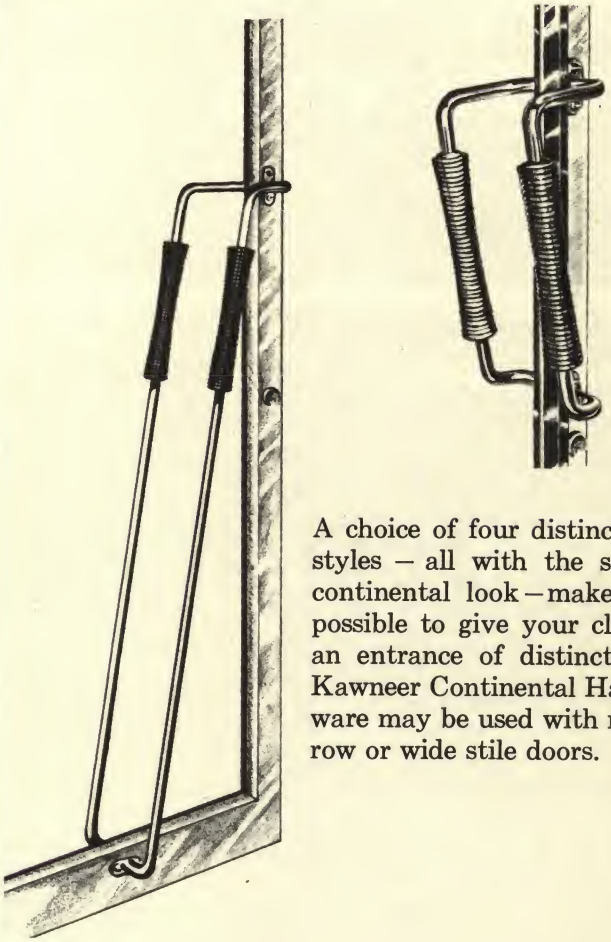


Kawneer Color Ware – beveled glass stops and/or push-pull handles – in a choice of 3 attractive colors. Use for entrance emphasis or as color perimeter for glazed areas.

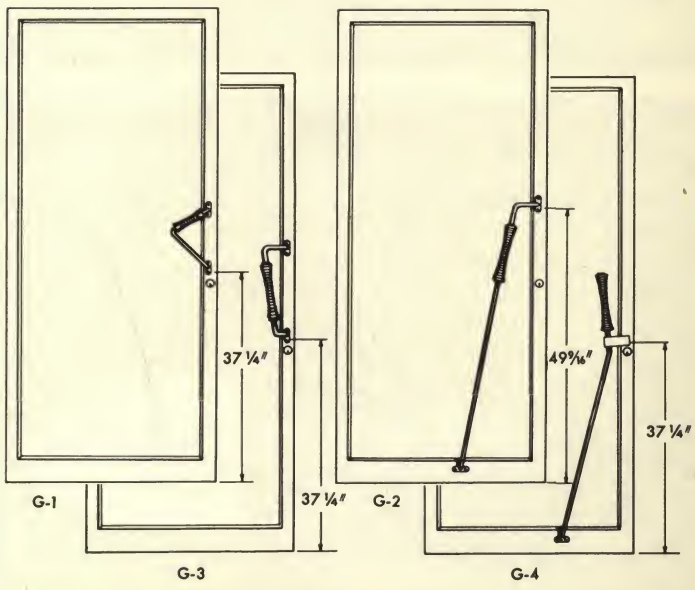
Features neoprene glazing strips for resiliency in setting.



Continental Hardware



A choice of four distinctive styles – all with the sleek continental look – makes it possible to give your client an entrance of distinction. Kawneer Continental Hardware may be used with narrow or wide stile doors.



ALUMINUM ENTRANCES

DISTRICT OFFICES

*Atlanta, Georgia
530 Fernalume Place, N.W.
Sycamore 4-9501

*Boston, Massachusetts
255 Corporation Way,
Medford, Mass.
Expott 5-7070

***Brooklyn 5, New York
245 Ten Eyck Street
Hyacinth 7-4880

Chicago 30, Illinois
4532 North Elston Avenue
Spring 7-6968

Cincinnati 36, Ohio
7565 Kenwood Road
Rm. 107
Kenwood Center Bldg.
Tweed 1-8122

*Cleveland 11, Ohio
4791 W. 105th Street
Orchard 1-1158

*Dallas 35, Texas
8615 Directors Row
Fleetwood 7-4581

Kansas City 15, Missouri
No. 20 On-the-Mall
Prairie Village
Endicott 2-2318

*Los Angeles 22, California
3000 Supply Avenue
Raymond 3-9171

***Miami 47, Florida
7651 N.W. 25th Avenue
Oxford 1-9131

New York 36, New York
Rm. 2946, 11 W. 42nd St.
Longacre 4-8476

Philadelphia, Pennsylvania
1020 Main St., Darby, Pa.
Ludlow 3-8600

**Richmond, California
600 Port Blvd.
Beacon 2-1821

Seattle 99, Washington
420 First Avenue, West
Atwater 4-0363

**Toronto, Ontario, Canada
1460 Don Mills Rd.,
Don Mills, Ont.
Hickory 4-1101

**Niles, Michigan
Cynthiana, Kentucky

*Combined Sales Office and Warehouse **Combined Sales Office and Factory
***Warehouse Only

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Other Architectural Products

For other architectural products, see these Kawneer catalogs in Sweet's Architectural File:

Aluminum Wall Systems
Section 3a/Ka

Wall Facings
Section 6d/Ka

Aluminum Sealair Windows
Section 17a/Kaw

Aluminum Canopies/Louvers
Section 19e/Ka

Aluminum Store Fronts
Section 21/Kaw

Litho in U.S.A. Form No. 60021

Kawneer
General Offices
NILES, MICHIGAN
ARCHITECTURAL METAL PRODUCTS

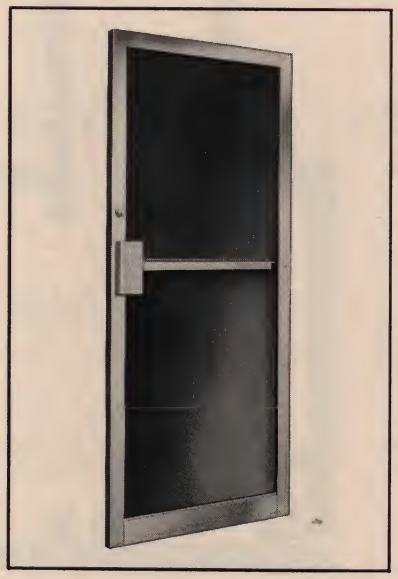
Factories in:

NILES, MICHIGAN
RICHMOND, CALIFORNIA
CYNTHIANA, KENTUCKY
TORONTO, CANADA

A-I-A FILE NUMBER 16-E

MARMET

WAUSAU, WISCONSIN



featuring the

1000

and

2200

series

ALUMINUM ENTRANCES

catalog 60-d

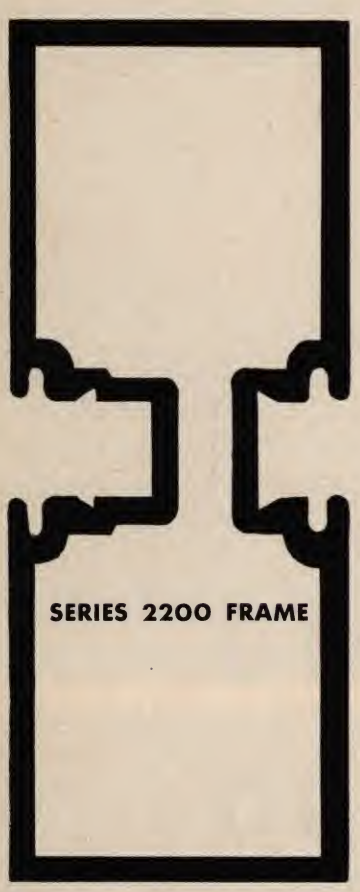
A-I-A FILE NUMBER 16-E

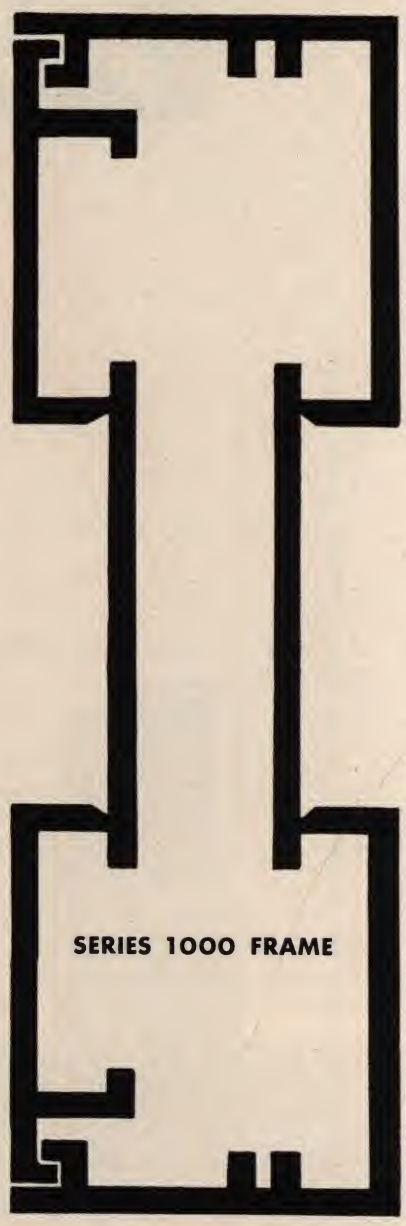
ALUMINUM DOORS

series 1000 & 2200

Series 1000 doors and entrances have been designed to meet all monumental entrance requirements, meeting at the same time the structural strength requirements of complex ornamental entrances.

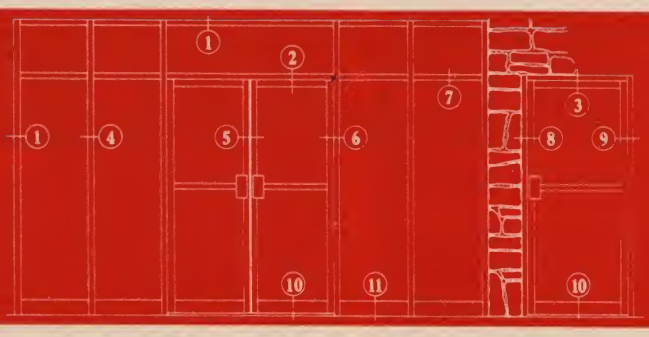
Series 2200 stock doors and entrances introduce an unusual, practical flush glazing design that increases glass area, reduces installation time and heightens the appearance of the entire entrance.





FULL SIZE SECTIONS

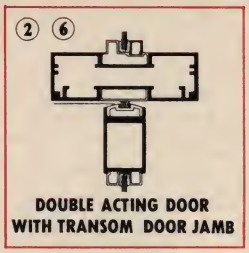
ELEVATION

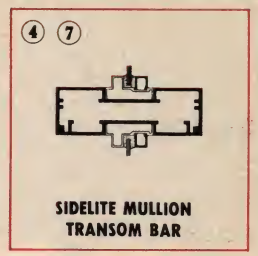


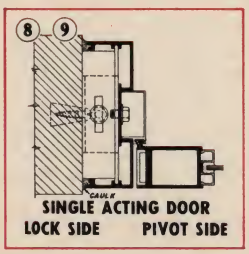
for complete specifications see page four

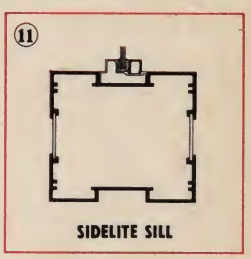
MONUMENTAL DOORS & ENTRANCES

TYPICAL DETAIL SCALE 1½"=1'0" SERIES 1000



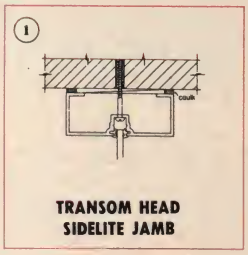


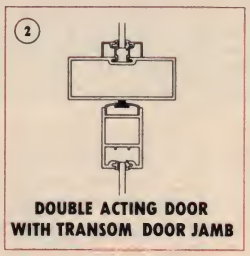


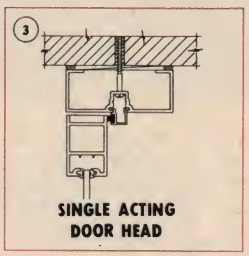


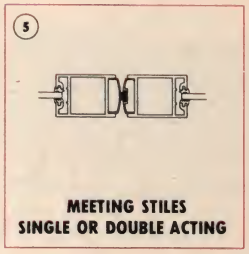
STOCK DOORS & ENTRANCES

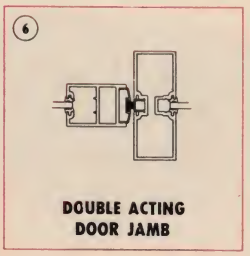
TYPICAL DETAIL SCALE 1½"=1'0" SERIES 2200

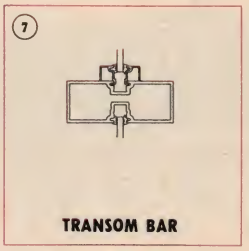


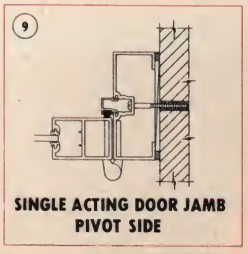












sizes

single doors
2'6" x 7'0"
3'0" x 7'0"
3'6" x 7'0"

double doors
Pair 2'6" x 7'0"
Pair 3'0" x 7'0"
Pair 3'6" x 7'0"

DOOR SPECIFICATIONS

	series 1000	series 2200
GENERAL	Furnish extruded aluminum doors and/or entrances of size and type as indicated on drawings as manufactured by Marmet Corporation, Wausau, Wisconsin.	
MATERIAL	Sections shall be of extruded aluminum alloy 6063-T5 (63S-T5), which has an ultimate tensile strength of 27,000 pounds per square inch. All sections shall have a nominal thickness of ⅛". Glazing bead shall be no less than .040" thick.	
CONSTRUCTION	Corners shall be butted, bolted and secured with concealed welds making a hairline joint. Welds shall be electric arc weld to develop complete fusion of metals. Glazing stops shall be interlocking grip type which exposes no screws. Cut or machined ends and recesses shall be true, accurate and free from rough edges and burrs. Joints shall have neat, accurate and secure fit.	
FINISH	Doors and entrances shall be finished with a 204-C2 alumilite finish, which shall be applied after complete fabrication. (Finish samples shall be furnished on request.)	Doors and entrances shall be finished equal to Alcoa's 204-A1 finish. (Finish samples shall be furnished on request.)
HARDWARE	Hardware shall be furnished and installed by the door manufacturer. Unless otherwise specified, these doors will be furnished with 1½ pair of ball bearing butts, one cylinder deadlock, one push bar and one pull plate.	Hardware shall be furnished and installed by the door manufacturer. Unless otherwise specified, these doors will be furnished with: one pair of pivots, one cylinder deadlock, one push bar and one pull plate.
WEATHERSTRIP	Frames shall be weatherstripped with plastic backed wool pile, around the perimeter of the frame as detailed. Double door meeting stiles shall be weatherstripped as shown on details.	Frames shall be weatherstripped with vinyl in place of plastic backed wool pile, around the perimeter of the frame as detailed. Double door meeting stiles shall be weatherstripped as shown on details.
SHOP DRAWINGS	Prior to executing any work under this contract, complete shop drawings in quantities desired, showing all work to be furnished shall be submitted for approval.	Shop drawings for standard sizes need not be submitted. Shop drawings for non-standard sizes shall be submitted in accordance with specifications for Series 1000, left.
PROTECTION	To prevent damage to finish, the general contractor shall protect aluminum surfaces from contact with mortar, plaster, and all harmful substances and damage resulting from careless use of tools or materials.	
CLEANING	Aluminum surfaces shall be thoroughly cleaned, following removal by the general contractor, of all protective applications. No acid, caustic, or abrasive cleaning agents shall be employed, but only plain water, or mild soap and water; or as directed by door manufacturer. Damage resulting from the use of other cleaning materials shall be the responsibility of the general contractor.	

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For Marmet Aluminum Windows and Curtain Wall, refer to the Manufacturers Index of the Sweet's Architectural Catalog File and Sweet's Construction Catalog File

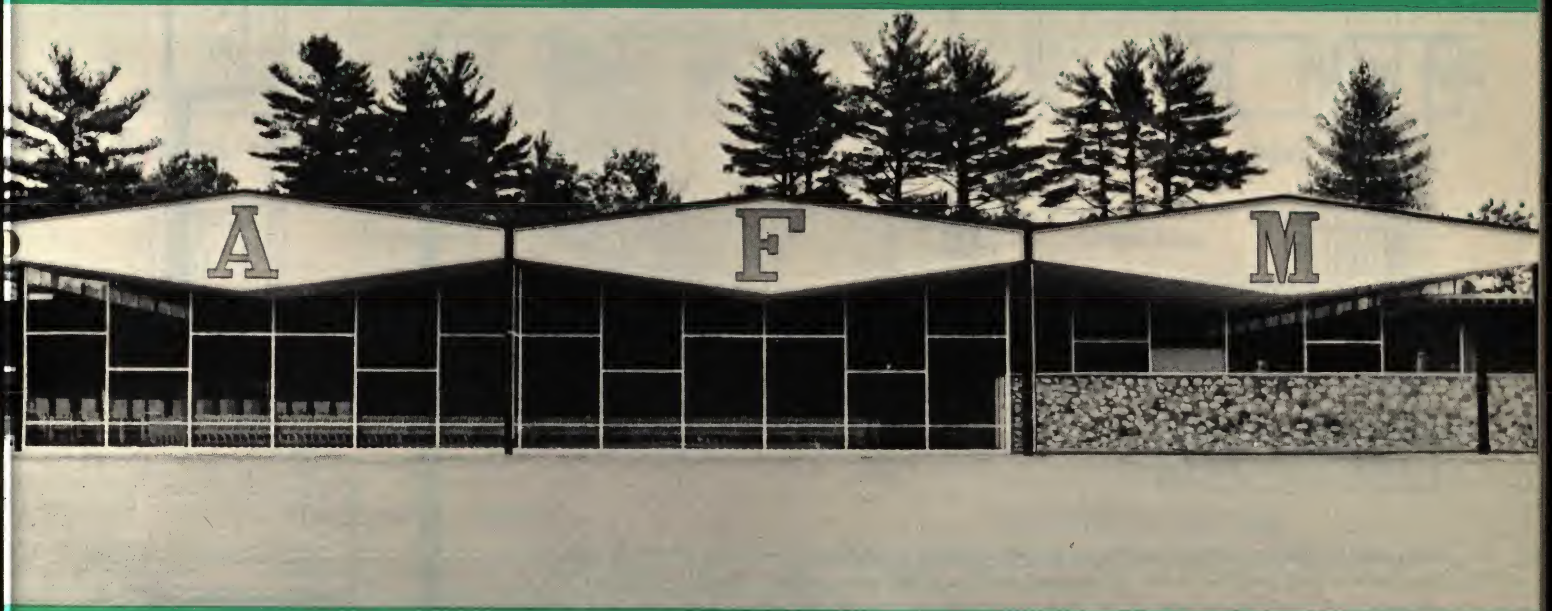
MARMET CORPORATION
WAUSAU, WISCONSIN

over 30 years...

16a
Nat

National

aluminum entrances and store fronts



ATLANTIC FOOD MARKET • NORTH READING, MASSACHUSETTS
architect: Salsberg & LeBlanc

catalog 60-S

National *Store Fronts Co. Inc.*

LAWRENCE, MASSACHUSETTS

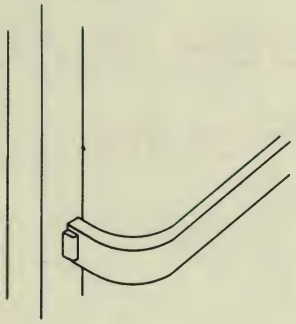
National Entrances

NATIONAL offers a door to the selective client who is concerned with its "under-the-hood" characteristics as well as its eye-catching appeal.

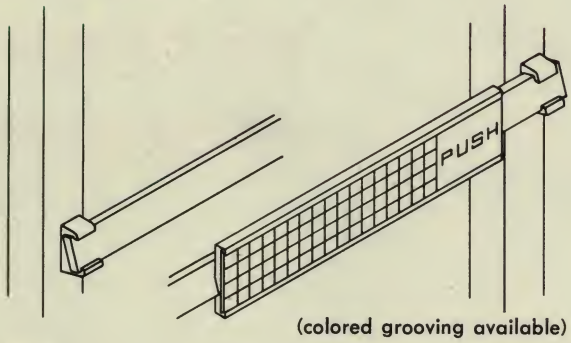
Its built-in features include internal 9" steel reinforcements for its mortised heavy aluminized brass multiple bearing butts; double deep-penetrating welds and bolts at each corner; heavy extrusion thickness; deadlock with heavy armored ¾" throw bolt; and other plus features.

The surface attractiveness of the NATIONAL door is enhanced by its superior buffed and anodized finish (204-A1-R1) and its harmonious hardware.

push and pull hardware



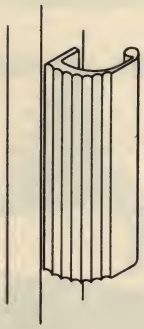
DH-1



DH-2

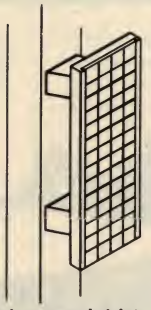
(colored grooving available)

DH-3



DH-11

DH-12



(colored grooving available)

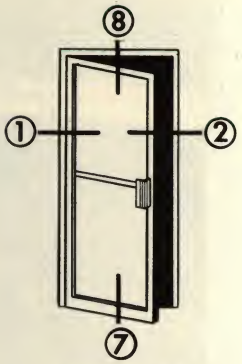
DH-13

specifications

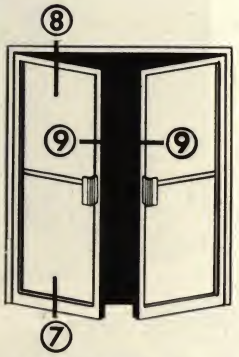
Doors shall be National Doors, constructed of extruded tubular aluminum shapes for stiles and rails. All aluminum shall be 6063-T5 with all exposed surfaces buffed and anodized. Extrusion thickness of stiles and rails shall be minimum of ⅛". The door thickness shall be 1¾". Stiles and rails shall be both bolted and electric arc Aircomatic welded to heavy extruded anchors at all four corners. All doors shall have adjustable astragals on lock stiles. Meeting stiles of all double doors shall be weatherstripped. All center pivoted doors shall be weatherstripped on lock and hinge stile. All glazing beads shall have vinyl inserts for clean, puttyless glazing. Butt hinged doors shall be furnished with steel reinforcing plates for one pair of 4½" x 4 mortised, multiple bearing, aluminized brass, templated butt hinges. Locks shall be non-rusting, deadlock type with hardened steel pin inserts, operated by standard 1-5/32" cylinders. Inactive doors of pairs shall be furnished with two 12" extension flush bolts.

Frames shall be constructed of extruded aluminum seamless tubes of 6063-T5 alloy. They shall be 1¾" x 4 x ⅛" thick with all surfaces buffed and anodized. Frames for butt hinged doors shall be furnished with steel reinforcing plates for door butt hinges.

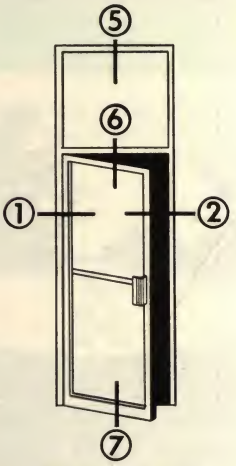
elevations



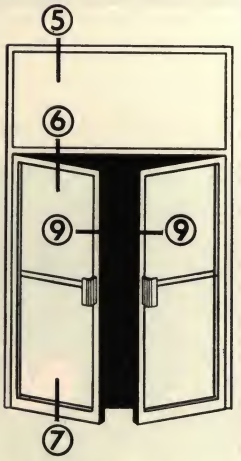
F-307 • F-367



F-507 • F-607 • F-707



FT-307 • FT-367

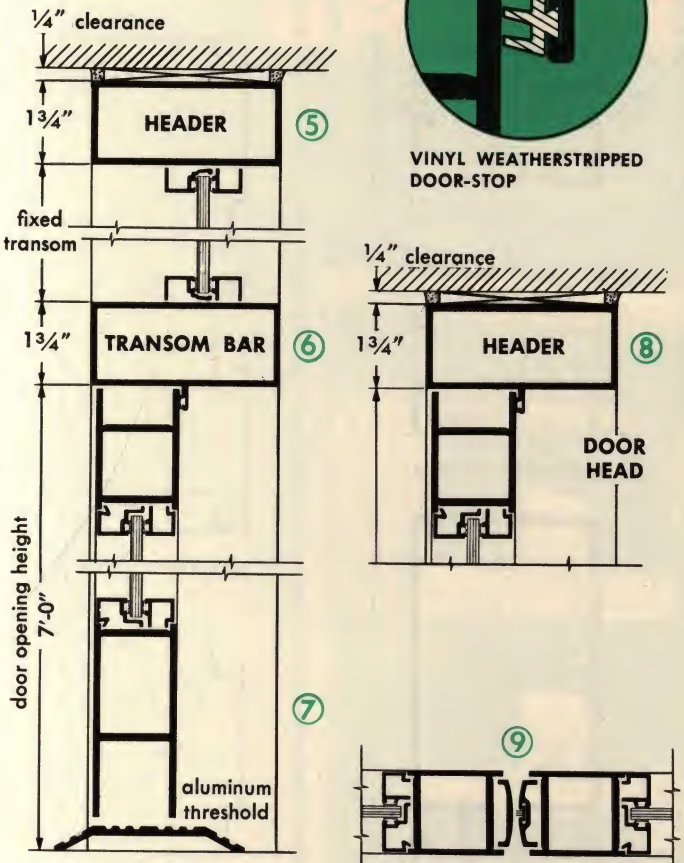


FT-507 • FT-607 • FT-707

Side lights available to suit any design.

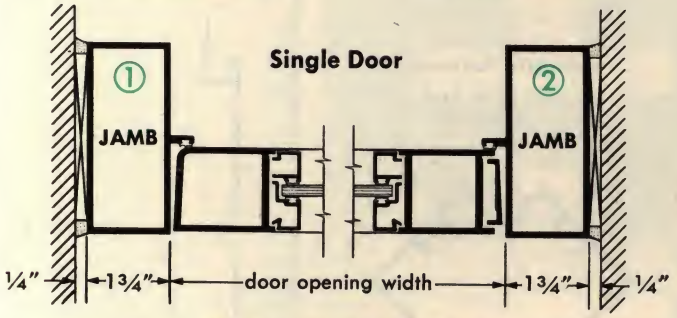
type B: Butt Hinged
type P: Offset Pivot

VINYL WEATHERSTRIPPED DOOR-STOP



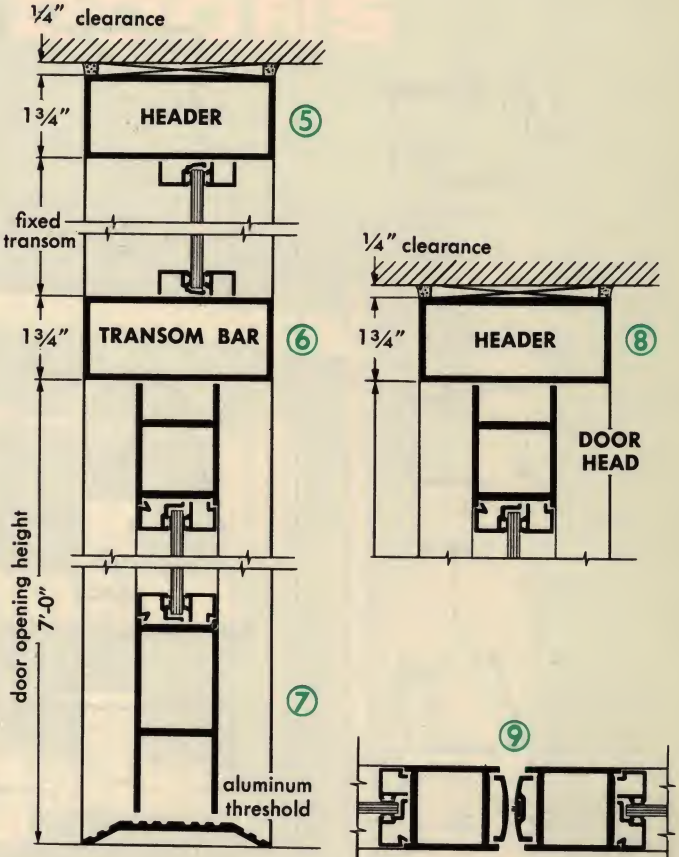
VERTICAL SECTION

Double Doors



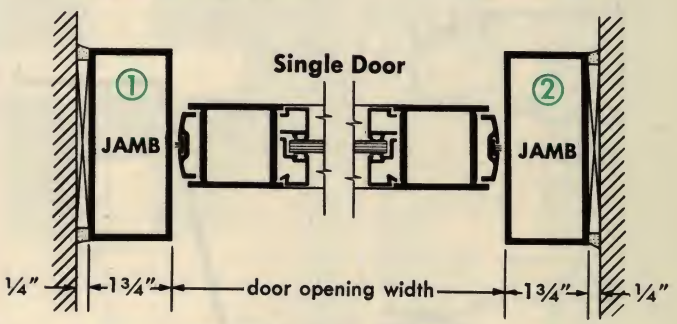
HORIZONTAL SECTION

type S: Center Hung Pivot Single Acting
type D: " " " Double "



VERTICAL SECTION

Double Doors



HORIZONTAL SECTION

sizes — standard types B, P, S, D

door opening ■		frame opening ▲		
3'-0"	x 7'-0"	F 307—3'- 4"	x 7'-2"	FT 307—3'- 4" x 10'-4"
3'-6"		F 367—3'-10"		FT 367—3'-10"
5'-0"		F 507—5'- 4"		FT 507—5'- 4"
6'-0"		F 607—6'- 4"		FT 607—6'- 4"
7'-0"		F 707—7'- 4"		FT 707—7'- 4"

■ Door sizes, singles or pairs, are ⅛" less than the opening width for single doors and ¾" less than the opening height (to allow for ½" threshold).

▲ Frame opening dimensions allow for ¼" erection clearance on all sides.

custom entrances

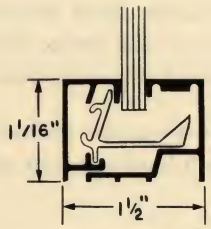
Custom Entrances are also readily available. These include standard or special size doors in frames with sidelites, frame of any design or size, full or semi-panelled doors, and other modifications.

Also Available—Doors with Concealed Panic Hardware (U. L. approval).

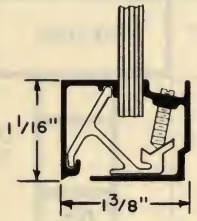
typical **BUTT-WAY STOREFRONT** mouldings

✳ 1/2 full size

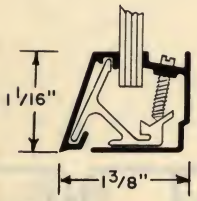
sash



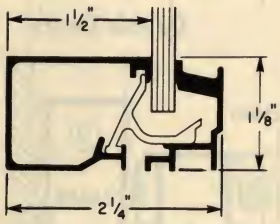
• 100-X



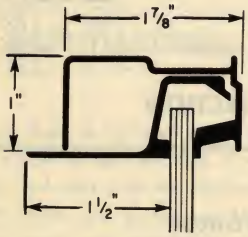
• 105-X



• 107-X

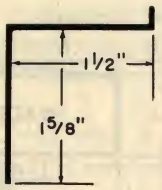


• 131-X

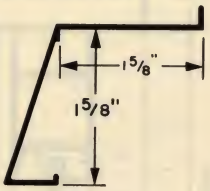


• 130-X

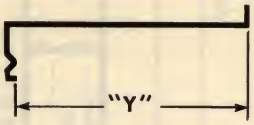
sills and jambs



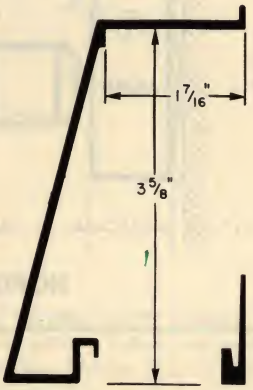
SILL
• 366-X
(matching head available)



SILL
• 367-X
(matching head available)

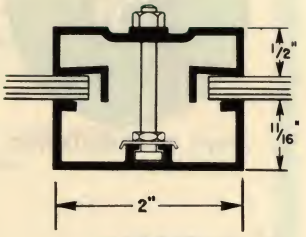


SILL
Y=1 5/8" • 23-X
Y=2 1/2" • 361-X

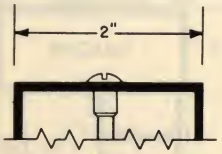


SILL
• 357-X

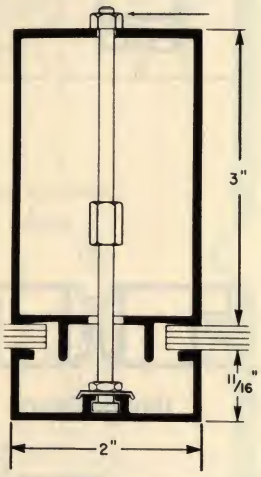
division and corner bars



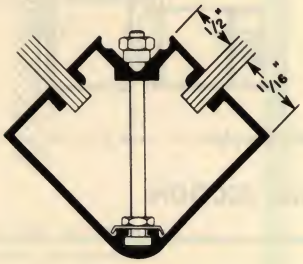
• 151-X



alternate fastener

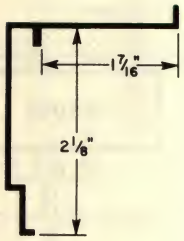


standard fastener
MULLION BAR
• 154-X

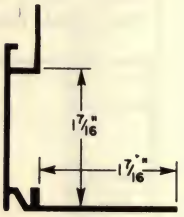


• 152-X-90°
also available for angles up to 179°

interlocking fascia

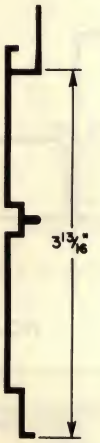


TOP • 306-X



BOTTOM • 308-X

SINGLE EXPANSION
• 307-X



DOUBLE EXPANSION
• 309-X

✳ These details are extracted from the complete catalog of National storefront mouldings. Send for your copy.

National Store Fronts Co. Inc.

MANCHESTER STREET • LAWRENCE, MASSACHUSETTS

16a
Ne

Newman "NARROW-STILE"

BRONZE DOORS

Fabricated exclusively of NEWMAN heavy extruded sections... Engineered for MAXIMUM ECONOMY

MATERIALS CARRIED IN STOCK TO ASSURE QUICKER DELIVERY

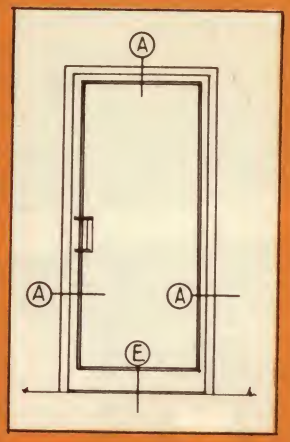
A. I. A. File No. 16-E

Internationally Famous Since 1882

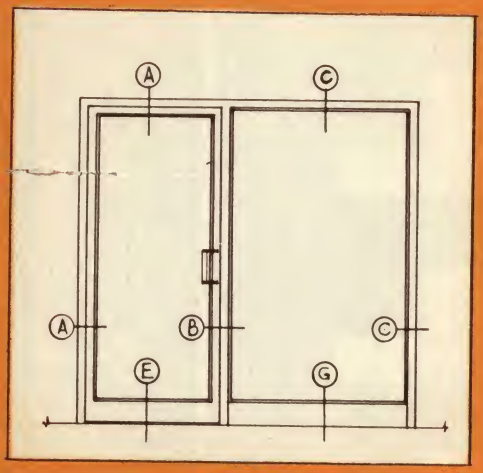
ECONOMY with lasting beauty is the keynote of the Newman line of bronze entrance units.

Costs are reduced (1) through the use of standardized members throughout, and (2) by fabricating on a "production line" basis.

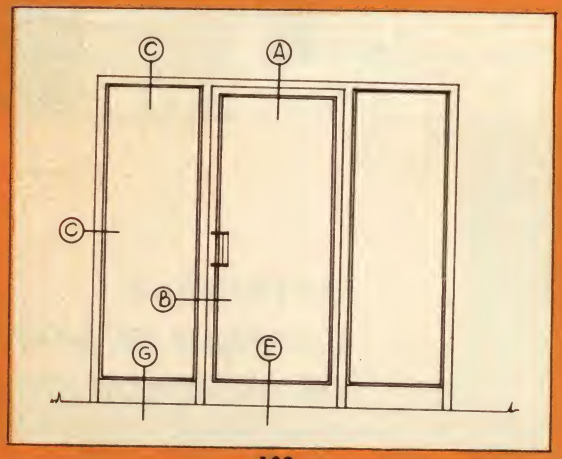
Now you may experience the satisfaction of specifying positively permanent entrances of warm and colorful bronze without the necessity for cutting costs in other directions to GET WHAT YOU WANT.



100

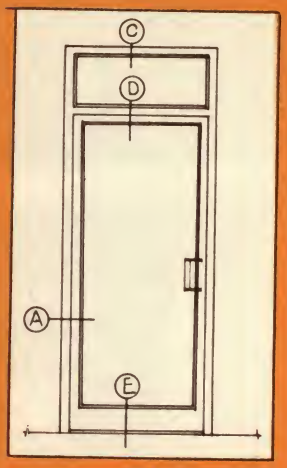


101



102

Newman standardized "Narrow-Stile" doors and entrance units are fabricated of 1/8" thick bronze extrusions and represent the ultimate in skilled and conscientious craftsmanship, famous the world over since 1882. These "Narrow-Stile" doors are made in ANY REQUIRED SIZES.

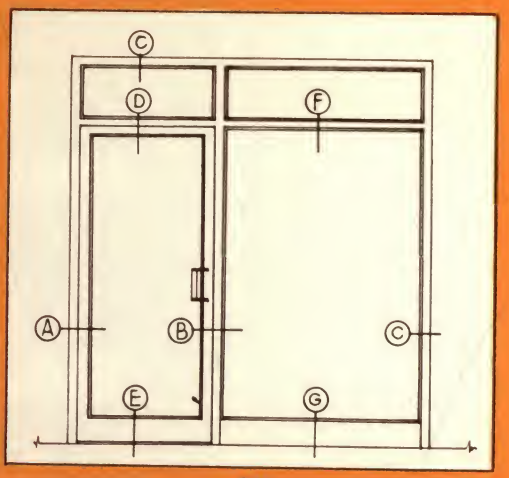


200

The use of exclusively-owned sections speeds the manufacture of Newman "Narrow-Stile" bronze doors on two counts:

A: All members are carried in stock.

B: Fitting, assembling and finishing are steps in one continuous fabricating operation.



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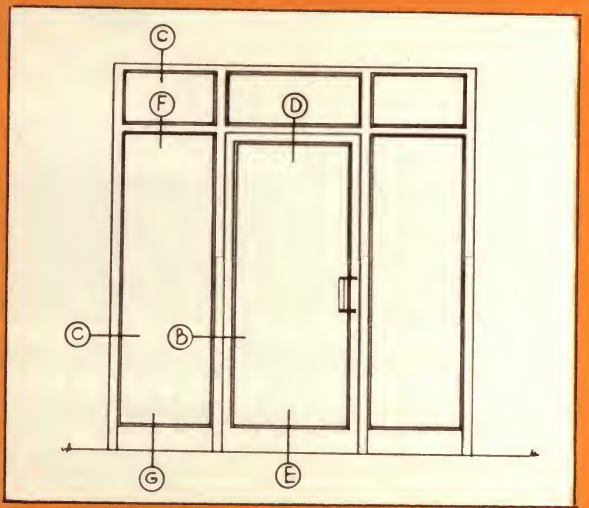


202

FOR CROSS SECTIONS SEE DETAIL NO. 16

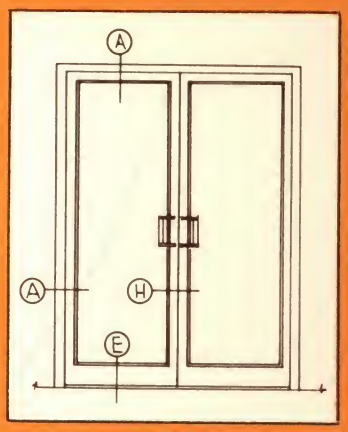
NEWMAN Finer Quality Entrances

HARDWARE SCHEDULE:

SINGLE-ACTING ON BUTTS: Three butt hinges, overhead check and bracket, pull handle and push plate, cylinder dead lock, and threshold. (Push and pull bars can be added if desired.)

SINGLE-ACTING ON FLOOR CHECK: Floor check and top pivot, pull handle and push plate, cylinder dead lock, and threshold. (Push and pull bars can be added if desired.)

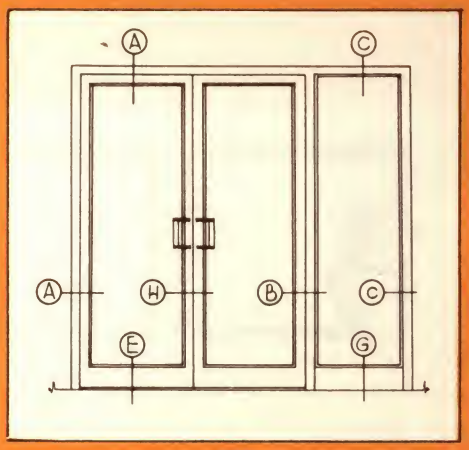
DOUBLE-ACTING ON FLOOR CHECK: Floor check and top pivot, pull handle and push plate, cylinder dead lock, and threshold. (Push and pull bars can be added if desired.)



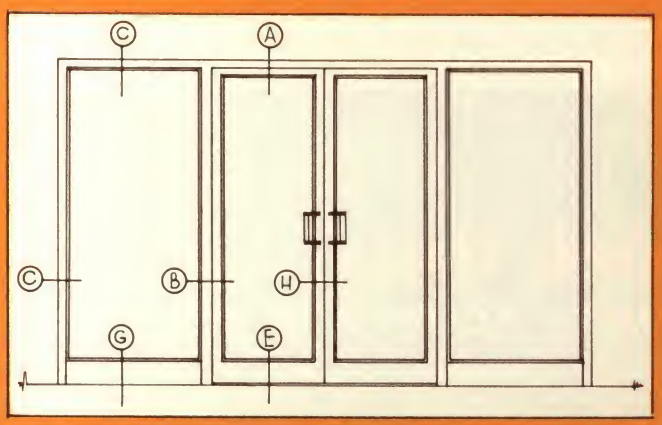
300

TRANSOMS may be either fixed or operating. For operating type we provide a continuous hinge, latch and retaining chain.

For pairs of doors we provide flush bolts. Special ornamental push and pull bars may be had at additional cost. Panic hardware will be supplied when required.

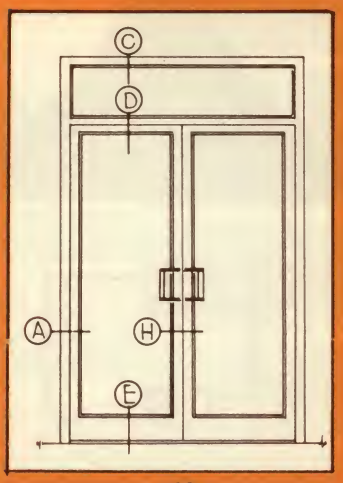


301



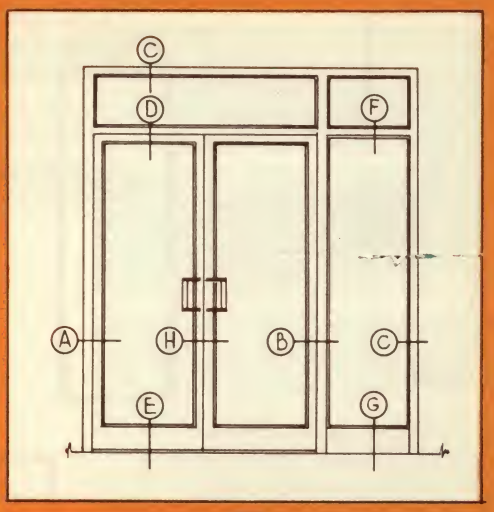
302

Other Newman doors made of bronze, aluminum, nickel silver and stainless steel are obtainable in ANY DESIRED SIZES and/or any required styles.

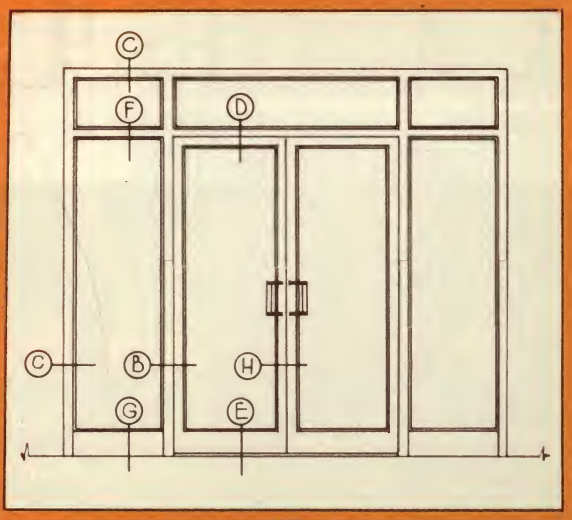


400

These doors also can be had with 3", 4" and 5" wide stiles, and can be arranged for the application of panic hardware. Estimates of cost will be supplied promptly upon request.

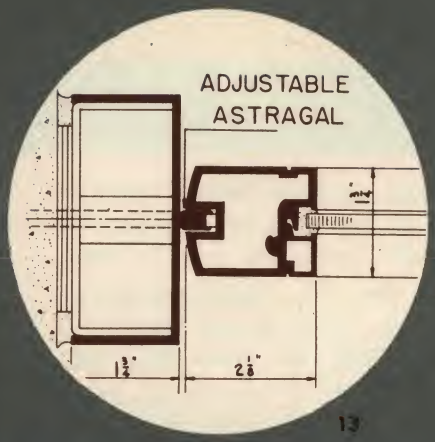


401

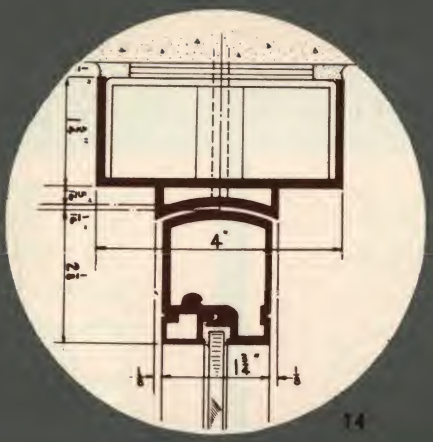


402

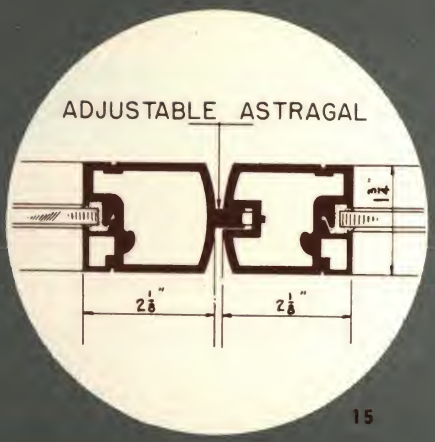
FOR CROSS SECTIONS SEE DETAIL NO. 16



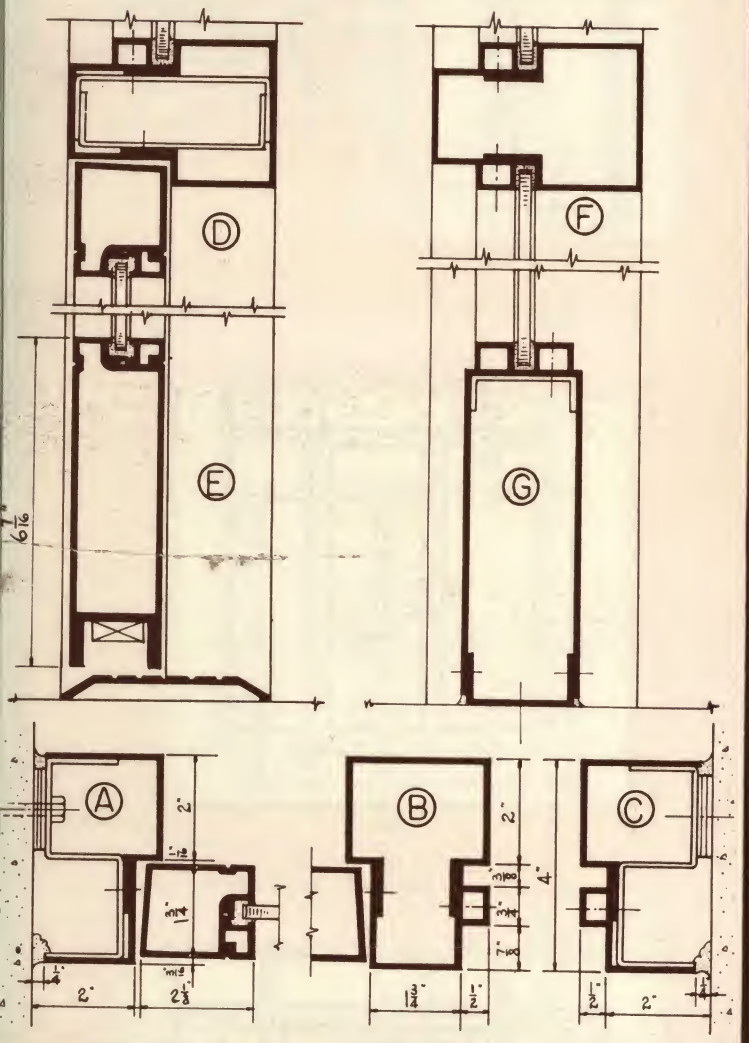
13



14

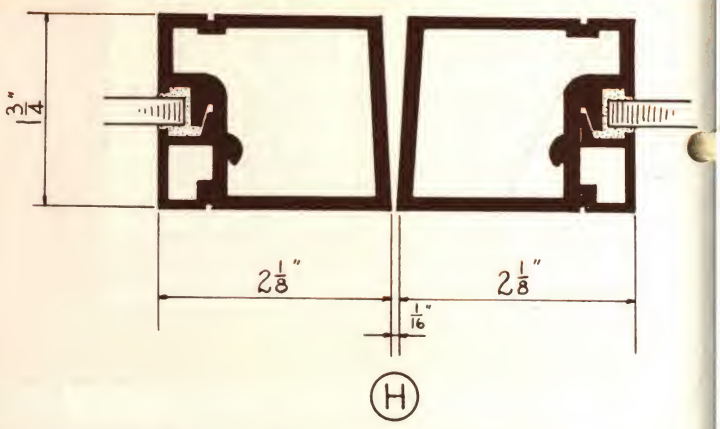


15



SUGGESTED SPECIFICATIONS:

All bronze "Narrow-Stile" doors shall be as manufactured by Newman Brothers Inc., Cincinnati, O. Doors shall be made of extruded bronze, not less than 1/8" thick. Seams shall be fully welded and finished to an invisible joint, free from pitted surfaces and discoloration. Frames to be made of 1/8" thick extruded bronze with standard steel sub-frame. Doors and frames to be mortised and adequately reinforced to receive necessary hardware. Thresholds shall be extruded bronze, fastened at each end and bolted to floor. When floor closers are used threshold to have built-out position to cover floor closers. Finish shall be natural satin (or medium statuary) (or dark statuary) and lacquered.



Newman brothers inc.

662-672 WEST FOURTH STREET
CINCINNATI 3, OHIO
ESTABLISHED 1882

NEWMAN NON-FERROUS PRODUCTS

Canopies	Grilles
Directories	Letters
Doors	Railings
Entrances	Tablets
Gates	Windows (special)

BULLETIN NO. A/P/D 201.8

PANELFAB DOORS

NEW

NOW AVAILABLE IN STANDARD* PACKAGE FORM

PANELFAB DOORS

PANELFAB DOORS

PANELFAB DOORS

VERTICAL RIBBED ANODIZED ALUMINUM

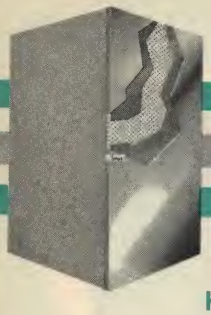
Panelfab aluminum honeycomb core doors — lightweight and maintenance free, but built to take it ! Panelfab doors are formed upon a phenolic resin-impregnated Kraft honeycomb core extending to the full dimension of an extruded aluminum frame. Core and frame are permanently bonded between monolithic facings consisting of vertical ribbed aluminum laminated to a hardboard backup material, with the frame roll-interlocked to the facings. They will withstand day-in, day-out high traffic abuse, without losing their original beauty. Extreme strength in relation to weight; unequalled torsional rigidity and absolute dimensional stability.

Complete door, frame and hardware
READY-TO-SHIP

Eliminates guesswork and production lead time. Panelfab's ready-packed doors now come to you **fast,** with costs budgeted before you specify. Choose from a wide range of types and sizes — and make PANELFAB your single source of the COMPLETE door with frame and hardware.

***CUSTOM SIZES, TYPES AND FINISHES ARE ALSO AVAILABLE** SEE PAGE 8 FOR DETAILS.

A.I.A. FILE NO. 16-E



ENGINEERED FOR FLAWLESS,

HANDSOME The patented Panelfab roll-interlocking edge provides extra perimeter strength and added beauty — no exposed screws or unsightly seams.

COLORFUL Panelfab doors are available in a wide range of eye-appealing anodized aluminum colors — in addition to the standard vertical ribbed anodized aluminum facing. Also porcelainized steel in many colors; vinyl covering in a large variety of patterns and colors. (See Back Cover for details.)

LOW COST Panelfab doors are precision-engineered with frames and hardware included when desired, to give perfect on-the-job installation. You save time on the original installation — eliminate labor costs on refittings.

EASILY, QUICKLY INSTALLED Panelfab doors are easy to install — in as little as 15 minutes. And by ordering in the new Standard Packages, you **know** you are going to have exactly the right frame, the right door and the required hardware on hand at installation time.

LIGHTWEIGHT Panelfab Doors are positively sealed for weather-tightness — and offer indefinite use even in heavy traffic installations. (Tested under accelerated conditions for more than 750,000 closures without sign of wear or breakdown!)

GUARANTEED Panelfab doors, when properly installed under normal service conditions, are guaranteed against warping, cracking, delamination or separation, rot and vermin.

CATEGORY NO. 1

ANY P/F TYPE ALUMINUM DOOR AND FRAME (TYPE "A") OF ANY P/F STANDARD SIZE HAVING THE FOLLOWING HARDWARE:

1-1/2 pair of 4-1/2 x 4-1/2 McKinney BB-B3313-1/2 Butts
1 - Knob Lockset - Lockwood (H) Series 141DL

P/F Standard Door Type and Sizes as listed with hardware selected from above list may be purchased under this Category with frame by others - frame must conform to standards outlined in this brochure.

Frame only - Type "A" or "B" may be purchased separately under this Category - being of standard sizes and with standard hardware locations as outlined - doors furnished by others must conform to P/F sizes.

Shipment of Category No. 1 — Within Two Weeks.

Category No. 1 offers sole responsibility by Panelfab to architect for door - frame and hardware.

Optional:

Surface mounted closer LCN CH90 90 deg. to 140 deg.
1 - DLV 350 Threshold

(For optional hardware see Category No. 2)

Note: Hardware, aluminum door and frame furnished by Panelfab in a pre-hung manner.

Closer and Lockset Knobs not installed on door; they will be shipped loose.

No Deviation from the above will be furnished under Category No. 1. Spreader strip for frame will be furnished by Panelfab when threshold is by others.

CATEGORY NO. 2

ANY P/F STANDARD TYPE ALUMINUM DOOR AND FRAME (TYPE "A") OF ANY STANDARD P/F SIZE INCLUDING ANY OF THE FOLLOWING HARDWARE AS REQUIRED BY ARCHITECT:

All Hardware Furnished in U.S. 26D Dull Chrome Finish

Butts	1-1/2 pair McKinney BB-B3313-1/2
Lockset	One Lockwood (H) Series 141DL
Surface Closer	1 - LCN CH90 - 90 to 140 deg.
Concealed Closer	1 - LCN 304C
Panic Device	Von Duprin 88 Series
Deadlock - Mortise	One Lockwood 2227-1/2
Floor Check	Rixson #25 Offset type floor hung
Push Bar	Brookline #35
Pull Bar	Brookline #795
Stop and Holder	GJ90 Overhead GJ90A Overhead GJ70 Overhead GJF-9 Floor Type GJW-1 Door Type

Hardware may be selected from the above list for each door as required. Hardware, when feasible, will be attached to the door in the pre-hung state. Bulky or protruding hardware will be shipped loose.

Panelfab Standard Door Type and Sizes as listed with hardware selected from above list may be purchased under this category with frames by others. Frames must conform to standard outlined in this brochure.

Frames only - Type "A" or "B" may be purchased separately under this Category being of standard sizes and with standard hardware locations as outlined — Doors furnished by others must conform to Panelfab sizes.

Shipment of Category No. 2 — Within Two Weeks.

Category No. 2 offers sole responsibility by Panelfab to architect for door - frame and hardware.

Category No. 2 reduces cost to - owner, architect and contractor.

Optional:

DLV 350 Threshold.

Spreader strip for frame will be furnished by Panelfab when threshold is furnished by others.

Note: Aluminum Door and Frame to be furnished by Panelfab in a pre-hung manner - Hardware when feasible, will be attached to door in the pre-hung manner - bulky or protruding hardware will be shipped loose.

CATEGORY NO. 3

ANY P/F TYPE ALUMINUM DOOR AND FRAME (TYPE "A") OF ANY STANDARD P/F SIZE HAVING ANY OF THE HARDWARE REQUIRED AS LISTED IN CATEGORY NO. 2.

In this category P/F doors will be prepared for hardware listed in Category 2; however, hardware will be furnished and attached by others in the field.

Optional:

Other make hardware than that listed above, which is adaptable to the same door preparation as above hardware, may be utilized. Check comparison list on following page for other hardware adaptable to P/F Standard Preparations.

P/F Standard Door Types and Sizes having any hardware preparation for hardware listed above, and listed substitutes, may be purchased under this Category with Frame by others. Frame must conform to Standard outlined in this brochure.

Frames only - Type "A" or "B" may be purchased separately under this Category being of standard sizes and with standard hardware locations as outlined — Doors furnished by others must conform to Panelfab sizes.

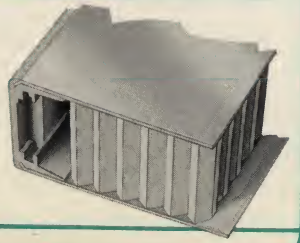
Shipment of Category No. 3 — Within Two Weeks.

Note: Door and Frame will be shipped K.D.

CATEGORY NO. 4

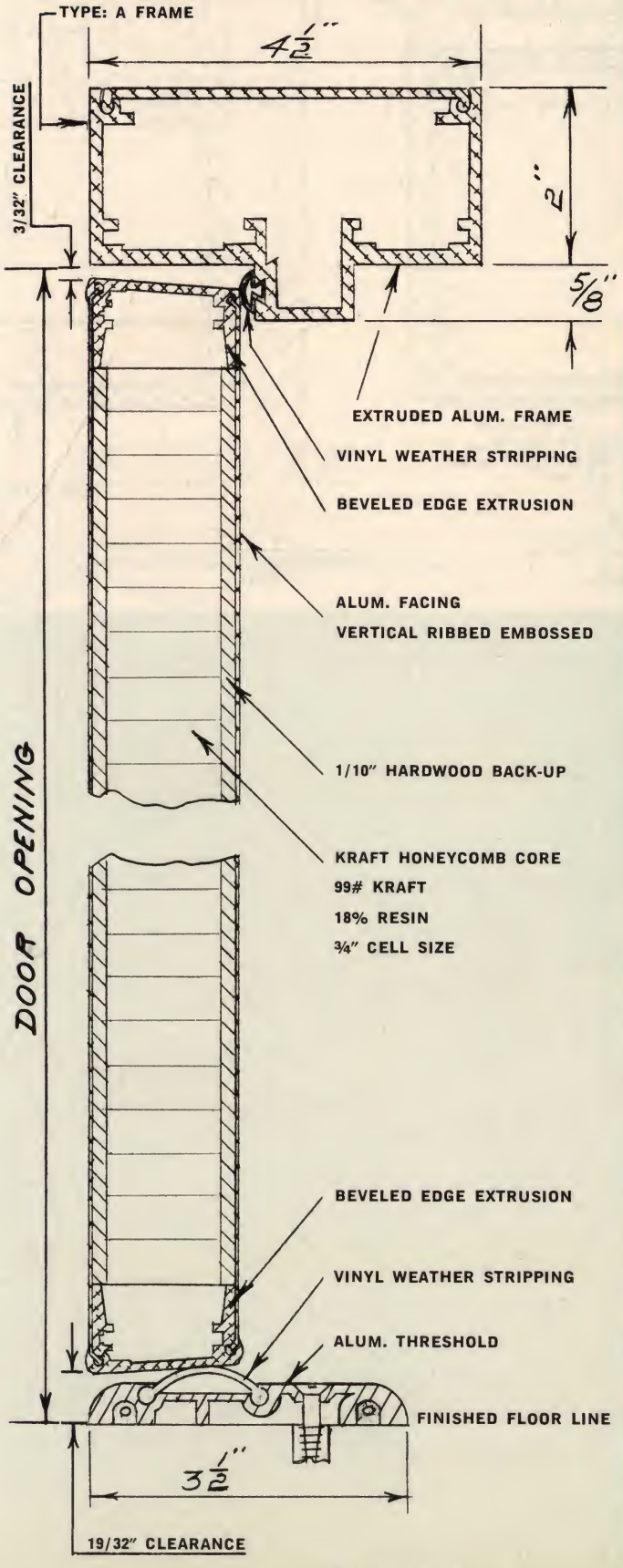
* Panelfab's Custom Door Line (see back cover for details).

Aluminum extrusion roll-interlocked with aluminum facings with reinforcing spline in position. Door edge is beveled for tight closure.



PERMANENT PERFORMANCE

DOOR & FRAME CONSTUCTION

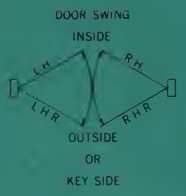


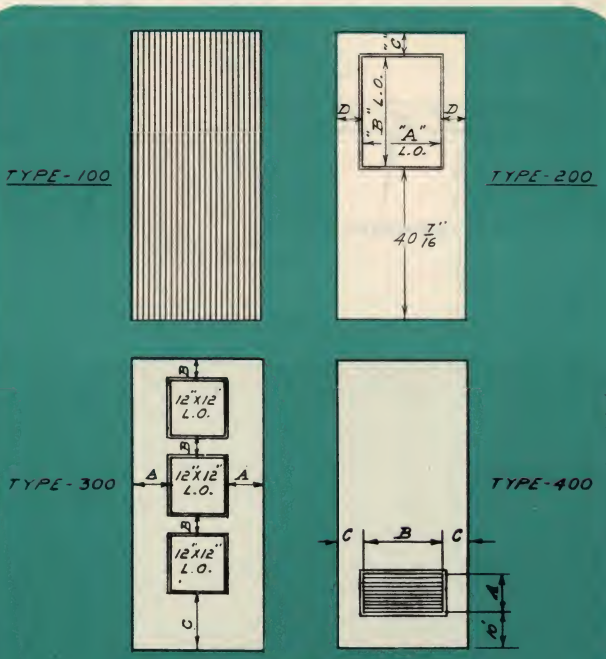
SCALE: ½" = 1"

STANDARD SIZES

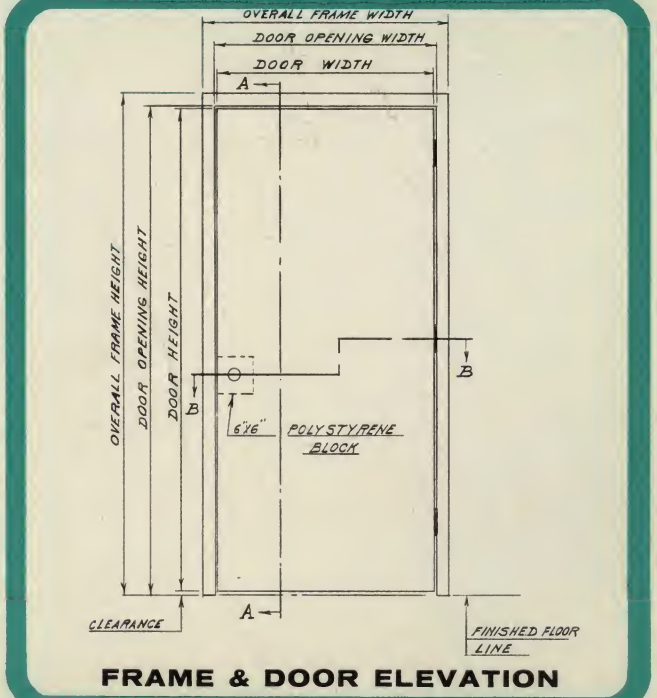
SINGLE

OVERALL FRAME SIZE		DOOR OPENING SIZE		ACTUAL DOOR SIZE	
WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT
34"	82"	2'-6"	6'-8"	29 9/16"	79½"
36"	82"	2'-8"	6'-8"	31 9/16"	79½"
40"	82"	3'-0"	6'-8"	35 9/16"	79½"
34"	86"	2'-6"	7'-0"	29 9/16"	83½"
36"	86"	2'-8"	7'-0"	31 9/16"	83½"
40"	86"	3'-0"	7'-0"	35 9/16"	83½"



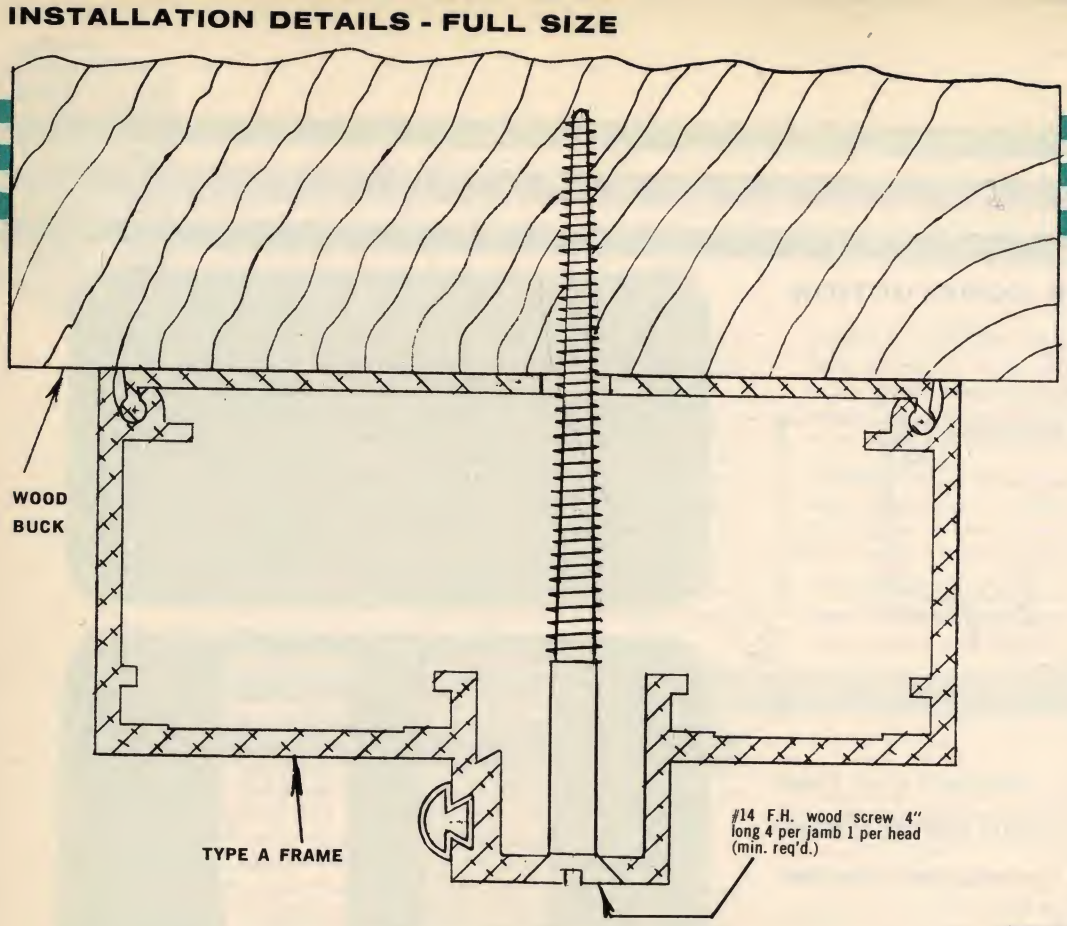


4 STANDARD DOORS

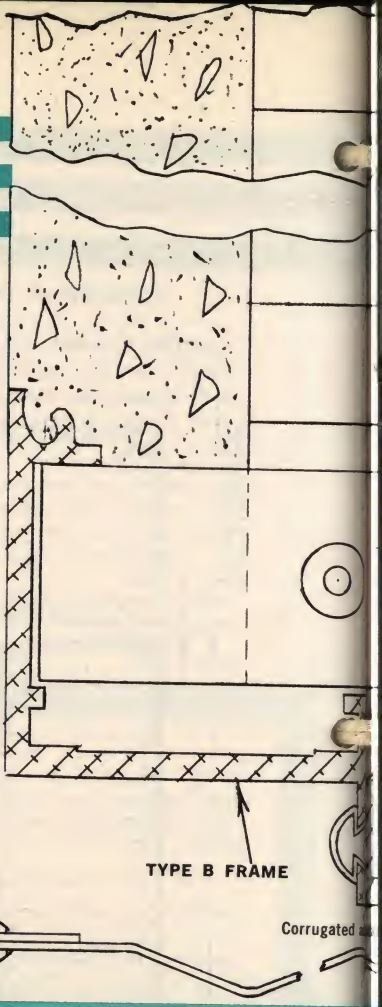


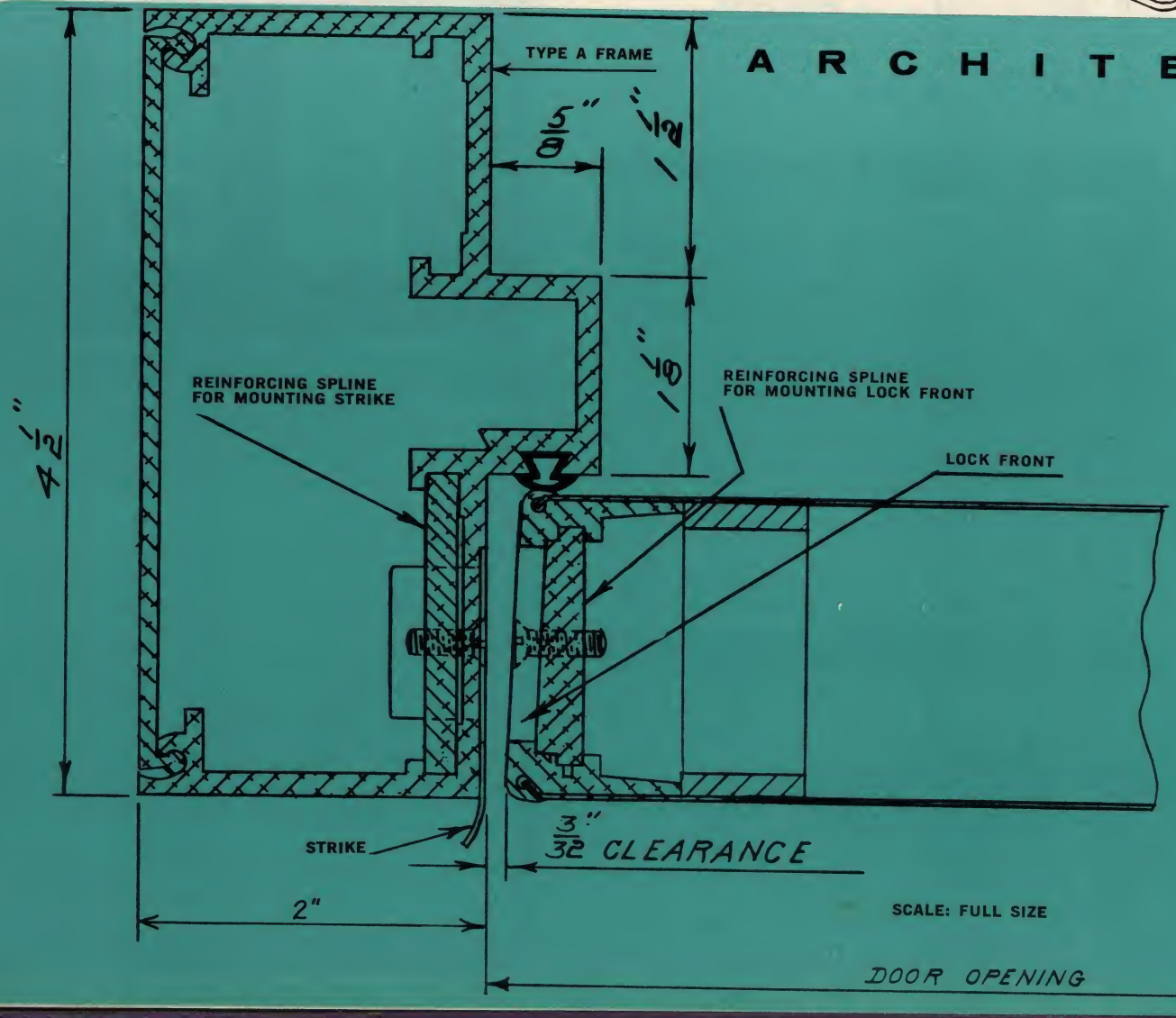
FRAME & DOOR ELEVATION

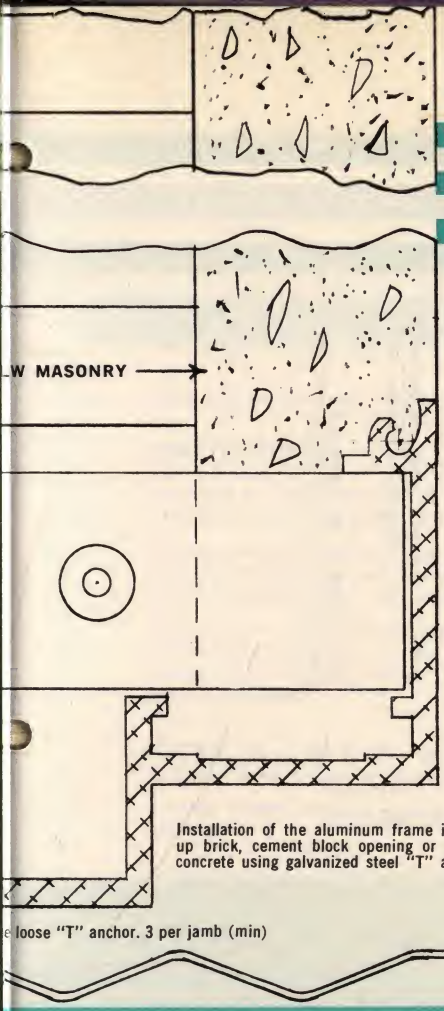
INSTALLATION DETAILS - FULL SIZE



Installation of the aluminum frame in wood buck opening

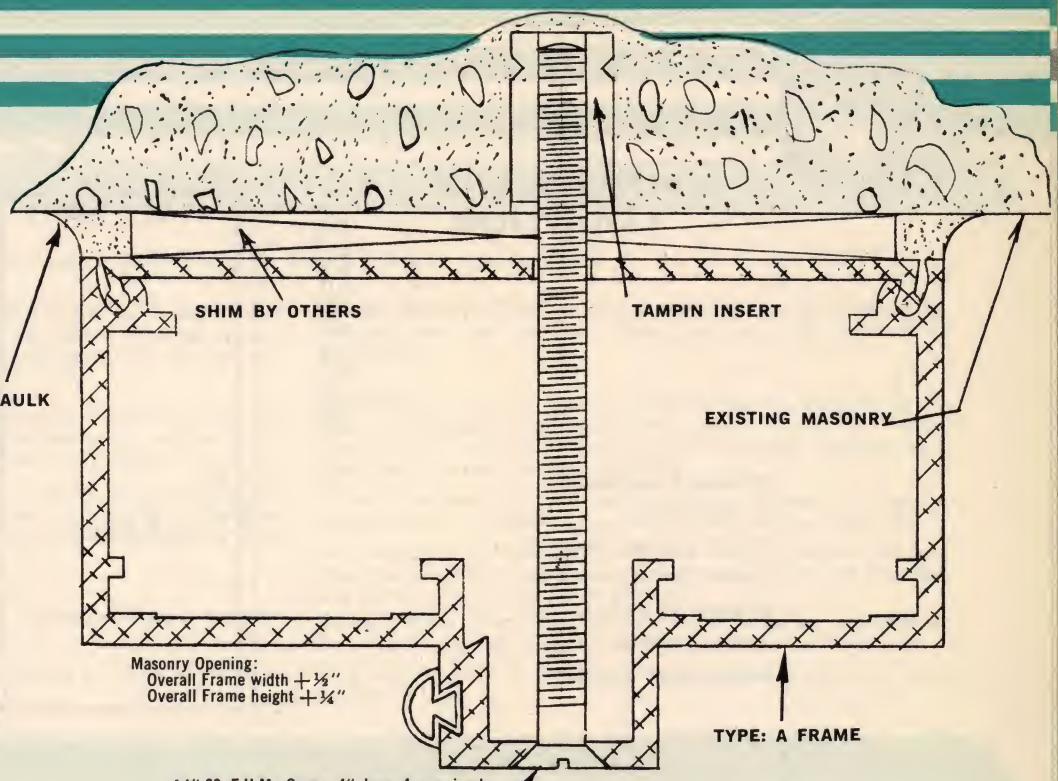






Installation of the aluminum frame in built up brick, cement block opening or poured concrete using galvanized steel "T" anchors

e loose "T" anchor. 3 per jamb (min)

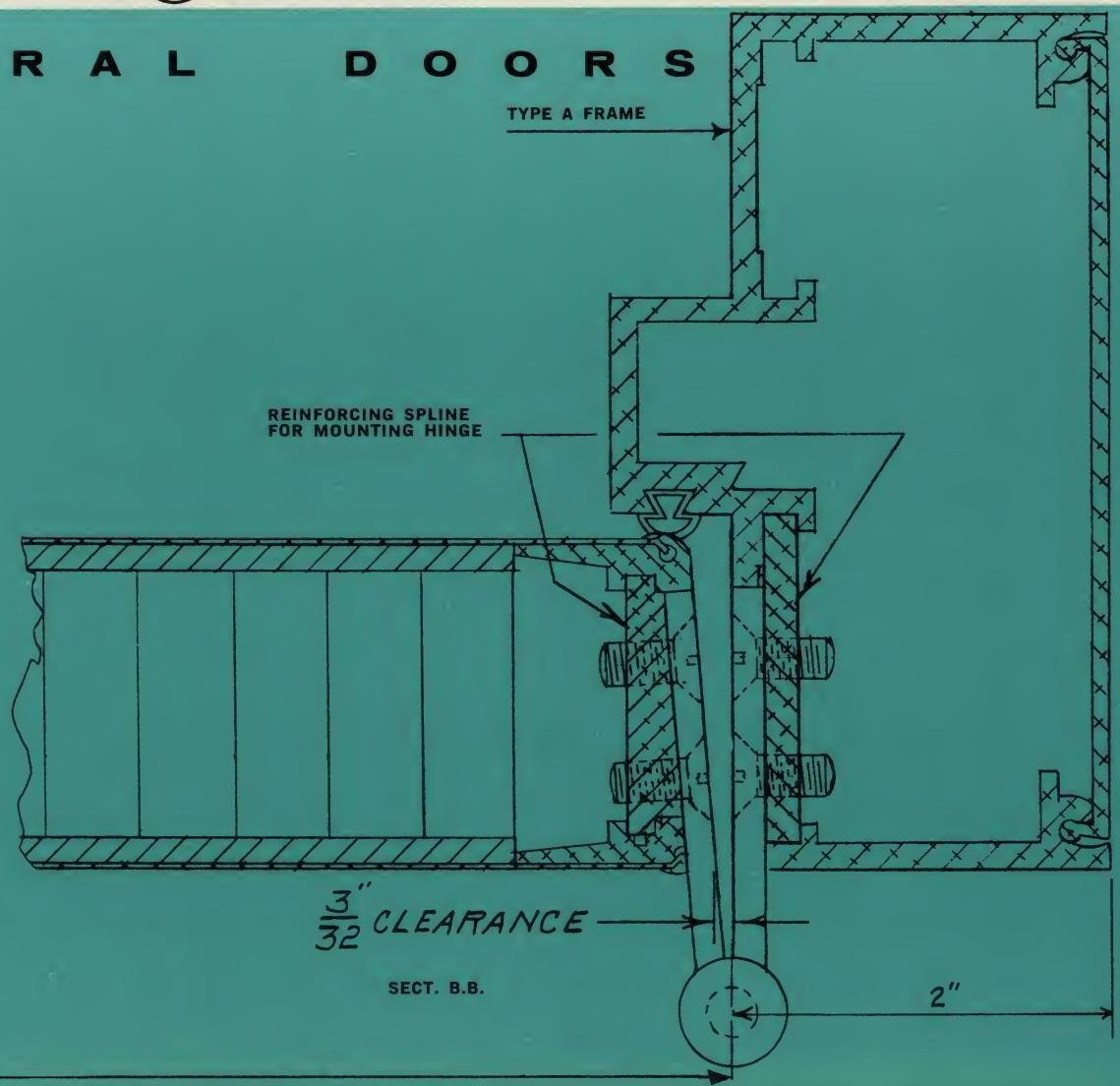


Masonry Opening:
Overall Frame width +½"
Overall Frame height +¼"

¼"-20 F.H.M. Screw 4" long 4 per jamb, 1 per head (min. req'd.)

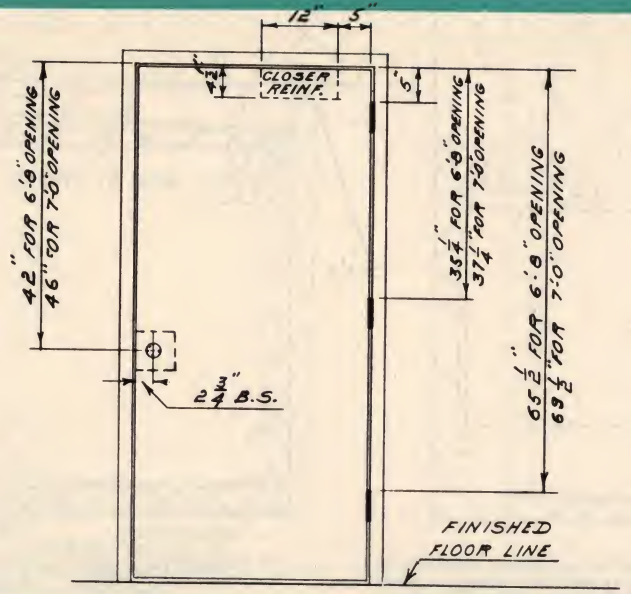
Installation of the aluminum frame in a precast or existing masonry opening

U R A L D O O R S



HARDWARE DETAILS

HARDWARE LOCATION



STANDARD HARDWARE

1 — KNOB LOCKSET

2 3/4 B.S. LOCKWOOD "H" SERIES 141 DL

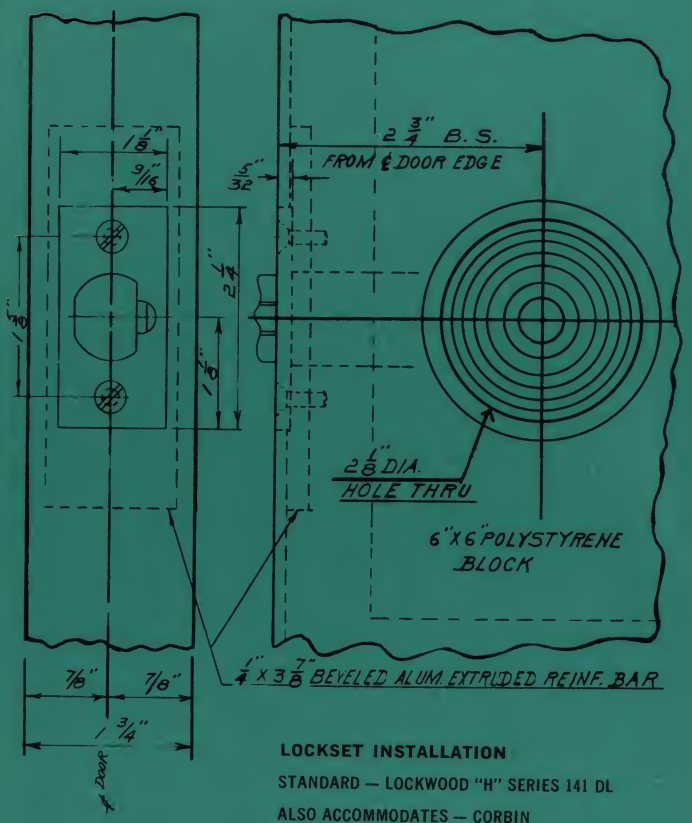
1 1/2 PR. 4 1/2" x 4 1/2" BUTTS —

MC KINNEY B.B. B. 3313 1/2

1 SURFACE CLOSER

— L.C.N. C.H. 90 - 90° to 140°

HARDWARE DETAILS (LOCK)



LOCKSET INSTALLATION

STANDARD — LOCKWOOD "H" SERIES 141 DL

ALSO ACCOMMODATES — CORBIN

YALE

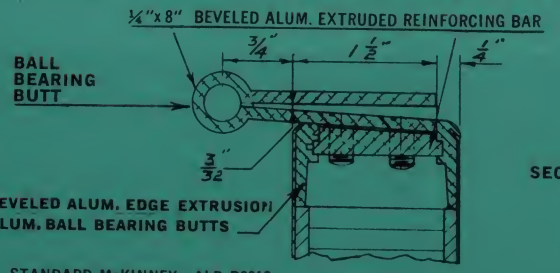
RUSSWIN

CHALLENGER

SCHLAGE

Installation of lockset on door. Scale: ½"=1"

HARDWARE DETAILS (BUTT)

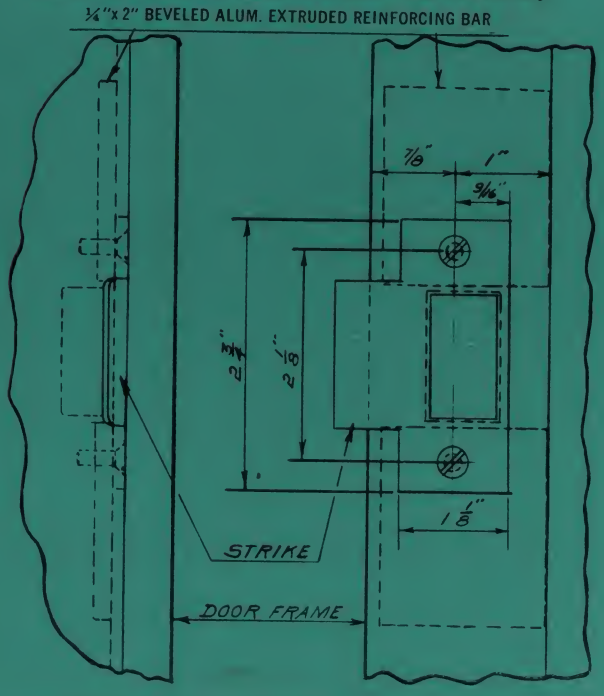


SECT. A-A

STANDARD-McKINNEY—ALD-B3313
ACCOMMODATES: ANY STANDARD
4½" x 4½ x .134" HINGE Template

Scale: ½"=1"

HARDWARE DETAILS (STRIKE)



Installation of lock strike on door frame.

Scale. ½"=1"

PANELFAB STANDARD DOOR SPECIFICATIONS

SCOPE: Aluminum Doors and Frames shall be as manufactured by Panelfab Products, Inc., 2000 N.E. 146th Street, North Miami, Florida

CONSTRUCTION: Aluminum Doors: Doors shall be constructed of one-piece .032 aluminum facings vertical ribbed embossed pattern laminated to 1/10" hardboard in turn laminated to phenolic resin impregnated kraft honeycomb core.

Entire perimeter of the door shall be furnished with patented aluminum extrusion featuring the roll interlocking and bonding of edge extrusion to facing material. Edge extrusion will have a 1/8" bevel in 2".

Frames: Frames shall be constructed of an extruded aluminum shape 2"x 4-1/2" with a minimum wall thickness of .125 incorporating an integral fixed door stop having extruded vinyl weather stripping along jambs and header.

FINISH: Door Skin: Entire door facing material shall be of anodized vertical ribbed embossed aluminum.

Frames: Frames shall be buffed and anodized at the factory prior to shipment.

GLASS AND GLAZING: All glass and glazing shall be furnished and installed under the glass and glazing section of the architectural specifications.

ERECTION: Aluminum Doors and Frames shall be installed by the general contractor in properly prepared openings. Frames shall be set plumb, square and at their proper level and proper alignment with other materials then securely anchored.

All joints between metal and masonry shall be caulked to produce a watertight seal, or neatly pointed with excess materials removed.

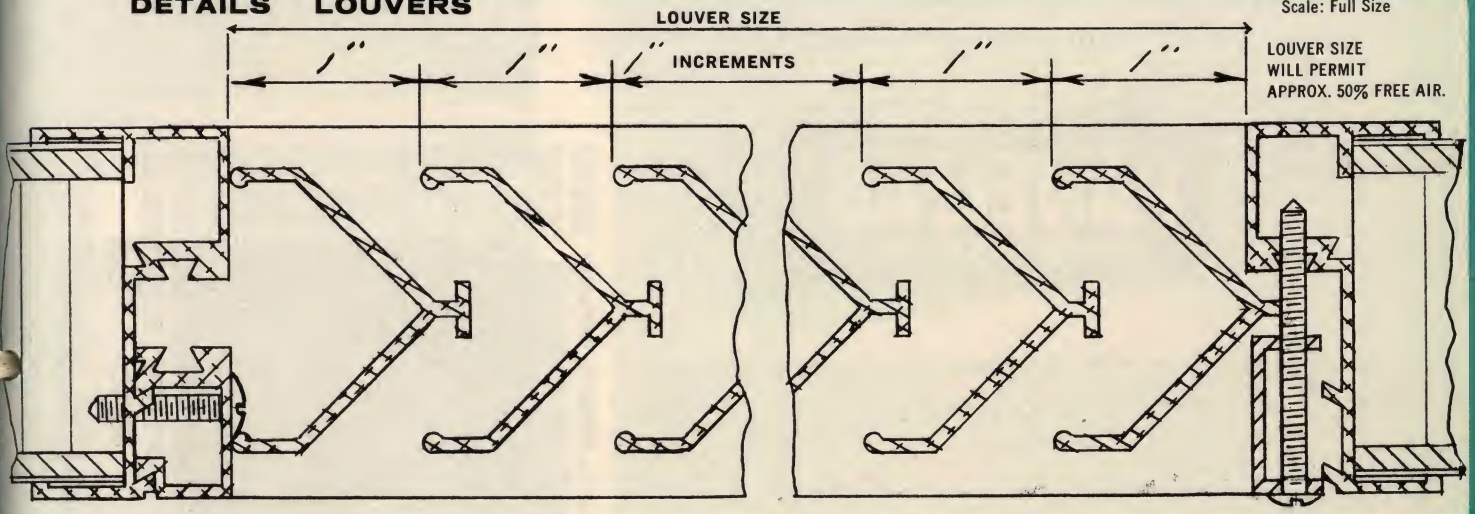
After installation of the aluminum doors into the frames, the door shall swing freely with proper clearances at head jamb and threshold and all hardware shall function properly.

During erection – doors and frames shall be protected by contractor from possible contact of mortar, paint and other similar materials.

All aluminum shall be thoroughly cleaned using a petroleum base solvent.

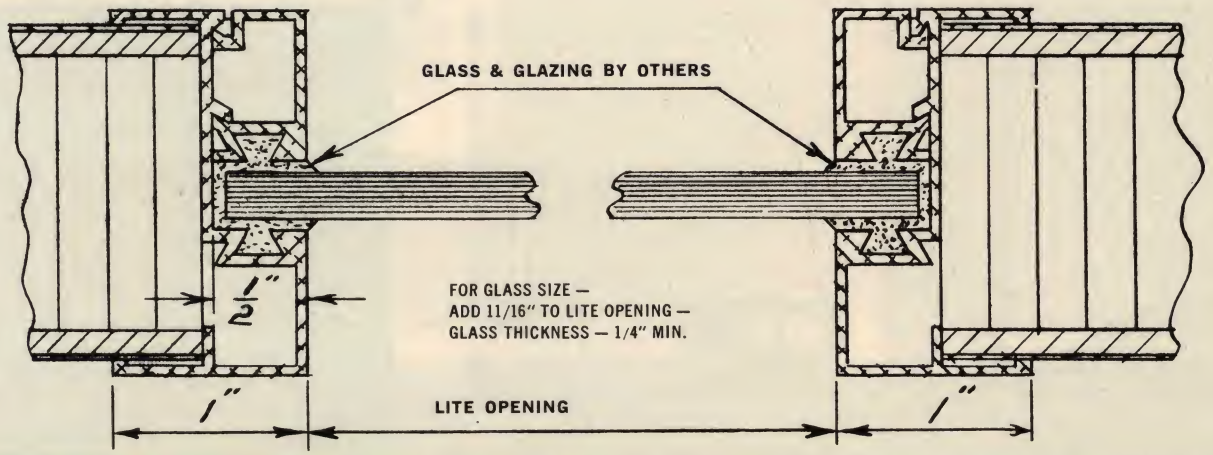
DETAILS LOUVERS

Scale: Full Size



DETAILS GLASS FRAME

Scale: Full Size



CATEGORY NO. 4

ANY TYPE PANELFAB DOOR AND FRAME WITH HARDWARE AS REQUIRED BY ARCHITECT. HARDWARE BY OTHERS.

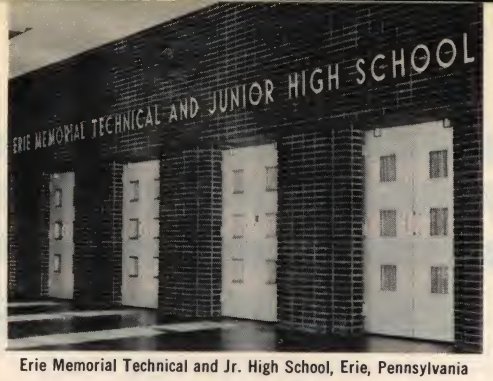
Category No. 4 is the Panelfab Custom Door (1⅜", 1¾", 2¼", and 3")—available in an almost unlimited range of types and finishes.

Panelfab Custom Doors, with or without frame, will be shipped K.D. Entire line of commercially available hardware may be specified. All hardware shall be furnished by Contractor according to approved hardware schedule, and will be applied to door in field by others.

Before any construction of door openings is to begin, door manufacturer shall be furnished with complete plans and specifications, approved hardware schedule and complete templates. Door manufacturer shall submit shop drawings for approval prior to construction of any door opening or fabrication of doors.

Requirements under Category No. 4 should be referred to factory for pricing and delivery schedules.

FACING MATERIALS AVAILABLE in addition to vertical ribbed anodized aluminum include color anodized aluminum, color vinyls, wood-grain vinyls and color porcelain – all in a variety of colors and patterns.



Erie Memorial Technical and Jr. High School, Erie, Pennsylvania
Aluminum Entrance Doors

Kaiser Ravenswood Factory, Ravenswood, West Virginia
Interior and Exterior Aluminum Doors

The New Everglades Hotel, Miami, Florida
Panelized Moveable Walls

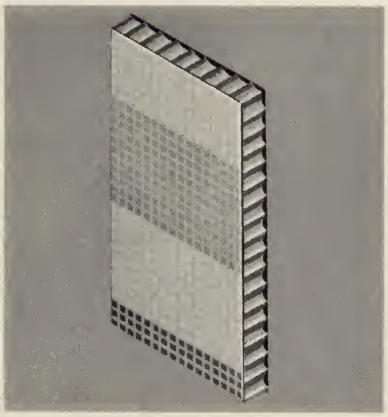
University of Miami Laboratory School, Miami, Florida
Aluminum doors and porcelain panels

PANELFAB DOORS...
PROVEN IN USE
Wherever Beauty *plus* Durability is required...
you'll find PANELFAB DOORS!

PANELFAB®
PRODUCTS, INC.

2000 N. E. 146th Street
North Miami, Florida
Phone: WIlson 5-1411

SALES AGENTS IN ALL PRINCIPAL CITIES



Beautiful ceramic tile facing
on Panelfab Structural Panel

Aluminum Solar Fascade Panels
Sun Louver Panels
WWL-TV Station
New Orleans, Louisiana

IMAGINATION KNOWS NO LIMITS WITH PANELFAB PANELS

Strong, lightweight, versatile Panelfab Panels add immeasureable beauty and practicality to modern architecture. Available in a variety of finishes and colors, and suitable for Mosaic Tile applications, Panelfab Panels permit architectural freedom of design never before attained.

A. I. A. FILE NO. 16-E — 1960

16a
Pi

Tubelite®

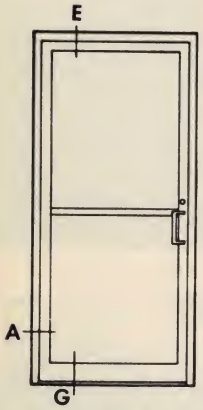
ALUMINUM ENTRANCES

PITTSBURGH PLATE GLASS COMPANY

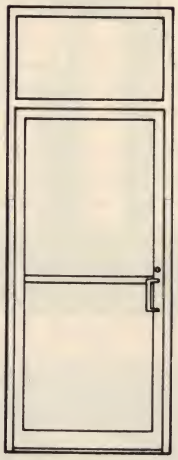
Tubelite®

ALUMINUM DOORS OF DISTINCTION

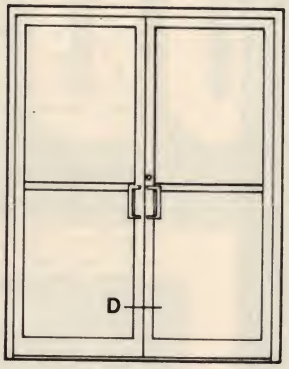
Standard size entrances are shown below. Special entrances can be made to architect's design from our standard construction.



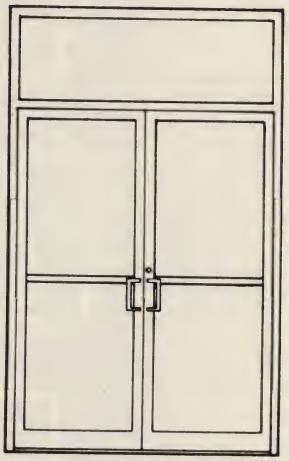
TYPE S-1, SINGLE DOOR WITH OR WITHOUT FRAME



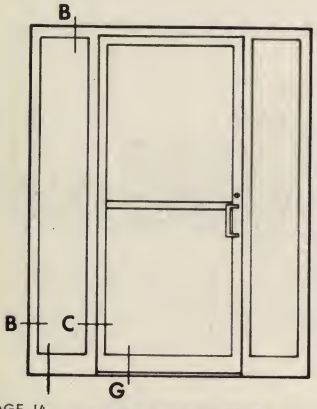
TYPE S-2, SINGLE DOOR WITH TRANSOM FIXED OR OPERATING



TYPE D-1, DOUBLE DOOR WITH OR WITHOUT FRAME



TYPE D-2, DOUBLE DOOR WITH TRANSOM FIXED OR OPERATING



SEE PAGE 14 ASSEMBLY OF 400-53 AND 400-92

TYPE S-3, SINGLE DOOR WITH SIDELIGHTS

STOCK DOORS & FRAMES

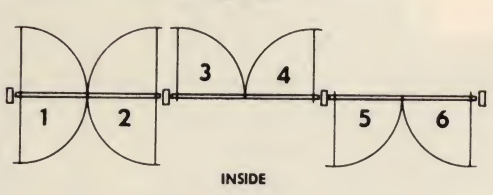
STANDARD SIZES

SINGLE DOORS	DOUBLE DOORS
3'-0"x7'-0"	2'-6"x7'-0"
3'-6"x7'-0"	3'-0"x7'-0"

STANDARD HARDWARE

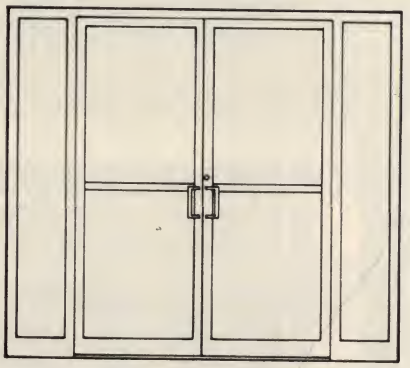
1 pair of No. 500-25 bronze ball bearing butt hinges per door, push bar No. 500-50, pull handle No. 500-5, dead bolt lock No. 500-21, Yale compact overhead door closer, top and bottom flush bolts No. 500-59 and a 4" threshold.

Stock doors can also be furnished on single or double acting floor checks, with or without a 7½" threshold.

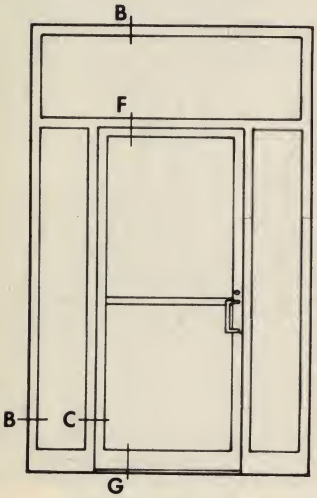


SPECIFY SWING OF DOOR BY NUMBER

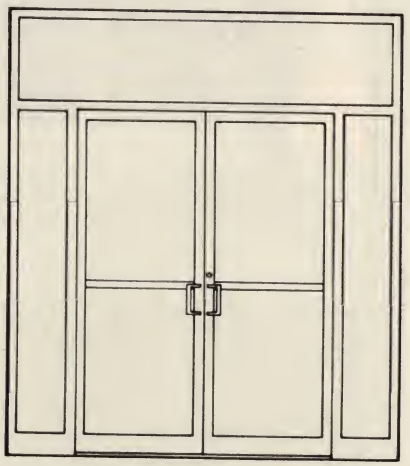
NOTE: Unless otherwise specified, door or doors will be furnished with frame, fixed transom, (when transom is required), and 4" bottom rail.



TYPE D-3, DOUBLE DOOR WITH SIDELIGHTS



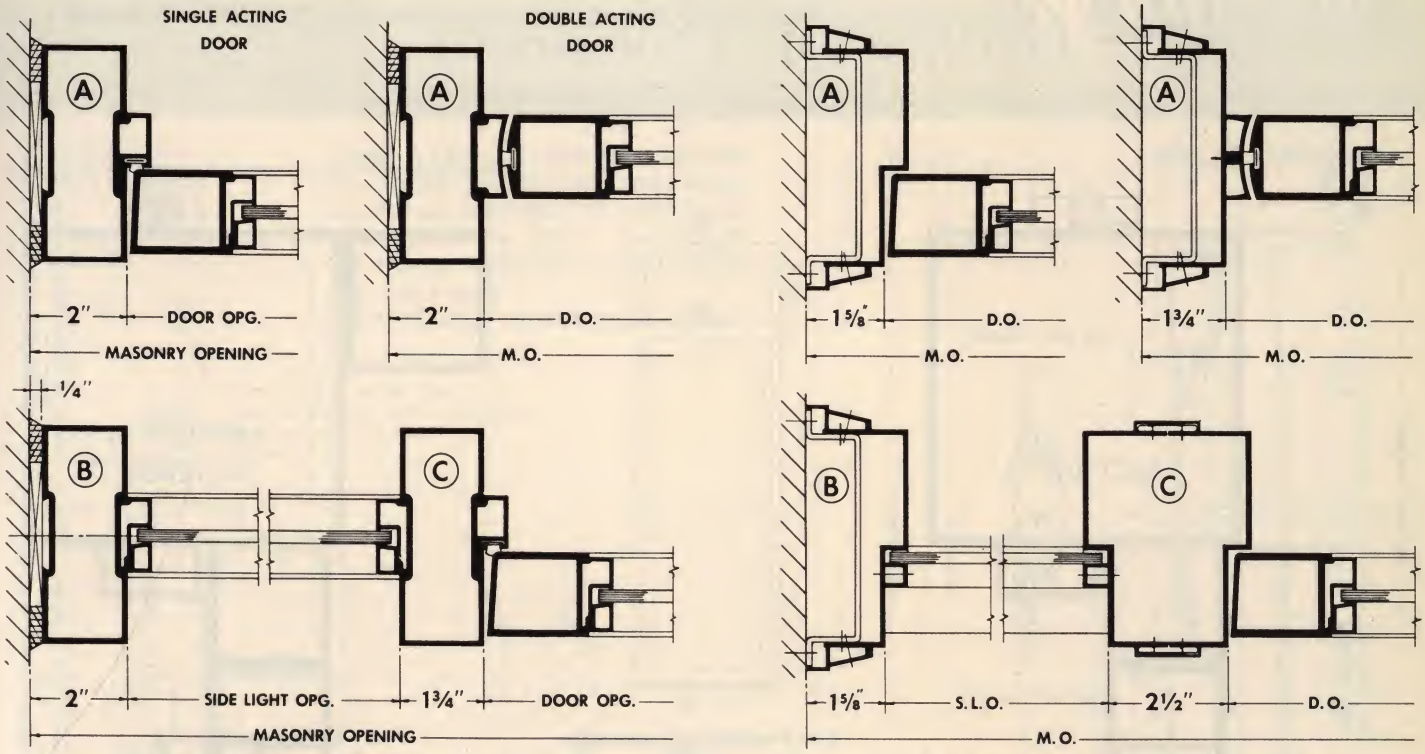
TYPE S-4, SINGLE DOOR WITH SIDELIGHTS WITH TRANSOM FIXED OR OPERATING



TYPE D-4, DOUBLE DOOR WITH SIDELIGHTS WITH TRANSOM FIXED OR OPERATING

STANDARD DOORS AND FRAMES

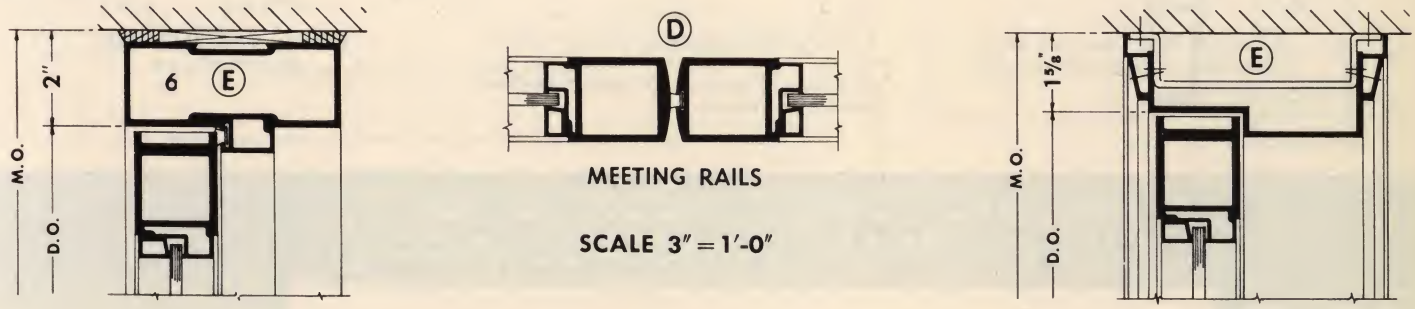
FINISH - POLISHED ALUMILITE 204A2

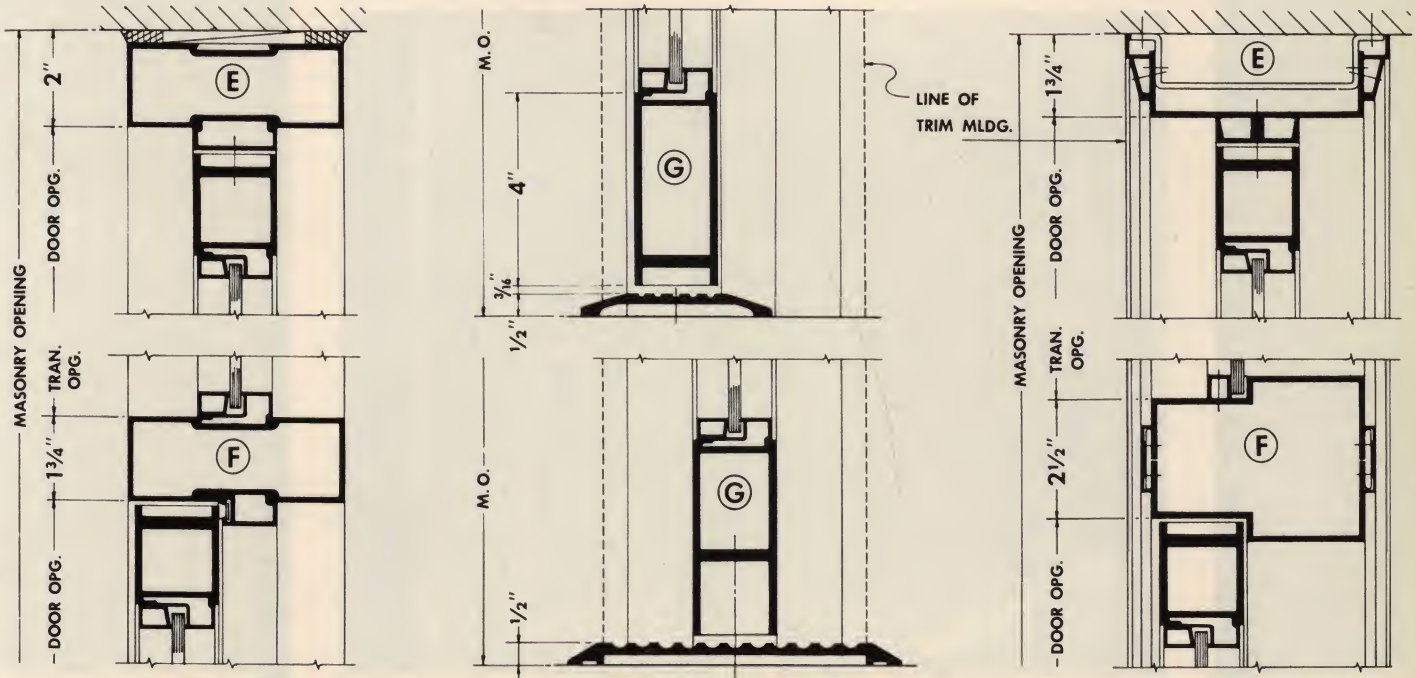


TUBULAR FRAME CONSTRUCTION

CHANNEL FRAME CONSTRUCTION

HORIZONTAL SECTIONS





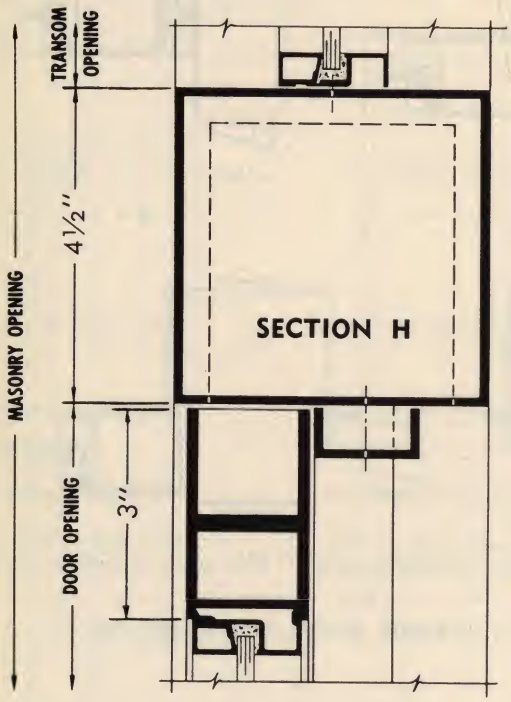
TUBULAR FRAME CONSTRUCTION

TYPICAL DOOR BOTTOM RAILS & THRESHOLDS

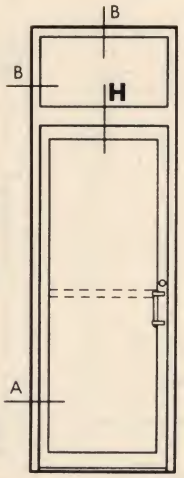
CHANNEL FRAME CONSTRUCTION

VERTICAL SECTIONS

Tubelite® Aluminum Entrances



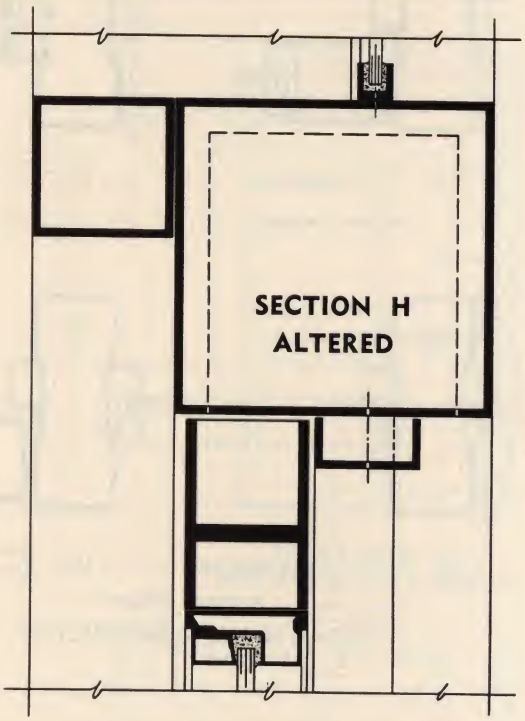
4½" x 4½" TRANSOM BAR WITH OVERHEAD CONCEALED CLOSER



TYPE S-2, SINGLE DOOR WITH TRANSOM FIXED OR OPERATING

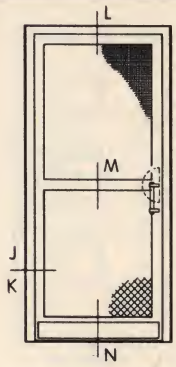
NOTE

The standard height of the door bottom rail is 4". A high bottom rail can be furnished if desired by adding surface applied kickplates.



CUSTOM CONSTRUCTION SHOWN BELOW

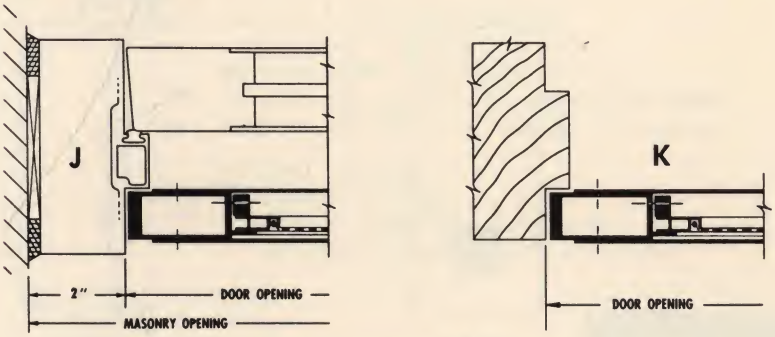
STANDARD TUBELITE DOORS & FRAMES WITH OVERHEAD CONCEALED CLOSERS



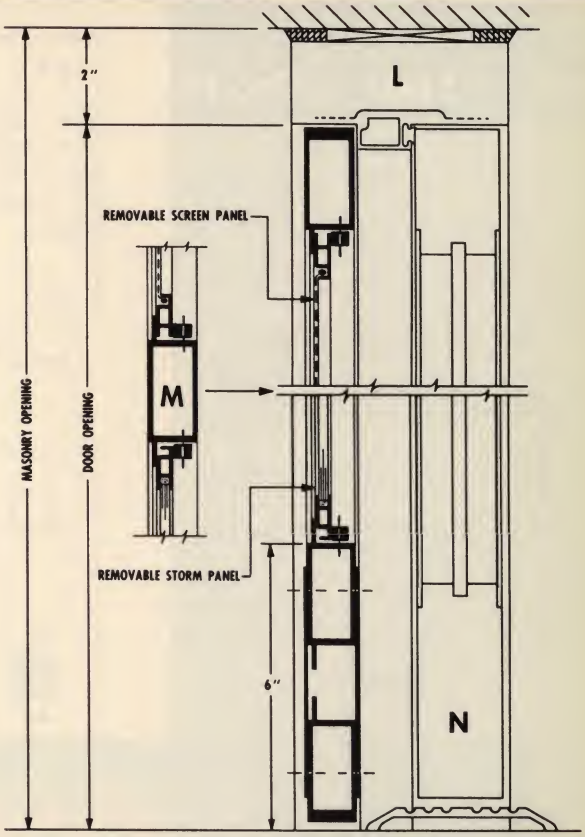
KEY ELEVATION

HARDWARE - 1½ pair of butt hinges No. 500-56, Yale overhead door closer No. 500-93, push plate No. 500-79 and pull handle No. 500-5. Latch lock set may be substituted for push plate and pull handle.
IMPORTANT - Specify swing of door.

Lower half of screen door may be supplied with expanded metal guard over screen if required.



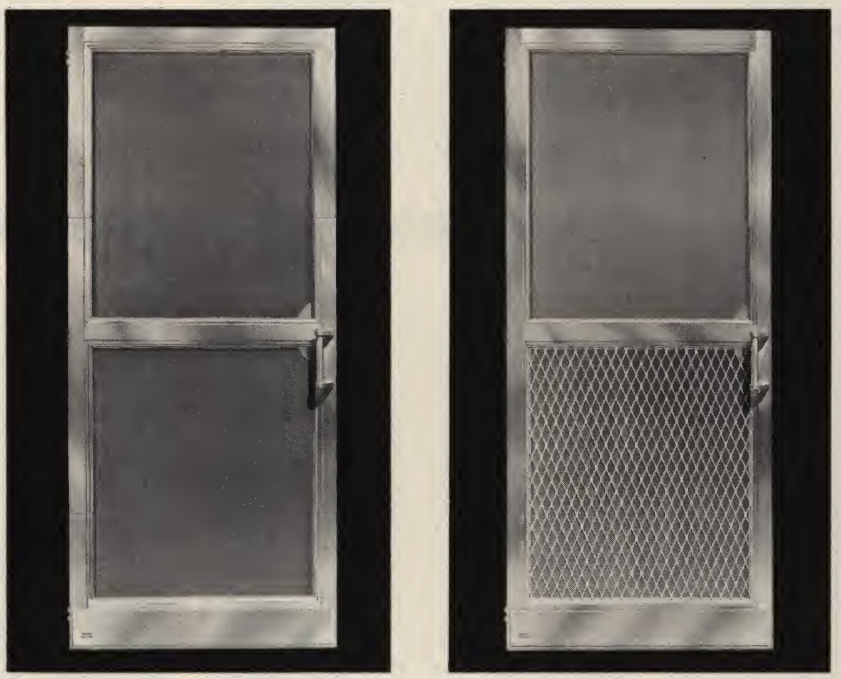
HORIZONTAL SECTIONS



VERTICAL SECTIONS

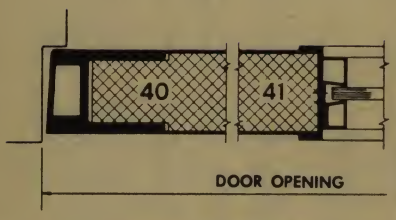
NOTE—In ordering screen doors specify door opening size.

SCREEN DOOR AND STORM SASH

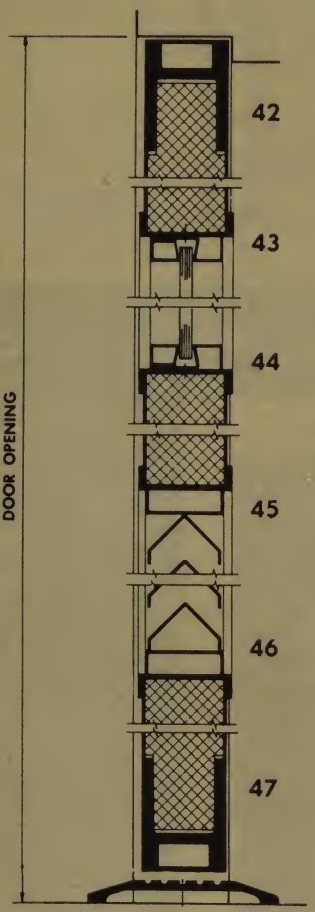


Tubelite® Aluminum Entrances

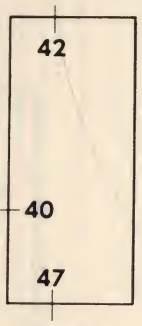
FLUSH PANEL DOORS



HORIZONTAL SECTION

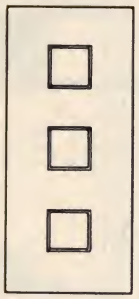


VERTICAL SECTIONS



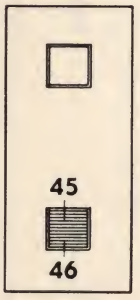
TYPE S-7

TYPE S-8



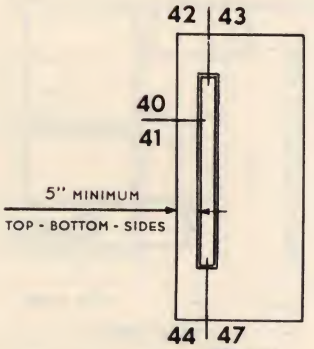
TYPE S-9

TYPICAL ELEVATIONS



TYPE S-10

TYPE S-11



TYPE S-12

SUBSTITUTE LETTER "D" FOR "S" IN SPECIFYING DOUBLE DOORS

Standard Hardware - 1½ pair of No. 500-92 bronze ball bearing butt hinges per door, keyed knob latch or dead bolt lock No. 500-21 with pull handle No. 500-5 and push plate No. 500-53, Yale compact overhead door closer, top and bottom flush bolts No. 500-59 and a 4" threshold.

Stock doors can also be furnished on single or double acting floor checks, with or without a 7½" threshold.

STANDARD SIZES

SINGLE DOORS	DOUBLE DOORS
2'-8"x7'-0"	5'-0"x7'-0"
3'-0"x7'-0"	6'-0"x7'-0"
3'-6"x7'-0"	
4'-0"x7'-0"	

Flush doors can be prepared to receive narrow line concealed panic hardware.

DEAD BOLT LOCK & PULL HANDLE

KEYED KNOB LATCH

DOOR SPECIFICATIONS

A solid fiberous core representing a sturdy solution to the reinforcement problem of flush construction. Also the use of an extruded aluminum H frame around the perimeter of the door and the employment of an extruded stile into which the facing material is mechanically interlocked, forms an exceptionally rigid construction.

CORE

(1) Weight per square foot 1⅝" thick -
2.161 lb. / sq. ft. (Average)

(2) Strength -
Tensile - 250 lb. / sq. inch (Average)
(A) Compression (Lbs. per sq. inch)
Approximately 100 lbs. / sq. inch.
Compression to 90% of original thickness.
Recovery to 100% of original thickness.

(B) Flexural strength
Transverse strength -
82 lbs. (Machine Direction)
65 lbs. (Cross Machine Direction)

(3) Fireproof rating -
Slow burning.

(4) Insulation Value -
K value - 0.33 to 0.36 depending on density.

U value of 1⅝" thickness - 0.20 to 0.22 btu. depending on density.

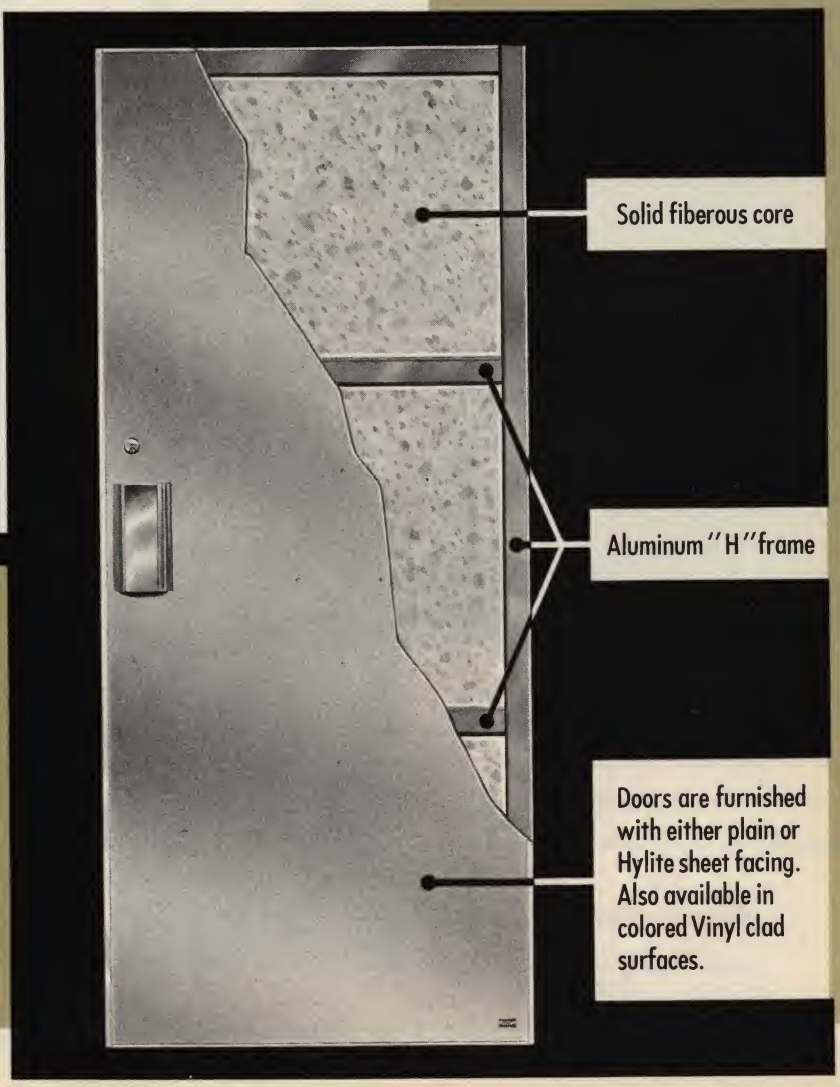
(5) Water absorption average
(Per cent vol.)
5.0% (2 hour test)

SOLD BY PITTSBURGH PLATE GLASS CO.
TUBELITE DOORS
REG. T.M.
A PRODUCT OF
MILLER INDUSTRIES INC.
REED CITY, MICH.

"This label is your assurance of quality"

FLUSH PANEL DOORS

- CHURCHES
- COMMERCIAL BUILDINGS
- HOSPITALS
- HOTELS
- INDUSTRIAL BUILDINGS
- PUBLIC BUILDINGS
- SCHOOLS


Solid fiberous core
Aluminum "H" frame
Doors are furnished with either plain or Hylite sheet facing. Also available in colored Vinyl clad surfaces.

CUSTOM PUSH - PULL

SEE PAGE 8

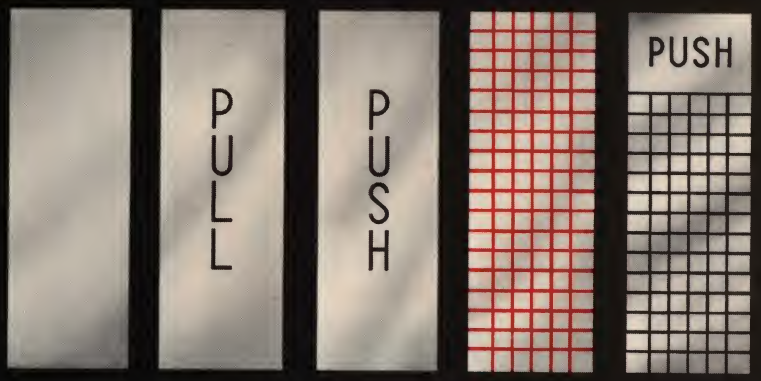
Unlimited Tubelite®

Lettering and crosshatching on standard

Aluminum Pull Plate size—5"x9"

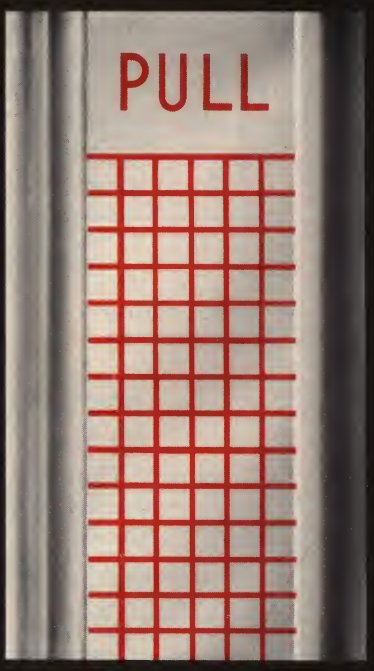
Aluminum Insert size—3 1/8"x9"

STANDARD DESIGNS — specify color desired



INSERT A INSERT B INSERT C INSERT D INSERT E

The above are just a few of the many custom designs possible

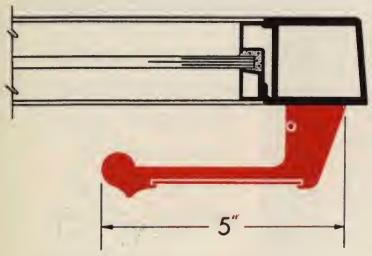


500-156 PULL PLATE WITH INSERT F

Also available in solid colored Vinyl Plastic surfaces in the following colors.

Metal Green — Cordovan
Red — Ebony
Blue — Dark Mahogany
Blizzard Grey — Bronco Brown

500-156 PULL-DETAIL



SCALE: 3"=1'-0"

500-156 is interchangeable with Pull Handle 500-5

DESIGNED TO MEET

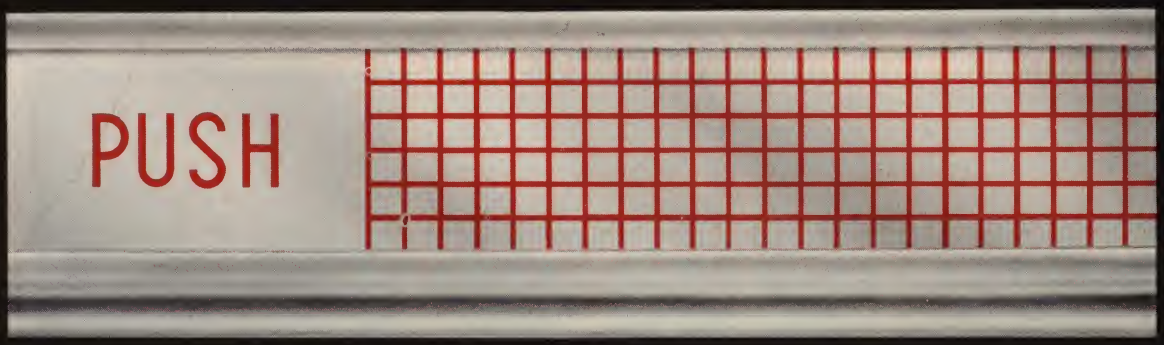
"Multi-Insert" push-pull plates

...igns to be black unless otherwise specified

Aluminum Push Plate size—4 ½"x16"

Aluminum Insert size—3 ⅛"x16"

STANDARD DESIGNS — specify color desired

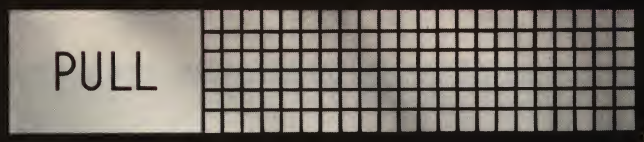


500-157 PUSH PLATE WITH INSERT E

INSERT A

INSERT D

INSERT B



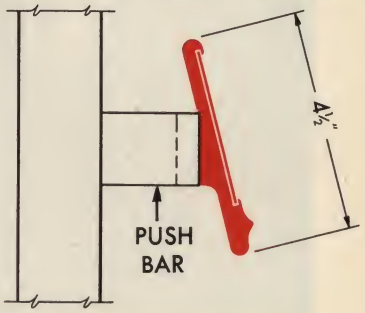
INSERT F

INSERT C

Unlimited custom designs upon request

500-157 is applicable to Push Bar 500-50

500-157 PUSH-DETAIL



SCALE: 3"=1'-0"

YOUR DEMANDS

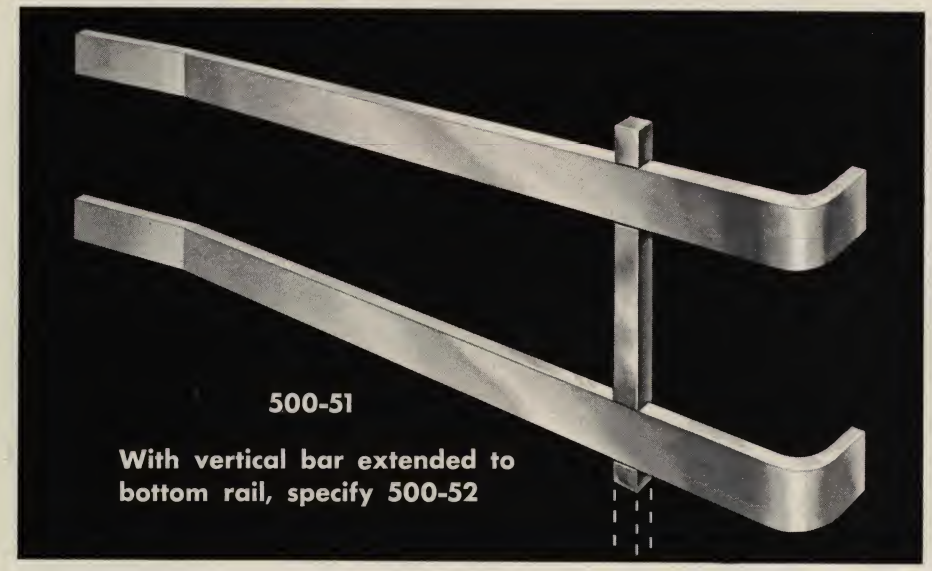
TUBELITE® PUSH AND PULLS

FINISH: POLISHED ALUMILITE 204 A2

500-50

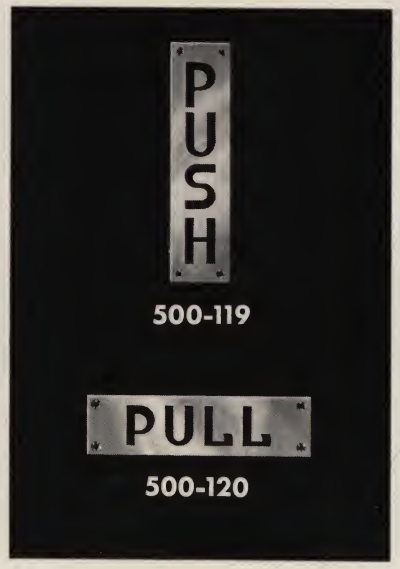
Standard Push Bar and Pull Handle

500-5



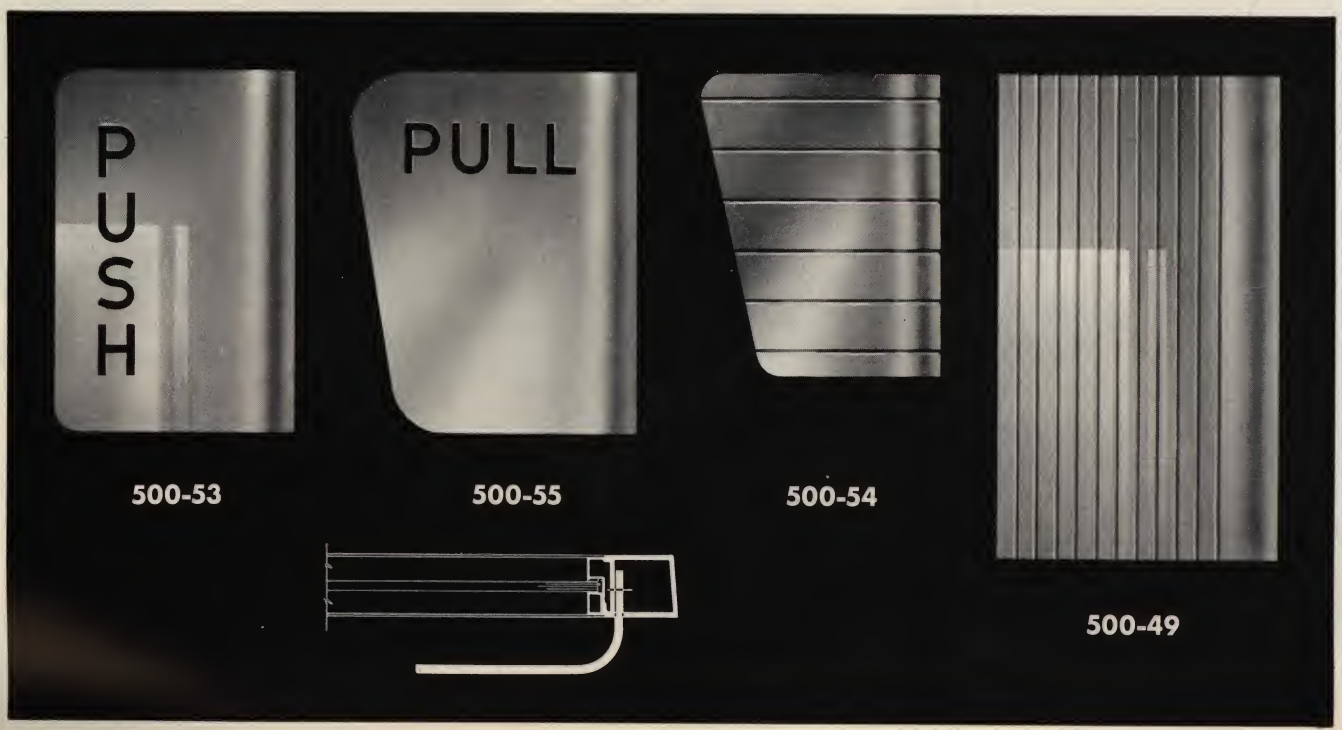
500-51

With vertical bar extended to bottom rail, specify 500-52



500-119

500-120



500-53

500-55

500-54

500-49

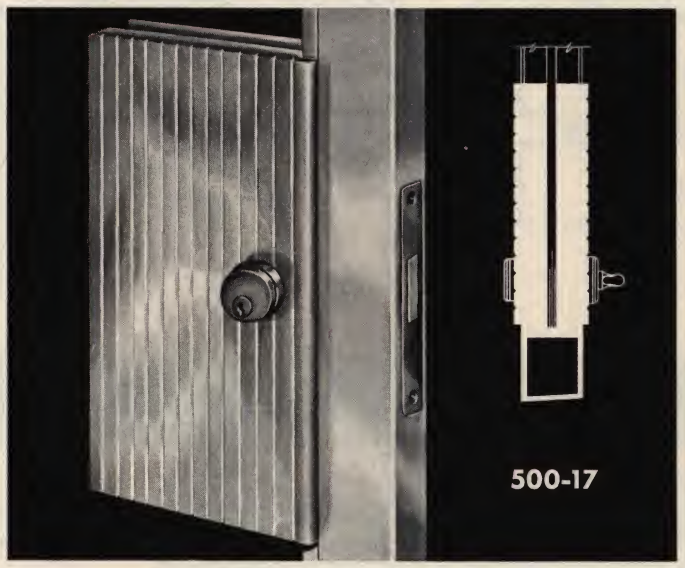
TUBELITE® PUSH AND PULLS

FINISH: POLISHED ALUMILITE 204 A2

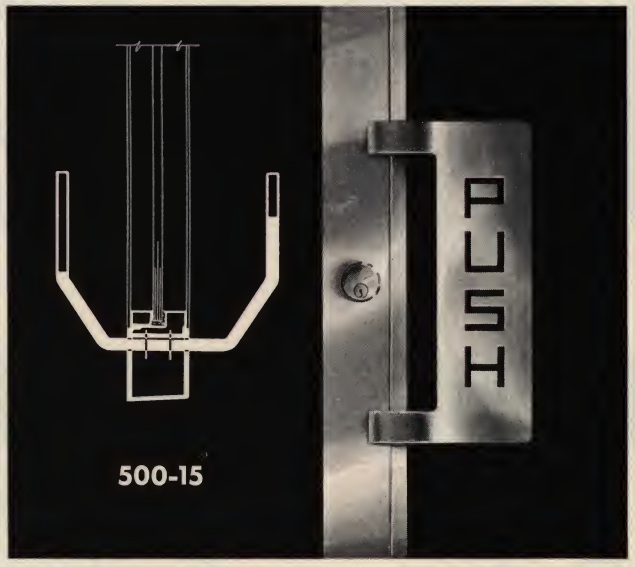
500-117

Shown attached to 500-50 Push Bar

500-83



500-17



500-15

CIPCO PUSH-PULLS

No. 184

No. 183
No. 183-O
(Not available in Stratawood)

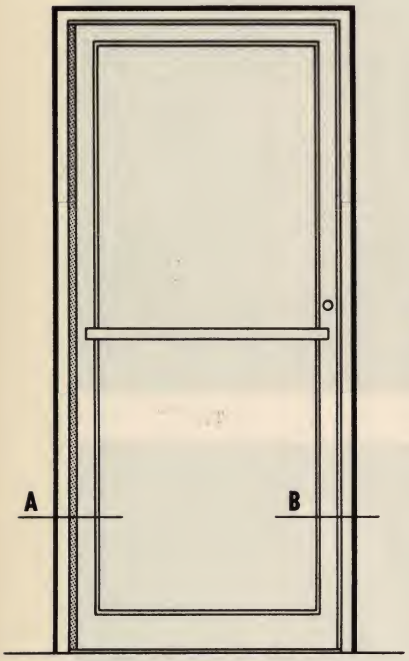
No. 182

No. 187

NOTE: No. 183 is for Flush doors only.
No. 183-O is for Narrow Line doors.

Units available in Stratawood, Teak, Mahogany, Oak, Walnut and Birch.

SIDE JAMB - FINGER GUARD

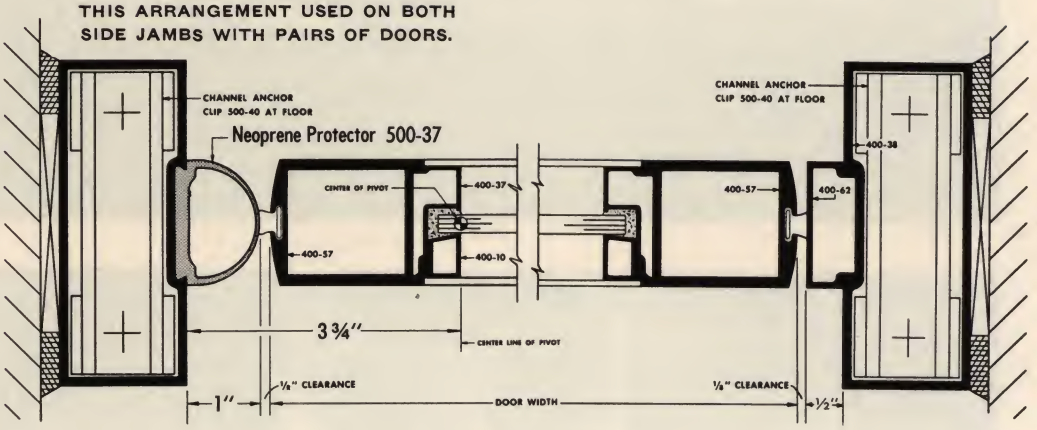


KEY ELEVATION

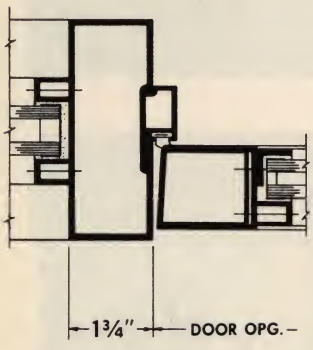
SECTION A

THIS ARRANGEMENT USED ON BOTH SIDE JAMBS WITH PAIRS OF DOORS.

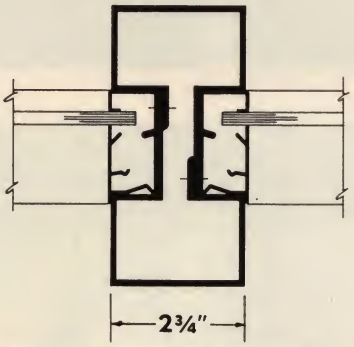
SECTION B



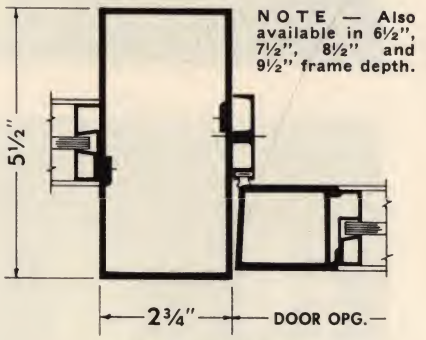
SPECIAL MULLION CONSTRUCTION



MULLION WITH TWINDOW

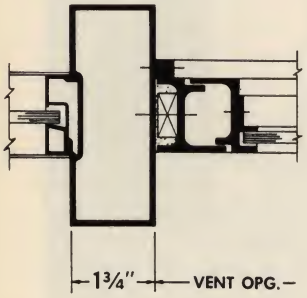


MULLION WITH RECESSED SASH NO. 17

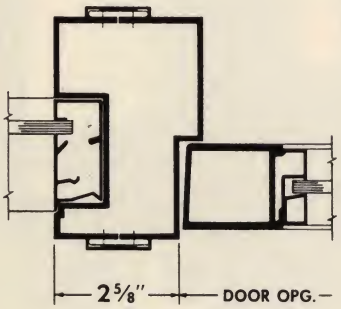


NOTE — Also available in 6½", 7½", 8½" and 9½" frame depth.

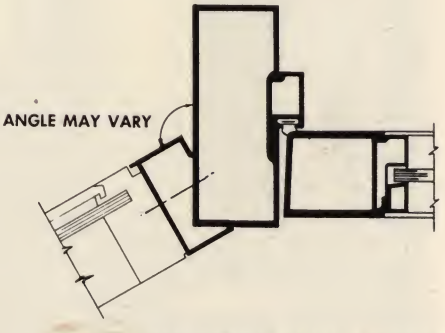
HEAVY MULLION



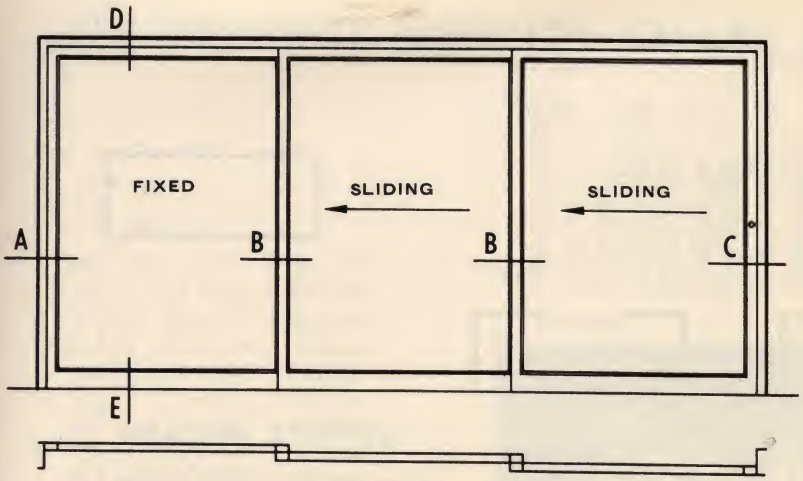
MULLION WITH VENTILATOR



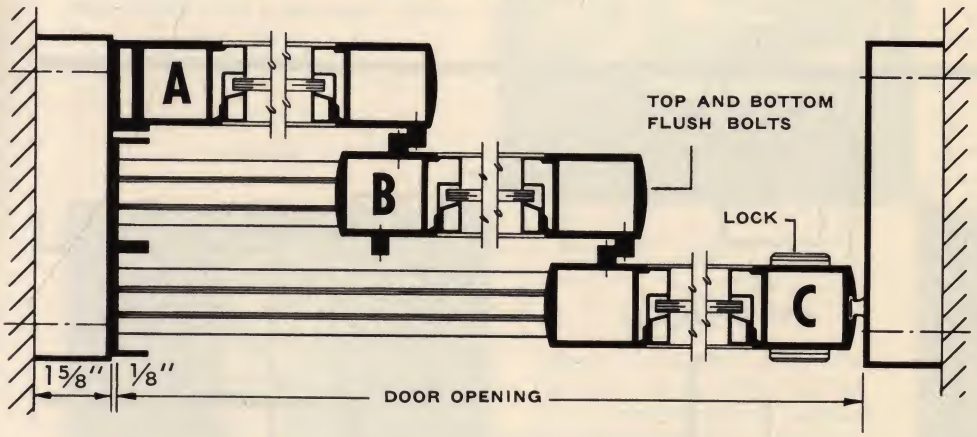
MULLION WITH RECESSED SASH NO. 17

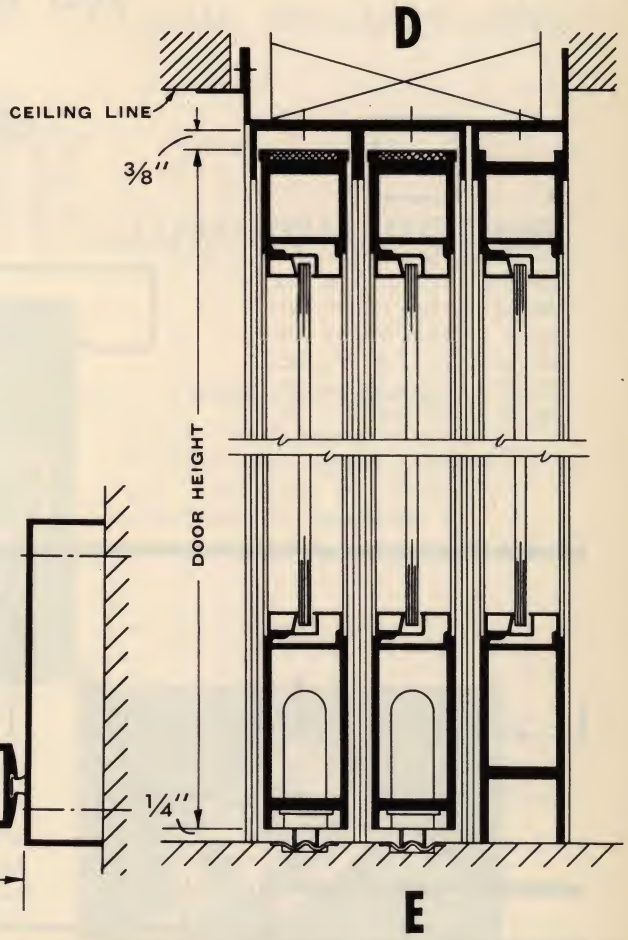


MULLION WITH SASH ADAPTOR

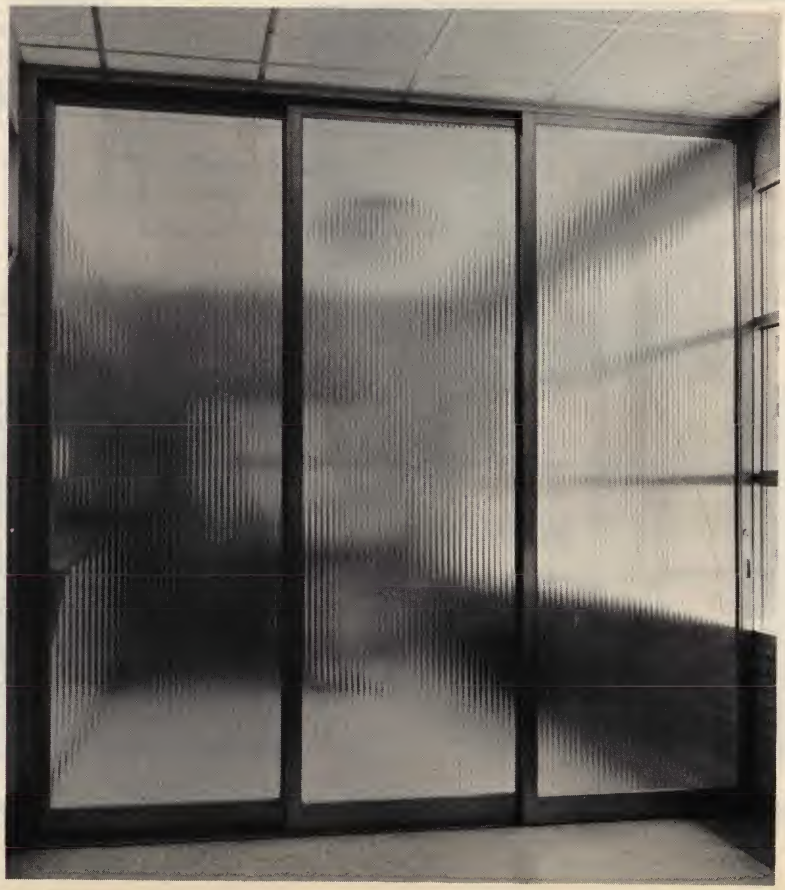


KEY PLAN & ELEVATION





SLIDING DOORS

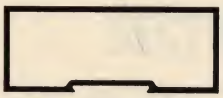


Sliding doors for commercial and industrial use. Made up of standard extruded door construction. Equipped with bronze sheaves. Available in narrow or wide stiles.

STOCK FRAME SECTIONS
FINISH-POLISHED ALUMILITE 204A2

TUBE FRAMES

400-150	½" x ½"	x .062"
400-151	¾" x ¾"	x .062"
400-152	1" x 1"	x .125"
400-153	1½" x 1½"	x .125"
400-1	1¾" x 1¾"	x .125"
400-154	2" x 2"	x .125"
400-155	4" x 4"	x .125"
400-133	4½" x 4½"	x .125"

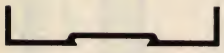


400-38
1¾"x4½"x.125"

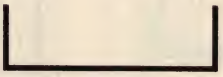
400-39
1¾"x4½"x.125"

400-156	½" x 1"	x .125"
400-157	¾" x 1½"	x .125"
400-158	1" x 2"	x .125"
400-82	1" x 4"	x .125"
400-75	1¾" x 2¼"	x .125"
400-159	1¾" x 3"	x .125"
400-2	1¾" x 4"	x .125"
400-41	1¾" x 4½"	x .125"
400-147	1¾" x 5"	x .125"
400-81	2" x 5"	x .125"
400-139	2" x 5½"	x .125"

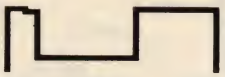
CHANNEL FRAMES



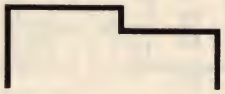
400-231
13/16"x4½"x.125"



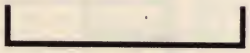
400-15
1⅜"x4½"x.125"



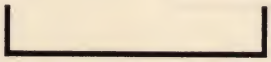
400-74
1⅜"x4½"x.125"



400-14
1¾"x4½"x.125"

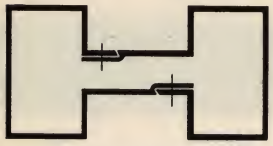


400-79
⅞"x5"x.125"

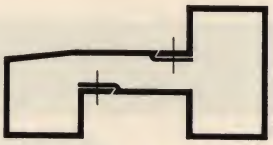


400-83
1 1/16"x5½"x.125"

400-80
1⅞"x5½"x.125"



400-123 (2)
2¾"x5½"x.125"



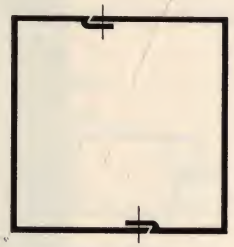
400-132 & 400-123
2¾"x5½"x.125"

COMBINATION FRAMES

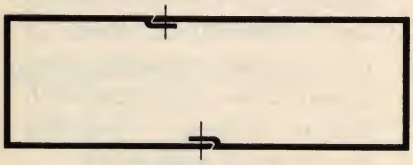
400-65 (2)
2¾"x5½"x.125"

400-65 & 400-66
2¾"x6½"x.125"

400-66 (2)
2¾"x7½"x.125"



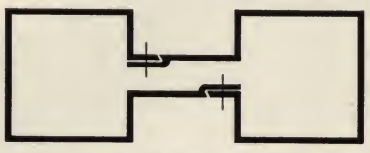
400-235 (2)
4½"x4½"x.125"



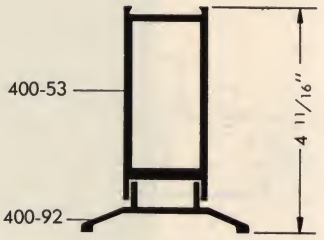
400-66 & 400-141
2¾"x8½"x.125"

400-141 (2)
2¾"x9½"x.125"

400-213 (2)
3"x12"x.156"

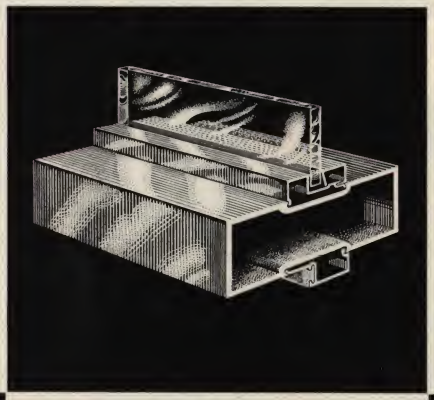


400-230 (2)
2¾"x7½"x.125"



Assembly of 400-53 & 400-92 as a sidelight base.

SIX REASONS WHY IT'S SMART TO USE Tubelite ALUMINUM DOORS



WEATHER STRIPPED

A Tubelite exclusive which provides maximum weathering by extending the pile bead into the lock face plate.

WALL THICKNESS

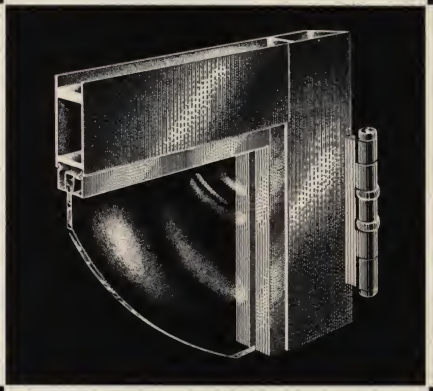
Twenty-five percent more wall thickness for added strength and assurance of adequate anchorage for hardware.

VERSATILITY

Heavy extruded dovetailed tubular frame offering several combinations without visible fastenings. Also featuring continuous pile weather stop.

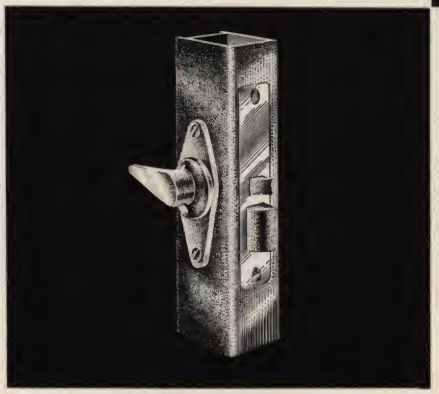
LOCK FLEXIBILITY

Our most recent addition. A latch lock which is interchangeable with our standard dead lock.



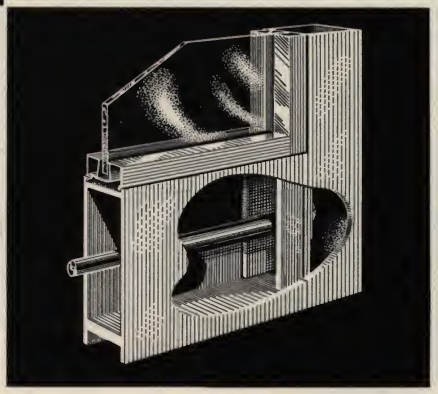
CORNER CONSTRUCTION

Dovetailed interlocking feature prevents any twisting. Further strength is obtained by use of stainless steel bearing plates held together under pressure by a tie rod having SAE threads and self-locking nuts.



BUTTS

Extra heavy ballbearing butts with stainless steel non-rising floating pins and screw type end caps.



Tubelite®

DOOR AND FRAME SPECIFICATIONS

GENERAL: Aluminum entrances shall be Pittsburgh Plate Glass "Tubelite" tubular aluminum doors, frames, trim, anchors and hardware as shown on details.

MATERIAL: All sections of doors and frames shall be extruded members of Architectural Alloy No. 6063-T5. Screws shall be of 24S-T4 aluminum alloy and cadmium plate brass or bronze.

FABRICATION: Doors shall be fabricated of extruded hollow aluminum tubes with no exposed seams. Frames may be either extruded tube or open channel, depending upon the strength of construction required. Anchor brackets at joints and reinforcement for hardware shall be completely concealed and fastened in place without fastening method being detectable on visible surfaces. Mechanical joints of doors and frames shall be accurately milled to a hairline water-tight joint. Glazing member is of such design that it is snapped in, eliminating use of exposed screws.

FINISH: All parts shall be finished in standard 204A2. Sample of the finish will be submitted to architect (upon request) for approval.

ERECTION: All openings shall be prepared plumb and square by others. Doors and frames shall be installed in the opening plumb and in true alignment, in accordance with instructions attached to all doors. Tubular frames shall be secured to the floor by means of anchors. Anchor screws shall be used at the side and head jambs. Channel frame shall be anchored to the jambs by means of steel cores securely fastened to the jambs, and the aluminum frame attached to the anchors in accordance with drawings prepared by the fabricator.

FINISH HARDWARE: All stock doors shall have standard hardware furnished by the door manufacturer. Hardware for custom - built doors and special entrances shall be specified by the architect. Hardware furnished by others shall be sent to the door manufacturer for application to the door.

QUALITY - ECONOMY - BEAUTY - RIGIDITY

PITTSBURGH PLATE GLASS COMPANY

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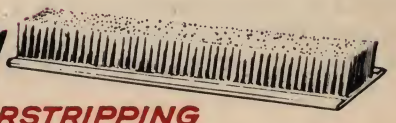
Your Guide to DOORS & Screens

with Schlegel *woven pile weatherstripping*

- **POSITIVE WEATHER PROTECTION**
- **LOW HEATING & AIR CONDITIONING COSTS**
- **LONG LIFE**
- **FREEDOM FROM NOISE**
- **EASY OPERATION**
- **ENGINEERED ACCURACY**
- **TRUE ECONOMY**

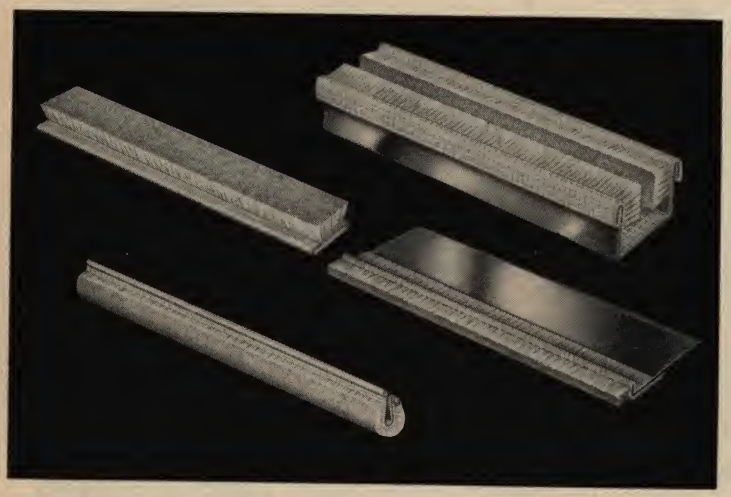
Sign of a quality, well-sealed product

Schlegel WOVEN PILE WEATHERSTRIPPING



See catalog 17a/Sc for "Your Guide to Windows & Screens with Schlegel Woven Pile Weatherstripping."

. . . . . a quality product demands quality components



From the finest yarns available, Schlegel produces an unmatched weatherstripping of dense woven pile. It provides a most effective sealing action due to the inherent resiliency of wool, and a unique principle of minimum friction – on fibre ends only.

For even greater protection against weather, for added resiliency, and as a deterrent to insects, Schlegel treats each yarn with Dow-Corning silicone.

Seventy years of weaving experience aid Schlegel engineers in designing wool pile of proper density and depth for each application. Each pile fabric strip is reinforced with a latex or Geon backing to assure uniformity of pile height. Then the strip is crimped in metal – or imbedded in a special vinyl plastic or polyester resin to give rigidity and shape for the specific application.

Windows and doors, in addition to adding style and beauty to a structure, are essential structural parts that move. In moving they must open and close easily, smoothly and quietly. Besides, they must positively block out the elements of weather for years ahead. Therefore, weatherstripping is now rightly regarded as an integral part of window and door design. When Manufacturers consider weatherstripping they naturally think of Schlegel Woven Pile. It is not an ordinary metal or plastic seal but it is a natural seal with built in qualities of resilience, compression, and permanency not found in any other type of weatherstripping.

nothing else—metal, felt, rubber or plastic—offers all these advantages:

POSITIVE WEATHER PROTECTION—In tests and in actual use – in all climatic conditions – the millions of 100% virgin wool fibres (Dow-Corning *silicone* treated) in Schlegel Wool Pile provide positive protection against wind, rain, snow, dust and dirt. This performance has been proved by the rigid F.H.A. tests for air infiltration (mandatory for all prime windows used in buildings where F.H.A. loans are granted).

LOWER HEATING AND AIR CONDITIONING COSTS—Wool pile stops drafts. Its excellent sealing characteristics assure heating and air conditioning economies, year after year.

LONG LIFE—Laboratory tests show that hundreds of thousands of opening and closing actions cause no appreciable wear. The earliest installations, now more than 25 years old, are still in excellent condition.

FREEDOM FROM NOISE—Wool pile weather seals provide a cushion between rigid surfaces that otherwise would bang and scrape or rattle on windy days. Moving parts ride quietly on dense pile fabric.

EASY OPERATION—Millions of flexible fibres, given even greater resiliency by treatment with Dow-Corning silicone, act as tiny individual "bearings." Unaffected by temperature changes, they "give" to let moving parts operate easily; then spring back at once to hold and seal. Windows and doors fitted with Schlegel Wool Pile will not stick or jam.

ENGINEERED ACCURACY—The forms of Schlegel Wool Pile weather seal in all products have been carefully specified and made to close tolerances – to assure maximum sealing, easy and silent operation, and long life.

TRUE ECONOMY—Schlegel Wool Pile ends call backs due to faulty weatherstripping performance. The customer, satisfied with protection that saves his money, pleased with smooth performance, will not hesitate to make recommendations.

This guide lists the types of windows and doors available now with Schlegel Woven Pile Weatherstripping—and tells who makes them. Under each type of window, key numbers refer to the manufacturers listed. The listings may not be complete. Other manufacturers are using Schlegel Weatherstripping, but they haven't told us specifically where.

SLIDING GLASS DOORS

1	29	54	84	130	153	192	215	247	280	305	348
5	30	56	90	133	155	193	216	252	281	308	349
6	31	59	96	134	156	194	217	254	282	315	352
7	36	60	99	135	157	198	220	256	289	316	354
8	38	62	100	136	159	200	221	257	291	317	
10	42	63	104	138	171	202	231	263	295	318	
13	44	64	108	140	173	204	235	264	297	321	
14	46	68	109	141	178	208	236	265	298	322	
20	47	69	118	143	179	209	237	269	299	323	
22	48	73	120	145	180	211	240	271	300	325	
27	49	81	125	149	183	212	241	273	301	334	
28	50	82	128	150	187	213	245	279	302	342	

screens

1	96	175	211	257	299
5	99	178	215	267	300
28	104	180	216	271	332
38	112	183	236	279	349
50	129	188	237	282	352
54	133	193	241	293	
69	141	198	245	295	
84	143	208	247	297	
87	149	209	252	298	

storm panels

112 188

KEYLIST—manufacturers using SCHLEGEL woven pile

1 **A. & B. Manufacturing Co., Inc.,**
210 N. Lee St., Alexandria, Va.

2 **ABC Weather Tite Co.,**
3514 Shenandoah Ave., N.W., Roanoke, Va.

3 **Ace Aluminum Sales Co.,**
731 S. Lincoln Ave., Lebanon, Pa.

4 **Acme Metal Molding Co.,**
1923 So. Los Angeles St., Los Angeles 11, Calif.

5 **Acorn Aluminum Products Co.** (Dorwal),
21750 Hoover Road, Warren, Mich.

6 **Adams Engineering Co., Inc.,**
19300 Biscayne Blvd., P.O. Box 875, Ojus, Fla.

7 **Ador Corporation,**
2345 W. Commonwealth Ave., Fullerton, Calif.

8 **Aer-Lite Mfg. Co., Inc.,**
1510 West Boradway, Phoenix, Arizona

9 **Airco,**
3101 Monroe, Toledo, Ohio

10 **Air-Lite Metal Products Co.** (Lanai'Dor),
1610 East 12th St., Oakland, Calif.

11 **Airloc, Inc.,**
550 5th St., Struthers, Ohio

12 **Air Master Corporation,**
20th St. & Allegheny Ave., Philadelphia 32, Pa.

13 **Air Seal Co.,**
1437 Sylvania Ave., Toledo, Ohio

14 **Alco Associates Inc.,**
206 E. Jericho Tpke, Mineola, N. Y.

15 **Al-Fab Aluminum Fabricators, Inc.,**
3341 West Lake St., Chicago 24, Illinois

16 **Allied Aluminum Products, Inc.,**
1800 West Fulton St., Chicago 12, Illinois

17 **Allied Window Manufacturers Inc.,**
2728 W. McMicken Ave., Cincinnati 14, Ohio

18 **All-Secur Window Products,**
866 Portage St., Kalamazoo, Mich.

19 **All-Temp Window Co.,**
3471 E. 49th St., Cleveland 27, Ohio

20 **All-Time Manufacturing Co., Inc.,**
Bridge St., Montville, Conn.

21 **All Weather Aluminum Ind., Ltd.,**
480 Ash Ave., Montreal, Canada

22 **All-West Aluminum Co., Inc.,**
2700 S. E. Ankeny, Portland 14, Oregon

23 **Alsco Ltd.,**
1602 A-9 Ave. S.W., Calgary, Alberta, Canada

24 **Alum-A-Seal Manufacturing Co.,**
3101 Monroe St., Toledo, Ohio

25 **Alumatic Corporation of America,**
2081 S. 56th St., Milwaukee 19, Wisconsin

26 **Alumatic of Canada, Ltd.,**
6161 Tecumseh Rd. E., Windsor, Ontario, Can.

27 **Alumatic Windows, Inc.,**
8205 Lyndon, Detroit 38, Mich.

28 **The Alumiline Corp.,**
Dunnell Lane, Pawtucket, Rhode Island

29 **Aluminaire Co.** (Div. Rafter Engineering),
4020 E. Buchanan St., Phoenix, Arizona

30 **Aluminex Incorporated,**
2408 Forney St., Los Angeles 31, Calif.

31 **Alumino Arquitectonico S.A.,**
Av. Insurgentes Sur 1605, Mexico 19, D.F.

32 **Aluminum Door & Window Co. Ltd.,**
1111 D'Argenson, Montreal 22, Canada

33 **Aluminum Home Products Corp.,**
6906 Preston Highway, Louisville, Kentucky

34 **Aluminum Ind.,**
716 E. Nash St., Milwaukee 12, Wis. and
7876 Portland S., Minneapolis, Minn.

35 **Aluminum Manufacturing Corp.,**
(Almaco Products), 2629 Rolinda, Dallas, Texas

36 **Aluminum Metals Co.,**
P.O. Box 300, Santa Rosa, Calif.

37 **Aluminum Products Hawaii, Ltd.,**
669 Sheridan St., Honolulu 14, Hawaii

38 **Aluminum Sash & Door Co., Inc.,**
(Pictorial-Rancho-Met-Tec),
13154 Saticoy St., North Hollywood, Calif.

39 **Amalume Co., Inc.,**
5 Stevens St., Waterbury, Conn.

40 **Amarlite Aluminum Entrances,**
P.O. Box 7188, Atlanta, Georgia

41 **American Aluminum Window Corp.,**
767 Eastern Ave., Malden 48, Mass.

42 **American Aluminum Windows Inc.,**
5201 Old Kings Rd., Jacksonville, Fla.

43 **American Glass Company,**
16 Howard St., Taunton, Mass

44 **American Home Conditioning Co.,**
1218 Kaighn Ave., Camden 3, N. J.

45 **American Projects Corp.,**
109-01 Jamaica Ave., Richmond Hill 18, N. Y.

46 **American Window & Door Co., Inc.,**
P.O. Box 1655, Lubbock, Texas

47 **V. E. Anderson Manufacturing Co.,**
P.O. Box 430, Bradenton, Fla.

48 **Anjac Manufacturing Co.,**
1218 Rio Vista Ave., Los Angeles 23, Calif.

49 **Antil Manufacturing Corp.,**
10027 Lyndon, Detroit 38, Mich.

50 **Arcadia Metal Products,**
801 S. Acacia Ave., Fullerton, Calif.

51 **Architectural Bronze Studio, Inc.,**
2600 So. 10th St., St. Louis 18, Mo.

52 **N. Armenti & Sons,**
516 Boston Turnpike, Shrewsbury, Mass.

53 **Arnold Window Sales,**
223 Ruby St., Joliet, Illinois

54 **Atlas Architectural Metals, Inc.,**
8238 Lovett, Dallas 17, Texas

55 **B. & G. Sales Company,**
P.O. Box 5786, Pittsburgh 8, Pa.

56 **Bailey Kelleher Co.,**
500 Bellevue Ave., Detroit 7, Mich.

57 **Balco Products Inc.,**
25 Denton Ave., New Hyde Park, N. Y.

58 **Bellaire Industries Inc.,**
562 Wortman Ave., Brooklyn, N. Y.

59 **Bellevue Metal Products,**
1314 E. First St., Los Angeles 33, Calif.

60 **The Benson Manufacturing Co.,**
18th at Agnes, Kansas City 27, Missouri

61 **Better-Built Aluminum Products Co.,**
614 8th Avenue S., Nashville 3, Tenn.

62 **Binswanger Glass Co.,**
207 North Main St., Houston, Texas

63 **Bon-Aire Co.,**
12237 Aurora Ave., Seattle, Washington

64 **Bourne Products, Inc.,**
900 Bourne Place, El Cajon, Calif.

continued on next page

STORE FRONT & ENTRANCE DOORS

4	43	65	96	123	164	178	206	219	237	260	275	310	347
23	44	70	101	125	165	186	209	227	238	261	282	326	356
28	47	75	109	136	166	190	210	229	239	263	290	327	
31	51	78	113	152	167	197	212	230	242	264	294	329	
35	54	93	116	155	176	199	214	234	254	269	298	331	
40	60	94	118	160	177	204	216	235	259	273	302	346	

screens

116 346

KEYLIST—manufacturers using SCHLEGEL woven pile . . . .

65 **Brasco Manufacturing Co.,**
152nd & Commercial Ave., Harvey, Illinois and Monroe, Mich.

66 **Brin Metals Corp.,**
116 Railroad Ave., Albany 5, N. Y.

67 **Bristol Aluminum Co.,**
P.O. Box 11, Bristol, Pa.

68 **Britt Sliding Door Corp.,**
P.O. Box 6735, Houston 5, Texas

69 **Brolliar Construction Inc.,**
P.O. Box 626, Pompano Beach, Fla.

70 **Browne Window Mfg. Co., Inc.,**
2841 Pierce St., P.O. Box 13632, Dallas, Texas

71 **Bruner Aluminum Products Inc.,**
1728 Arthur at Bloom Sts., Louisville 17, Ky.

72 **Burke Window Mfg. Co., Inc.,**
30 Goodrich St., Buffalo 3, N. Y.

73 **Bur-Val Manufacturing Co.,**
3000 N. San Fernando Rd., Burbank, Calif.

74 **Calif. Cabana Mfg. Corp.,**
1455 Cota Ave., Long Beach 13, Calif.

75 **Cameron Windows (Aluminum) Ltd.,**
91 Kennedy Rd. S., Brampton, Ontario, Canada

76 **Campbell Sash Works, Inc.,**
2409-35 Wilson Ave., Campbell, Ohio

77 **Canadian Aluminum Window Co. Ltd.,**
6545 Durocher St., Montreal, Canada

78 **Canadian Pittsburgh Industries Ltd.,**
680 est blvd. Lamarche, Chicoutimi, Canada

79 **Capitol Aluminum Products Co.,**
County Route 113-West, Bellevue, Ohio

80 **Capitol of Des Moines (Window Seal of Iowa),**
2008 Forest Ave., Des Moines, Iowa

81 **Capitol Products Corporation,**
P.O. Box 69, Mechanicsburg, Pa.

82 **Capri Sales, Inc., (T. V. Walker & Son, Inc.),**
P.O. Box 547, Burbank, Calif.

83 **Capri Window Company, Inc.,**
4400 Superior, Cleveland 3, Ohio

84 **Carco Industries, Inc.,**
2155 N.W. 25 Ave., Miami 52, Fla.

85 **Carhayes Ltd.,**
Box 820, Brantford, Ontario, Canada

86 **Century Aluminum Products, (Artistic Ven. Blind Corp.),**
212 South 12th Ave., Mount Vernon, N.Y.

87 **Challenger Products, Inc.,**
Hammond & Gregg Sts., Carnegie, Pa.

88 **Chalmers Inc., (Air Seal Window Co.),**
3405 W. Lake St., Melrose Park, Illinois

89 **E. A. Clamage Company,**
3100 W. 51st St., Chicago 32, Illinois

90 **Compo-Miracle Products Co. Inc.,**
15221 W. 11 Mile Road, Oak Park, Mich.

91 **Corona Manufacturing Corp.,**
11300 Tuxford St., Sun Valley, Calif.

92 **Corson Industries,**
9000 River Road, Delair, N. J.

93 **Crane Fulview Glass Door Co.,**
4500 N. Clark St., Chicago 40, Illinois

94 **Cronstroms Manufacturing Inc.,**
4225 Hiawatha Ave., Minneapolis 6, Minn.

95 **Crown Imperial Aluminum Products Co., Inc.,**
520 Orange Ave., West Haven, Conn.

96 **Cupples Door and Frame Corp.,**
West Railroad St., Dowagiac, Mich.

97 **Custom-Aire Products & Mfg. Co., Ltd.,**
61 Arrow Road, Weston, Ontario, Canada

98 **Customatic Alum. Prod. & Enterprises, Ltd.,**
16 Arrow Road, Weston, Ontario, Canada

99 **D. H. I. Ltd.,**
Box 221, Toronto 16, Ontario, Canada

100 **Daryl Products Corp.,**
7240 N.E. 4th Ave., Miami, Florida

101 **Desco Metals Company,**
2264 Wilkins, Detroit 7, Mich.

102 **Devac Inc.,**
5900 Wayzata Blvd., Minneapolis 16, Minn.

103 **Diamond Aluminum Products Co.,**
1232 N.W. 4th, P.O. Box 3987, Oklahoma City, Oklahoma

104 **Dina Pak Corporation,**
P.O. Box 488, 1212 N. Loop 12, Irving, Texas

105 **Dorwin Aluminum Products Corp.,**
33-35 Debevoise Ave., Roosevelt, N. Y.

106 **Dual Temp Products Ltd.,**
604 Dundas St., Woodstock, Ontario, Canada

107 **Dumont Aluminum Products Ltd.,**
709 Main St., W., Hamilton, Ontario, Canada

108 **Dunaway Mfg. Co.,**
Box 37, Greggton, Texas

109 **Dunco, Limited,**
Hafis Rd. & Sheffield St., Toronto 15, Ontario, Canada

110 **Duo-Temp Corporation,**
786 Terrace Blvd., Depew, N. Y.

111 **Eagle-Picher Co.,**
Dover, N. J.

112 **Elmont Door Corporation,**
P.O. Box 128, West Hempstead, N. Y.

113 **Embury Store Front Metals,**
150 Pearl St., Toronto 1, Ontario, Canada

114 **Esco Manufacturing Co. Inc.,**
430 Chelton Ave., Camden 4, N. J.

115 **Excelum Aluminum Products Co. Ltd.,**
10 Corbeil St., Pont Viau, Montreal 9, Canada

116 **Extrudart Metal Products Inc.,**
14 East Wesley St., South Hackensack, N. J.

117 **F & G Aluminum Storm's Ltd.,**
12 Queen Elizabeth Blvd., Toronto 18, Canada

118 **Facade, Incorporated,**
1726 Cockrell, Dallas 15, Texas

119 **Feather Lite Mfg. Co.,**
11710 Cloverdale Ave., Detroit 4, Mich.

120 **Fentron Industries Inc.,**
2801 Market St., Seattle, Washington

121 **Fetter Brothers Alum. Mfg. Co.,**
835 Spring St., Jeffersonville, Indiana

122 **Filterlite Industries Ltd.,**
102 Elmslie St., La Salle, Montreal, Canada

123 **Fine Line Products Co.,**
Box 633, Valdosta, Georgia

124 **G. M. Firth Co.,**
E. Broad St., P.O. Box 81, Montoursville, Pa.

125 **Fleet of America, Inc.,**
2015 Walden Ave., Buffalo 25, N. Y.

126 **C. M. Flynn Mfg. Co.,**
26051 Michigan Ave., Inkster, Mich.

127 **Flynn Manufacturing Company,**
601 South Harding St., Indianapolis, Indiana

128 **Michael Flynn Co.,**
700 East Godfrey Ave., Philadelphia 24, Pa.

129 **Francis Bros. Corp.,**
445 South "C" St., Tustin, Calif.

130 **Fullview Corp.,**
4640 Sperry St., Los Angeles 39, Calif.

131 **Gallatin Aluminum Products Co., Inc.,**
(Gapco), Maple St., Gallatin, Tenn.

132 **General Aluminum Products, Inc.,**
("Care-Free") 817 Hall St., Eaton Rapids, Mich.

133 **General Bronze, Corp., (Alwintite Division),**
711 Stewart Ave., Garden City, N. Y.

134 **General Glass Company,**
777 Oak St., S.W., Atlanta 10, Georgia

135 **Glass Shower Door Co., Inc.,**
105 W. Wacker Drive, Chicago 1, Illinois

136 **Glide Windows, Inc.,**
7463 Varna Ave., North Hollywood, Calif.

137 **Graef Storm Window Co.,**
1100 Velma Court, Youngstown 12, Ohio

138 **Greenway Aluminum Co., Inc.,**
518—1st Ave. S., Seattle 4, Washington

139 **Greenwell Home Improvement Co.,**
New Haven, Kentucky

140 **Gridwall Company,**
7463 Varna Ave., North Hollywood, Calif.

141 **H & D Inc.,**
6515 Highway 99 South, Everett, Washington

142 **Halco Eng. Co., Inc.,**
13550 S. Cratham St., Blue Island, Illinois

MONUMENTAL & COMMERCIAL DOOR FRAMES

4 176 199 210 219* 290 320 343 355

angle door stop

4 219* 320 343 355

thresholds

320 343 355

custom doors

234 298 354

continued from page 3 . . . .

143 **Haletron Industries Ltd.,**
185 Pemberton Ave., North Vancouver, B.C., Canada

144 **Hamilton Window & Door Mfgrs.,**
726 Ridgelawn Ave., Hamilton, Ohio

145 **Harrow Manufacturing Co.,**
1911 W. 139th Street, Gardena, Calif.

146 **Harvey Window Corp.,**
5-9 Livingstone St., Dorchester, Mass.

147 **Hasco Manufacturing Co.,**
Elmwood Ave., Westbrook, Me.

148 **Heaton's Screen & Storm Sash Co.,**
1925 Patterson Road, Dayton 20, Ohio

149 **Hecker Mfg. Co.** (Artdor),
710 Parker St., Santa Clara, Calif.

150 **The Heller Company,**
1914 Genesse St., P.O. Box 4512, Houston 13, Texas

151 **Hess Aluminum Windows Inc.,**
4096 Tighlman St., Allentown, Pa.

152 **The Himmel Bros. Co.,**
1409-15 Dixwell Ave., Hamden, Conn.

153 **Hi-View Products, Inc.,**
3150 E. 11th Ave., Hialeah, Fla.

154 **J. L. Holberton Sales Co.,**
14142 Fenkell Ave., Detroit 27, Mich.

155 **Holiday Door Corporation** (Rolleze Corp.),
815 E. Rosecrans Ave., Los Angeles 59, Calif.

156 **Hollycraft Building Products, Ltd.,**
413 E. Columbia St., New Westminster, B.C., Canada

157 **Hollyview Sliding Door and Window Co.,**
13060 Saticoy St., North Hollywood, Calif.

158 **The Home Window Co., (Home Steel Prod.),**
1120 Sandusky St., Fostoria, Ohio

159 **Horizon Door Company, Inc.,**
640 Paula St., Glendale 1, Calif.

160 **Howard Industries Inc.,**
1695 E. 11th Ave., Hialeah, Fla.

161 **Humphrey Aluminum Windows Ltd.,**
7415—82nd Ave., South Edmonton, Alberta, Canada

162 **The Hutch Mfg. Co.** (Aerolite),
20 Lowellville Rd., Struthers, Ohio

163 **Ideal Aluminum Products Co.,**
39 E. 19th St., Bayonne, N. J.

164 **Illinois Bronze Works Inc.,**
917 S. Kildare Ave., Chicago 24, Illinois

165 **Indiana Manufacturing Co.,**
P.O. Box 251, Indiana, Pa.

166 **International Art Metals Corp.,**
3520 N.W. 54th St., Miami, Florida

167 **International Steel Co., Revolving Door Div.,**
Evansville 7, Indiana

168 **International Window Company,**
3501 Martens St., Franklin Park, Illinois

169 **Jalousies of Ohio,**
4509 Springfield St., Dayton 31, Ohio

170 **Jasco Aluminum Products, (Division Unexcelled Chemical Corp.),**
31 Nassau Terminal Rd., New Hyde Park, N. Y.

171 **Kaiserhof Industries Inc.,**
512 West 23rd St., Houston, Texas

172 **H. A. Kammerer, Inc., (Kamco Alum. Prod.),**
341 North High St., Mt. Vernon, N. Y.

173 **Karey Products Corp.,**
199 Liberty Ave., Mineola, L. I., N. Y.

174 **Kasson & Keller Inc.,**
School Lane, Fonda, N. Y.

175 **Kaufmann Window & Door Corp.,**
12891 Mt. Elliott, Detroit, Mich.

176 **Kawneer Co.,**
1105 North Front St., Niles, Mich.

177 **Kawneer Company Canada Limited,**
1460 Don Mills Rd., Don Mills, Ontario, Canada

178 **Kawneer De Mexico,**
S.A. De C.V., A.P. 73, Naucalpan De Juarez Estado De Mexico, Mexico

179 **O. S. Keene Machine Co. Inc.,**
Middlebury, Indiana

180 **G. M. Ketcham Manufacturing Corp.,**
70-70 80th St., Glendale 27, N. Y.

181 **Keystone Alloys Co.,**
Derry, Pa.

182 **Koch Aluminum Mfg.,**
430 E. Market St., Sandusky, Ohio

183 **Kota Products, Inc.,**
Route 25A, Rocky Point, N. Y.

184 **Kreuger Manufacturing Company Inc.,**
1445 E. Main, Owosso, Mich.

185 **Larson Distributing & Mfg. Co.,**
418-420 Adams Ave., Albert Lea, Minn.

186 **The H. A. Leed Co.,**
1685 Dixwell Ave., Hamden, Conn.

187 **Likit Windows Inc.,**
111 Berry Ave., Hayward, Calif.

188 **Lisco Products Inc.,**
P.O. Box 128, West Hempstead, N. Y.

189 **Lorain Aluminum Mfg. Inc.,**
4610 French Creek Road, Lorain, Ohio

190 **Losli Sheet Metal Works,**
115 S.W. Montgomery St., Portland 1, Oregon

191 **Lovett Aluminum Products Inc.,**
83 Atwells Ave., Providence, Rhode Island

192 **Luedtke Mfg. & Dist. Co., Inc.,**
21—4th St., Fond DuLac, Wis.

193 **Lynart, Inc.,**
2320 Centinela Ave., Los Angeles 64, Calif.

194 **Majestic Door Company Limited,**
76 Orfus Rd., Toronto 19, Ontario, Canada

195 **Malco Sales Corporation,**
610 37th Ave., Rock Island, Illinois

196 **Malco of New York Sales Co.,**
150 Denton Ave., Lynbrook, N. Y.

197 **Malcoa Aluminum Products,**
Plainwell, Mich.

198 **Malibu Manufacturing Corp.,**
1557 No. Tyler Ave., El Monte, Calif.

199 **Marmet Corporation,**
P.O. Box 208, Wausau, Wis.

200 **Marshall Aluminum Products, Inc.,**
3400 Fowler St., Los Angeles 63, Calif.

201 **Master Seal Windows, Inc.,**
21647 Dequindre Ave., Hazel Park, Mich.

202 **Mayfair Industries Incorporated,**
LaFayette, Louisiana

203 **Maywood, Inc.,**
Box 706, Amarillo, Texas

204 **McGrath Window Co.,**
4785 Lake Ave., Rochester, N. Y.

205 **Mercury of New England, Inc.,**
1178 Silas Deane Highway, Wethersfield 9, Conn.

206 **Metalco Co.,**
1475 67th St., Emeryville, Calif.

207 **Metal Rolling, Inc.,**
1615 N. Highland St., Memphis, Tenn.

208 **Metal Window Products Co.,**
401 N. Velasco, Houston 13, Texas

209 **Miami Window Corp.,**
950 S.E. 12th St., Hialeah, Fla.

210 **The Michaels Art Bronze Co.,**
P.O. Box 668, Covington, Ky.

211 **Michel & Pfeffer Iron Works, Inc.,**
212 Shaw Road, South San Francisco, Calif.

212 **Michigan Aluminum Co.,**
9237 N. 30th St., Richland, Mich.

213 **Mid-States Aluminum Products Co.,**
15526 Dale, Detroit 23, Mich.

214 **Miken Aluminum Window Co. Ltd.,**
200 Pelutt Ave., Toronto 15, Canada

215 **Miller Sliding Glass Door Co.,**
3216 Valhalla Drive, Burbank, Calif.

216 **Miller Industries Inc.** (Tubelite),
Reed City, Mich.

217 **Milton Metals, Inc.,**
1222 N. Front St., Milton, Pa.

continued on next page

STORM DOORS

combination

2	18	33	55	79	95	111	127	151	174	194	223	244	258	277	291	312	335	350
3	19	34	57	80	97	112	131	154	175	195	224	246	262	278	292	313	336	351
9	21	39	58	81	98	114	132	158	181	201	225	248	263	280	295	314	337	353
11	22	41	61	83	99	115	137	161	182	203	226	249	266	283	296	315	338	
12	23	44	66	85	102	117	139	162	183	204	228	250	267	284	303	316	339	
13	24	45	67	87	103	119	142	163	184	205	232	251	268	285	304	319	340	
14	25	47	71	88	105	121	144	168	185	207	233	253	270	286	306	324	341	
15	26	49	72	89	106	122	146	170	189	217	235	255	272	287	307	328	344	
16	27	52	76	91	107	124	147	172	191	218	241	256	274	288	309	330	345	
17	32	53	77	92	110	126	148	173	192	222	243	257	276	289	311	333	348	

KEYLIST—manufacturers using SCHLEGEL woven pile . . . .

218 **Missouri Valley Storm Sash, Inc.,**
655 Leffingwell Road, Kirkwood 22, Mo.

219 **Modern Industries,**
2920 1st Ave. S., Seattle 4, Wash.

220 **Modern Shower Door Co.,**
1804 E. 40th St., Cleveland 3, Ohio

221 **Modern Specialties Inc.,**
18025 S. Figueroa St., Gardena, Calif.

222 **Moloney Aluminum Products of Canada Ltd.,**
19 Wellington St. W., Aurora, Ontario, Canada

223 **Monarch Products Corp.,**
110-120 E. 115th St., Chicago 20, Illinois

224 **Morrell Aluminum Products,**
156 Belmont Ave., Garfield, N. J.

225 **Mort Co., (Mallard Mfg. Co.),**
400 W. Girard Ave., Philadelphia 23, Pa.

226 **Motor Coach Industries Ltd.,**
Erin & St. Matthews Sts.,
Winnipeg 10, Manitoba, Canada

227 **Moynahan Bronze Co.,**
P.O. Box 126, Flat Rock, Mich.

228 **H. J. Murray Co.,**
21 Pershing St., Hamden 14, Conn.

229 **National Glass Corp.,**
15 N. Paulina St., Chicago 12, Illinois

230 **National Store Fronts Co., Inc.,**
Manchester St., Lawrence, Mass.

231 **National Window Corp.,**
P.O. Box 632, Jackson, Miss.

232 **National Window & Door Co. Inc.**
601 S. Harding St., Indianapolis, Indiana

233 **The Nelson Co., Inc.**
149 E. Woodlawn Ave., Louisville, Ky.

234 **Newman Bros., Inc.,**
662-672 W. Fourth St., Cincinnati 3, Ohio

235 **Northeast Fabricators, Inc.,**
12 Oak St. Terrace, Shrewsbury, Mass.

236 **Nudor Manufacturing Corp.,**
7326 Fulton Ave., North Hollywood, Calif.

237 **Offenhauser Company,**
2201 Telephone Rd., P.O. Box 18068,
Houston 23, Texas

238 **O'Keefes Inc.,**
75 Williams St., San Francisco, Calif.

239 **Ornamental Bronze Co. Ltd.,**
1125 Vernon Drive, Vancouver 6, Canada, B.C.

240 **Oro Manufacturing Co.,**
1425 East Michigan St., Adrian, Mich.

241 **B. R. Oster Corp.,**
1305 Dorchester Ave., Boston 22, Mass.

242 **Overly Manufacturing Company,**
574 West Otterman St., Greensburg, Pa.

243 **Owens Aluminum Window Corp., Inc.,**
1140 North Mosley, Wichita 14, Kansas

244 **Owens Window Company,**
Box 394, Collinsville, Va.

245 **Pacemaker Aluminum Corp.,**
25 Ranick Drive East, Amityville, N. Y.

246 **Parmco,**
2626 So. 2nd West, Salt Lake City, Utah

247 **Peachtree Doors, Inc.,**
P.O. Box 2605 Station D, Atlanta 18, Georgia

248 **Peerless Products Inc.,**
4319 Independence Ave., Kansas City, Mo.

249 **Peerless Supply Co.,**
120 Manton Ave., Providence, R. I.

250 **Permalum Window Mfg. Corp.,**
Pulaski Rd. & Fifth Ave., Huntington Sta., N. Y.

251 **Perm-O-Bilt Corp.,**
4001 Prospect, Indianapolis, Indiana

252 **Peterson Window Corp.,**
700 Livernois, Ferndale, Mich.

253 **Pfaff Sash & Door Company,**
13333 Lyndon Ave., Detroit 27, Mich.

254 **Pittsburgh Plate Glass Company,**
632 Fort Duquesne Blvd., Pittsburgh 22, Pa.

255 **Plains Aluminum Industries,**
Box 38, Panhandle, Texas

256 **Premier Products Co.,**
534 S.E. Oak, Portland 14, Oregon

257 **Prosseda Brothers,**
500 E. Broadway Ave., Clifton Heights, Pa.

258 **Quaker Window Products Company,**
Highway 63 South, Freeburg, Missouri

259 **Raymond Distributing Company Ltd.,**
5045 Ontario St. E., Montreal 4, P.Q., Canada

260 **Raymond Mfg. Company Ltd.,**
1000 Sherbrook St., Lachine 32, P.Q., Canada

261 **Rebco Inc.,**
Lackawanna Ave., West Paterson, N. J.

262 **Regal Window Products Co.,**
6720 Allentown Blvd., Harrisburg, Pa.

263 **Regent Alum. Products (Maritimes) Ltd.,**
Woodside Ind. Pk., Dartmouth, N.S., Canada

264 **The Reliance Art Metal Co.,**
599 McMicken Ave., Cincinnati 14, Ohio

265 **Republic Aluminum Co., (R. Schnoor & Sons),**
751 Campbell Ave., Santa Clara, Calif.

266 **Republic Metals Inc.,**
621 East First St., South Boston, Mass.

267 **Rex-Lite Storm Window Co.,**
423 Park Ave., Worcester, Mass.

268 **Benjamin F. Rich Co.,**
1401 Todd's Lane, Wilmington, Del.

269 **Rigid Metal Products Inc.,**
1915 East 51st St., Los Angeles 58, Calif.

270 **Roberts Door and Window Co.,**
4215 E. 27th, Kansas City, Mo.

271 **Rolleze-Holiday Sales,**
815 E. Rosecrans Ave., Los Angeles 59, Calif.

272 **Rollyson Aluminum Products,**
Ironton, Ohio

273 **Roman Metal Products, Inc.,**
3768 E. 37th St., P.O. 4477, Tucson, Arizona

274 **Rose Aluminum Products Inc.,**
217 Center St., Southington, Conn.

275 **Roto-Swing Door Co., Inc.,**
P.O. Box 1013, Oklahoma City, Oklahoma

276 **Royal Aluminum Co., Inc.,**
9 West 7th St., Bayonne, N. J.

277 **Royal Products Inc.,**
2230 No. Main St., Dayton 5, Ohio

278 **Rusco Window Company,**
1005 Holmes, Kansas City, Mo.

279 **Rusco Windows, Inc. of Florida,**
1090 E. 16th St., Hialeah, Florida

280 **The F. C. Russell Company,**
P.O. Box 26, Columbiana, Ohio

281 **Rylock Company, Ltd.,**
2485 Washington Ave., San Leandro, Calif.

282 **Samuels Metal Products, (Samuels Glass Co.),**
221 Newell St., San Antonio, Texas

283 **Scatton Bros., Mfg. Co.,**
447 W. Queen Lane, Philadelphia 44, Pa.

284 **Scientific Storm Window Co. Inc.,**
6919 S. Halsted St., Chicago, Illinois

285 **Seal Rite Aluminum Products, Inc.,**
147 McKinley Ave., Bridgeport, Conn.

286 **Seal Test Aluminum Mfg.,**
1-5 Grant St., Linden, N. J.

287 **Seals, Inc.,**
450 S. First St., Bangor, Pa.

288 **Season-Aire Aluminum Ltd.,**
2258 Mountainside Drive, Burlington,
Ontario, Canada

289 **Seasonmaster, Inc.,**
24 Kinkel St., Westbury, L. I., N. Y.

self storing

21 184
57 203
88 258
102 313
103 340
124

JALOUSIE DOORS

1 24 47 81 107 137 175 222 251 285 312 345
3 25 49 83 110 142 181 223 253 286 313 350
9 26 52 85 111 144 183 224 257 287 316 351
11 27 55 86 112 148 184 225 258 289 318
12 33 57 87 114 151 185 228 262 291 319
13 34 58 88 115 154 189 233 266 292 324
14 37 66 89 119 158 191 235 267 296 328
16 39 69 92 121 160 194 241 268 303 335
19 41 72 95 124 168 196 243 274 304 338
20 44 74 99 125 169 204 249 277 308 339
23 45 79 105 131 170 205 250 284 311 340

continued from page 5 . . . .

290 **Seattle Bronze Company Inc.,**
315 2nd St., Seattle 99, Washington

291 **Security Windows, Inc.,**
181 Taylor St., Springfield, Mass.

292 **Sellmore Window Manufacturing Co.,**
3373 South Park Ave., Buffalo 19, N. Y.

293 **Shade Screen Sales Co.,**
6044 San Fernando Rd., Glendale 2, Calif.

294 **Sheboygan Glass Co.,**
(Architectural Metals Division),
617 Center Ave., Sheboygan, Wisconsin

295 **Sherkat Sanaye Pars & America,**
Teheran, Iran

296 **Shield-Well Aluminum Corp.,**
82 Sherman Place, Garfield, N. J.

297 **Shower Door Company of America,**
1 Permalume Place N.W., Atlanta 18, Georgia

298 **Silvernail Industries, (St. Petersburg Glass),**
2201-09 1st Ave. S., St. Petersburg, Fla.

299 **Slide Master of Canada, Ltd.,**
25 Milford Ave., Toronto 15, Ontario, Canada

300 **Slide-View Door & Window Co.,**
P.O. Box 409, El Monte, Calif.

301 **Southern Sash Sales & Supply Co. Inc.,**
818 20th St., Sheffield, Alabama

302 **Specialume Products, Inc.,**
P.O. Box 126, Sarasota, Florida

303 **Standard Home Service Co.,**
1915 Broadway N.E., Minneapolis, Minn.

304 **Stanyon Products Inc.,**
2664 Erie Blvd. E., Syracuse, N. Y.

305 **SteelBilt Sales Co.,**
Box 384, Gardena, Calif.

306 **Storm Seal Aluminum Ltd.,**
Box 158, Brantford, Ontario, Canada

307 **Sun-Air Inc.,**
Highway 69, Stanley, Kansas

308 **Sun Valley Industries Inc.,**
8354 San Fernando Rd., Sun Valley, Calif.

309 **Superior Aluminum Products,**
Nicholson Road and Crescent Blvd.,
West Collenswood Hts., N. J.

310 **Superior Metal Store Fronts Corp.,**
130 Willis Ave., Bronx 54, N. Y.

311 **J. P. Sutton Window Corp.,**
Box 966, Martinsville, Va.

312 **T.F.F. Mfg. Co., Inc.,**
(Fairlane Anodized Products),
4629 West End Ave., Chicago 44, Illinois

313 **T.J.C. Home Products Ltd.,**
262 Main St. S., Weston, Ontario, Canada

314 **Tempco Products Co.,**
P.O. Box 304, Robinson, Illinois

315 **Textron Metals Company,**
P.O. Box 144, Pottsville, Pa.

316 **Thacker Industries, Inc., (Cape Cod),**
226 Belleville Ave., New Bedford, Mass.

317 **John Thompson-Leonard Limited,**
381 York St., London, Ontario, Canada

318 **George W. Trapp Co.,**
26015 Glendale, Detroit 39, Mich.

319 **Triangle Aluminum Products Co. Inc.,**
771 W. Merrick Road, Valley Stream, N. Y.

320 **Trim Alloys Inc.,**
30-40 West Third St., Boston 27, Mass.

321 **Trim Slide Inc.,**
Fulton & Potter Sts., Farmingdale, L. I., N. Y.

322 **Trimview Metal Products,**
P.O. Box 349, 600 N. 3rd St., Covina, Calif.

323 **Tucker Aluminum Products Inc.,**
1395 East 11th Ave., Hialeah, Fla.

324 **U.S.C. Mfg. Corp.,**
85 E. Merrick Road, Valley Stream, N. Y.

325 **Union Aluminum Co. Inc.** (UALCO),
Scheffield, Alabama

326 **United States Aluminum Co.,**
1301 S. Main St., South Bend 18, Indiana

327 **Valley Metal Products Company,**
Plainwell, Mich.

328 **Vanguard Aluminum Products Co.,**
1215 Kenilworth Ave., N.E., Wash. 19, D.C.

329 **Variety Mfg. & Engineering Co.,**
810 West Fulton St., Chicago 7, Illinois

330 **Ventaire Aluminum Products Ltd.,**
462 Gilbert Ave., Toronto 10, Ontario, Canada

331 **Virginia Glass Products Corp.,**
P.O. Box 1231, Martinsville, Va.

332 **Waldemer Manufacturing Company,**
22818 Sutro St., Hayward, Calif.

333 **Warrenville Window Company,**
Box G, Warrenville, Illinois

334 **W. M. Products Co.** (Watson),
P.O. Box 7592, Houston 7, Texas

335 **Weather Master Co. Inc.,**
936 Exchange St., Rochester 14, N. Y.

336 **Weather Rite Mfg. Co.,**
Route 5, Box 648, Charleston, West Va.

337 **Weather Seal Inc.,**
324 Wooster Road, N., Barberton, Ohio

338 **Weather-Tite Company,**
P.O. Box 310, Bedford, Ohio

339 **Weather-Tite Inc.,**
3401 S. Morgan, Chicago 8, Illinois

340 **Weather-Tite Products Inc.,**
790 Paterson Ave., East Rutherford, N. J.

341 **Wepco (Division of The Weather-Proof Co.),**
P.O. Box 45, Litchfield, Illinois.

342 **Western Patio Door Co. Inc.,**
1212—6th St., Berkeley 10, Calif.

343 **Western Weatherstrip Co.,**
1090 Monterey Pass Rd., Monterey Park, Calif.

344 **Western Window Ltd.,**
587 Clifton St., Winnipeg 10, Manitoba, Canada

345 **What Cheer Aluminum Window Co. Inc.,**
228 Waterman Ave., Greystone 11, R. I.

346 **White Pine Sash Co.,**
Spokane, Washington

347 **Williams & Williams (Eastern) Ltd.,**
Box 411, Trenton, Ontario, Canada

348 **Wilmes Window Mfg. Co.,**
Ferdinand, Indiana

349 **L. S. Wilson Mfg. Co.,**
371 E. 116th St., Chicago 28, Illinois

350 **Windows Incorporated,**
10625 George Pichet, Montreal North,
P.Q., Canada

351 **Window Corporation of America** (Season-All),
Route 119, Indiana, Pa.

352 **Winter Seal Corporation,**
14575 Meyers Road, Detroit 27, Mich.

353 **Walter Wray Ltd.,**
1111 Chevrier Blvd., Ft. Garry,
Winnipeg 9, Manitoba, Canada

354 **R. B. Wyatt Mfg. Co. Inc.,**
67 Steuben St., Brooklyn 5, N. Y.

355 **Zero Weatherstripping Co., Inc.,**
451 East 136th St., New York 54, N. Y.

356 **Zimmcor Company,**
112 Church Ave., Verdun, Quebec, Canada

What you should know about fabric weatherstripping

- Many Schlegel Pile shapes available for all applications
- Engineered specifically to meet manufacturers requirements
- Supplied with a variety of backing materials

In a minute, we'd like to explain the advantages about Schlegel Woven Pile and let you make your own evaluation.

One roof—one goal Schlegel Woven Pile Weatherstripping is made *completely*—from yarn to finished product—under one roof. Every step of the process is aimed to produce the best weatherstripping possible.

How the fabric is made The fabric in Schlegel Woven Pile Weatherstripping is woven exclusively on narrow-fabric looms. Individually woven flanges on each side of the pile provide an accurately engineered assembly. This assures not only easier insertion into the extrusion, but also a better method of holding the weatherstrip in the extrusion. All dimensions—including the backing width, pile height, and bead thickness—are maintained. This is not always the case with other types of weatherstripping.

What it's made of Constant research has not yet revealed any material that has all the qualities of natural virgin wool. That's the *only* fibre used in Schlegel Woven Pile. When other materials are proved to have better characteristics for this purpose, Schlegel will use them—and will let you know what they are.

How much in a pile? Every pile weatherstripping assembly has an ideal set of dimensions (height, width, and density) for the application. When you compare Schlegel Pile with others, study the *density* of the material. If you can't see the difference, you may be able to feel it. Density is important in weathersealing performance . . . and in wearing qualities.

A difference you can't see Every piece of Schlegel Woven Pile Weatherstripping is treated with Dow-Corning silicone. This doesn't show in any way. But silicone treatment provides added protection against all elements of weather and gives greater and prolonged resiliency to the pile. This is a difference you *can't* see.

And the backing Schlegel offers plastic, metal and resin backing—which ever proves best for the application. Schlegel research has developed a plastic backing that assures an inseparable bond with the pile. There are metal-backed assemblies holding the fabric by means of a clinched bead and/or cement. The gauge and type of metal are specified to assure perfect results in each application; tolerances are held so that the assembly job will be easier. Polyester resin is a new Schlegel backing which provides dimensional stability in a variety of applications.

Manufacturers find Schlegel Woven Pile easy to work with because it's accurately fabricated—of materials best suited to the purpose—without cutting corners.

That's the story of how Schlegel Woven Pile Weatherstripping is made—a process based on the longest and most extensive experience. This process produces woven pile weatherstripping of the highest quality to last the life of the window.

For protection that's *silent*, *smooth*, and *sure*—specify doors and windows with Schlegel Woven Pile Weatherstripping.

See catalog 17a/Sc for "Your Guide to Windows & Screens with Schlegel Woven Pile Weatherstripping."

Schlegel

WOVEN PILE WEATHERSTRIPPING

SCHLEGEL MANUFACTURING COMPANY
P.O. Box 197, Rochester 1, N. Y. and Oakville, Ont., Canada

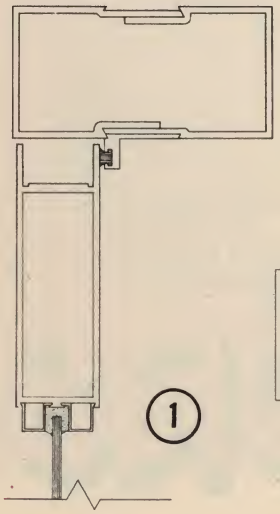
Printed in U. S. A.

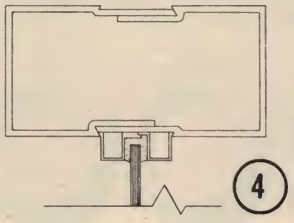
VAMPCO® Aluminum DOORS

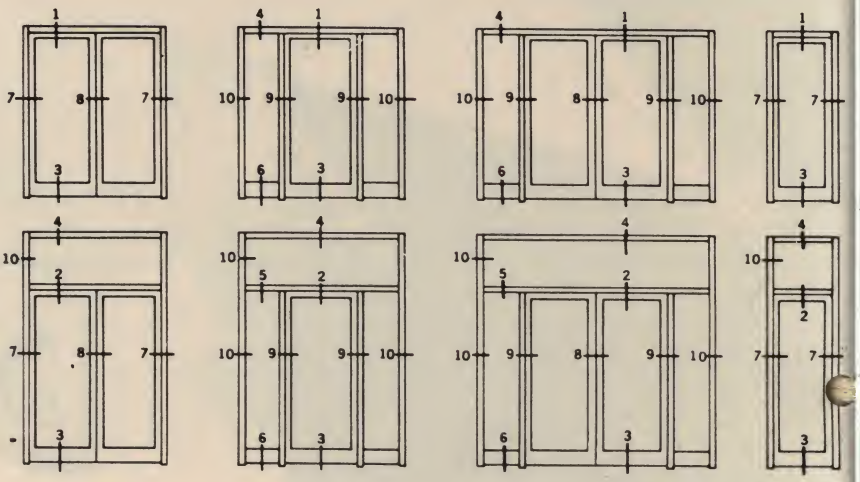
VALLEY METAL PRODUCTS CO.

PLAINWELL
MICHIGAN

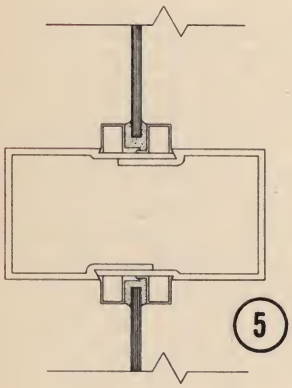
Subsidiary of
Mueller Brass Co.,
Port Huron, Mich.

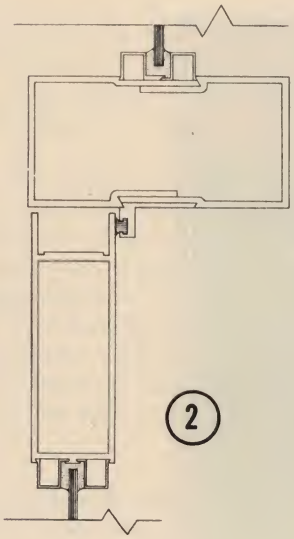


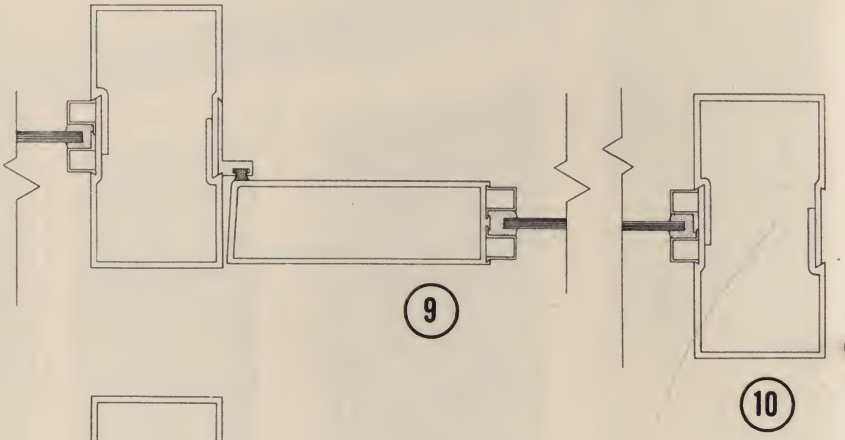


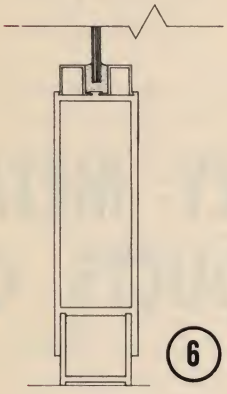


2¾" x 5½" FRAME

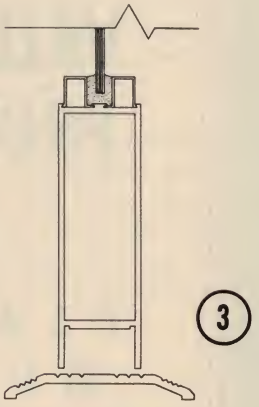


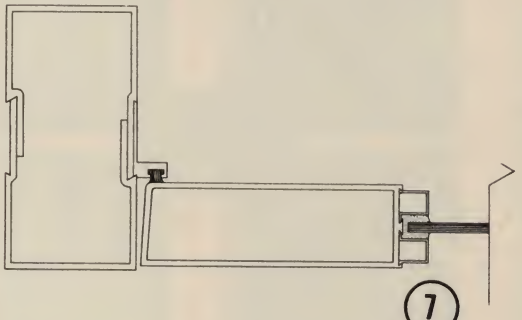


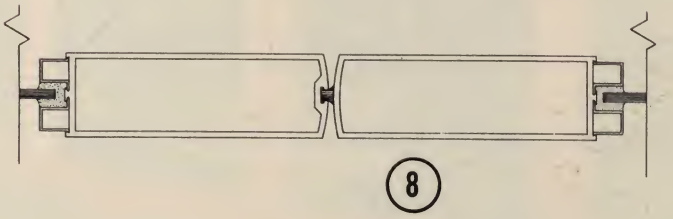




2¾" x 7½" and
2¾" x 9½" deep
Frames are also
available







specifications

WORK REQUIRED: Aluminum narrow stile, wide stile or recessed panel, doors, frames, transoms, side lights and other items directly related shall be as manufactured by Valley Metal Products Company, Plainwell, Michigan.

MATERIALS: All sections shall be of extruded aluminum shapes of 6063-T5 alloy.
Section thickness shall be not less than .125" and glazing shapes shall not be less than .040".
All fastening parts such as screws, bolts, nuts, brackets and clips shall be fully protected against any chemical or electrolytic action.

WORKMANSHIP: All door corners shall be accurately joined and fitted to flush hairline joints. All corners shall be welded on unexposed sides. No weld marks such as halos, pitting or discoloration will be permitted on finish product.

All door welds shall thoroughly penetrate and produce a complete fusion of metals, and the corners shall be reinforced with a ⅜" aluminum rod with nuts on both ends giving an additional strength of not less than 20,000 P.S.I.

All fastening of glazing beads shall be of concealed type and no exposed screws shall be permitted.

Weatherstrip shall be of vinyl back pile cloth, securely held in place as provided in the extrusions of the doors and frames. The perimeter of the frames on single acting doors shall be weatherstripped as well as the meeting stile of double doors. Double acting doors shall be weatherstripped on the face of the stile on all outside stiles as well as the meeting stiles.

No surface application of weatherstripping will be permitted.

All cutouts, mortising, recesses or mill operation necessary for the installation of hardware shall be accurately made and where reinforcing is required, it shall be done with such material to insure adequate operation and strength.

The complete assembly shall be fabricated in the factory to insure accurately fitted joints, proper fitting hardware. No field fabrication of frames will be permitted.

FINISH: All exposed surfaces shall be finished free of die marks, scratches, weld halos or surface blemishes and given an anodic oxide treatment in accordance with Alcoa specification "Alumilite 204 A1 R1". Recessed Door panel finish shall be Vamchrome applied color, #10 Ribbed Aluminum, Plastic Fabricate Coated, Wood veneer or plain Aluminum 204 finish.

HARDWARE: All hardware shall be furnished and installed by the door manufacturer. No field application will be permitted. Hardware finish shall closely match the finish of the doors.

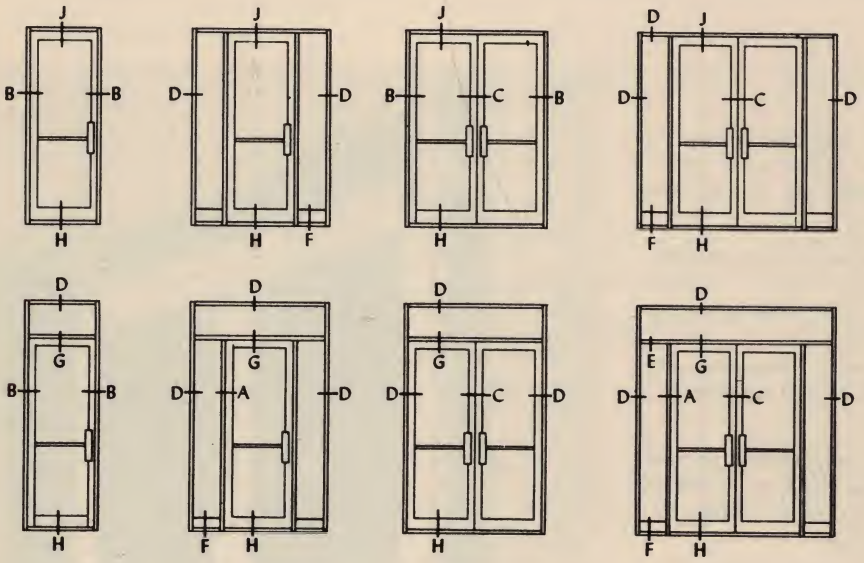
SHOP DRAWINGS: Drawings shall be furnished for approval in triplicate of a scale that will show all details clearly and with all dimensions necessary for coordination and installation.

PROTECTION: Surfaces of the aluminum placed in contact with any material such as steel, concrete or any other material that contains corrosive chemicals the aluminum shall be protected by an approved method by the erection contractor.

ERECTION: All items under this section shall be installed in prepared openings and be set plumb, square and level and all properly aligned to insure proper operation and must be under the guidance of factory trained personnel.

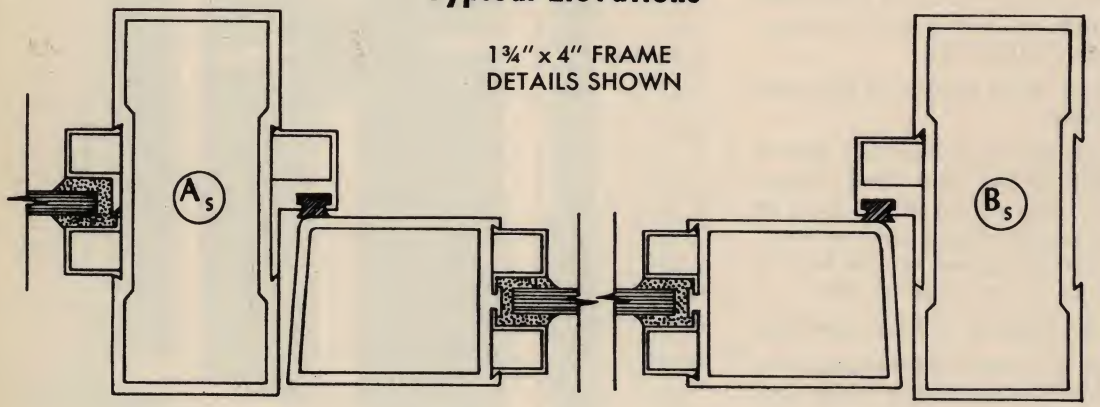
To insure proper operation the installation contractor and architect check and make any adjustments necessary for satisfactory operation.

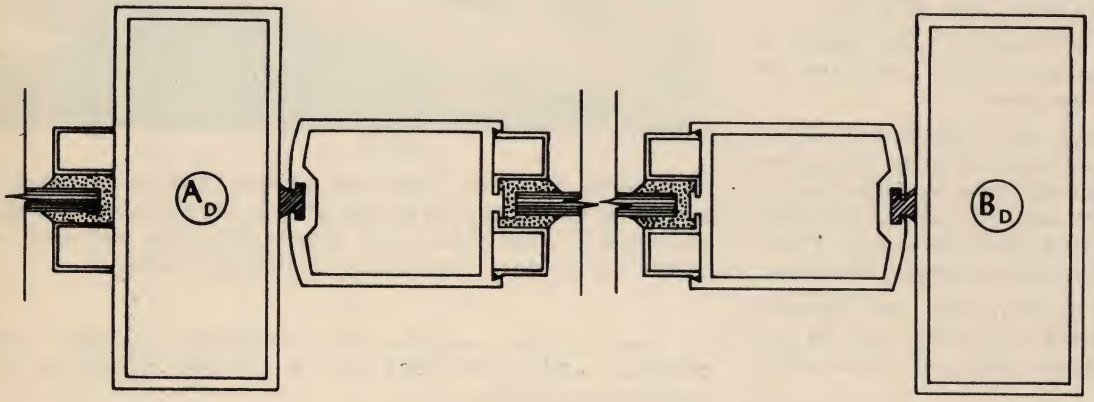
All material under this contract shall carry a guarantee of one year against manufacture defect and any failure occurring under these circumstances the material will be replaced without charge to the owner.

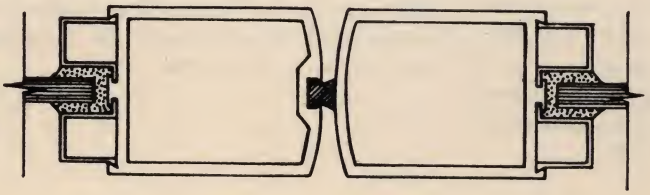


Typical Elevations

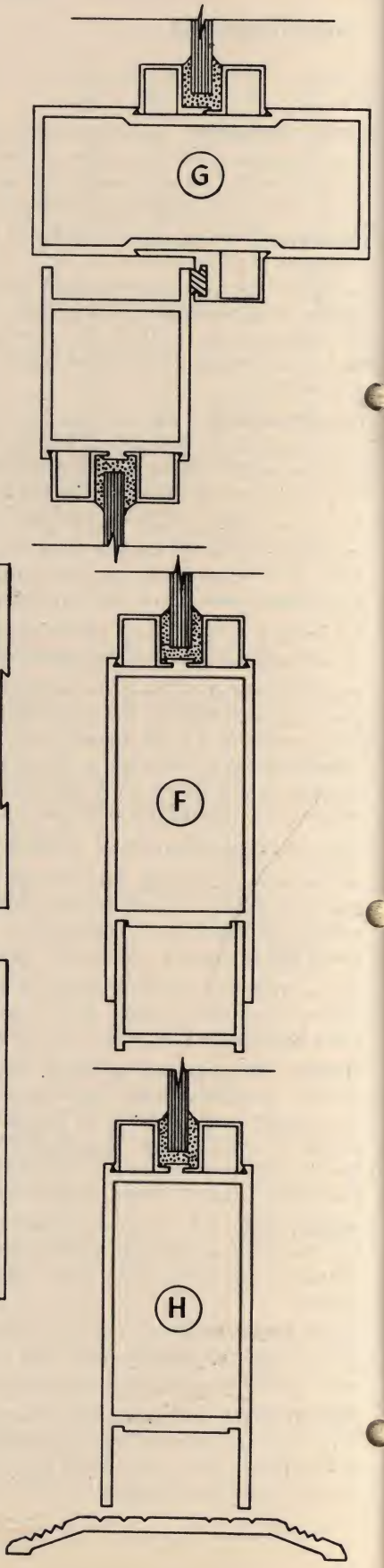
1¾" x 4" FRAME
DETAILS SHOWN



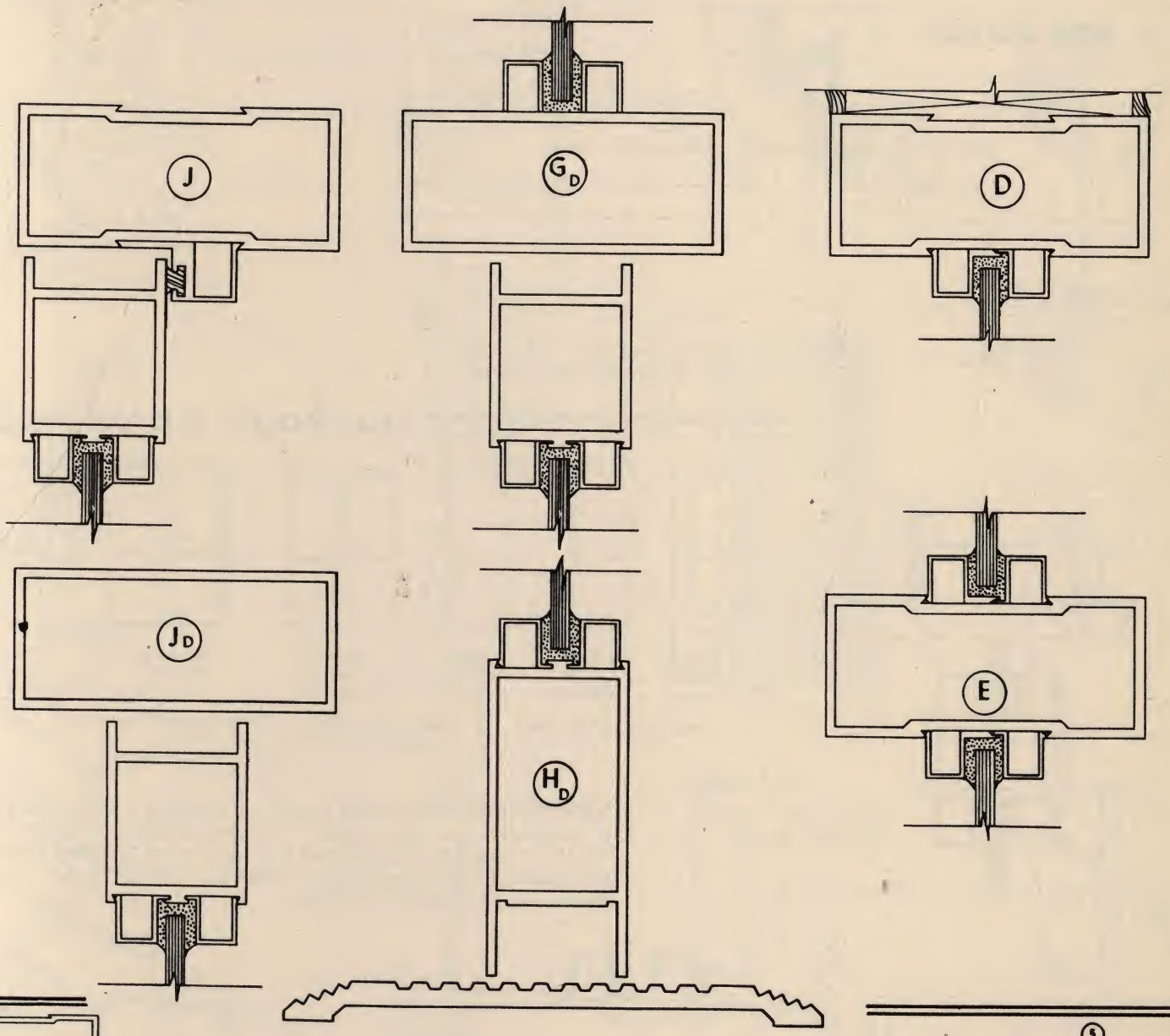




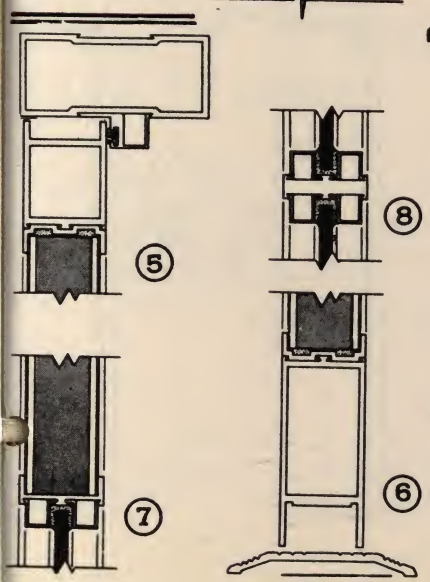
SMALL LETTER S. IN DETAIL IDENTIFICATION DENOTES SINGLE ACTION. SMALL LETTER D. DENOTES DOUBLE ACTION DOORS.

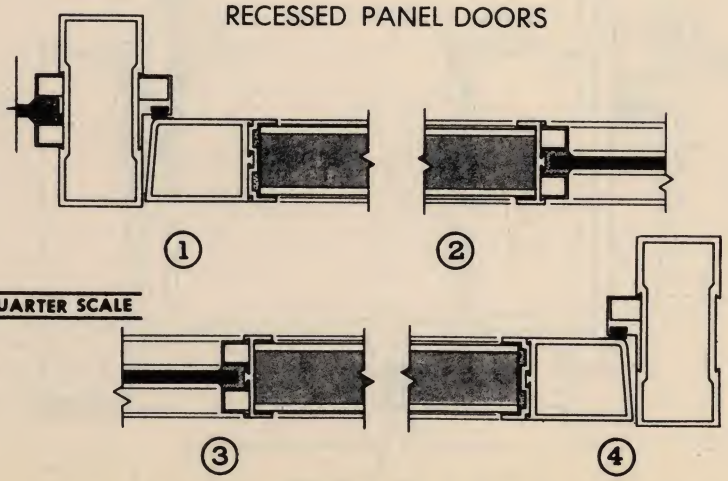


NARROW STILE DOORS . . . . . ½ SIZE DETAILS

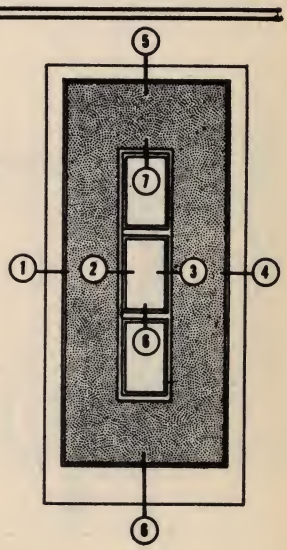


RECESSED PANEL DOORS

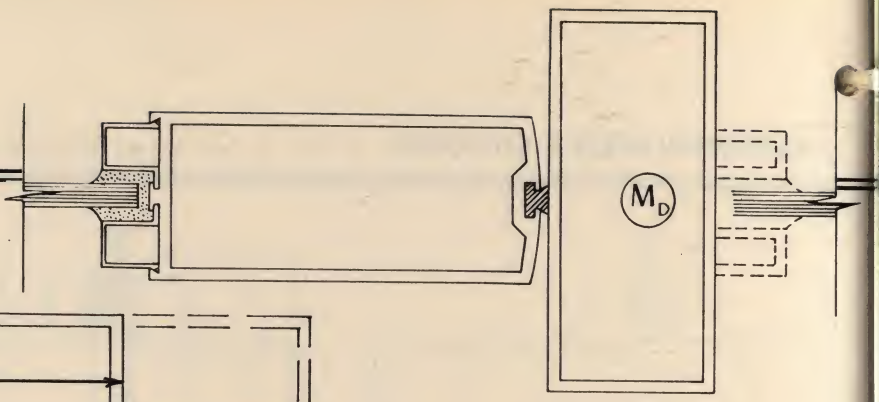




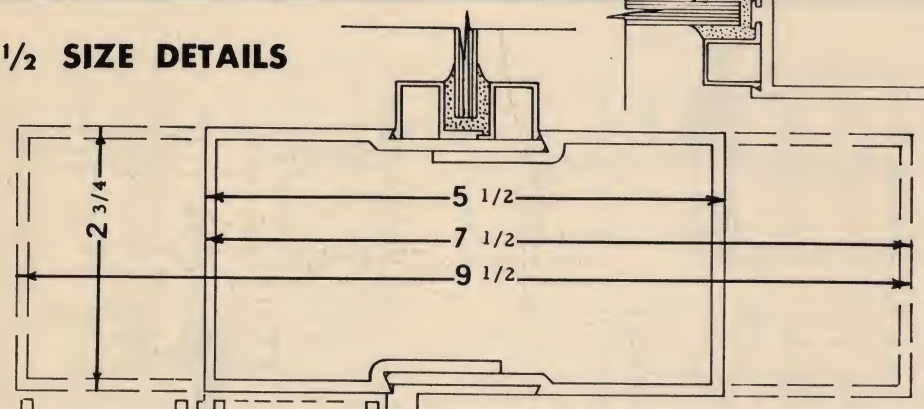
QUARTER SCALE



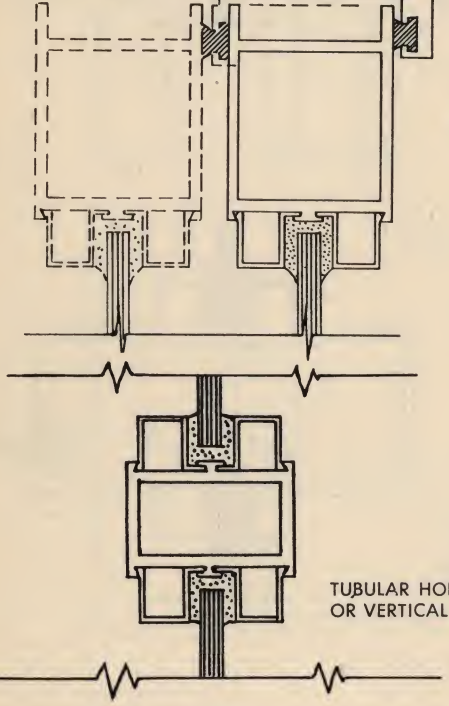
½ SIZE DETAILS



VAMPCO WIDE STILE DOOR

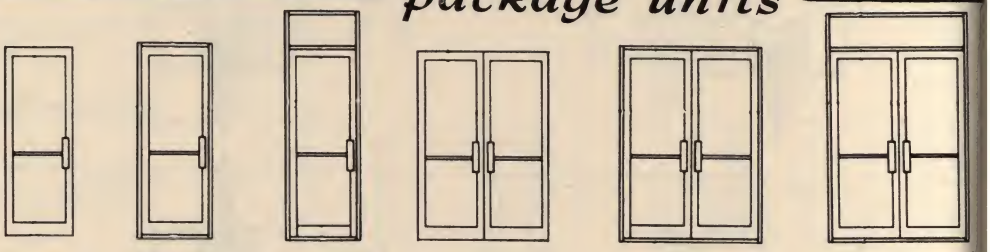


SPECIAL FRAMES FOR WIDE AND NARROW STILE DOORS



TUBULAR HORIZONTAL OR VERTICAL MUNTIN

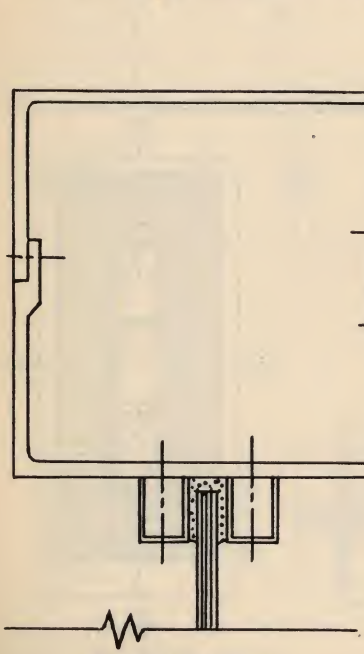
package units



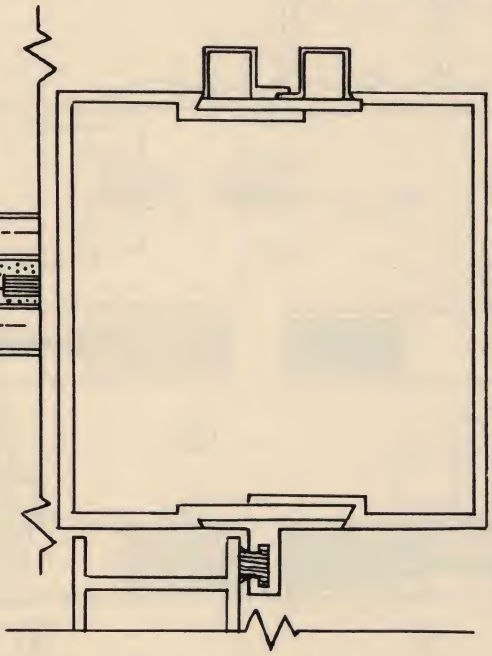
3084D	3084DF	3084DFT	6084-2D	6084-2DF	6084-2DFT
3684D	3684DF	3684DFT	7284-2D	7284-2DF	7284-2DFT
4284D	4284DF	4284DFT	8484-2D	8484-2DF	8484-2DFT

D INDICATES DOOR ONLY F INDICATES FRAME T INDICATES TRANSOM
2 INDICATES PAIR OF DOORS

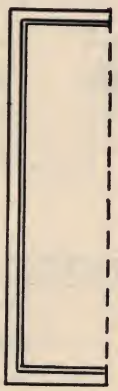
VAMPCO PACKAGE DOOR consists of VAMPCO Narrow Stile Doors in standard sizes. Door closers of either overhead or floor type, VAMPCO pivot hinges, push and pull bars, dead lock and threshold and flush bolts for pairs of doors. VAMPCO STANDARD STOCK Side Lights are also available in 3 sizes.



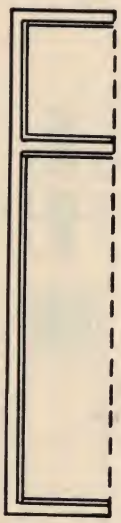
4" x 4" SELF-MATING CORNER POST



4½" x 4½" HEAD JAMB FOR CONCEALED OVERHEAD CLOSERS



V-1
2'0" x 7'2"



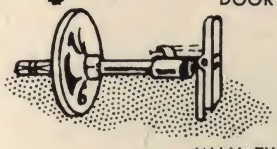
V-2
2'0" x 10'4"

V-3
2'0" x 10'4"

VAMPCO

Aluminum doors

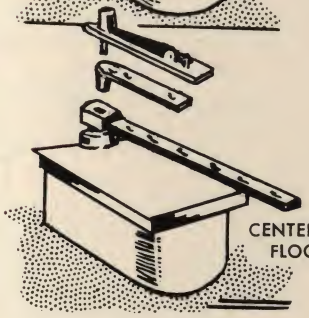
FLOOR TYPE
DOOR HOLDER



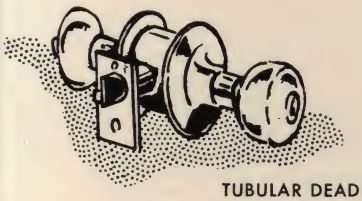
WALL TYPE
DOOR HOLDER

DROP ARM
DOOR HOLDER

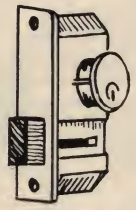
OFFSET PIVOT
FLOOR CLOSER



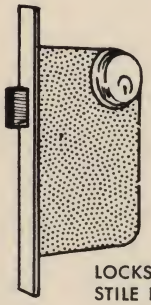
CENTER PIVOT
FLOOR CLOSER



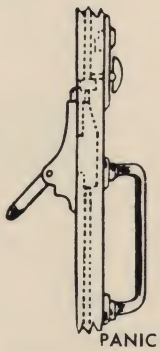
TUBULAR DEAD LOCK



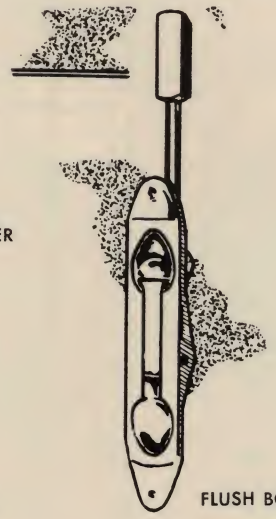
DEAD BOLT LOCK



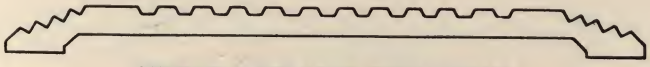
LOCKSET-WIDE
STILE DOORS



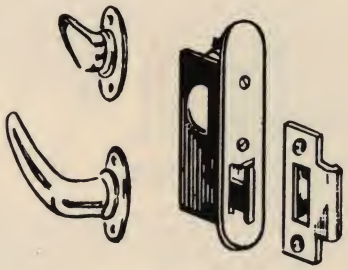
PANIC HARDWARE



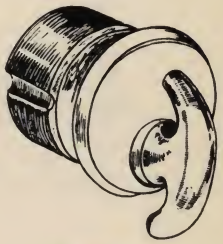
FLUSH BOLT



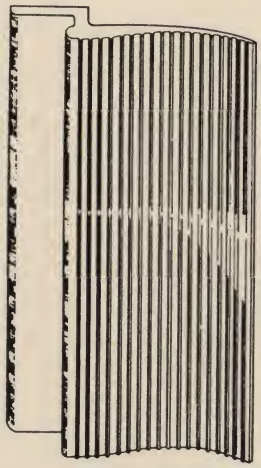
THRESHOLD FOR FLOOR CHECK CLOSERS



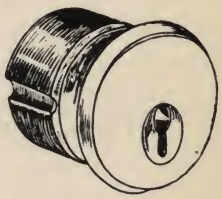
LATCH LOCK



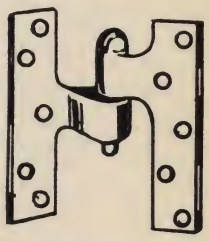
THUMB TURN



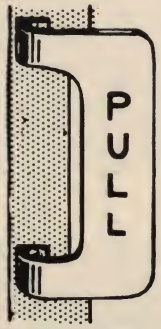
STANDARD PUSH-PULL BAR



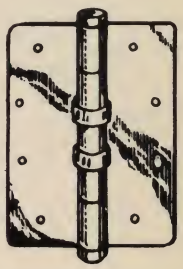
STANDARD LOCK CYLINDER



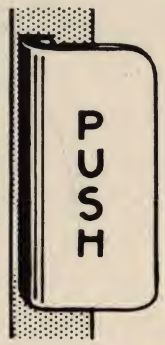
INTERMEDIATE PIVOT HINGE



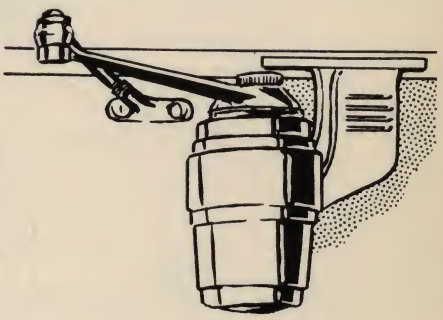
SPECIAL PULL BAR



BALL BEARING HINGE



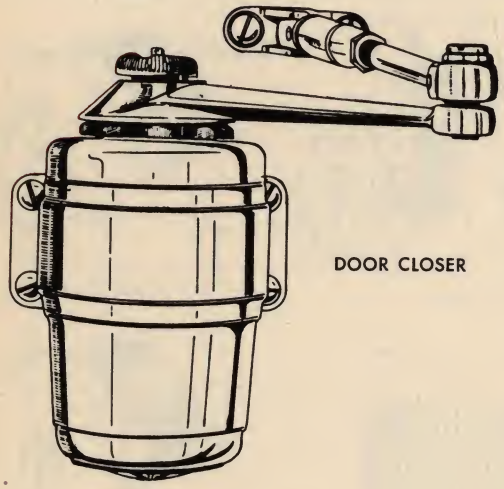
SPECIAL PUSH BAR



SOFFIT BRACKETS FOR OUTSWINGING
DOORS

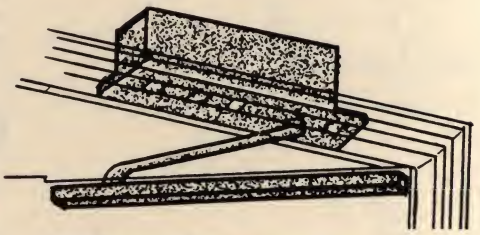
VAMPCO

Aluminum doors

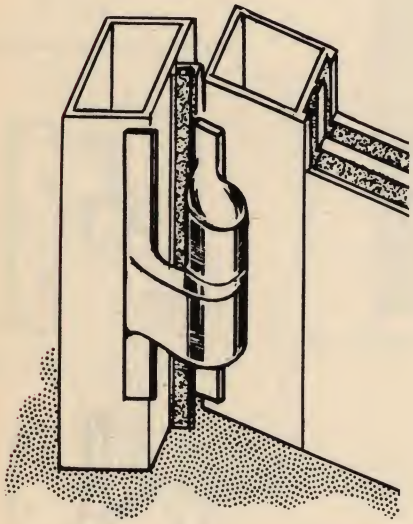


DOOR CLOSER

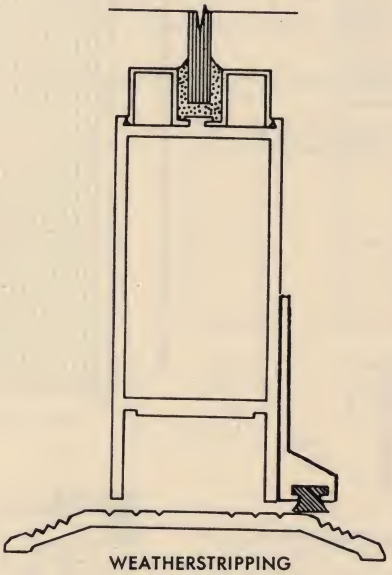
SPECIAL NAME PLATE PUSH BAR



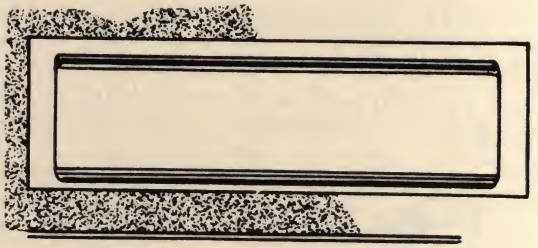
CONCEALED OVERHEAD CLOSER



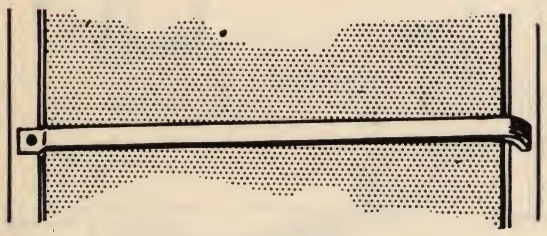
VAMPCO OFFSET PIVOT HINGE



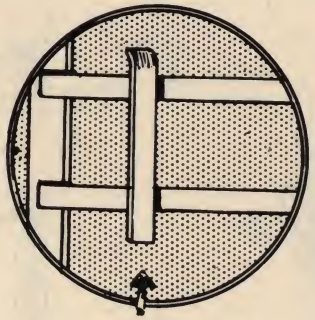
WEATHERSTRIPPING
BOTTOM RAIL



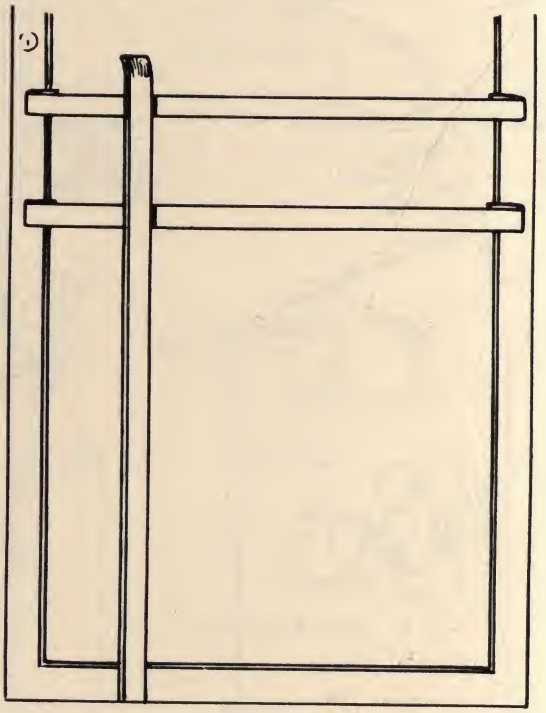
LETTER SLOTS



PUSH BAR



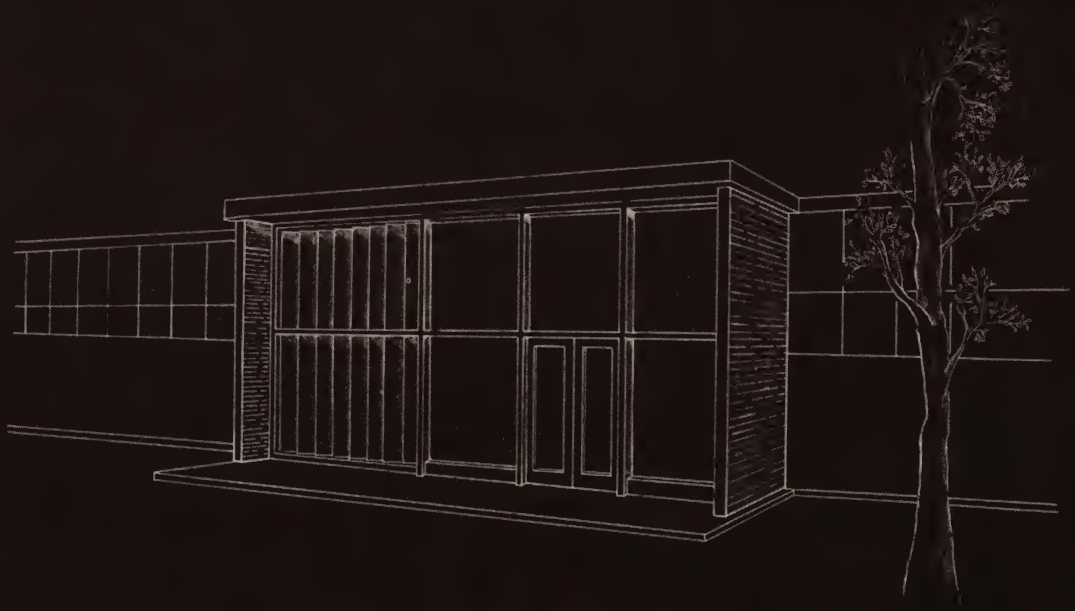
SPECIAL PUSH-PULL BAR



SPECIAL PUSH OR
PULL BAR SET

PRODUCERS' COUNCIL
AFFILIATED WITH AMERICAN INSTITUTE OF ARCHITECTS
ALUMINUM WINDOW MANUFACTURERS ASSOCIATION
AWM

Acme



STEEL DOOR CORP

HOLLOW METAL

DOORS
FRAMES
ENTRANCES

KALAMEIN

DOORS
FRAMES

Division of ACME Steel Partition Co.
513 Porter Ave., Brooklyn 22, N. Y.

Acme

STEEL DOOR CORP., a division of ACME STEEL PARTITION CO. INC., has been producing Hollow Metal work of the highest caliber for more than thirty years. With a well-equipped factory, the most modern and up-to-date machinery and the latest engineering techniques, ACME is able to meet the needs of an expanding market. Our own complete tool and die shop makes possible not only efficient maintenance, but also the ready application of new techniques and methods.

ENGINEERING • DESIGN • LAYOUT

Acme maintains an engineering and drafting department of skilled men with many years of detailed experience who are available for consultation to architects, designers and contractors without obligation. Submission of shop drawings is facilitated by ACME's own blue printing service.

SPECIFICATIONS • FRAMES

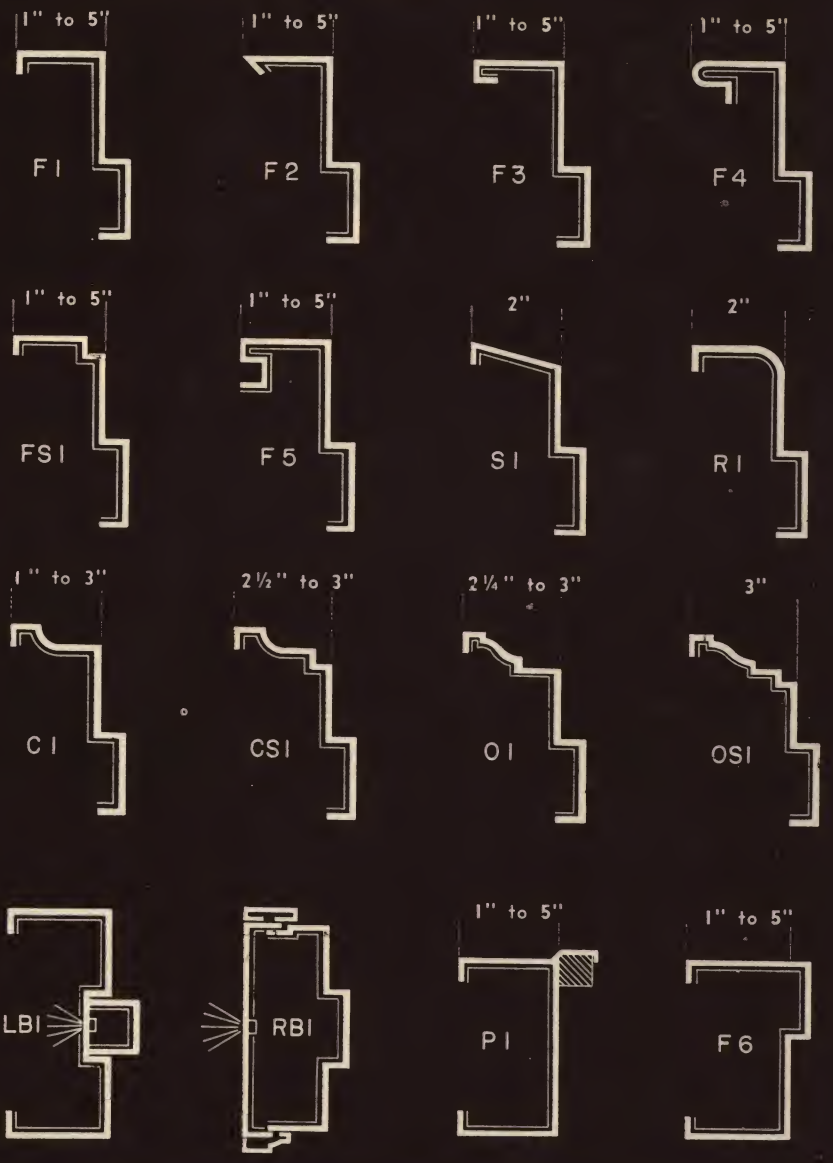
Acme steel door frames are manufactured of gauges ranging from US No. 10 through US No. 20 cold rolled highest quality sheet steel to meet all architectural specifications and details. Frames can also be furnished in galvanized, galvanealed, paintlock, copper bearing and stainless steel when so required. Heads and jambs are carefully mitred and continuously welded. Wall anchors, at least three per jamb, are manufactured and applied to meet varied wall conditions as detailed by the architect. Floor anchors, stationary or adjustable, are designed for easy bolting into the floor.

Acme mortises from paper templates for all hardware calling for such mortising and reinforces with heavy gauge material for all surface applied hardware. Drilling and tapping for surface hardware is done in the field by others. After manufacture all frames are thoroughly cleansed, degreased and painted with a red zinc chromate rust inhibitive primer. Frames can also be furnished in baked prime and baked enamel finishes.

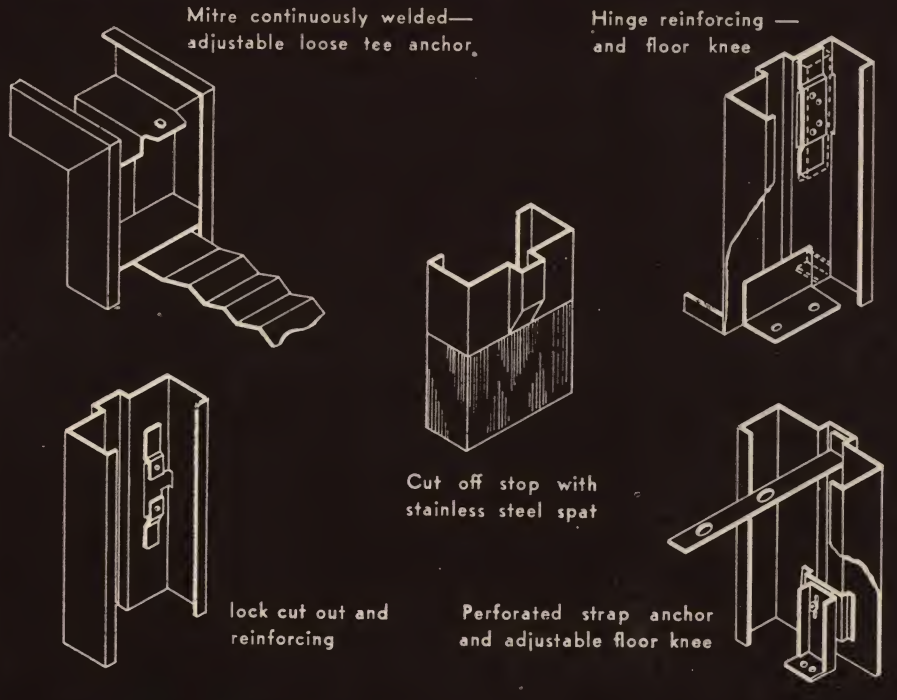
HOLLOW METAL DOORS

Acme hollow metal doors are manufactured of two sheets of cold rolled, stretcher-level steel ranging from US No. 12 through US No. 20 gauge. Doors are continuously reinforced with interlocking channels, spaced on 6 inch centers. All spaces between the vertical stiffeners are filled with air-cell asbestos or mineral rockwool, both of which meet Underwriter specifications. Tops of all exterior doors are closed flush to prevent accumulation of moisture or rain water. Doors are mortised, reinforced, drilled and tapped at the factory from paper templates for all

Acme STANDARD PROFILES



Acme CONSTRUCTION DATA


Mitre continuously welded— adjustable loose tee anchor
Hinge reinforcing — and floor knee
Cut off stop with stainless steel spat
lock cut out and reinforcing
Perforated strap anchor and adjustable floor knee

mortised hardware. Heavy gauge reinforcements are used for all surface applied hardware, which is drilled and tapped in the field by others. All doors are painted on the inside. After welding, doors are thoroughly cleansed and degreased and all mitres and spot welds are ground smooth prior to the application of a zinc chromate coat of paint. The doors are filled as many times as required to effect a completely homogeneous unit. Each coat of filler is baked separately. The doors are then painted and baked with a rust inhibitive gray primer. Baked enamel and grain finishes are provided whenever specified to meet architectural requirements.

Acme manufactures hollow metal doors to meet the specifications for labelling by the Underwriters' Laboratories, Inc. and the New York City Board of Standards and Appeals. See page 4 for detailed requirements for labelling.

KALAMEIN DOORS

Acme Kalamein doors are designed to meet all architectural specifications as to construction and are covered with 24 gauge galvanized steel sheets. Kalamein doors are given a shop coat of rust inhibitive primer.

Acme Kalamein doors are designed to meet the specifications for labelling by the Underwriters' Laboratories, Inc. and the New York City Board of Standards and Appeals.

SPECIAL ENTRANCES

Acme Special Entrances are manufactured in accordance with the varied architectural designs and details to insure an exact duplication in metal of modern architectural interpretations. All joints are carefully mitred, notched, welded continuously and ground smooth prior to the application of a coat of rust inhibitive primer.

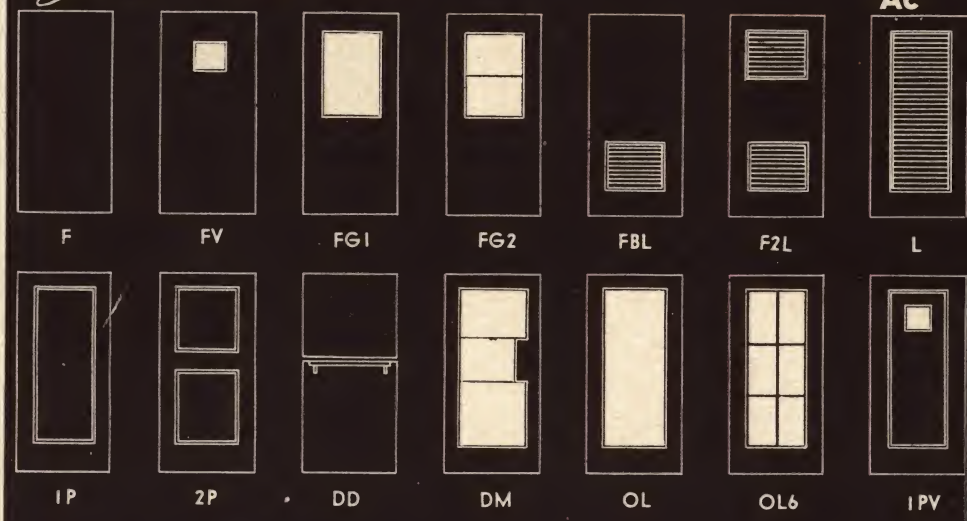
OTHER PRODUCTS

Acme other products include movable steel office partitions fabricated with the latest factory equipment and methods. Partitions can be furnished in 1 ½ inch, 2 ⅜ inch and 3 inch thicknesses. For further information, please write for ACME Steelwall catalog.

Acme also manufactures special entrance frames of standard rolled shapes to insure rapid delivery, the newest development in hollow metal. For specifications and details, please write to home office.

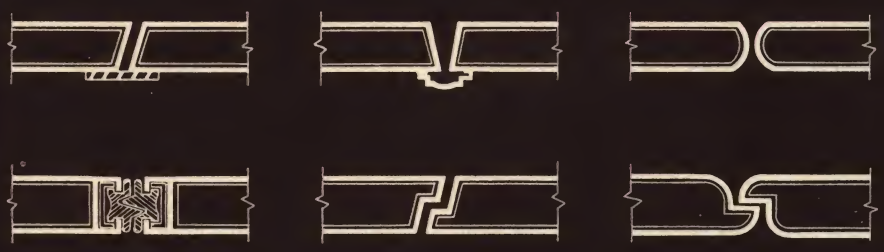
Acme also produces a full line of elevator entrances, including frames, swing or slide doors, hanger housings, hanger covers, struts, trim, fascias and sills as required for a complete installation. Frames and doors of 1 ⅜ inch and 1 ¾ inch are thicknesses are manufactured to meet architecural requirements in accordance with the above specifications for hollow metal work. For further information and specifications, please write to ACME Steel Door Corp.

Acme DOOR TYPES

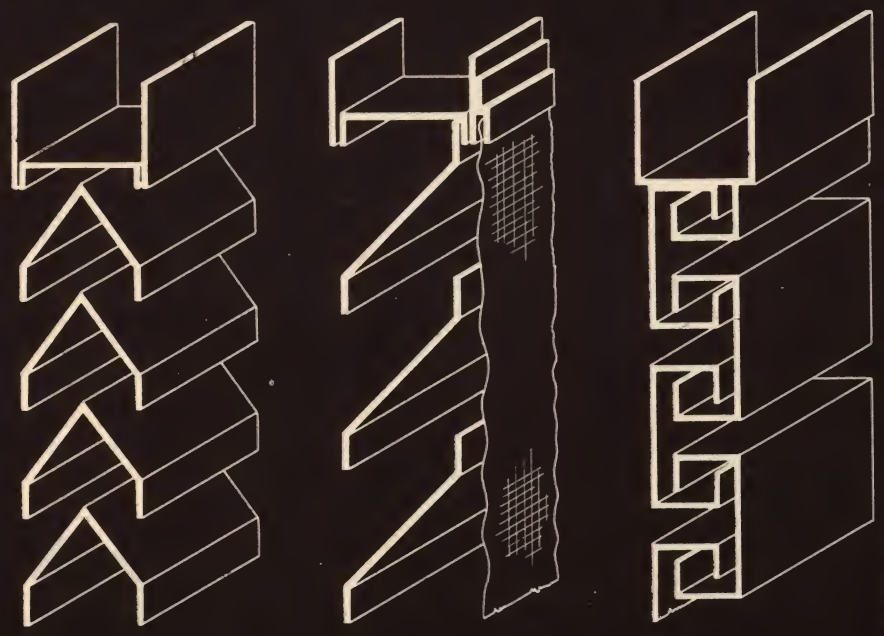


Acme DOOR MOULDINGS

Acme DOOR MEETING STILES



Acme DOOR LOUVRES



Acme INSTALLATIONS

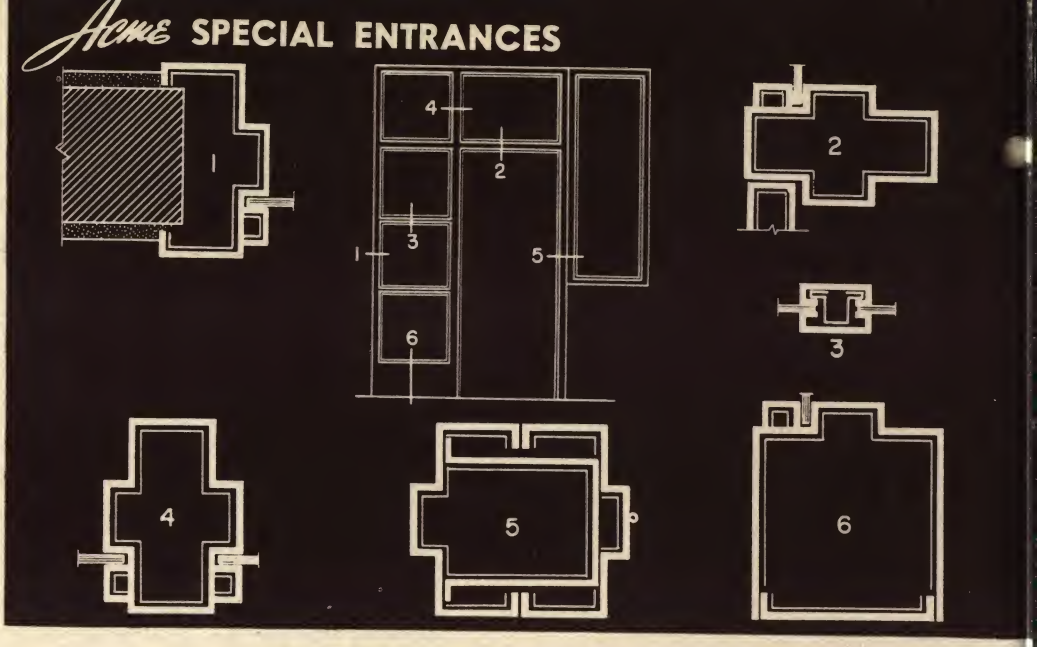
Job	Douglas Aircraft Co.
Location	Tulsa, Okla.
Contractor	Martin K. Eby Co.
Architect	Skidmore, Owings & Merrill
Job	Williams Elementary School
Location	Pittsfield, Mass.
Contractor	George E. Emerson
Architect	Perkins & Will
Job	Robert E. Lee Jr. H. S.
Location	Pampa, Texas
Contractor	Ramey Construction Co.
Architect	Cantrell & Co.
Job	Lutheran Publishing House
Location	Philadelphia, Pa.
Contractor	Wark & Co.
Architect	T. Norman Mansell
Job	Holy Redeemer Hospital
Location	Philadelphia, Pa.
Contractor	Wark & Co.
Architect	George E. Yundt
Job	East High School
Location	Rochester, N. Y.
Contractor	A. Friederichs & Sons
Architect	Faragher & Macomber
Job	Enlisted Mens Barracks
Location	Midway Islands
Contractor	Hawaiian Dredging Co. Ltd.
Architect	Pereira & Luckman
Job	Geigy Chemical Co.
Location	Greenburgh, N. Y.
Contractor	Vermilya Brown
Architect	Skidmore, Owings & Merrill
Job	Ogden School
Location	Hempstead, L. I., N. Y.
Contractor	Alexander Stein Const. Co.
Architect	F. P. Weidersum Assoc.
Job	Sans Souci Hotel
Location	Miami, Fla.
Contractor	Taylor Construction
Architect	Morris Lapidus
Job	IBM World Trade
Location	United Nations Plaza, N. Y. C.
Contractor	John Lowry, Inc.
Architect	Harrison & Abramovitz
Job	High School
Location	Leavenworth, Kansas
Contractor	Hunter & Lundberg
Architect	Williamson, Loebsack & Assoc.

Acme

STEEL DOOR CORP.

Main Office and Plant
513 PORTER AVENUE • BROOKLYN 22, N. Y.
EVergreen 4-7800

Acme SPECIAL ENTRANCES



UNDERWRITERS' STANDARDS

DOORS	CLASS A	CLASS B	CLASS C	CLASS D	CLASS E
Max. Sizes Singles	4-0 x 10-0	4-0 x 10-0	4-0 x 10-0	4-0 x 10-0	4-0 x 10-0
Pairs	8-0 x 10-0	8-0 x 10-0	8-0 x 10-0	8-0 x 10-0	8-0 x 10-0
Operation	Swing	Swing	Swing	Swing	Swing
Min. Gauge	18	18	18	18	18
Min. Thick	1¾	1¾	1¾	1¾	1¾
Insulation	A S B E S T O S		O R	R O C K W O O L	
Max. Exposed Glass Area	No Glass	*	1296 sq. in. per lite	None	720 sq. in. per lite
Min. Depth Moulding	None	½"	Over 300 sq. in. ¾"	None	Over 300 sq. in. ¾"
Astragals	Both Leaves	One Side	One Side	One Side	One Side
FRAMES	Max. Sizes				
16 Ga. Singles	None	3-8 x 7-6	3-8 x 7-6	3-8 x 7-6	3-8 x 7-6
Pairs	None	5-0 x 7-6	5-0 x 7-6	5-0 x 7-6	5-0 x 7-6
14 Ga. Singles	4-0 x 10-0	4-0 x 10-0	4-0 x 10-0	4-0 x 10-0	4-0 x 10-0
Pairs	8-0 x 10-0	8-0 x 10-0	8-0 x 10-0	8-0 x 10-0	8-0 x 10-0
Min. Jamb Width	Wallspan	4	4	4	4
Min. Stop Ht.	¾	⅝	⅝	⅝	⅝
Min. Trim Width	1¼	1¼	1¼	1¼	1¼

*100 sq. in. per opening with 12" maximum height or width or 100 sq. in. per opening, height and width not to exceed 33" and 4" respectively.

MINIMUM HARDWARE Class A — Up to 3'-0 x 7'-0 (3) 4½" regular weight hinges. Over 3' x 7'-0 4½" extra heavy hinges. Labelled 3-point lock (2-point lock for inactive leaf of pairs.)

Class B, C, D, E — (3) 4½" regular weight hinges. Mortised latch or lock (inactive leaf of pairs must have top and bottom bolts.) Rim type panic devices can be used only on E label doors. Doors over 8'-0 in height must have 3-point locks.

ADDITIONAL HARDWARE Class A — Surface-applied hinges. Semi-concealed closer. Surface closers.

Class B, C, D, E — Surface applied hinges. All surface closers. Glynn-Johnson and LCN type concealed closers. Russwin semi-concealed closers. Schlage and Russwin type unit locks. Surface applied flush bolts. Rixon 65, 66, 67 and 68 pivots — *MUST BE USED WITH INTERMEDIATE PIVOT.*

One hinge needed for each 2'-6" in height or fraction thereof.

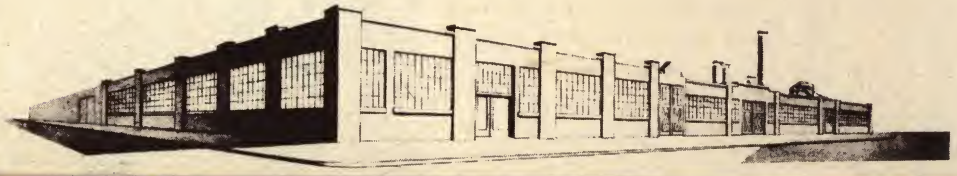
No spring hinges or deadlocks permitted.

NOTES: 1) Stainless steel, bronze and aluminum openings and mullion units, transom frames, cabinet jambs and frames with removable stops cannot be labelled.

2) Frames in plaster and stud partitions and frames anchored to walls with expansion bolts cannot be labelled.

3) Doors with rabbetted stiles cannot be labelled.

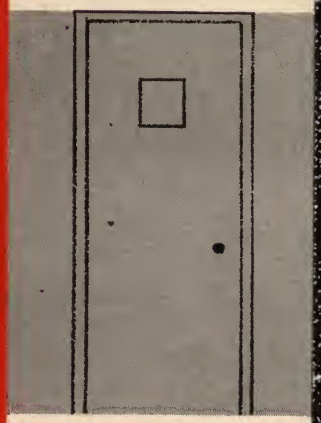
4) Frames must be expansion bolted to floor and anchored to walls with built in anchors for each 2'-6" in height or fraction thereof.



1960 CATALOG

AETNAPAK®

STEEL
DOOR-AND-FRAME
PACKAGES
COMPLETE WITH
HARDWARE.
AVAILABLE FOR
FAST DELIVERY—
NO CUSTOM
ENGINEERING
DELAY.



AETNA STEEL PRODUCTS CORPORATION, NEW YORK

Aetna Steel Products Corporation

presents herewith specifications and details covering the Aetnapak line of stock-standard steel door-and-frame packages, complete with hardware; also standard-engineered door frames and combinations of borrowed lights, side lights, transoms.

This is a new concept of a Hollow Metal program in that the Aetnapak line is fabricated in such a way as to approximate as closely as possible the quality standards usually associated *only* with the finest of *custom* built products.

AETNAPAK formula:

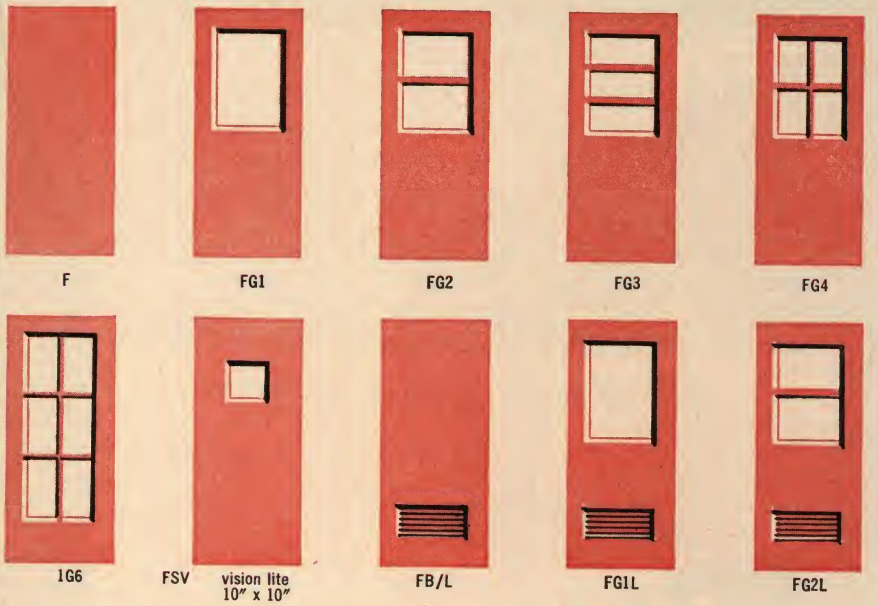
Custom quality, fast service, no custom-engineering delay.

The following typically *custom* features are built into Aetnapak stock and standard-engineered doors and frames.

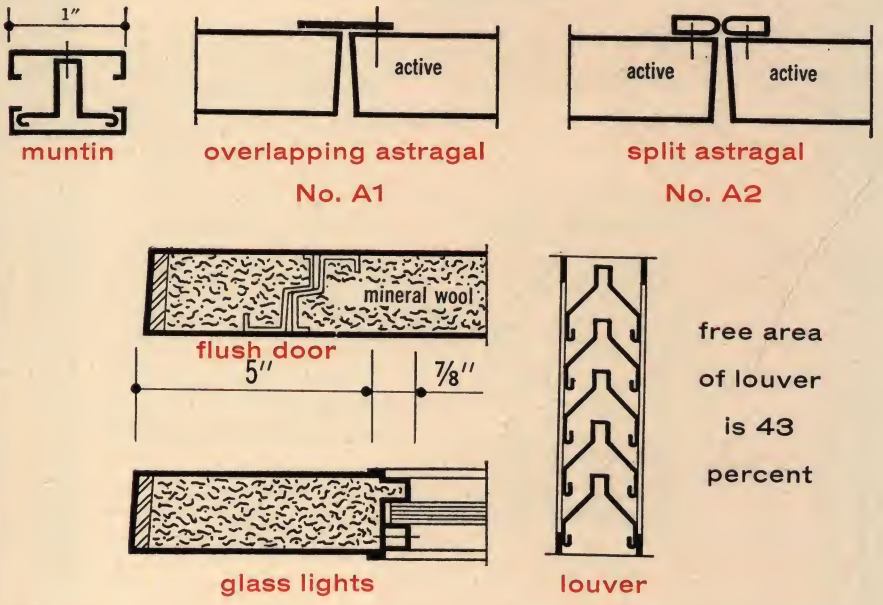
- Completely flush-designed doors with no exposed joints or surface defects.
- Uniform clearance at top and sides of door.
- Standard bevelled door stiles.
- Reinforced door and frame for closers—and other surface hardware where necessary.
- Mortised flush bolts (not surface applications).
- Frames either knock-down or set-up construction.
- Doors constructed of furniture grade steel.
- A completely finished product in every respect.

door types

See back cover for: Underwriters Label Service
Details for Single Point A-Label Fyr-Chek Door Openings Shown Complete on Page



details (stiles and top rails 5″; bottom rails 10″)



door swings

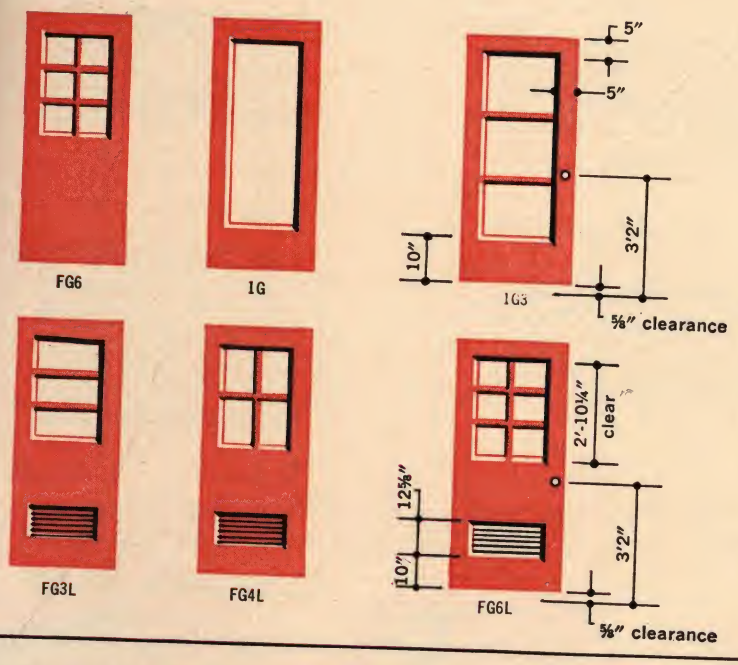
regular hands (swing in)

reverse bevel hands (swing out)

- ***Avoid custom-engineering delay.***
- ***Specify AETNAPAK IN-STOCK or STANDARD-ENGINEERED doors and frames, complete with hardware.***

AETNAPAK®
CUSTOM-STANDARD

steel door-and-frame packages



door types and sizes

held in stock for immediate shipment

opening sizes	F	FG1	FG2	FG3	FG4	FG6	1G	1G3	1G6	FSV	FL	FG1L	FG2L	FG3L	FG4L	FG6L
single swing																
2'-0"	x6'-8"	•														
2'-4"		•														
2'-6"		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2'-8"		•	•	•	•	•					•	•	•	•	•	•
3'-0"		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
3'-4"		•	•	•	•	•										
3'-6"		•	•	•	•	•										
3'-8"		•	•	•	•	•										
4'-0"		•	•	•	•	•										
2'-0"	x7'-0"	•														
2'-4"		•														
2'-6"		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2'-8"		•	•	•	•	•					•	•	•	•	•	•
3'-0"		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
3'-4"		•	•	•	•	•	•	•	•	•						
3'-6"		•	•	•	•	•	•	•	•	•						
3'-8"		•	•	•	•	•	•	•	•	•						
4'-0"		•	•	•	•	•	•	•	•	•						
pair swing																
5'-0"	x6'-8"	•	•	•	•	•	•	•	•							
6'-0"		•	•	•	•	•	•	•	•							
5'-0"	x7'-0"	•	•	•	•	•	•	•	•							
6'-0"		•	•	•	•	•	•	•	•							

how to order

1 size of opening
2 door type
3 complete hardware
4 swing*

* All pairs RH active when opening in.
All pairs LHRB active when opening out.

specifications

• doors

Doors shall be as manufactured by Aetna Steel Products Corp. and shall be a completely flush design and shall be constructed of two outer sheets of 18-gauge, stretcher-levelled steel formed and rigidly connected and reinforced inside with continuous vertical interlocking 20-gauge stiffeners.

All doors shall be continuously arc welded vertically where the two outer sheets are joined and dressed smooth. All doors shall be sound-deadened with mineral wool.

All doors shall be 1¾" thick with glazing mouldings and muntin bars prepared for installation of ¼" (maximum) thick glass. All mouldings and muntin bars shall be attached with oval-head screws. (See pages 2 and 3 for construction details, types, sizes, etc.)

Doors shall be mortised, reinforced, drilled and tapped for hinges, locks and flush bolts; also, reinforced for closers and other surface hardware where necessary. Any drilling and tapping required for surface hardware shall be done in the field by others. All hardware shall be applied by others in the field. (See pages 10 through 15 for available hardware.)

• door frames

Frames shall be fabricated from 16 gauge steel. They shall be mortised, reinforced, drilled and tapped for hinges and lock strikes. Also reinforced for closers and any other surface hardware where necessary. Frames are set-up construction with arc welded miters. Rubber door silencers shall be furnished for the strike jamb. Loose "T" masonry anchors are provided. (As an alternate 5½" jamb depths can be supplied from stock with knocked-down construction. Also weld-on wood stud anchors are available for 4½" and 5½" jamb depths.) Frames are designed to finish flush with the floor and adjustable floor anchors are furnished. (See Page 4 for details of construction.) 4½" and 5½" jamb depths are held in stock for immediate shipments. For variable jamb depths, see Pages 6, 7 and 8.

All drilling for surface hardware shall be done in the field by others.

• hardware

Mortised cylinder locks shall be heavy-duty commercial grade especially designed for hollow steel doors. Function of locks to be specified. (See page 10 for specifications.)

Cylindrical locks shall be heavy-duty commercial grade especially designed for hollow steel doors. Function of locks to be specified. (See page 11 for specifications.)

Hinges shall be regular weight 4½" x 4½", full mortised button tip—3 per opening. Half mortised are recommended for structural frames. (See page 12 for specifications.)

Miscellaneous hardware—closers, push plates, push bars, holders, bumpers, flush bolts, panic devices, etc. (See specifications, pages 12, 13, 14 and 15.)

All standard hardware shall have Phillips head screws.

Hardware application not by Aetna Steel Products Corporation.

• painting

Materials shall be Bonderized and given a coat of baked on gray zinc chromate rust inhibitive primer. Finish painting in field by others.

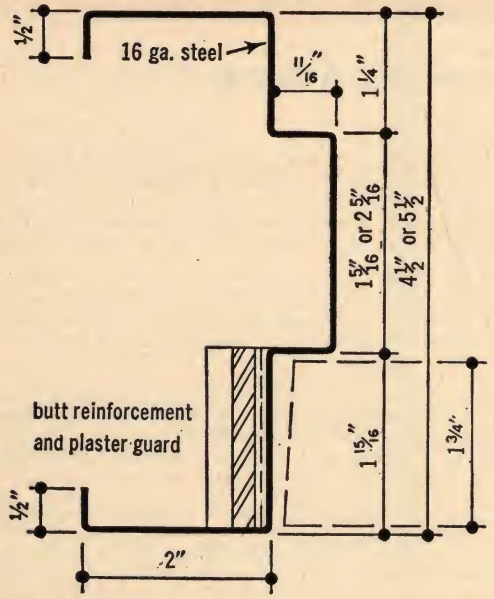
• glazing

All glass, glazing and putty by others.

Consult back cover for Underwriter label doors and frames.

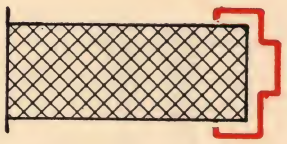
door frame features and details

profile scale: 1/2 full size

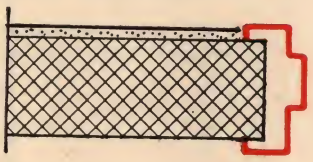


4½ and 5½ jambs held in stock for immediate shipment. See page 3 for stock sizes. Strike preparation #86 or 161. K.D. construction for 5½" jambs only.

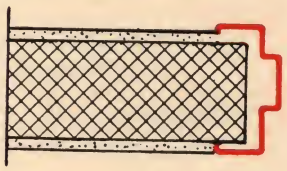
3" or 4" wall—no plaster



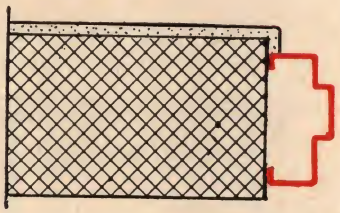
3" or 4" wall—plaster 1 side



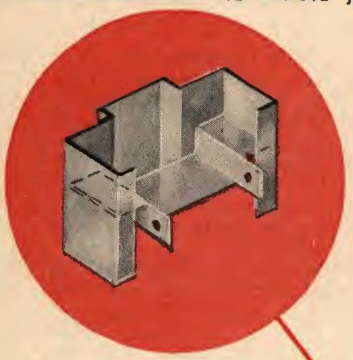
3" or 4" wall—plaster 2 sides



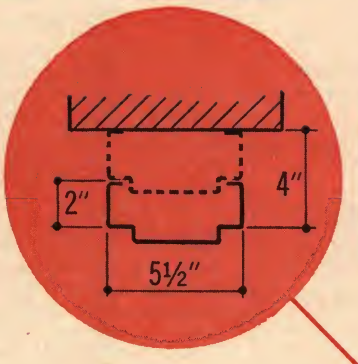
6" walls or over



loose stud anchor for 5½" jamb only
welded stud anchor for 4½" and 5½" jambs



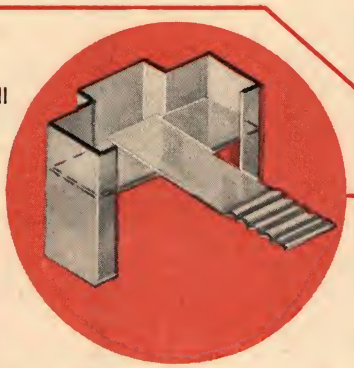
head adapter (for exposed concrete block wall)

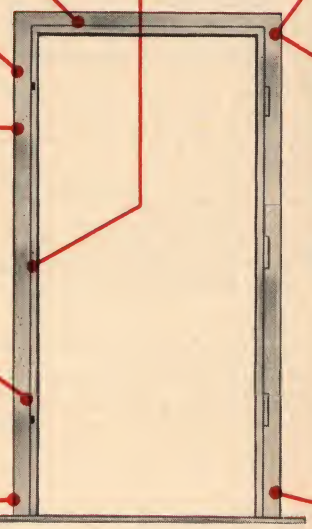


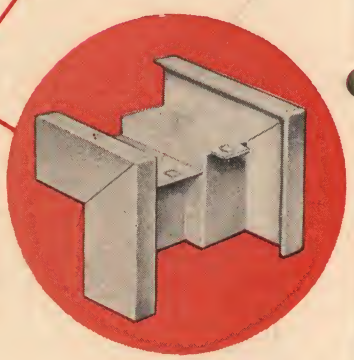
strike reinforcement and plaster guard

miter reinforcing plate (for 5½" KD frames only)

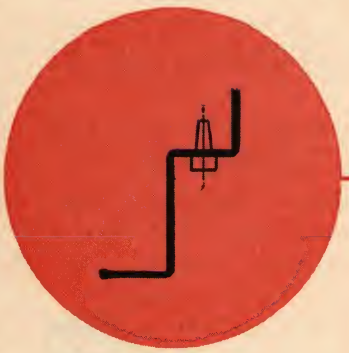
loose stud anchor masonry wall



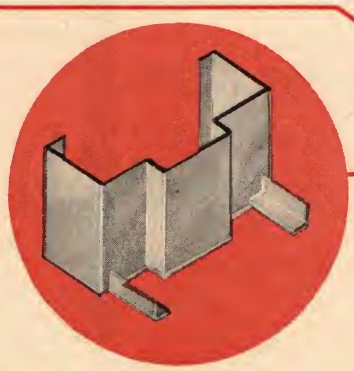




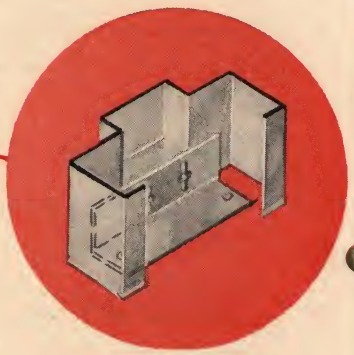
arc welded miter



rubber door silencer



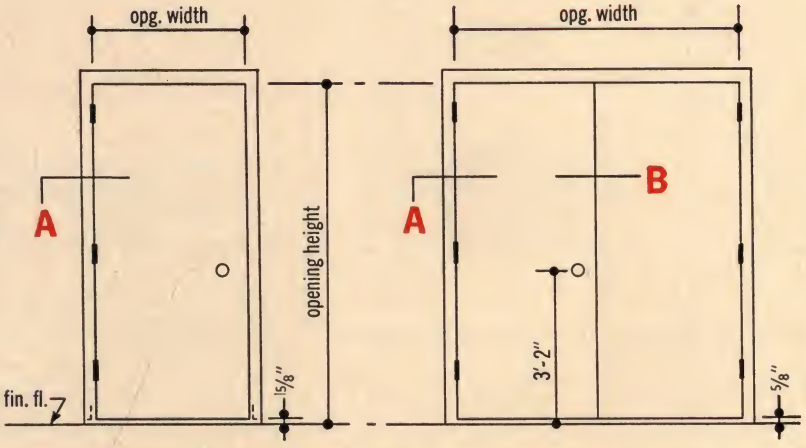
removable spreaders



adjustable floor anchors (maximum adjustment 2")

- ***Avoid custom-engineering delay.***
- ***Specify AETNAPAK IN-STOCK doors and frames, complete with hardware.***

Fyr - Chek (underwriters "A" label)
doors/frames/hardware with single point lock
held in stock for immediate shipment

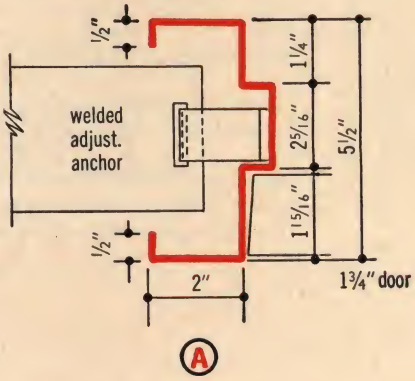


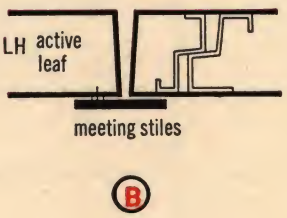
door swings

regular hands (swing in)

reverse bevel hands (swing out)

details (scale 3"=1'-0")





stock sizes ▲

	W	H	jamb
single swing	2'-6" 3'-0" 3'-6"	7'-0"	5½"
pair swing	5'-0" 6'-0"		

▲ Special sizes, jamb depths and L.H. active doors can be supplied on special request.

specifications

(for opening in fire wall)

- **single**

Maximum opening size: 3'-6" x 7'-6".

- **pairs**

Maximum opening size: 7'-0" x 7'-6".

- **frame construction**

2" flat trim.
4" minimum jamb depth.
#14-gauge minimum.
1½" x 1½" x #14-gauge weld on floor anchors.
Bridge type wall anchors with 6" adjustments.

- **door construction**

Completely flush design. No exposed joints or seams.
Glass lights not permitted.
#18-gauge minimum.
Underwriters approved insulation.
Thickness: 1¾".
One astragal required for pairs of doors.
Vertical edge of door to be reinforced by #18-gauge channel as a continuous unit. Intermediate steel stiffeners spot welded on 2" centers.

- **hardware**

butts:

Minimum size 4½" x .134" thick steel for openings up to and including 3'-0" x 7'-0". Exceeding this size, use 4½" x .180" thick steel butts. Openings 5'-0" or less in height, use 2 butts; for each additional 2'-6" or fraction thereof, add (1) butt. All butt reinforcements 3/16" thick. (Spring hinges, pivots, floor closers not permitted).

lock:

Active door leaf, use mortised or cylindrical *single point* lock as approved by Underwriters. Inactive leaf of pairs, use top and bottom flush bolts.

notes

1 Consult pages 10 to 15 for complete finished hardware for these openings.

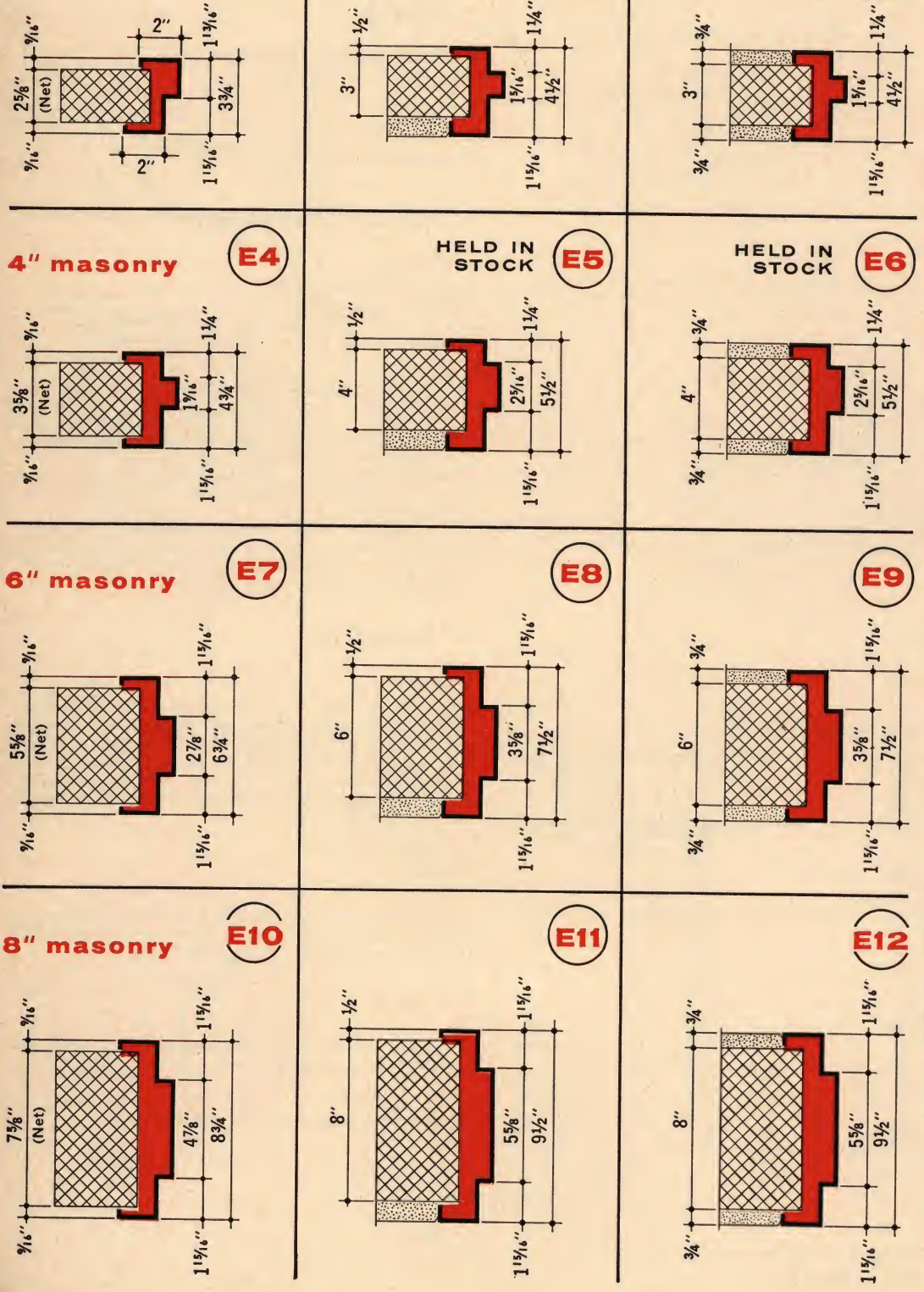
2 See back cover for other classifications.

profiles for 1¾" doors

FAST shipments
not inventoried/standard-engineered

"E" series (90° bend)

no plaster	plaster — one side	plaster — two sides
3" masonry E1	HELD IN STOCK E2	HELD IN STOCK E3
4" masonry E4	HELD IN STOCK E5	HELD IN STOCK E6
6" masonry E7	E8	E9
8" masonry E10	E11	E12



specifications

All frames shown on this detail to be in strict accordance with AETNAPAK standards on page 4 except for jamb depths.

Frames will be #16 gauge, trim 2" and back bands ½" with 90° bends, prepared for three (3) butts 4½" x 4½" (.134); lock preparation #86 and #161 (specify) with AETNAPAK standard hardware locations.

Set-up type only with welded miters (no K.D.).

Surface strike S-11980—panic devices R29 & V22 #S-11980 for rim panic devices can be used only on frames with 2⅝" stops.

Heights:
6'8" and 7'0".

Widths:

Single swing—2'0", 2'4", 2'6", 2'8", 3'0", 3'4", 3'6", 3'8" and 4'0".
Pair swing—5'0" and 6'0".

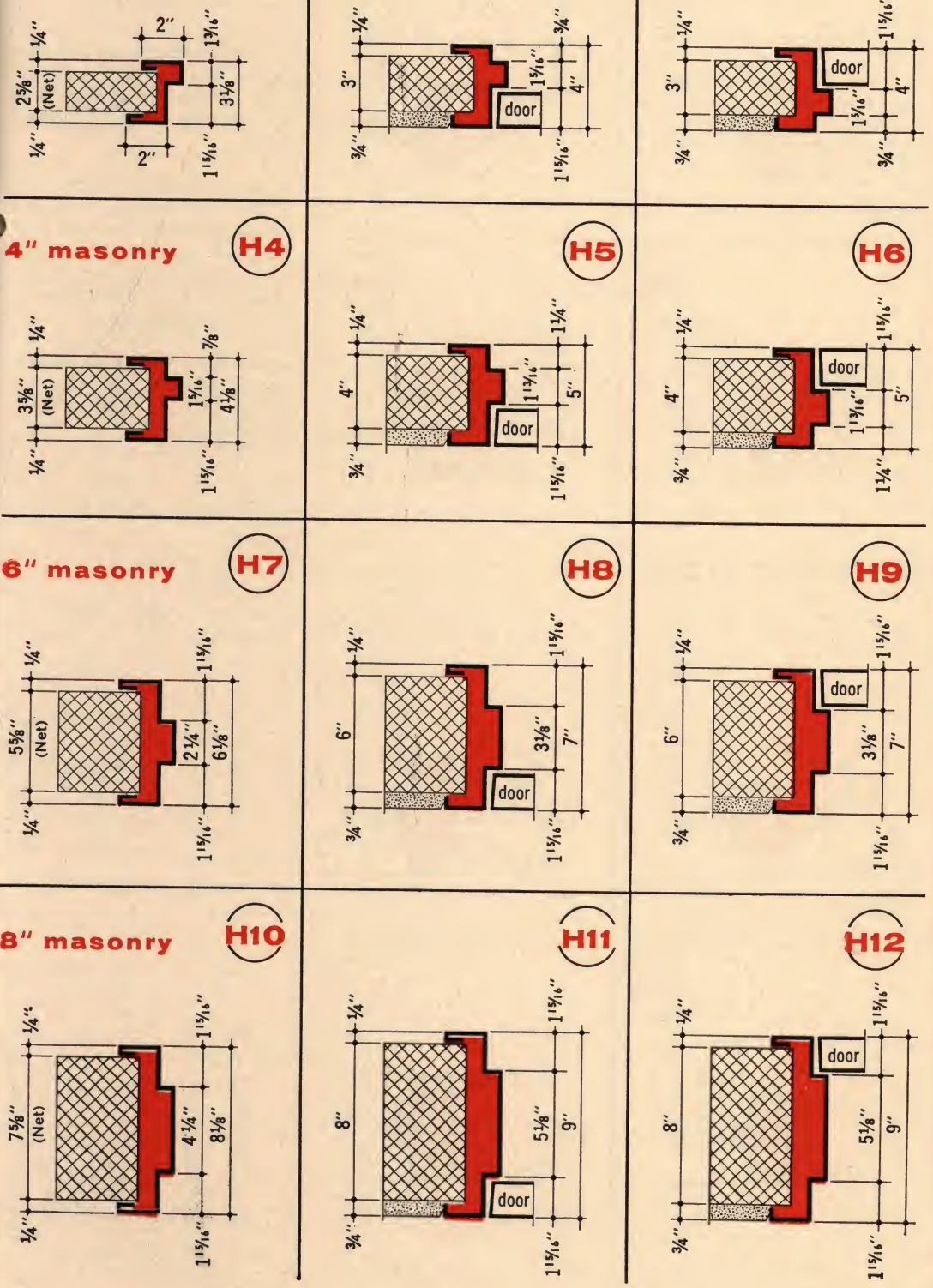
Masonry anchors only (stud anchors for 5½" frames only).

Refer to Catalog pages #2 and 3 for doors and pages 10 to 15 for hardware to fit these frames.

- *Avoid custom-engineering delay.*
- *Specify AETNAPAK IN-STOCK or STANDARD-ENGINEERED doors and frames, complete with hardware.*

"H" series ("dutch" bend)

	no plaster	plaster (one side)	
3" masonry	H1	H2	H3
4" masonry	H4	H5	H6
6" masonry	H7	H8	H9
8" masonry	H10	H11	H12



specifications

All frames shown on this detail to be in strict accordance with AETNAPAK standards. Frames will be #16 gauge, trim 2" and back bands ½" with 90° or 180° bends, prepared for three (3) butts 4½" x 4½" (.134); lock preparation #86 or #161 (specify) with AETNAPAK standard hardware locations.

Set-up type only with welded miters (no K.D.).

Surface strike #S-11980 for rim panic devices R29 & V22 can be used only on frames with 2⅝" stops.

Heights:
6'8" and 7'0".

Widths:

Single swing—2'0", 2'4", 2'6", 2'8", 3'0", 3'4", 3'6", 3'8" and 4'0".

Pair swing—5'0" and 6'0".

Masonry anchors only (stud anchors for 5½" frames only).

Refer to Catalog pages #2 and 3 for doors and pages 10 to 15 for hardware to fit these frames.

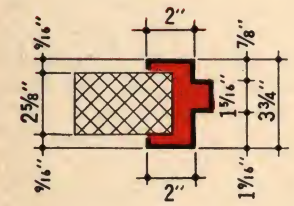
profiles for 1⅜" doors

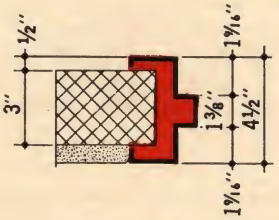
FAST shipments
not inventoried standard-engineered

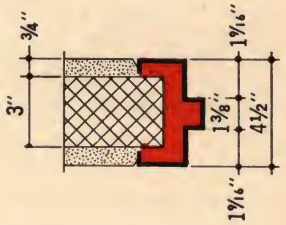
"K" series (90° bend)

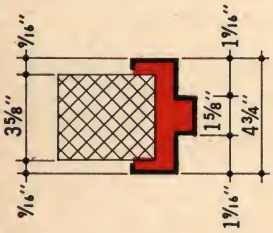
MASONRY CONSTRUCTION

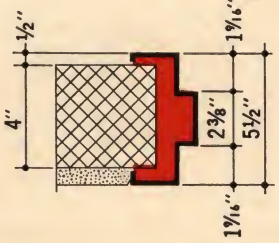
no plaster	plaster: one side	plaster: two sides
3" masonry K1	K2	K3
4" masonry K4	K5	K6

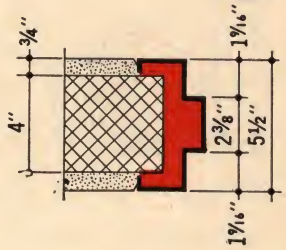






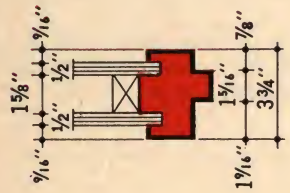


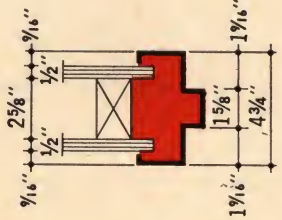


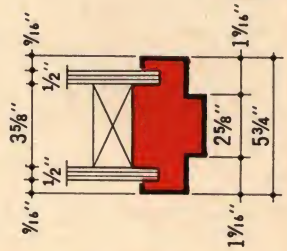


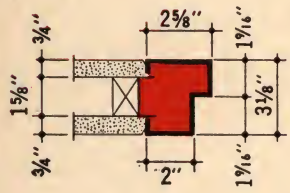
WOOD STUD CONSTRUCTION

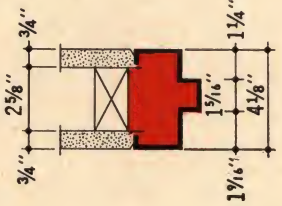
2" wood stud	3" wood stud	4" wood stud
½" drywall two sides K7	K8	K9
plaster two sides K10	K11	K12

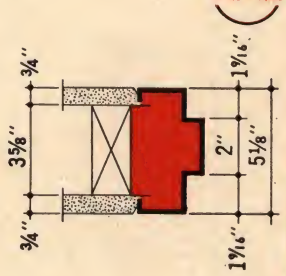












specifications

All frames shown on this detail to be in strict accordance with AETNAPAK standards on page #4 except for jamb depths.

Frames will be #16 gauge, trim 2" and back bands ½" with 90° bends, prepared for two (2) template butts 3½" x 3½" (.123); strike preparation Govt. #160 (1⅛ x 2¾) with AETNAPAK hardware locations.

Set-up type only with welded miters (no K.D.).

Heights:
6'8" and 7'0".

Widths:
Single swing—2'0", 2'4", 2'6", 2'8", 3'0".

Pair swing—5'0" and 6'0".

Masonry or stud anchors are supplied.

- *Avoid custom-engineering delay.*
- *Specify AETNAPAK STANDARD-ENGINEERED doors and frames, complete with hardware.*

STANDARD-ENGINEERED
4½ & 5½ jamb depths only
strike preparation #86 & 161
set-up only no. k. d. construction
FAST *shipments (inventoried components)*

AETNAPAK® STANDARD-ENGINEERED — steel door-and-frame packages

combinations borrowed lights/side lights/transoms

sizes (clear openings)

door frames				transoms				borrowed lights (variable sizes)						side lights (variable sizes)			
S single		P pair		ST single		PT pair		BL plain		BLM mullion		BLT transom		SL plain		SLT transom	
W	H	W	H	W	H	W	H	W	H	W	H	W	H	W	H▲	W	H▲
2-0	6-8	5-0	6-8	2-6	6-8	5-0	6-8							MAX.	6-10	MAX.	MAX.
2-4	7-0	6-0	7-0	3-0	7-0	6-0	7-0							9-8	7-2	9-8	10-0
2-6				3-6													
2-8																	
3-0																	
3-4																	
3-6																	
3-8																	
4-0																	

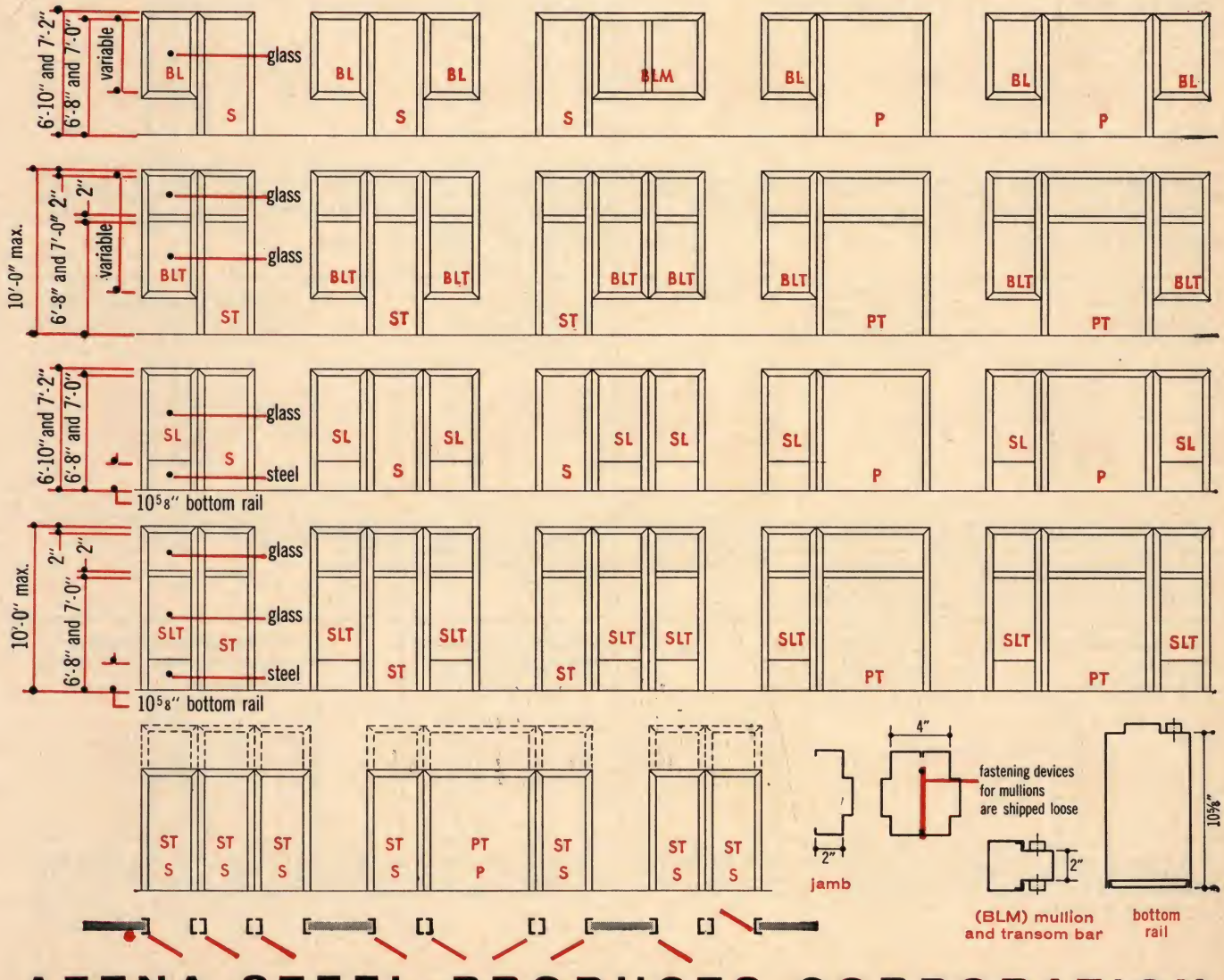
MAX.-OVERALL HGT. 10′-0″

MAXIMUM 9′-8″

notes
1. ▲ overall dimensions (All other dimensions noted on this page refer to clear openings.)
2. Hardware: see pages 10-15
3. Frames: see page 4 (4½″ and 5½″ jamb depths)
4. Door Types: see pages 2 and 3
5. Fastening Devices for mullions are shipped loose
6. Welded miters; no knockdown

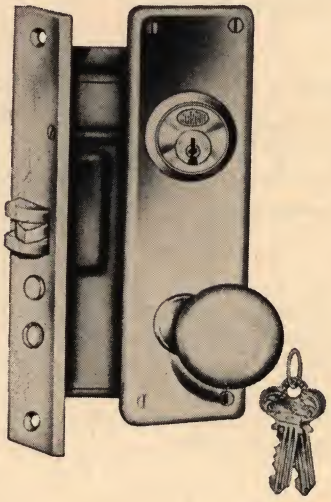
typical suggested arrangements (not in scale)

S—single door frame
P—pair door frame
ST—single door with transom
PT—pair doors with transom
BL—borrowed light
SL—side light
BLM—borrowed light with mullion
BLT—borrowed light with transom
SLT—side light with transom



standard hardware (heavy duty)

mortise locksets • U. S. GOVERNMENT SERIES 86



specifications

Mortise locksets shall be:

Aetnapack heavy duty commercial grade which shall meet U. S. Government Specification FF-H-106A for 86 Series; approved by the National Board of Fire Underwriters. #7551, 7557, 7554, 7555, 7510 (no locks having dead bolts can have underwriters' approval); reversible and interchangeable in the standard lock mortise.

▲ **indicates underwriters approval**

Mortise locksets shall have:

Locks: armoured front 8″ x 1¼″, strikes standard 5¾″ x 1¼″, backset 2¾″; Latch bolts: cast bronze, ⅝″ throw for security, (anti-friction type for easy closing and long life); Knobs: 2¼″ diameter seamless, cast shank; Escutcheons: 7½″ x 2¼″ heavy (.050 gauge) cold forged.

Finish shall be:

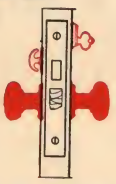
Stock US10 Dull Bronze or Stock US28 Alumilited Aluminum; or Special-to-order US26D Dull Chrome.

The following lock series will fit Aetnapak standard lock mortise: Corbin 7500, Russwin 2000, Sargent 7700, Lockwood 5100 or Yale 8000 (with a few exceptions).

entrance doors
AETNAPAK No. 7543
U. S. Gov't. No. 86A

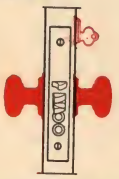
Latch bolt operated by key from outside at all times and by knob from either side except when outside knob is locked by stop in face. Dead bolt operated by key from outside and by thumb knob from the inside.

office doors
AETNAPAK No. 7523
U. S. Gov't. No. 86B



Latch bolt operated by knobs from either side. Dead bolt operated by key from the outside and by thumb knob from the inside.

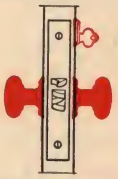
exit doors
AETNAPAK No. 7551
U. S. Gov't. No. 86E



▲

Latch bolt operated by key from outside at all times and by knobs from either side except when outside knob is locked by stop in face.
* Has Auxiliary Latch.

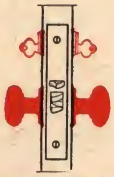
storage or toilet doors
AETNAPAK No. 7557
U. S. Gov't. No. 86EW



▲

Latch bolt by key from the outside and knob from the inside. Outside knob always rigid.
* Has Auxiliary Latch.

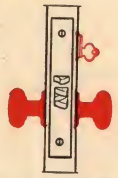
store doors
AETNAPAK No. 7554
U. S. Gov't. No, 86G



▲

Latch bolt operated by key from outside at all times and by knobs from either side except when outside knob is locked from inside by master key only unless otherwise specified.
* Has Auxiliary Latch.

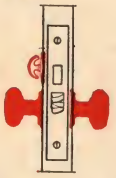
school and classroom doors
AETNAPAK No. 7555
U. S. Gov't. No. 86J



▲

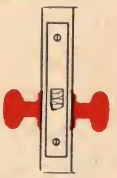
Latch bolt operated by key from outside and knobs from either side except when outside knob is locked by key from outside. Inside knob always operative.
* Has Auxiliary Latch.

privacy doors
AETNAPAK No. 7520
U. S. Gov't. No. 86L



Latch bolt operated by knobs from either side. Dead bolt operated by thumb knob from inside only. Furnished to operate by emergency key from outside.

latches for passage doors
AETNAPAK No. 7510
U. S. Gov't. No. 86N



▲

Latch bolt operated by knob from either side at all times.

storage doors
AETNAPAK No. 7313
U. S. Gov't. No. 86P

Dead bolt operated by key from the outside and by thumb knob from the inside. No trim included. Use with push and pull sets (page 9).

closet doors
AETNAPAK No. 7311
U. S. Gov't. No. 86S

Dead bolt operated by key from outside only. No trim included. Use with push and pull sets (page 9).

storage room doors
AETNAPAK No. 7312
U. S. Gov't. No. 86T

Dead bolt operated by key from either side. No trim included. Use with push and pull sets (page 9).

store entrance doors
AETNAPAK No. 7588
U. S. Gov't. None

Latch bolt operated by thumb piece from either side. Dead bolt by key from either side.

- ***Avoid custom-engineering delay.***
- ***Specify AETNAPAK IN-STOCK or STANDARD-ENGINEERED doors and frames, complete with hardware.***

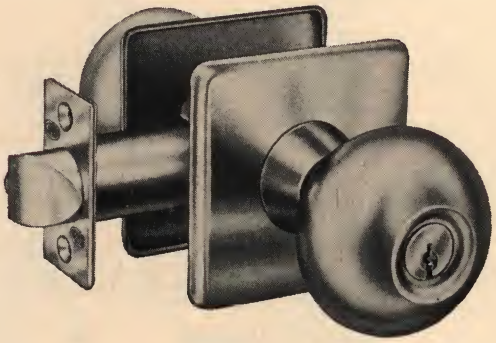
for immediate shipment

AETNAPAK®
CUSTOM-STANDARD

steel door-and-frame packages

(heavy duty)

cylindrical locks • U. S. GOVERNMENT SERIES 161



specifications

All cylindrical locks shall be:

Aetnapak Heavy Duty Cylindrical Locks shall meet U. S. Government Specifications FF-H-106A for 161 Series; approved by National Board of Fire Underwriters; reversible.

All cylindrical locks shall have:

solid bronze self-lubricating latch bolt with full 5/8" throw for extra security; cylinder sets with the extra protection of automatic deadlocking latch bolt; 2¼" dia. heavy wrought knobs steel reinforced to prevent denting; extra heavy 3" x 3" square rose plates cold forged (.080 gauge) give equivalent of cast metal trim; knob shanks of seamless tubular design to obtain the most complete torsional strength and to give balanced knob action; brass bushings to prevent wear. Front 2¼" x 1⅛". Strike 2¾" x 1⅛". Back Set 2¾".

Finish shall be:

Stock US10 Dull Bronze or Stock US28 Alumilited Aluminum; or Special-to-order US26D Dull Chrome.

The following heavy duty cylindrical lock series will fit the standard lock preparation in Aetnapak doors:

Corbin 400, Russwin 400, Schlage C & D, Lockwood "H" or Yale & Towne 5400, Sargent Series #8 (Magna Lock)

entrance or office doors
AETNAPAK No. 451
U. S. Gov't. No. 161A

Latch bolt operated by key from the outside at all times and by knobs from either side except when outside knob is locked by turn button in inside knob. Latch bolt is automatically deadlocked when door is closed.

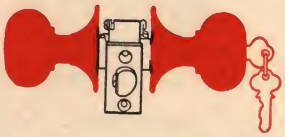
office doors
AETNAPAK No. 461
U. S. Gov't. No. 161B

Latch bolt operated by key from the outside at all times and by knobs from either side except when outside knob is locked by pushing in button in inside knob. Turning key outside or knob inside automatically releases locking button. Closing door does not release locking button. Latch bolt is automatically deadlocked when door is closed.

vestibule or office doors
AETNAPAK No. 454
U. S. Gov't. No. 161C

Latch bolt operated by key from outside at all time and by knobs from either side except when outside knob is locked by key in inside knob. Latch bolt is automatically deadlocked when door is closed.

utility or storeroom doors
AETNAPAK No. 457
U. S. Gov't. No. 161D

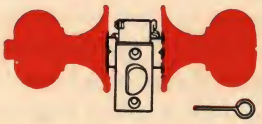


Latch bolt operated by knob from inside and by key from the outside. Outside knob always rigid. Latch bolt is automatically deadlocked when door is closed.

store doors
AETNAPAK No. 488
U. S. Gov't. No. 161G

Latch bolt operated by knobs from either side except when both knobs are locked by turning key in either knob. When both knobs are locked from either side key from either side will unlock both knobs. Latch bolt automatically deadlocks when door is closed.

privacy doors
AETNAPAK No. 420
U. S. Gov't. No. 161L



Latch bolt operated by knobs from either side except when outside knob is locked by pushing in button in inside knob. Turning inside knob or closing door automatically releases locking button. In case of emergency, pressure of emergency key or other pointed instrument against emergency device in center of outside knob releases locking mechanism.

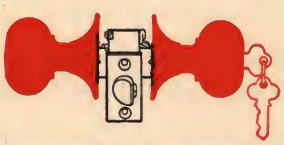
communicating doors
AETNAPAK No. 400
U. S. Gov't. No. 161M

Latch bolt operated by knobs from either side except when turn button in either knob locks opposite knob. Latch bolt is automatically deadlocked when door is closed. To prevent accidental lockout this lock should not be used on doors between rooms which have no other entrance.

latches for passage doors
AETNAPAK No. 410
U. S. Gov't. No. 161N

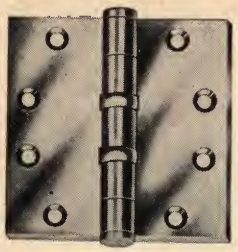
For any door that does not require locking. Latch bolt operated by knobs from either side at all times.

classroom doors
AETNAPAK No. 455
U. S. Gov't. No. 161R



Latch bolt operated by knobs from either side except when outside knob is locked by key in outside knob. Latch bolt is automatically deadlocked when door is closed. Inside knob always operative.

hinges



full mortised

half mortised

full mortised 4½" x 4½"

description		government specifications
46	Plain Bearing, Steel, Loose Pin	2014½P
BB46	Two Race Ball Bearing, Steel, Loose Pin	2010½P
46FP	Plain Bearing, Steel, Fast Pin	2014½P
BB46FP	Two Race Ball Bearing, Steel, Fast Pin	2010½P

half mortised 4½" (for C. I. frames only)

BB28	Two Race Ball Bearing, Steel, Loose Pin
BB28FP	Two Race Ball Bearing, Steel, Fast Pin

specifications

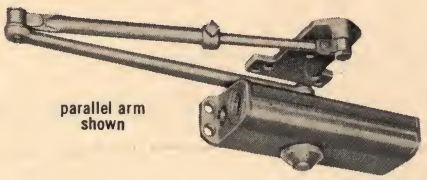
Hinges shown above are manufacturer's standard quality, size 4½" x 4½" regular weight (.134" thick) with flat button tips, templated. Steel hinges are furnished bonderized prime painted (USP). Plain bearing hinges are not recommended for doors used above average frequency or for doors with closers; in these cases use ball bearing hinges. Fast pin hinges have a set screw in the barrel which is inaccessible when door is closed.

1½ pair of hinges used for each door.

On special order steel hinges may be furnished bronze plated, chromium plated or aluminum plated. Half mortised hinges are recommended only for structural frames.

All hinges have non-rising pins. Use only steel hinges for Underwriters' Label Doors.

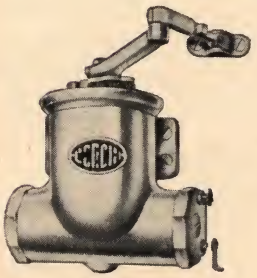
closers

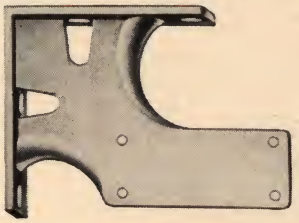


parallel arm shown

Number 1500 TRIM-LINE is a non-handed door closer for interior and exterior doors. Can be used on either right or left handed door. Available in both regular and parallel arm installations. Rack and pinion type. Blends with modern architecture.

Type of Closer	Maximum Door Size 2'-6"x7'-0"	3'-0"x7'-0"	4'-0"x7'-0"
INTERIOR DOORS			
Regular Arm	1502	1503	1504
Parallel Arm	P 1502	P 1503	P 1504
Regular Holder Arm	1502 H	1503 H	1504 H
Parallel Holder Arm	P 1502 H	P 1503 H	P 1504 H
Reg. Fus. Link Hold Arm	—	1503 FL	1504 FL
Par. Fus. Link Hold Arm	—	P 1503 FL	P 1504 FL
EXTERIOR DOORS			
Regular Arm	1503	1504	1505
Parallel Arm	P 1503	P 1504	P 1505
Regular Holder Arm	1503 H	1504 H	1505 H
Parallel Holder Arm	P 1503 H	P 1504 H	P 1505 H





corner bracket

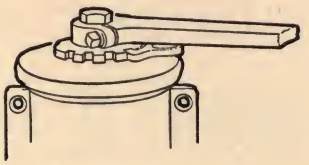
AETNAPAK door closers are designed to give trouble-free operation under heavy traffic conditions.

For right or left hand doors without change. They are not affected by extremes of temperature. Easily adjusted to any speed of closing through a dual valve control.

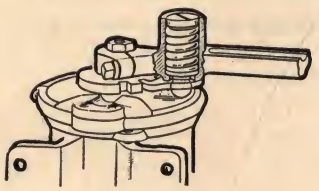
The case is cast iron, the spring is light, long and resilient. The tension is evenly distributed over twenty coils of flat wire designed to prevent external friction so as to permit the full power of the spring to be used to close the door.

The rack and pinion keep the door under constant checking control. The liquid has a high viscosity index, excellent lubricating properties and is capable of flowing at −60° F (below zero).

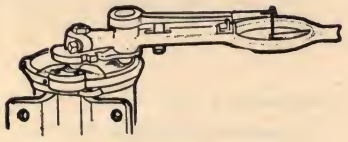
Finishes:
DBL (Dull Bronze Lacquer)
SBL (Silver Bronze Lacquer)



standard



hold-open



fusible link

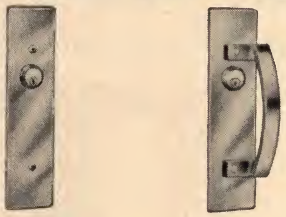
Closer No.	type	Gov't no.	maximum sizes interior	exterior	corner bracket	Gov't type
3	standard	3001 -III	3'–0"	2'–6"	26–3*	R
4	standard	3001 -IV	3'–6"	3'–0"	26–4*	R
5	standard	3001 -V	4'–0"	3'–6"	26–5*	R
103	hold open	3001 H-III	3'–0"	2'–6"	27–3	R
104	hold open	3001 H-IV	3'–6"	3'–0"	27–4	R
105	hold open	3001 H-V	4'–0"	3'–6"	27–5	R
▲523	fusible link hold open for fire doors	3001 F-III	3'–0"	2'–6"	86–3	R
▲524	fusible link hold open for fire doors	3001 F-IV	3'–6"	3'–0"	86–4	R

* when overhead holder (880 Series) is used substitute 27 Series bracket.
▲approved by National Board of Fire Underwriters.

- ***Avoid custom-engineering delay.***
- ***Specify AETNAPAK IN-STOCK or STANDARD-ENGINEERED doors and frames, complete with hardware.***

miscellaneous hardware

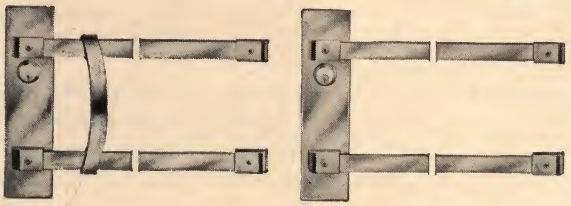
push and pull plates available in dull bronze (US10) or aluminum (US28)



790	push plate (blank)	14″ x 3½″
790C	" " cut for cylinder	
790T	" " with turn piece	
786	pull on plate (blank)	
786C	" " " cut for cylinder	
786T	" " " with turn piece	

push and pull bars

grips: cast bronze or aluminum
bars: extruded aluminum or bronze
locks not included: see page 10 for locks



230	two pull bars with grip and cover plate (blank)
230C	" " " " " " " " cut for cylinder
230T	" " " " " " " " with turn piece
231	two push bars with cover plate (blank)
231C	" " " " " " cut for cylinder
231T	" " " " " " with turn piece

top and bottom flush bolts available in cast bronze (US10) or aluminum (US28)

2874	12″ long plate 6¾″ x 1¼″ round bolt head ½″ diameter throw at bolt ¾″ U. S. Gov't. #1045

door stop and holder

383	door stop	1⅜″ high; 1⅞″ dia. base U. S. Gov't. #1330AE	cast bronze (US10) or aluminum (US28)
363	door stop and holder	3⅝″ high; 2½″ dia. base U. S. Gov't. #1329E	
2861	plunger type door holder	7¼″ x 2½″; 1⅞″ dia. throw U. S. Gov't. #1156	wrought bronze (US10) dull chrome (US26D)

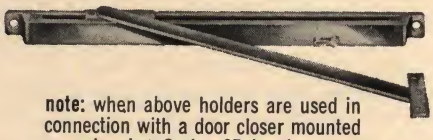
kick plates available in wrought bronze (US10) or aluminum (US28); thickness B & S; gauge = .050″; edges beveled on three sides

	height	widths
2316	6″	22″, 26″, 28″, 30″, 34″, 38″, 40″, 42″, 46″

thresholds

	extruded	width	height	lengths
T4	bronze	4″	½″	2′–0″, 2′–4″, 2′–6″, 2′–8″, 3′–0″, 3–4″
T5	aluminum			3′–6″, 3′–8″, 4′–0″, 5′–0″, and 6′–0″

overhead door holders available in bronze (US10) or dull chrome (US26D);



note: when above holders are used in connection with a door closer mounted on a bracket Series 27 bracket must be used.

will hold door open at 90°; for use on doors hung on standard 4½″ x 4½″ butts; applied to stop side of door

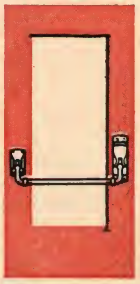
	door width	U. S. Gov't.
880B	2′–6″	
" C	2′–8″	
" D	3′–0″	#1161
" E	3′–4″	
" F	3′–6″	
" G	3′–8″	
" H	4′–0″	

panic devices

The purpose of panic exit devices is to provide rapid exit at all times by pushing the inside cross bar. Doors cannot be locked on the inside. They are always used on swing out doors. Latch bolts can be held retracted by "dogging" the cross bar allowing the door to be push and pull operation, requiring door closers.

horizontal push bar • interior elevation

mortised type with government series #86 lock and mortised strike. Functions: A, B, C, and D. RHRB or LHRB. Set no. M 12. (can bear Underwriters' A, B, C, D, E labels).



rim type with surface strike. Functions: A, B, C and D. RHRB or LHRB. Set no. R 29.

rim type with removable mullion. Functions: A x A, A x B, A x C, A x D, B x B, B x C, C x C and DxD. Set no. R 29 M. RHRB or LHRB. Specify active hand.

exterior trim and lock functions
(for both rim and mortised types)

A
no outside control

Exit only. No outside control

B
pull handle and cylinder

Entrance and exit. Cylinder and pull handle. Outside key retracts latch bolt.

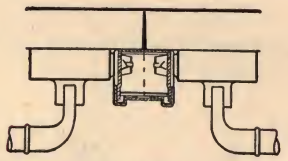
C
pull handle, cylinder and thumb piece

Entrance and exit. Cylinder, pull handle and thumbpiece outside. The key locks or unlocks the thumbpiece.

D
cylinder and knob

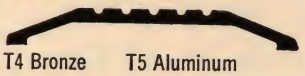
Entrance and exit. Cylinder key locks or unlocks knob.

removable mullion



2⅜" x 2¾" Shipped in 7'-6" Lengths cut in field to suit conditions

threshold



T4 Bronze T5 Aluminum

how to order:

specify:

1. swing (RHRB or LHRB)
2. panic device set no.
3. function (A, B, C or D)
4. finish (U.S. 10 or U.S. 28). ▲
5. cylinder (master keyed, keyed alike, etc.)
6. width and height of door opening
7. threshold see page 14
8. door closers and brackets if required

exterior

to determine the swing of doors

▲ U.S. 26D dull chrome available on special order.

description

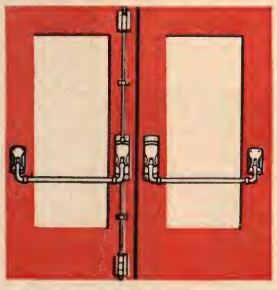
Rim type (R 29 and R 29 M) government type series 810.
- Lock and exit mechanism factory assembled.
- Drop forged arm lever with Oilite bearing.
- Case-cast bronze or aluminum, active 9¼" x 3", supporting 5¼" x 1 13/16".
- Bar-seamless tubing.
- Latch bolt-swinging type, ¾" throw.
- Latch bolt can be retracted from inside at all times by slight pressure against horizontal bar affording immediate exit.

Mortise type (M 12) government type series 820.
- Mortise lock-standard mortise front 8"x1¼".
- Latch bolt-anti-friction type—⅝" throw.
- Case-cast bronze or aluminum, active case 8⅝" x 2¼", supporting case 5¼" x 2¼".

Vertical rod type (V 22) government type series 821.
- Cast bronze or aluminum.
- Active case 8⅝" x 2¼".
- Supporting case 5¼" x 2¼".

• ***Avoid custom-engineering delay.***
• ***Specify AETNAPAK IN-STOCK or STANDARD-ENGINEERED doors and frames, complete with hardware.***

push bar and vertical rod combinations • interior elevation

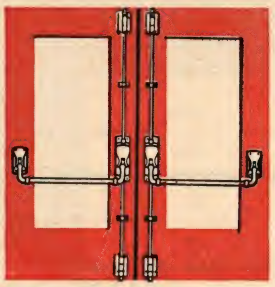


inactive active

function inactive: A only;
function active: A, B, C and D

Set No. V22-M12

Pairs of doors with vertical rod on inactive leaf (RHRB) and horizontal bar on active leaf (LHRB). U.S. Gov't. Series 86 mortised lock on active leaf. Open back strike on inactive leaf allows both doors to open and close independently of each other Refer to page 14 for hardware functions (A.B.C.D.) and exterior trim for active door only. No outside trim (or functions) on inactive door. Split astragal No. A2 can be used if desired. Closers are recommended for active leaf or both leaves of doors.

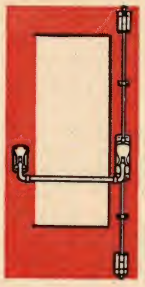


inactive active

function inactive: A only;
function active: A and D only

Set No. 2-V22

Pairs of doors with vertical rods on both leaves. Active door (LHRB). Inactive door (RHRB). See page 14 for hardware functions (A and D only) and exterior trim for active door only. No outside trim (or functions) on inactive door. Split astragal No. A2 can be used if desired. Door closers recommended on both leaves.



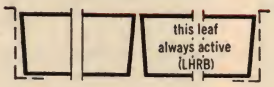
functions: A and D only

Set No. 1-V22

Single door with vertical rod can be either RHRB or LHRB swing. See page 14 for hardware functions (A and D only) and exterior trim.

meeting stiles for pairs of doors

exterior side

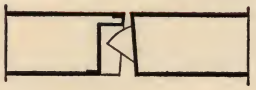


split astragal for pairs of doors no. A2

exterior side

open back strike for pairs of doors. For set no. V22-M12 only.

exterior side



Arms levers drop forged with Oilite bearing.

For bolt V 22: top and bottom latches swinging type, free latching. Latches remain projected while door is open, unless horizontal bar has been locked in depressed position by dogging key holding latches retracted.

Bottom latch has independent action allowing top latch to remain locked even if bottom latch is forced out of strike or when bottom strike is obstructed.

how to order:

specify:

1 Panic device Set No.
2 Function (A, B, C or D)
3 Finish (U.S. 10 or U.S. 28) ▲
4 Cylinder (master keyed, keyed alike, etc.)
5 Width and height of door opening
6 Threshold (see page 10)
7 Door closers and brackets
8 Astragal required

Note:
Doors supplied only in hands specified above. Vertical rod devices always have inside cross bar.

▲ U.S. 26D dull chrome available on special order.

in-stock

Aetnapak underwriters label doors

New York City Board of Standards and Appeal labels also available. Contact New York office.

		3 hour	1½ hour	1 hour	1½ hour	1 hour	1 hour
doors		**class "A"** ▲ division and fire wall **FYR-CHEK**	**class "B"** vertical shaft	**class "C"** corridor and room partition	**class "D"** fire shutter for exterior wall severe fire exp.	**class "E"** opening in exterior wall	**class "E"** exterior fire escape
max. sizes	single	3′–6″ x 7′–0″	3′–6″ x 7′–0″	3′–6″ x 7′–0″	3′–6″ x 7′–0″	3′–6″ x 7′–0″	3′–6″ x 7′–0″
	pairs	6′–0″ x 7′–0″	6′–0″ x 7′–0″	6′–0″ x 7′–0″	6′–0″ x 7′–0″	6′–0″ x 7′–0″	6′–0″ x 7′–0″
operation		swing	swing	swing	swing	swing	swing
design		flush	flush	flush	flush	flush	flush
gauge		18	18	18	18	18	18
thickness		1¾″	1¾″	1¾″	1¾″	1¾″	1¾″
insulation		UNDERWRITERS APPROVED					
exposed max. glass area		no glass	100 sq. in. wire gl.	1296 sq. in. wire gl. per light	no glass	720 sq. in. wire glass per light. Max. dim. = 48″ hor. or 54″ vertical	
depth of moulding		none	¾″	¾″	¾″	¾″	¾″
astragal		one side	one side	one side	one side	one side	one side
frames		"set-up" types only 14 gauge	"set-up" types only 16 gauge	"set-up" types only 16 gauge	"set-up" types only 16 gauge	"set-up" types only 16 gauge	"set-up" types only 16 gauge
max. sizes	single	3′–6″ x 7′–0″	3′–6″ x 7′–0″	3′–6″ x 7′–0″	3′–6″ x 7′–0″	3′–6″ x 7′–0″	3′–6″ x 7′–0″
	pairs	6′–0″ x 7′–0″	6′–0″ x 7′–0″	6′–0″ x 7′–0″	6′–0″ x 7′–0″	6′–0″ x 7′–0″	6′–0″ x 7′–0″
jamb thickness		5½″	5½″	5½″	5½″	5½″	5½″
height of stop		¾″	11/16″	11/16″	11/16″	11/16″	11/16″
width of trim		2″	2″	2″	2″	2″	2″
notes		Frames anchored to walls with expansion bolts not permitted. Frames must be expansion bolted to floor and anchored in walls with built in anchors spaced at least (2) for 5′–0″ height opg.—frames in excess of 5′–0″ height are to have (1) anchor for each 2′–6″ in height or fraction thereof per jamb. All frames must be "set-up" type—no knock down.					
		No labels will be allowed for { mullion swing-unit frames, transom frames, sliding doors, louvers }			▲ See page 5 for full information on AETNAPAK FYR-CHEK A-LABEL door with single-point lock.		
hardware							
size butts		4½″ x 4½″ standard weight steel butts—one for each 2′–6″ of height of opening, or fraction thereof. For class A only: doors exceeding 3′–0″ x 7′–0″ require heavy duty steel butts .180					
locks or latches		Standard knob lock or latch having ½″ min. throw or panic device for s/sw doors. P/sw doors must have ¾″ throw. For class A only (mortise or cylindrical): Active leaf must have single point lock with ¾″ throw.					
inactive leaf hardware for pairs of doors		Inactive leaf of pairs of doors must have top and bottom bolts.					

Printed in U. S. A.

AETNA STEEL PRODUCTS CORPORATION

EXECUTIVE OFFICES 730 Fifth Avenue
New York 19, N.Y.
JUdson 6-2525

PLANT Pottsville, Pa.

16b
Am

DOORS

LABEL AND NON-LABEL

HOLLOW METAL

- ENGINEERED
- STANDARD

KALAMEIN-TIN CLAD

FRAMES

PRESSED STEEL

- ENGINEERED
- STANDARD

LOUVERES

- HOAL'S LEAKPROOF
- STANDARD

American

Over 55 Years of Continuous Service

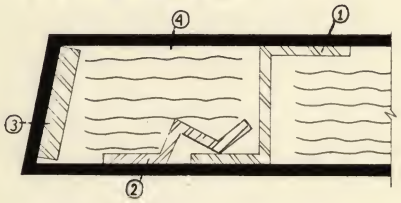
ENGINEERED DOORS AND FRAMES

dependability—You get exactly what you specify when you specify "American"—this has always been our policy throughout our more than 55 years of continuous operation. You can depend on American doors and frames to be quality engineered and quality built.

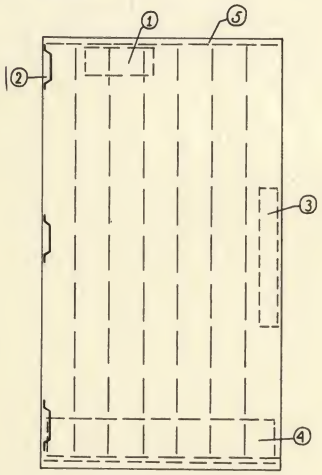
sales engineering—We invite you to consult our engineers, at any time, on problems of design or installation—at no cost to you.

prompt service—American's extensive capacity is your assurance of prompt completion and fast delivery of your order.

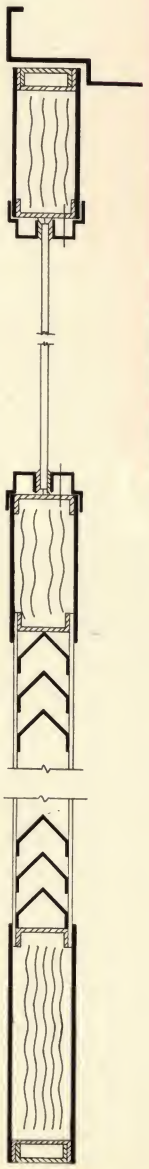
door details



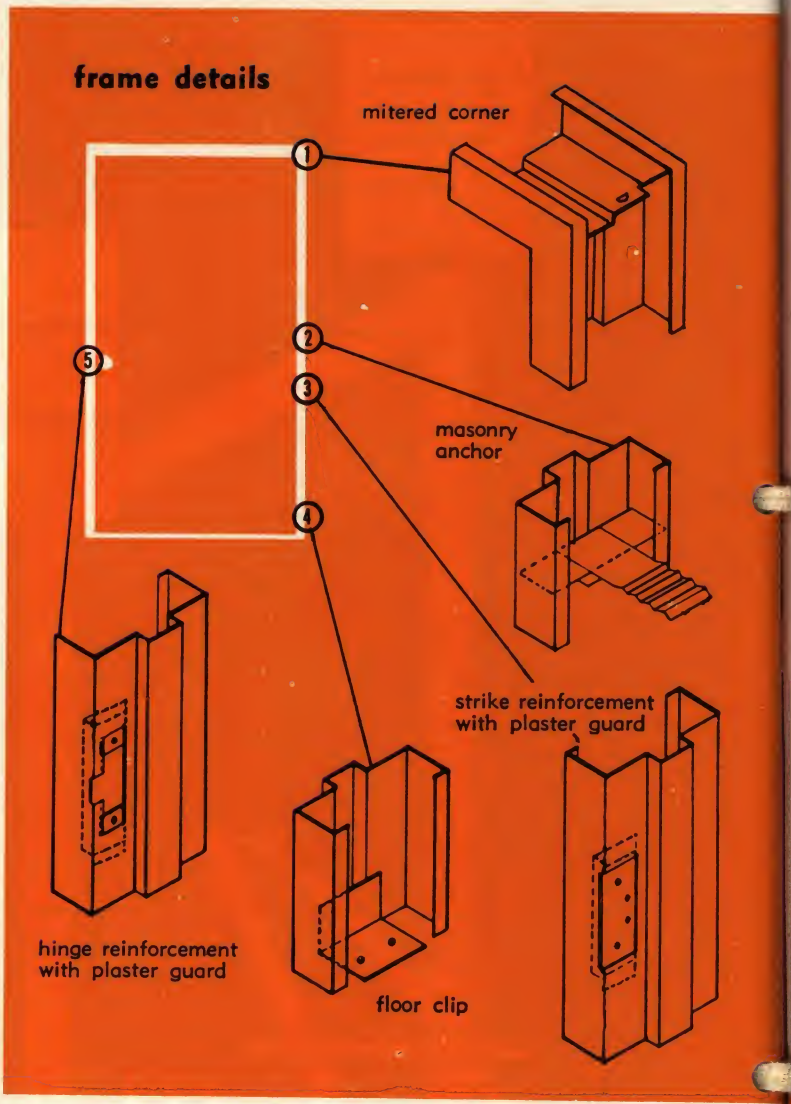
1. "Z" Stiffener, Max. 6" O.C.
2. Stiffener Clip
3. Edge Reinforcement
4. Insulation



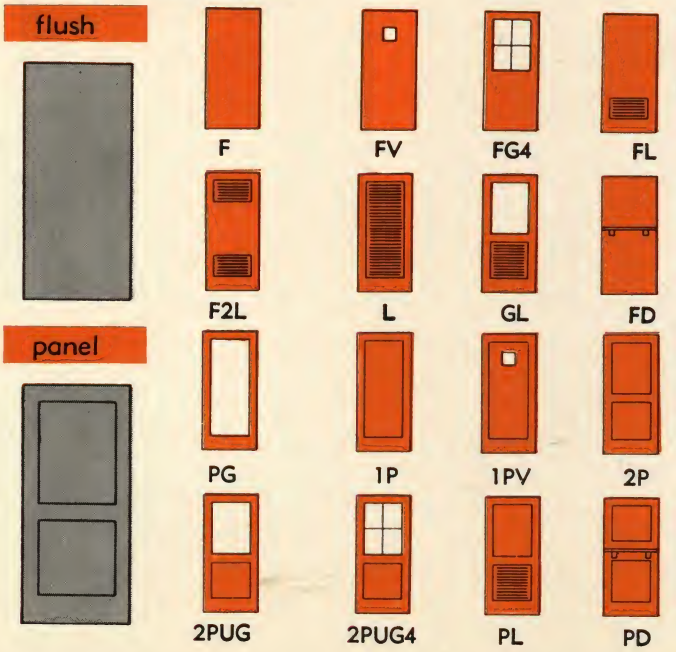
1. Closer reinforcement
2. Hinge Reinforcement
3. Lock Reinforcement
4. Kick Plate Reinforcement
5. Top and Bottom Channel Reinforcement (closed flush when specfied)



frame details



engineered door types



specifications

hollow metal doors

Furnish and install hollow metal doors as manufactured by American Metal Works, Inc. of flush (or panel type) construction as indicated on drawings and specifications.

flush type doors—Door faces to be constructed of two formed steel sheets of not less than No. 18 U. S. Standard gauge (No. 16, 14 to 12 gauge if specified) new billet prime commercial steel, cold rolled and stretcher leveled. Doors to be rigidly reinforced inside with continuous vertical stiffeners spot welded in position and located on not to exceed 6'' centers throughout. Both edges of doors to be joined and reinforced the full height by steel channels or flat bars placed immediately inside of and welded to the door faces. Top and bottom of door to be reinforced horizontally by steel channels running the full width of door. Inside voids of door to be filled with suitable sound deadening insulation.

panel type doors—Construction to be of No. 18 gauge U. S. Standard (No. 16 or No. 14 gauge if specified) cold rolled and stretcher leveled prime seel for all stiles and rails with No. 20 gauge panels and molding. Stiles, top rail, and intermediate rail widths to be 5'', bottom rail width 10'', all unless specified otherwise. Panels to be separated by suitable composition board insulating material and all door stiles and rails to be filled with suitable sound deadening material.

hardware—All hollow metal doors shall be mortised, reinforced, drilled and tapped for mortise type template hardware at the factory. In addition reinforcement plates are to be provided for all surface applied hardware at the factory; however all drilling and tapping for such surface applied hardware shall be done in the field. All finish hardware to be applied in the field.

finish—Doors are to be thoroughly cleaned of all oil, grease and other impurities. Each coat of primer to be baked on finish.

underwriters' label service—Hollow metal doors can be furnished with labels of Underwriters' Laboratories, Inc. (Table on page 4).

kalamein doors

Furnish and install Kalamein doors as manufactured by American Metal Works, Inc. of flush or panel type construction as indicated on drawings and specifications.

flush type doors—Cores to be constructed of properly seasoned kiln-dried Western red cedar, white pine or other suitable non-resinous wood free from loose or unsound knots, shakes or other imperfections. Steel covering to be No. 26 gauge minimum galvanized paint grip steel glued to the wood cores under pressure. Joint at edges of doors to be flushed with solder and ground smooth.

panel type doors—Construction to consist of 26 gauge minimum galvanized paint grip steel stiles and rails, die formed to insure snug fit to wood cores. Stiles and rails to be joined by hardwood dowels and glued under pressure. Seams at intersection of stiles and rails shall be flushed with solder and ground smooth. Panel cores to be constructed of ¼'' asbestos board for labeled doors and suitable composition board for non-labeled doors.

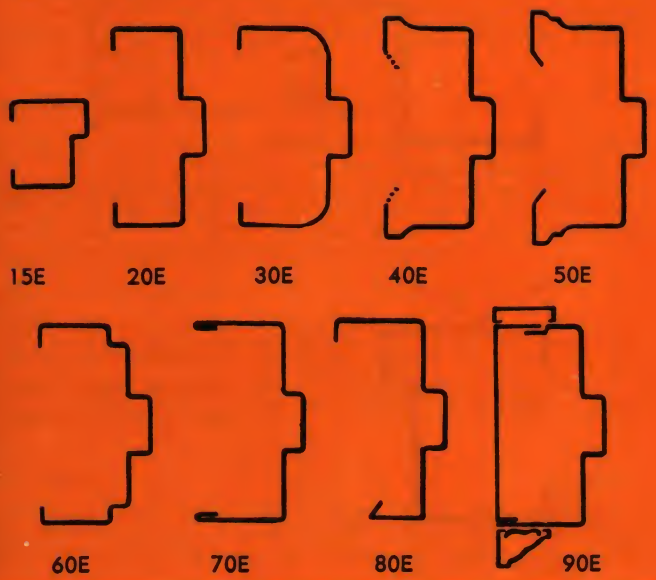
hardware—All label Kalamein doors shall be mortised, reinforced, drilled and tapped for mortise template type hardware at the factory. All non-label Kalamein doors to be prepared for hardware in the field. All finish hardware to be applied in the field.

finish—Doors are to be thoroughly cleaned of all oil, grease and other impurities. Each coat of primer to be baked on finish.

underwriters' label service—Kalamein doors can be furnished with labels of Underwriters' Laboratories, Inc. (Table on page 4).

pressed steel frames

typical frame sections



specifications

Frames to be manufactured of No. 16 U. S. Standard gauge (No. 18, 14 or 12 gauge if specified) prime new billet pickled steel sheet. Unit type welded construction to be used throughout with corners mitered, welded, and ground smooth on the outside. Profiles to be press brake formed. Removable steel spreaders are to be welded to bottom of frame to insure proper alignment.

hardware—Reinforcements, drilled and tapped, to be provided for all mortise template type hardware such as lock strike, latch strike, flush bolt strikes and hinges. Steel plaster guards to be spot welded over such reinforcing plates.

Suitable reinforcement will be applied inside frames at the factory for surface applied hardware, but no drilling and tapping. No hardware of any type to be applied at the factory.

Wall anchors and floor clips to be provided of a suitable type to fit job conditions.

finish—Frames are processed through a power spray washer that produces a rust preventative phosphatized surface to which paint bonds with exceptitonal adhesiveness. Each frame will have at least one coat of baked on primer.

STANDARD DOORS & FRAMES

advantages

American STANDARD Hollow Metal Doors and Pressed Steel Frames are always available from our stock in the full range of sizes shown below—for either indoor or outdoor use. STANDARD doors and frames are of the same high quality as engineered doors and frames.

economy—Through mass production, we are able to produce engineered quality at a considerably reduced price.

fast delivery—No waiting for special design or special construction; your order is ready to ship anytime. Easy installation. All mortising, drilling, tapping, and prime painting is completed at the factory. The builder merely sets the frame, attaches hardware and hangs door.

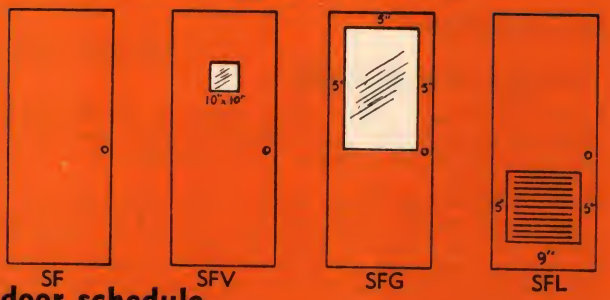
quiet—Insulates against noise.

fire safe—All steel—nothing to burn.

low maintenance cost—No warping, cracking, shrinking, swelling or splintering; American Standard doors are practically free of maintenance.

permanent—All-welded steel construction provides maximum strength, rigidity and durability.

standard door types and sizes



door schedule

stock types	stock sizes	
	single	pair
SF SFG SFG2	2'-6" x 6'-8"	5'-0" x 6'-8"
SFG3	2'-8" x 6'-8"	5'-4" x 6'-8"
SFG4	2'-8" x 7'-0"	5'-4" x 7'-0"
SFG6	3'-0" x 6'-8"	6'-0" x 6'-8"
SFG8	3'-0" x 7'-0"	6'-0" x 7'-0"
SFV	3'-4" x 7'-0"	6'-8" x 7'-0"
SFL		

Underwriters' Labeled Doors and Frames

LABEL CLASS	LOCATION	MAXIMUM SIZE	MAXIMUM GLASS (SQ. INCHES)
(3 HR) A	FIREWALL	SGL. 4'-0"x8'-0" PR 8'-0"x8'-0"	NONE
(1½ HR) B	STAIR WELL	SAME	100 PER OPENING
¾ HR) C	CORRIDOR OR ROOM PARTITION	SAME	1296 PER LIGHT
(1½ HR) D	EXTERIOR WALL	SAME	NONE
(¾ HR) E	EXTERIOR FIRE ESCAPE	SAME	720 PER LIGHT

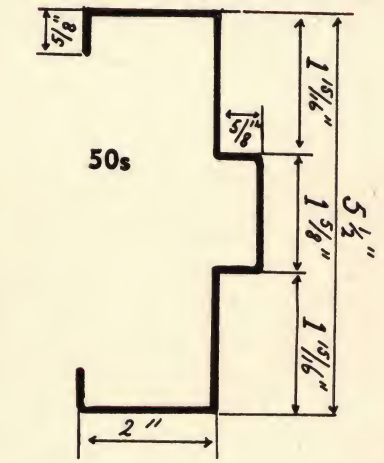
NOTES

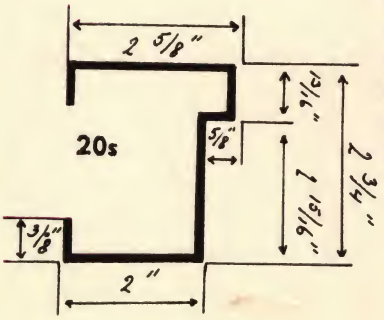
FRAMES
(1) 4" minimum jamb depth, 1¼" min. trim.
(2) Approved adjustable anchors only.
(3) **No labels permissable on frames with the following:** Transoms, Mullions, Rough Bucks, Bolts and Shields, Wood Stud Anchors and Steel Stud Anchors.

DOORS (HOLLOW METAL AND KALAMEIN)
(1) 18 Ga. minimum (Hollow Metal).
(2) 1¾" and 2" thickness (Hollow Metal).
(3) 1¾" thickness (Kalamein).
(4) Insulation as approved by Underwriters'.

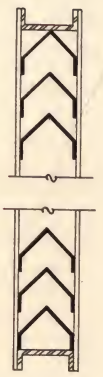
HARDWARE (1) 4½" minimum butt size
(2) All openings must have locks or latches (Deadlocks not permissable).

frame sections





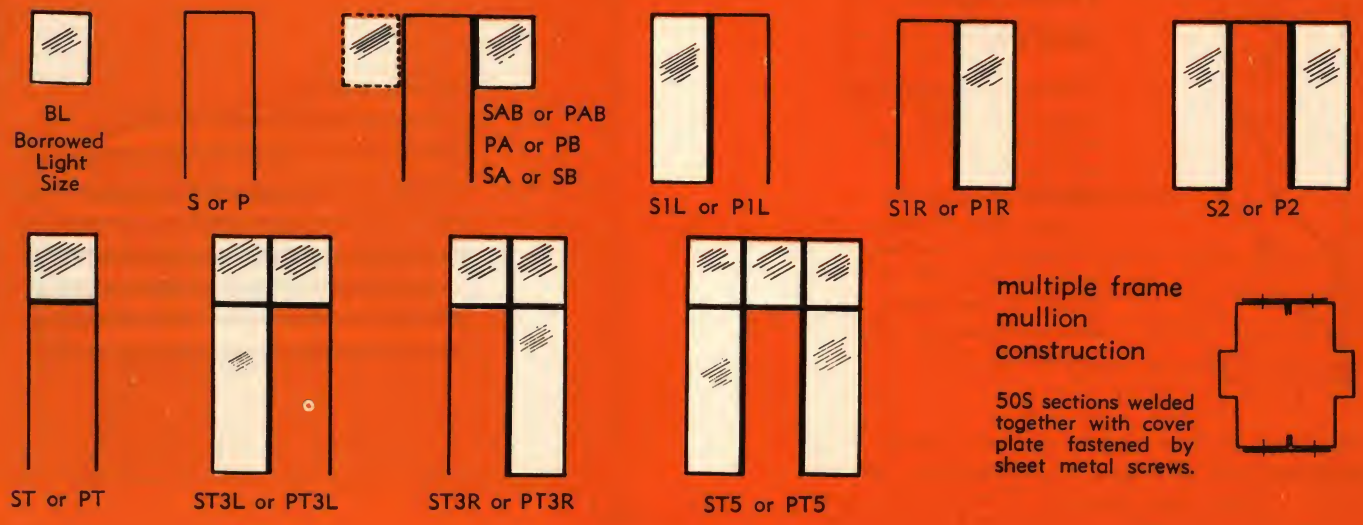
door louver



Louvers are available for each size door, and can be furnished on special order for doors of any type. Other types of Louvers (see page 7) are available on special order.

standard (stock) frame types

Multiple Light Frames (welded construction) available in same sizes shown in door schedule (page 4, column 2). All Transoms have 2'0" glass opening. Sidelights have same opening width as doors used in frames. Additional sidelights can be furnished for each of above types.



multiple frame mullion construction

50S sections welded together with cover plate fastened by sheet metal screws.

legend

A & B—same as BL (borrowed light)
BL—borrowed light
P —pair
L—left
R—right
S—single opening
T—transom
NUMERALS indicate number of glass openings.

specifications

Furnish and install Hollow Metal Doors and Frames as manufactured by American Metal Works, Inc. of flush type construction as indicated on drawings and specifications.

standard flush type doors: 1¾" thick

Door faces to be constructed of two formed steel sheets of not less than No. 18 U. S. Standard gauge new billet prime commercial steel, cold rolled and stretcher leveled. Doors to be rigidly reinforced inside with continuous vertical stiffeners spot welded in position and located on not to exceed 6" centers throughout. Both edges of doors to be joined and reinforced the full height by steel channels or flat bars placed immediately inside of and welded to the door faces. Top and bottom of door to be reinforced horizontally by steel channels running the full width of door. Inside voids of door to be filled with suitable sound deadening insulation.

standard pressed steel frames

Frames to be manufactured of No. 16 U. S. Standard gauge (No. 14 gauge if specified) prime new billet pickled steel sheet. Unit type welded construction to be used throughout with corners mitered, welded, and ground smooth on the outside. Profiles to be press brake formed. Removable steel spreaders are to be welded to bottom of frame to insure proper alignment.

finish

Doors are thoroughly cleaned of all oil, grease and other impurities. Each coat of primer to be baked on finish. Frames to be processed through a power spray washer to thoroughly clean and provide phosphatized surface for rust inhibiting paint bond. Primer to be baked on.

hardware

All Standard Doors are carried in stock cut-out, reinforced, drilled, and tapped for 4½" regular weight template butts and heavy duty cylindrical lock (Type "C" hardware). Standard Frames are carried in stock cut-out, reinforced, drilled and tapped for 4½" regular weight template butts and either heavy duty cylindrical lock strike (Type "C") or mortise lock strike (Type "A"). Standard Doors cut-out for type "A" hardware are available on special order only. All doors are reinforced for closers and closer brackets.

Steel plaster guards are spot welded over reinforcing plates.

Suitable reinforcements on frames are provided for surface applied hardware if specified. Drilling and tapping to be done in the field. All hardware to be applied in the field.

Standard stock engineered door hinges

Hinges for Standard Engineered Doors and Frames are full mortised 4-1/2" x 4-1/2" template butts, 1-1/2 pair per frame. Plain hinges are available, either prime coat steel, or U. S. 10 dull bronze.

Ball Bearing butts available in U. S. 10 dull bronze finish, only.

type "C" hardware

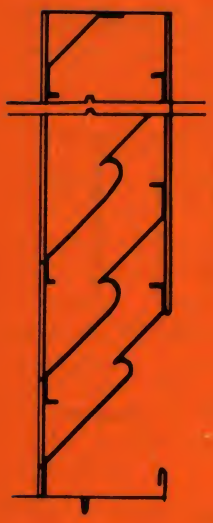
Our standard stock cylindrical lock is the Lockwood "H"-100 series. Alternates which will fit standard cutouts are Schlage "C" & "D" series, Corbin 400 series, Russwin 400 series, Yale 5400 series. All standard doors have cutout for type "C" hardware.

LOCK FRONT—2¼" x 1⅛"; beveled ⅛" in 2"; thickness 5/32"; bore for latch case 1" diameter. BACK SET—2¾"; cylinder hole 2⅛" diameter. STRIKE—2¾" x 1⅛". LIP OF STRIKE—1½" high, located at center line of strike.

type "A" hardware (special order)

On special order, only, Standard doors and frames will be prepared for type "A" hardware, with cutouts to fit heavy mortise locksets and latches. Standard mortise locks are Sargent 7700 series, Lockwood 5100 series, Yale 8000 series, Corbin 7300, 7500, 7700, 7900 series, Russwin 2000 series. Standard doors for type "A" hardware will be prepared for cylinder outside, thumb turn inside, unless otherwise specified.

FIXED LOUVERS



HOAL'S LEAKPROOF LOUVERS

GUARANTEED STORMPROOF
HURRICANE TESTED
MAXIMUM VENTILATION
ECONOMICAL
STRONG—LIGHTWEIGHT
4 BASIC ROOF DESIGNS
7 BASIC WALL DESIGNS
MADE IN ANY SIZE
CHOICE OF MATERIALS
SPECIAL DESIGN, ON ORDER
PROMPT DELIVERY

This famous, and widely copied, louver was designed and patented by American Metal Works. When you specify "American", you get the original Hoal's Leakproof Louver, produced by American for more than thirty-five years. Their long life, and freedom from maintenance, make Hoal's Leakproof Louvers most economical.

specifications:

Furnish and install Hoal's leakproof louver ventilators, of the size and type indicated, in all openings where indicated in drawings. Louver frames are to be constructed in such a manner as to insure a water-tight seal between the frames and the wall (or roof). Louvers are to be manufactured by American Metal Works, Inc., New Orleans, Louisiana.

STANDARD STRAIGHT-BLADE LOUVERS

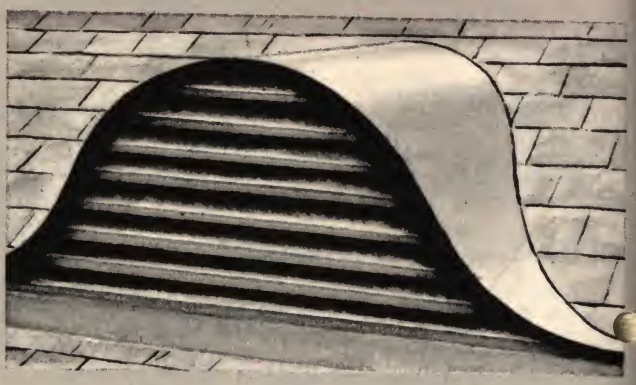
This standard design is sometimes used because of the extremely free movement of air it admits through the blades, which can be placed on 30-degree or 45-degree angle. Straight-blade louvers are available in all type of metals.

specifications

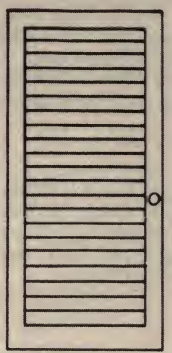
Furnish and install Straight Blade Louvers, of the size and type indicated, in all openings where indicated in drawings. Louver frames are to be constructed in such a manner as to insure a water-tight seal between frame and the wall (or roof). Louvers are to be manufactured by American Metal Works, Inc., New Orleans, La.

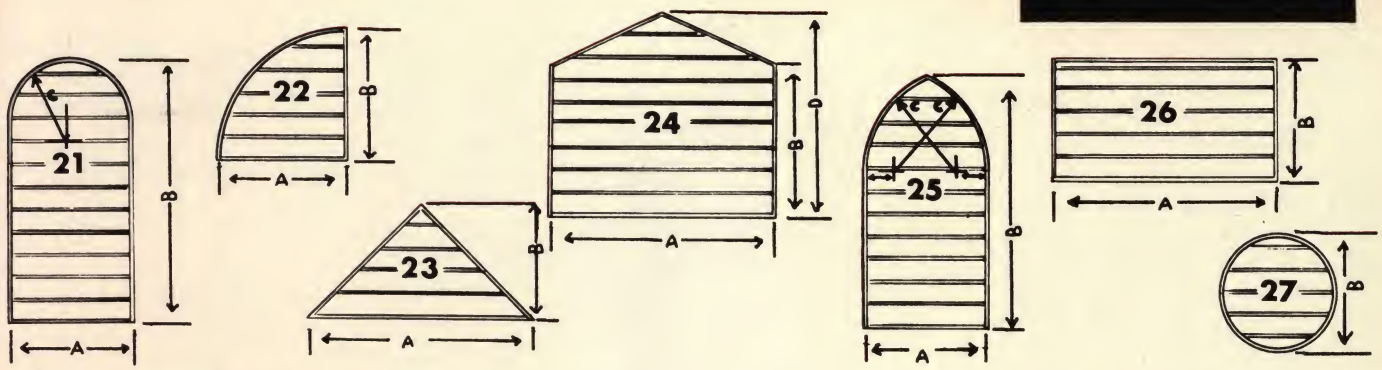
wall

roof



door





choice of materials (wall and roof louvers):

WALL LOUVERS: GALVANIZED IRON, normally 26-gauge, but available up to 12-gauge. COPPER, normally 16-ounce, but available up to 20 ounces. ALUMINUM, normally 20-gauge, but available up to 12-gauge. Stainless steel, normally 26-gauge. Any other suitable metal on special order.

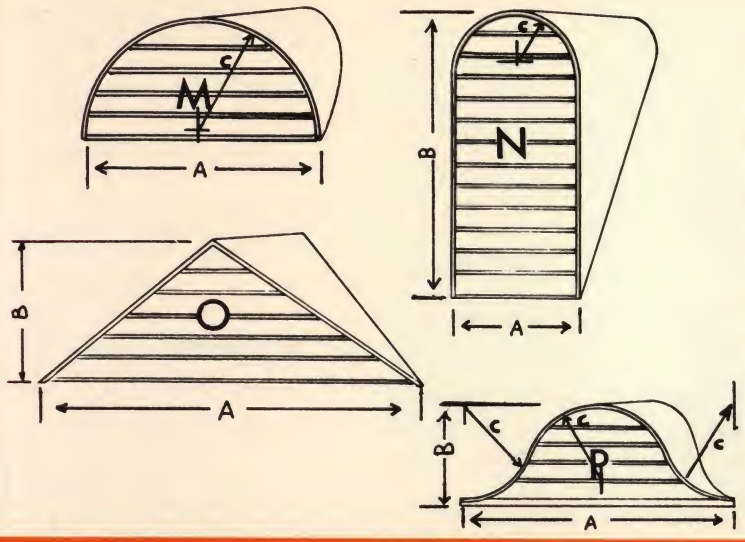
ROOF LOUVERS: 26-Gauge GALVANIZED IRON: COPPER, 16-oz. copper or ALUMINUM, 20 gauge.

VERTICAL STIFFENING CHANNELS are added to all louvers wider than 3'-6" to assure greater rigidity. Screens and closing flaps are available for all louvers on special order.

DELIVERY—Hoal's Leakproof Roof Louvers delivered promptly from stock. Wall Louvers made to your specificatins immediately upon receipt of your order.

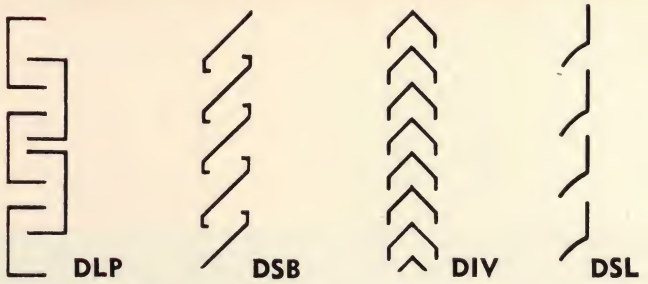
how to order

Always specify type (Hoal's or Straight-Blade); state shape wanted (by number) specify material; give all dimensions, as indicated, above for shape you need.



DIMENSION SCHEDULE OF STOCK SIZES

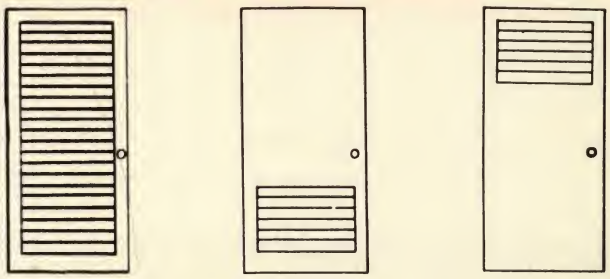
Size	Dimensions "A"	Dimensions "B"	Dimensions "C"	Approx. Ship. Wt., Crated	Net Free Area
Design "M"					
M-1	2'-6"	1'-3"		50	74 sq. in.
M-2	3'-0"	1'-6"		62	122 sq. in.
M-3	3'-6"	1'-9"		74	180 sq. in.
M-4	4'-0"	2'-0"		88	246 sq. in.
Design "N"					
N-5	1'-6"	2'-3"	9"	70	92 sq. in.
N-6	1'-10"	2'-9"	11"	98	200 sq. in.
N-7	2'-2"	3'-3"	1'-1"	123	254 sq. in.
N-8	2'-6"	3'-9"	1'-3"	150	355 sq. in.
Design "O"					
O- 9	3'-8"	1'-2⅝"		45	57 sq. in.
O-10	4'-4"	1'-5⅜"		55	100 sq. in.
O-11	5'-0"	1'-8"		65	128 sq. in.
O-12	5'-8"	1'10⅝"		75	192 sq. in.
Design "P"					
P-13	4'-0"	1'-4"	1'-1"	60	75 sq. in.
P-14	5'-0"	1'-8"	1'-4¼"	75	152 sq. in.
P-15	6'-0"	1'-11"	1'-8"	90	220 sq. in.
P-16	7'-0"	2'-4"	1'-10¾"	110	315 sq. in.



louver styles

Door Louvers are made to fit standard or special openings, and are available in any of the four styles shown in section below.

Door Louvers are available for all standard openings, also in special sizes and materials on special order. Material is 20-gauge cold-rolled black steel, or equivalent.



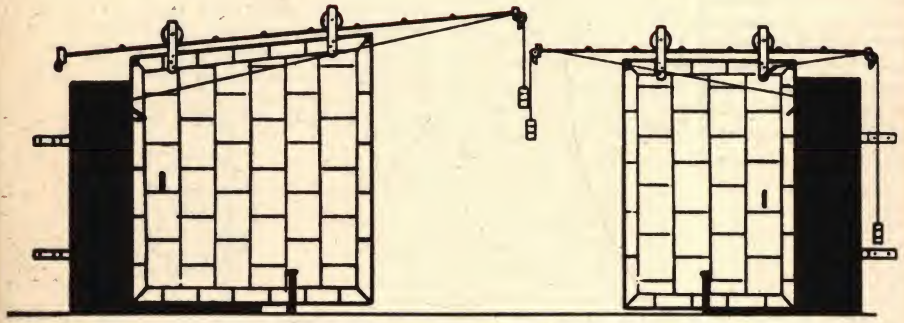
specifications:

Furnish and install Door Louvers, of the size and type indicated, in all openings where specified on drawings. Louvers are to be manufactured by American Metal Works, Inc., New Orleans, La.

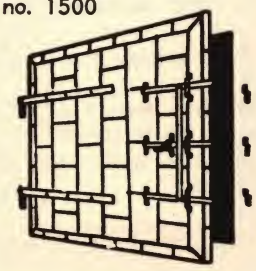
TIN-CLAD FIRE DOORS

inclined sliding
no. 700

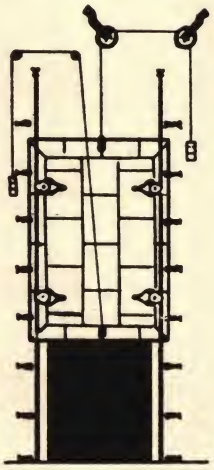
level sliding
no. 800



swinging
no. 1500



vertical
no. 1000



specifications

Tin-Clad Fire Doors to be constructed in accordance with the requirements of Underwriters' Laboratories, Inc. 3 hour, Class "A," 3-ply doors will be 2⅝" thick, and manufactured by American. 1½ hour, Class "B" or "D," 2-ply doors will be 1⅞" thick. 1¾ hour, Class "C" or "E," 2-ply doors will be 1⅞" thick. Cores to be constructed of properly seasoned and kiln-dried Western red cedar, white pine, fir or other nonresinous wood. Plys of core to alternate in direction with outer plys laid vertical on three-ply doors—all plys to be tongued and grooved. The core to be securely fastened together by clinch nails spaced on maximum of 8" centers. Metal covering of door to be 30 gauge galvanized steel (IC-20-pound terne plate on special order) fastened flat to core by lock seams and nails.

Hardware to be automatic closing type with all metal parts constructed of steel or cast malleable iron.

PERFORMANCE

American Metal Works has extreme pride in the quality of products placed in the construction field. For better than 55 years our metal products have been shipped over the entire United States, Central and South America. The ability to keep abreast of ever changing techniques in design and equipment in our engineering and production departments has enabled our products to remain the best afforded in our industry.

recent American installations

ALABAMA
Mobile ____ Buildings & Utilities, Bates Field

COLORADO
Colorado Springs, Northeast Senior High School

FLORIDA
Okeechobee __ Okeechobee Independent School

GEORGIA
Atlanta _____ State Office Building

ILLINOIS
Metropolis _____ Feed Mill Building, Allied Chemical & Dye Co.

INDIANA
New Albany _____ Trinity Methodist Church

IOWA
Council Bluffs __ United States Army Reserve Training Center

KANSAS
Topeka _____ Men's Residence Hall, Washburn University

KENTUCKY
Owensboro _____ Daviess County High School

LOUISIANA
New Orleans _____ Civic Center Buildings

MINNESOTA
Mound __ Elizabeth Gardner Elementary School

MISSISSIPPI
Greenville ___ United States Post Office Bldg.

MISSOURI
St. Louis _____ Garage and Work Center, Southwestern Bell Telephone & Telegraph Co.

MONTANA
Butte _____ Silver Bow County Hospital

NEBRASKA
Omaha _____ Horace Mann School

NEW MEXICO
Albuquerque _____ Student Union Building, University of New Mexico

NORTH CAROLINA
Charlotte _____ Phase V — Nike Plant

NORTH DAKOTA
Minot __ Operations Air Control & Warning, Minot A.F.B.

OKLAHOMA
Oklahoma City _____ Hospital, Tinker A.F.B.

SOUTH CAROLINA
Union _____ Dial Office Southern Bell Telephone & Telegraph Co.

SOUTH DAKOTA
Spearfish __ Black Hills Teachers College Dorm.

TENNESSEE
Memphis ___ Additions to St. Joseph Hospital

TEXAS
Austin _____ State Office Building

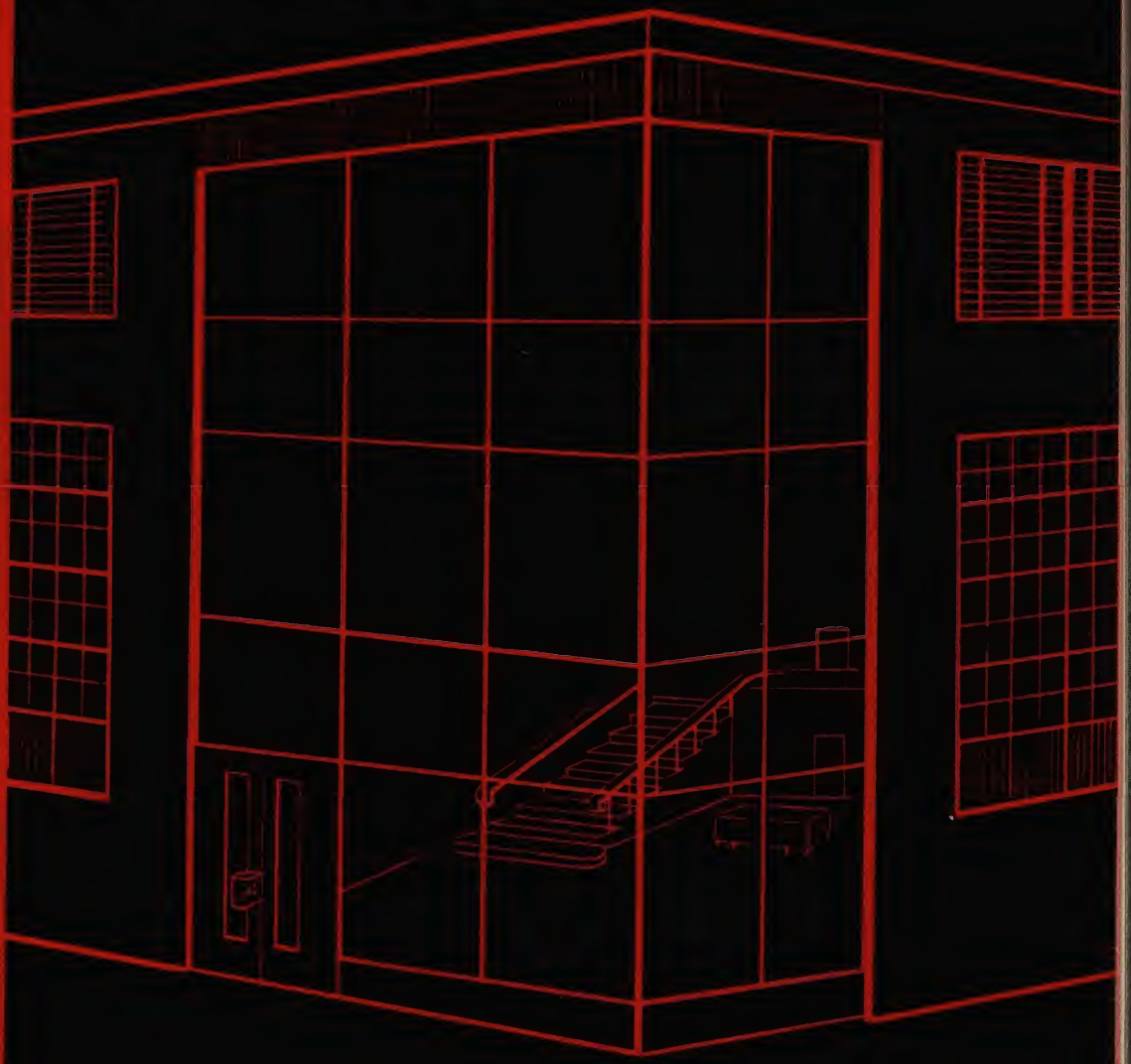
WISCONSIN
Milwaukee _____ Llewellyn Library

WYOMING
Thermopolis _____ Hot Springs County Memorial Hospital

doors
frames
louvers

American METAL WORKS, INC.
P. O. Box 7027 New Orleans 19, La.

HOLLOW METAL®



HOLLOW METAL DOORS

SOUND CONDITIONED DOORS

STEEL DOOR FRAMES AND TRIM

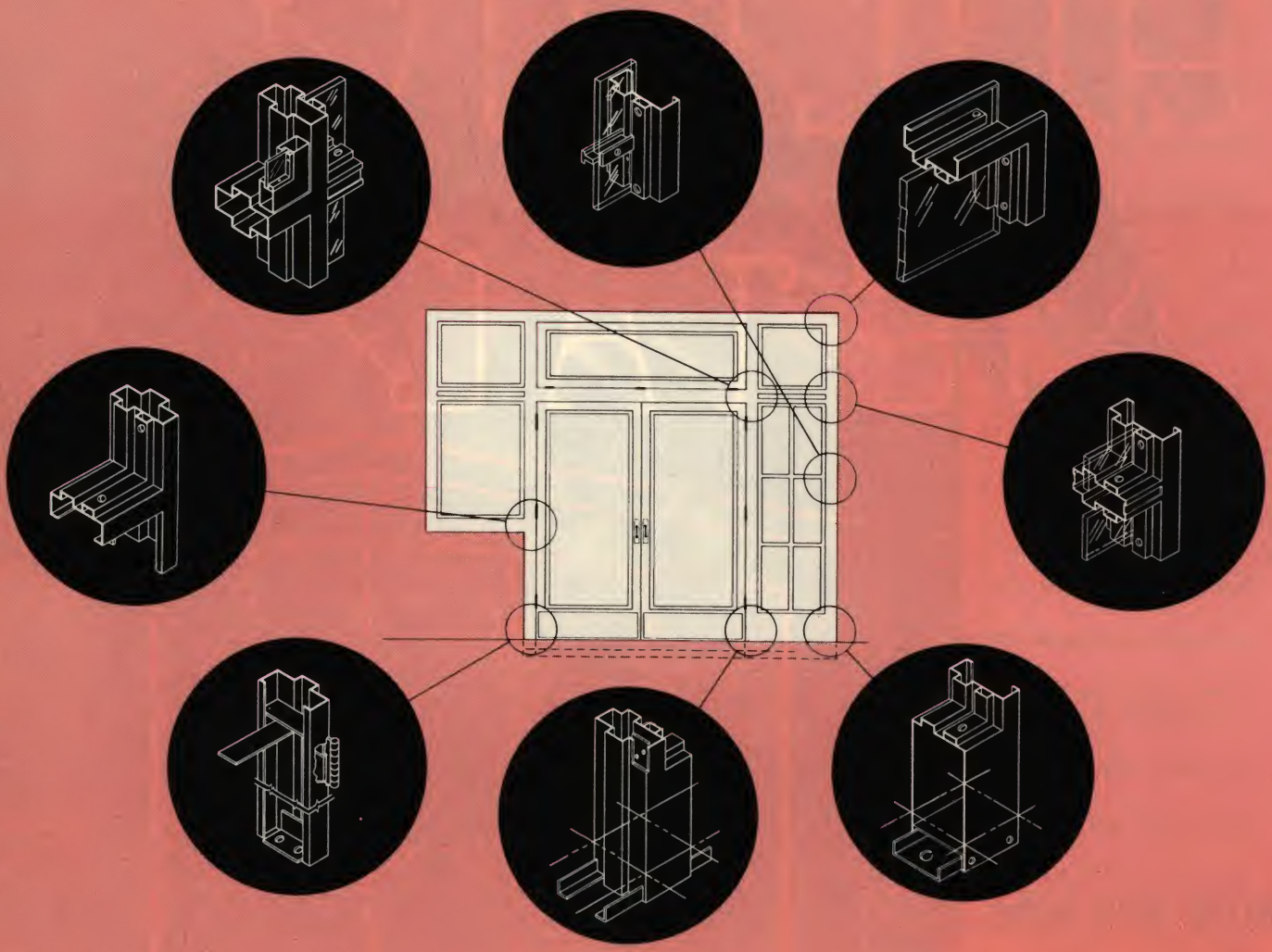
ENGINEERED METAL PRODUCTS

SINCE 1938

American Steel Products Corporation

REWE STREET • BROOKLYN 11, N.Y.

HOLLOW METAL



INTRODUCTION

We have enjoyed the privilege and opportunity of executing Hollow Metal Work, and other products which we manufacture, for numerous prominent buildings throughout a considerable part of the United States and some foreign countries. For the greater part, these accomplishments reproduce the designs and creations of nationally known Architects and Designers, and as a natural consequence, represents contracts from the leading General Contractors and Builders. Versatility in design, added to the stress placed on good workmanship, are combined with an earnest effort not only to keep pace with new developments, but also to initiate innovations in production techniques.

We maintain a complete and up-to-date machine shop for the manufacture of all types of dies, rolls and jigs required in every phase of the Hollow Metal Industry. This assures the best possible maintenance of dies and equipment and precludes delays resulting from equipment failures. It further makes possible the speediest procurement of whatever new devices may be needed.

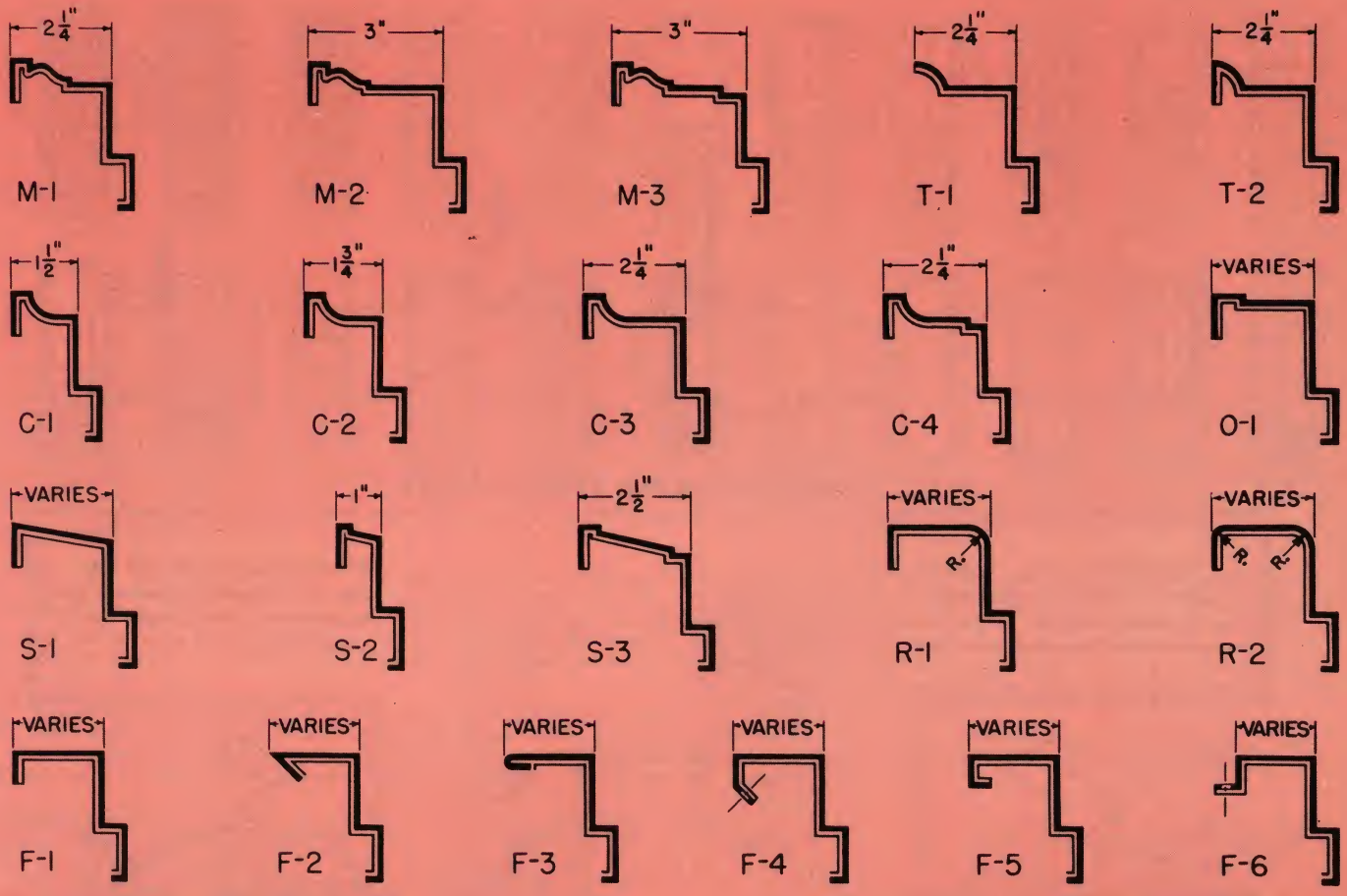
Our Engineering Department is composed of technicians fully trained in their field of work. Its services and experience are available, without obligation, to architects, owners and others interested in making use of them.

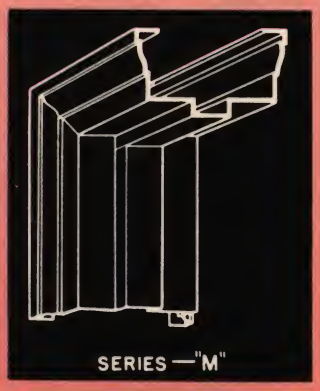
AMERICAN STEEL PRODUCTS are executed by skilled mechanics using the most modern machines and equipment, producing a mechanically perfect product of metal joinery. All materials are the finest obtainable. The highest grade of furniture steel, thoroughly pickled, double annealed and patent levelled, is used throughout. No bolts or rivets are used in the construction of American Steel Products, and only a special type of screw for removable glass mouldings appears on the finished surfaces. All joints and intersections of metal are welded and ground perfectly smooth, before the rust preventing zinc chromate prime is applied.

FINISHES of baked-on enamel or baked prime, are artistic, lasting and sufficiently elastic to overcome any expansion or contraction. Craftsmen, and automatically heat controlled ovens and other modern equipment, coupled with the skill and knowledge requisite to the proper mixing and blending of pigments and materials, enables us to produce any baked-on enamel finish that may be required.

We shall continue to concentrate on the quality of our products and in being of maximum service to the Architects and General Contractors in the building field—which is the basis of our steady expansion.

HOLLOW METAL DOOR FRAME STANDARDS

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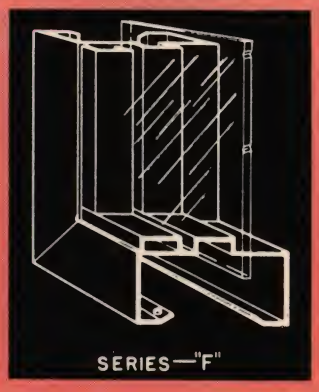
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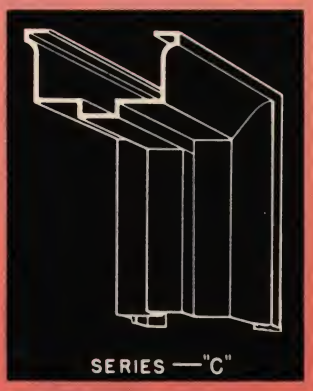
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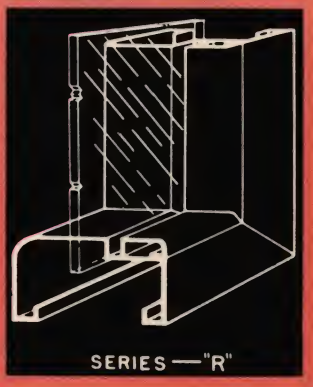
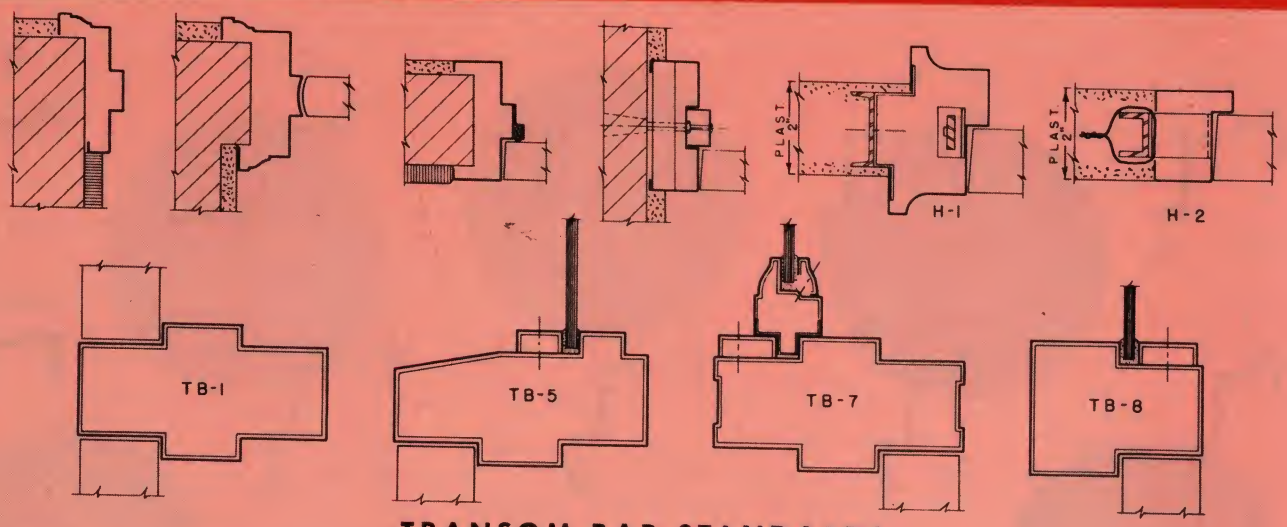

SERIES—"R"

STEEL DOOR FRAMES

AMERICAN STANDARD COMBINATION FRAMES of both rolled and pressed construction in Nos. 18-16-14 and 12 U. S. standard gauge commercial furniture stock steel, as indicated upon pages 3 and 4, with the potential of combining various frame types, meet practically every condition of construction and also permit the minimum initial cost achieved through the use of the most modern facilities.

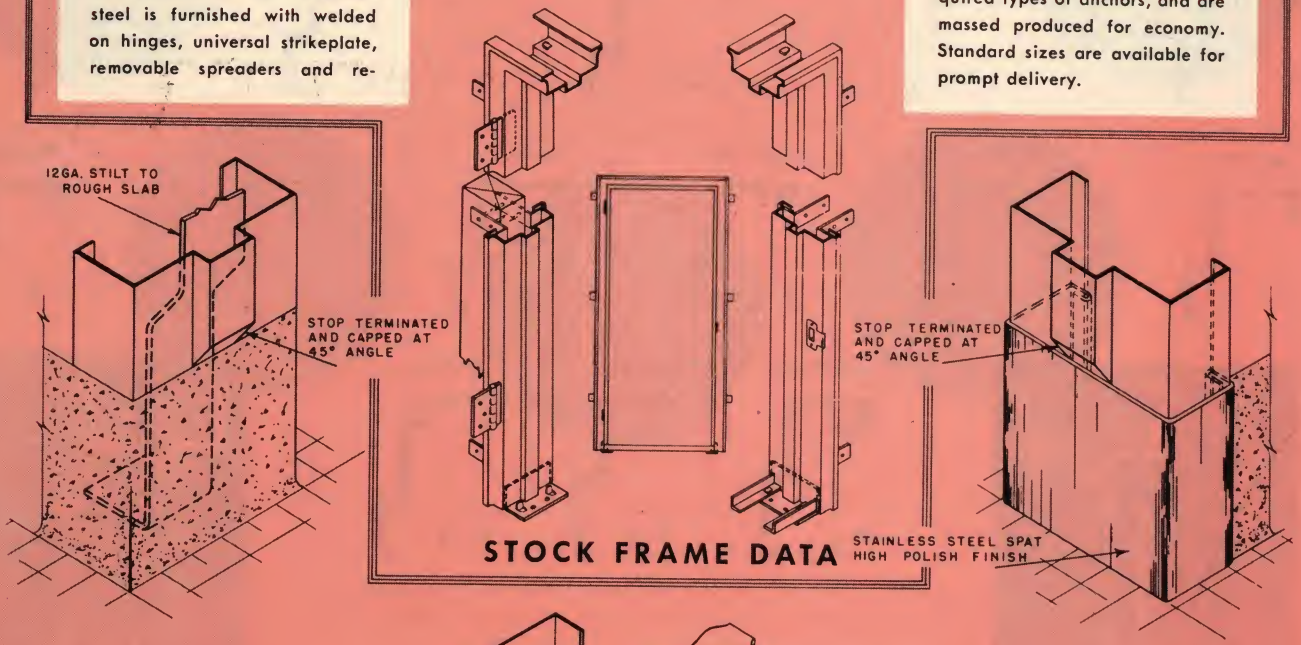
AMERICAN STANDARD COMBINATION FRAMES are of true and sharp contours, and are assembled to exacting tolerances. All frames are mitered, tenoned and continuously welded the full length of all intersections and are provided with anchors, floor clips and removable spreaders. Cutouts and drilled and tapped reinforcements, bearing proper offsets, are provided for the application of all mortised hardware. These reinforcements are of not less than No. 10 ga. steel, protected with No. 24 ga. mortar guards.

Frames are furnished with at least one prime coat of best metallic primer, and baked when specified.

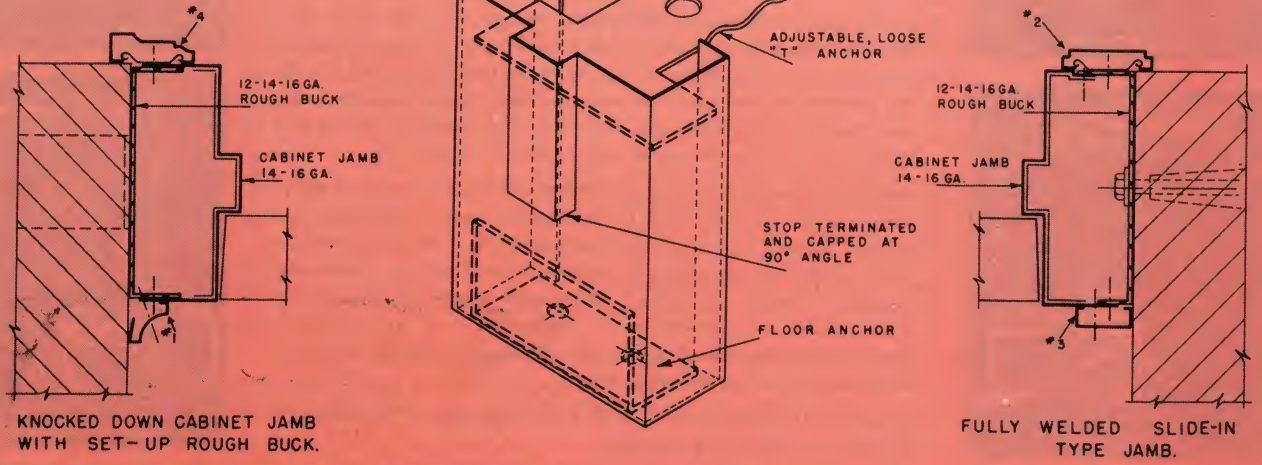


TRANSOM BAR STANDARDS

This product of No. 18 gauge steel is furnished with welded on hinges, universal strikeplate, removable spreaders and required types of anchors, and are massed produced for economy. Standard sizes are available for prompt delivery.

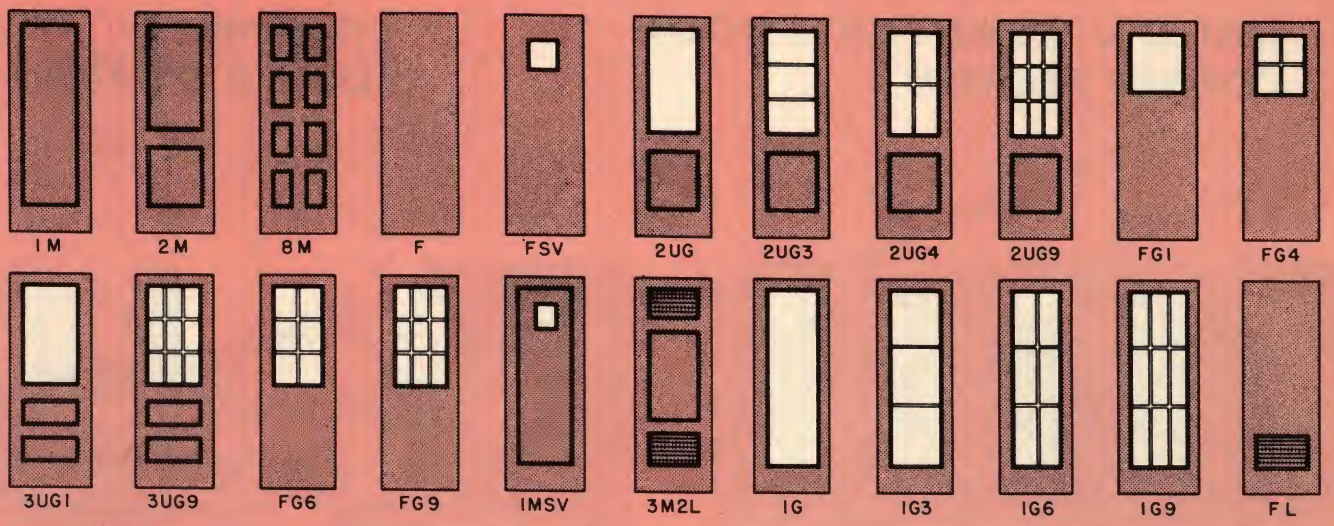

12GA. STILT TO ROUGH SLAB
STOP TERMINATED AND CAPPED AT 45° ANGLE
STOP TERMINATED AND CAPPED AT 45° ANGLE
STAINLESS STEEL SPAT HIGH POLISH FINISH

STOCK FRAME DATA



KNOCKED DOWN CABINET JAMB WITH SET-UP ROUGH BUCK.

FULLY WELDED SLIDE-IN TYPE JAMB.

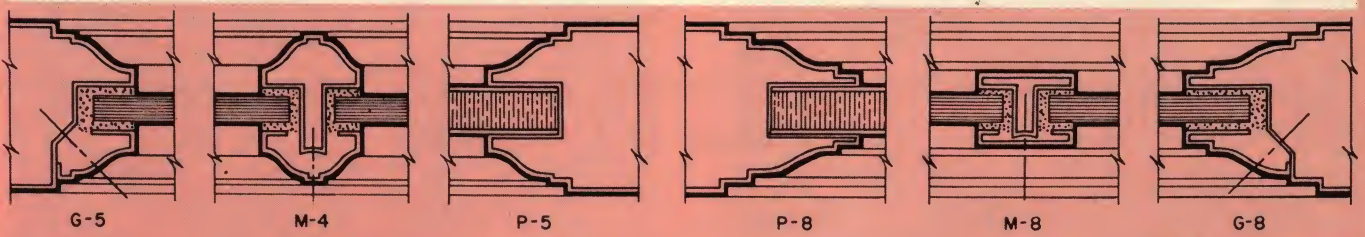


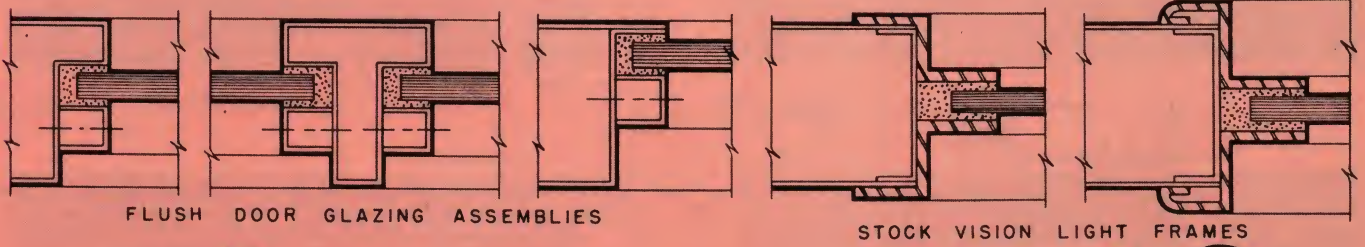
SPECIFICATIONS

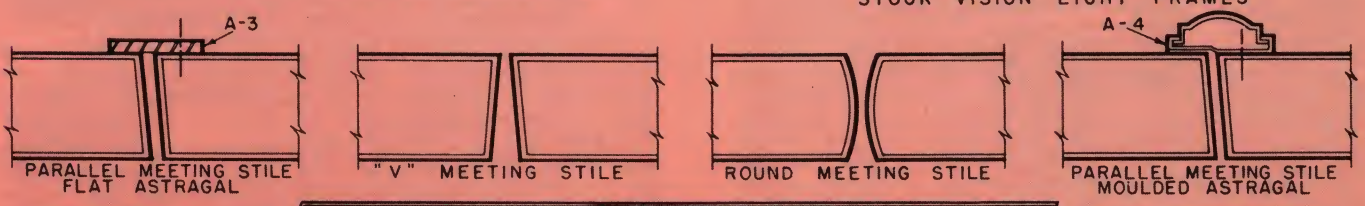
Flush type doors are constructed of two sheets of No. 18 gauge steel, welded at all edges to reinforcing channels and to continuous vertical interlocking reinforcements running full height of door, and spaced at 5" intervals to insure perfect alignment, rigidity and strength. Compressed cellulose asbestos insulation is solidly packed between these interlocking channels.

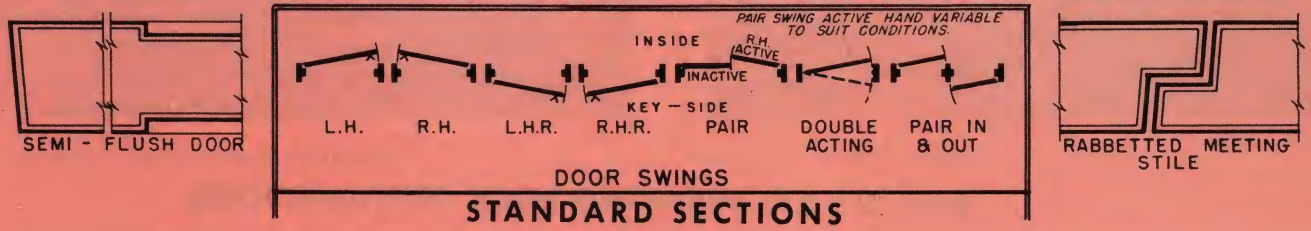
Paneled doors are formed with stiles and rails of No. 18 gauge steel, and continuously interlocked mouldings. The intersections of all stiles and rails are reinforced and welded with the continuous reinforcing channels at the top and bottom in order to form a homogenous structure. Compressed air cell asbestos is used in the stiles and rails to eliminate metallic sound. Panels of doors are constructed of two sheets of No. 20 gauge steel, securely bonded under pressure to a ⅜" fireproof asbestos filler, and are fitted to the panel mouldings formed in one section of cold drawn No. 20 gauge steel, of the profiles shown. These have been standardized by American Steel to enable passing along the savings gained by rolling a large quantity of standard shapes.

AMERICAN STEEL DOORS are constructed with heavy gauge steel hardware reinforcements, rigidly welded in place, and drilled and tapped for the application of all hardware.



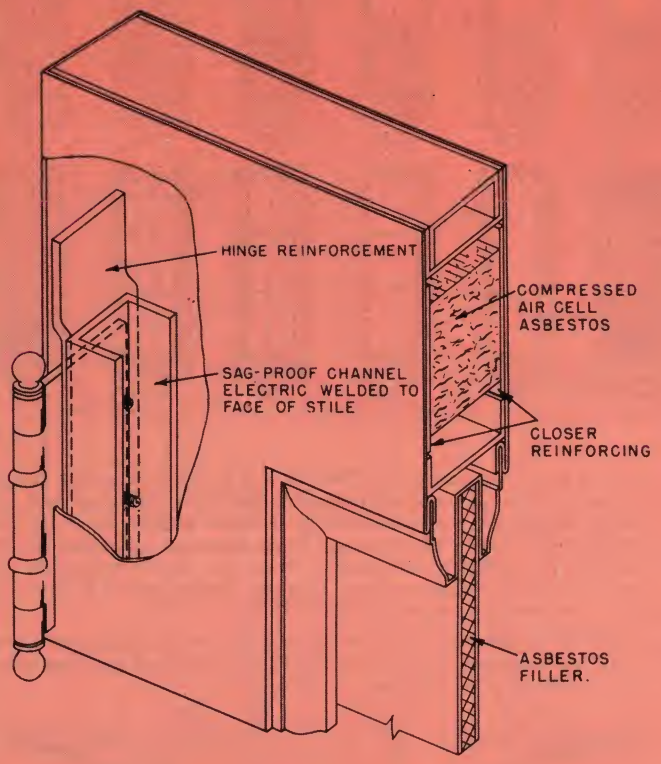




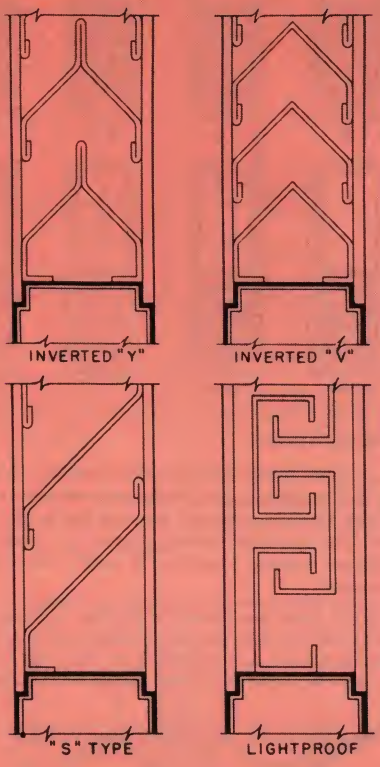


STANDARD SECTIONS

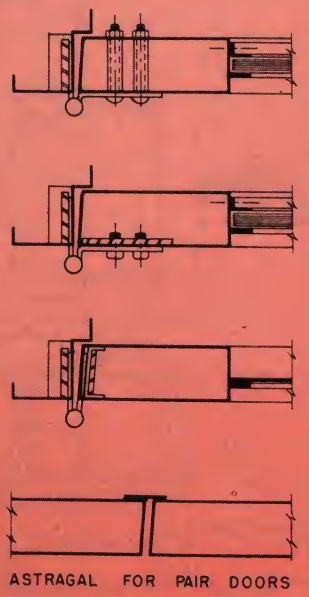
HOLLOW METAL PANEL DOOR CORNER SECTION

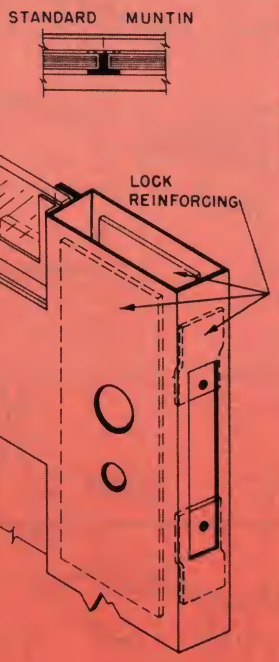


STANDARD LOUVER DETAILS



INDUSTRIAL STEEL DOORS





STANDARD MUNTIN

SPECIFICATIONS

Our intent upon this page is to familiarize those interested with the fact that we can furnish Industrial Steel Doors to suit specialized purposes, and to accommodate non-standard hardware, when specified.

Stiles and Rails are formed of No. 16 U. S. standard gauge cold rolled steel, rolled and welded into shape. Jamb stiles and top rails are 5" x 1¾", middle rails 6" x 1¾" and bottom rails 7" x 1¾".

Solid panels of No. 14 U. S. standard gauge steel are rigidly welded to the flanges of both stiles and rails. Glazing angles are both mitred and welded into frames which simplifies their removal for the installation of glass (furnished by others).

Stiles are accurately bevelled to enable the furnishing of doors with minimum clearance.

Please write for stock door data.

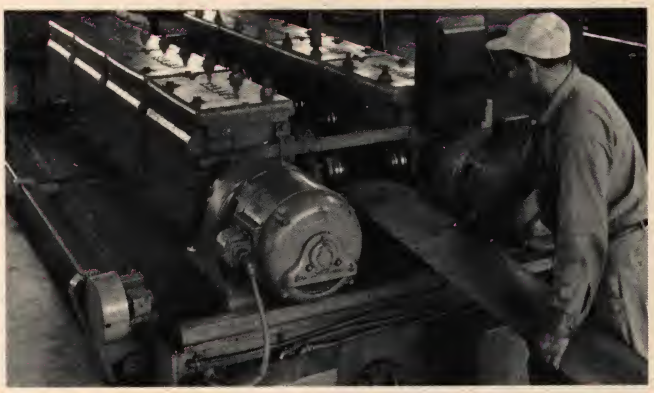
STILE DETAIL SHOWING LOCK PREPARATIONS

American Steel Products Corporation

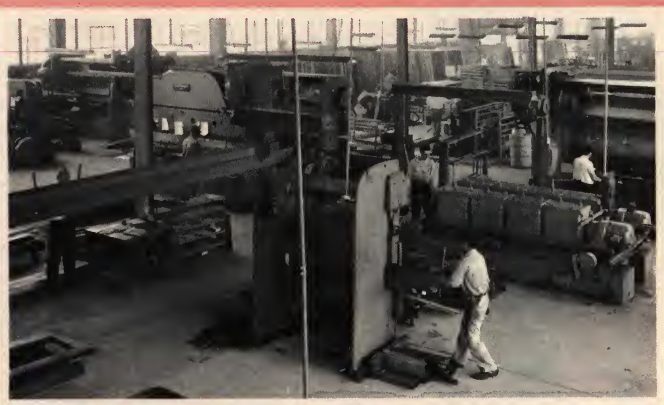
HOLLOW METAL OPERATIONS

"On this page we have chosen to show a small portion of our Rewe Street Plant equipment. Certain technological improvements were deliberately withheld, however, a first hand tour of our complete facilities is encouraged and welcomed".

Partial View of Engineering Dept.



Hi Speed Rolling Mill



Section of Power Forming Dept.

Corner View of Machine Shop

Standard of Our Forming Equipment

Section of Shearing Dept.

HOLLOW METAL® INSTALLATIONS

Project— Library, Admin. & Clrm. Bldg.—Hunter College, Bronx, N. Y.
Archt. — Marcel Breuer
Contr. — Leon D. De Matteis & Sons

Project— Linton High School, Schenectady, N. Y.
Archt. — Perkins & Will
Contr. — Christensen & Nielsen

Project— Lower Merion Sr. High School, Lower Merion Twp., Pa.
Archt. — Vincent G. Kling
Contr. — Joseph R. Farrell, Inc.

Project— Upper Merion High School, Montgomery Co., Pa.
Archt. — Joseph Wigmore, Robert A. C. Gilfillan
Contr. — B. Bornstein & Son

Project— Maximum Security Bldg., St. Elizabeths Hosp., Washington, D. C.
Archt. — General Services Administration
Contr. — Wm. E. Cramer Company

Project— 2 Patients Bldgs., Wernersville, Pa.
Archt. — General State Authority
Contr. — Sordoni Construction Co.

Project— Charlotte Memorial Hospital, Charlotte, N. C.
Archt. — A. G. Odell & Associates
Contr. — Little Construction Company, Inc.

Project— Student Activities Bldg., Charlottesville, Va.
Archt. — Eggers & Higgins
Contr. — Doyle & Russell

Project— Oak Creek Power Plant, Oak Creek, Wisc.
Archt. — Western Electric Power Company
Contr. — Western Electric Power Company

Project— Low Rent Housing Project, Memphis, Tenn.
Archt. — Eason, Anthony, McKinnie & Cox, Inc.
Contr. — J. A. Jones Construction Company

Project— Missile Master Facilities, Pittsburgh, Pa.
Archt. — Corps of Engineers
Contr. — Malan Construction Company

Project— Island Trees High School, Island Trees, L. I., N. Y.
Archt. — F. P. Wiedersum
Contr. — Jonwal Construction Company, Inc.

Project— Research Bldg.—Womens Medical College, Philadelphia, Pa.
Archt. — Schmidt, Garden & Erikson
Contr. — Joseph R. Farrell, Inc.

Project— War Memorial Coliseum, Greensboro, N. C.
Archt. — McMinn, Norfleet & Wicker
Contr. — Barger Construction Company, Inc.

Project— Medical Science Bldg.—Dartmouth College, Hanover, N. H.
Archt. — Shepley Bulfinch, Richardson & Abbott
Contr. — Wexler Construction Company, Inc.

Project— Airmens Dormitories, MacDill A.F. Base, Fla.
Archt. — Corps of Engineers
Contr. — Southern Construction Company, Inc.

Project— Peoples Life Insurance Co. Bldg., Washington, D. C.
Archt. — Mills Petticord & Mills
Contr. — Chas. H. Tompkins Company

Project— Readiness Crew Building, Glasgow A.F. Base, Mont.
Archt. — Corps of Engineers
Contr. — Fred R. Comb Company, Inc.

Project— Residence Halls—Univ. of Delaware, Newark, Del.
Archt. — McKim Mead & White
Contr. — The Thompson Construction Corp.

Project— Ernest Harmon A.F. Base, Stephenville, Newfoundville
Archt. — Frank Grad & Sons
Contr. — J. A. Jones Construction Company

Project— Tussey Mountain School, Saxton, Pa.
Archt. — Hunter, Campbell & Rea
Contr. — R. S. Mowery & Sons, Inc.

Project— Assembly Hall—Univ. of Ill., Urbana, Ill.
Archt. — Harrison & Abramovitz
Contr. — Felmley-Dickerson Company

Project— Zeckendorf Campus—L.I.U., Brooklyn, N. Y.
Archt. — S. J. Kessler
Contr. — Leon D. De Matteis & Sons, Inc.

Project— Elementary School, Plattsburg A.F. Base, N. Y.
Archt. — Knappe & Johnson
Contr. — Paul M. Sterling Company, Inc.

Project— Winchell Avenue Elem. School, Kalamazoo, Mich.
Archt. — Stapert-Pratt-Bulthuis-Spau-Grothers, Inc.
Contr. — Miller-Davis Company

Project— Student Union Building, Big Springs, Tex.
Archt. — Puckett & French
Contr. — A. P. Kasch & Sons

Project— Central Catholic High School, Lafayette, Ind.
Archt. — Walter Scholer & Associates
Contr. — F. A. Wilhelm Construction Company

Project— Woodrow Wilson Houses, New York, N. Y.
Archt. — Pomerance & Breines
Contr. — Leon D. De Matteis & Sons, Inc.

Project— Oxen Hill Sr. High School, Prince Georges Co., Md.
Archt. — Harder & Dressel
Contr. — John Tester & Son, Inc.

Project— North Colonie Jr. Sr. High School, Colonie, N. Y.
Archt. — Henry L. Blatner
Contr. — Sano Rubin Construction Company

Project— Windham Memorial Hospital, Willimantic, Conn.
Archt. — York & Sawyer
Contr. — The Wadhams & May Company

Project— St. Lukes Hospital, Bethlehem, Pa.
Archt. — Crow, Lewis & Wick
Contr. — H. E. Stoudt & Sons

Project— Greenville General Hospital, Greenville, S. C.
Archt. — York & Sawyer—Kiff, Colean, Voss & Souder
Contr. — Thompson & Street Company

Project— Gates Chili Jr. Sr. High School, Gates, N. Y.
Archt. — Benedict Ade
Contr. — Le Chase Construction Corp.

Project— Readiness Crew Bldg., Ellsworth A.F. Base, S. D.
Archt. — Corps of Engineers
Contr. — M. A. Garland Construction, Inc.

Project— SAC Composite Bldgs., Robins A.F. Base, Ga.
Archt. — Corps of Engineers
Contr. — Taylor Construction Company

Project— Hudson Valley Technical Institute, Troy, N. Y.
Archt. — Robert A. Green
Contr. — Frank E. Antolick & Sons, Inc.

Project— Bomarc Facilities, Duluth, Minn.
Archt. — Corps of Engineers
Contr. — Blount Bros. Construction Company

Project— St. Johns College High School, Washington, D. C.
Archt. — Walton & Madden
Contr. — John Tester & Son, Inc.

Project— Mens & Womens Dormitories—Rider College, Trenton, N. J.
Archt. — Alfred Clauss
Contr. — Belli & Company

Project— John Seiver Steam Plant, McCloud, Tenn.
Archt. — Tennessee Valley Authority
Contr. — Tennessee Valley Authority

Project— Bermudian Theater, Hamilton, Bermuda
Archt. — Urbahn, Brayton & Burrows
Contr. — Hutchings & Milani, Ltd.

SINCE 1938 American Steel Products Corporation
REWE STREET • BROOKLYN 11, N.Y.

AMWELD®

BUILDING PRODUCTS

STEEL DOORS AND FRAMES

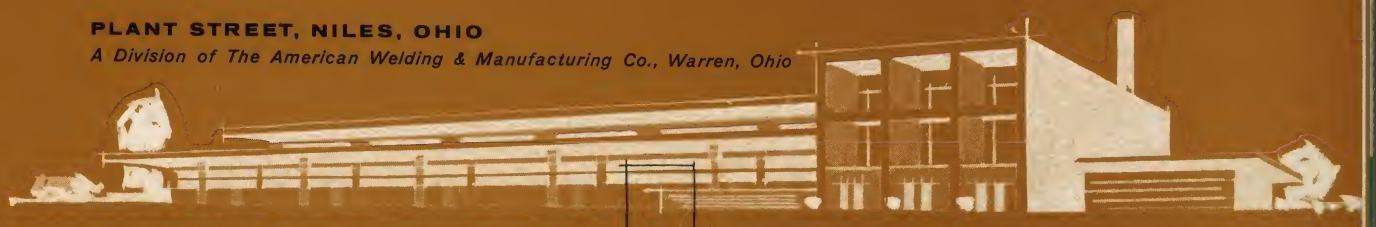
SDI STEEL DOOR INSTITUTE

Standard Types and Sizes • Distinctive Style and Variety

For Commercial, Institutional and Residential Buildings

PLANT STREET, NILES, OHIO

A Division of The American Welding & Manufacturing Co., Warren, Ohio



series 200 Commodity Line frame construction

With Amweld Inter-Lok frames, door openings can be framed in minutes. Jambs and header are self-aligning and tabs bend over, interlocking to form secure neatly mitered corner.

Available in a wide assortment of profiles, there is an Inter-Lok frame for almost every type of wall construction. Snap-in steel anchors provide rigid attachment to studs. Adjustable "T" anchors provide secure attachment of frames in masonry walls.

For 1⅜" doors, frames are made of 16 or 18 ga. steel; for 1¾" doors, frames are made of 16 ga. steel only. All U.L. frames are of 16 ga. Trimmed opening frames, folding door frames and motel interconnecting frames are of 18 ga. steel only.

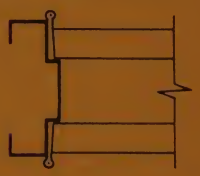
trimmed openings (18 gauge only). Trimmed opening frames are available "knocked-down" (Inter-Lok) or assembled. Assembled trimmed openings can be furnished welded with mitered corners.

"K-D" inter-lok frames

Commodity Line 1¾" frames are formed from 16 gauge and 1⅜" frames from 16 or 18 gauge steel. Frames are furnished knocked-down for easy handling and economical shipping. Easy to erect—take only minutes to install in stud or masonry walls. Corners are mitered, presenting neat joints. Available in single and double widths. On special order, frames may be furnished assembled with corners welded.

motel inter-connecting frames

(18 gauge only)

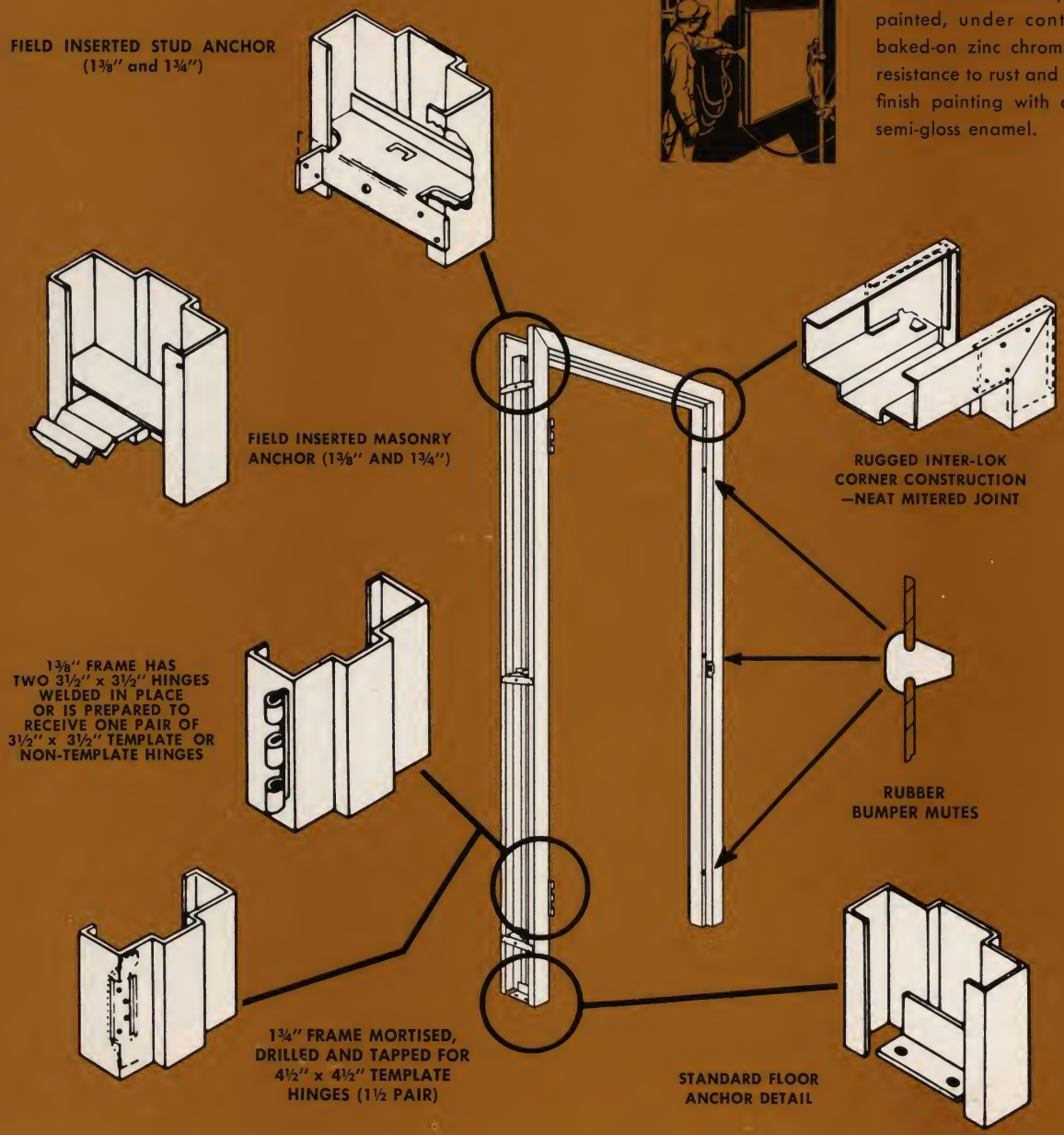


Frames for inter-connecting 1⅜" motel doors (6¼" jamb only) have 1 pair, 3½" x 3½" welded hinges on both rabbets of hinge jamb and strike preparation on both rabbets of strike jamb.

rust-inhibitive finish

All exposed surfaces of both doors and frames are first chemically cleaned, then factory painted, under controlled conditions, with baked-on zinc chromate primer, for maximum resistance to rust and corrosion. We recommend finish painting with oil base, spirit-thinned, semi-gloss enamel.

inter-lok frame details


FIELD INSERTED STUD ANCHOR (1⅜" and 1¾")
FIELD INSERTED MASONRY ANCHOR (1⅜" AND 1¾")
RUGGED INTER-LOK CORNER CONSTRUCTION —NEAT MITERED JOINT
1⅜" FRAME HAS TWO 3½" x 3½" HINGES WELDED IN PLACE OR IS PREPARED TO RECEIVE ONE PAIR OF 3½" x 3½" TEMPLATE OR NON-TEMPLATE HINGES
RUBBER BUMPER MUTES
1¾" FRAME MORTISED, DRILLED AND TAPPED FOR 4½" x 4½" TEMPLATE HINGES (1½ PAIR)
STANDARD FLOOR ANCHOR DETAIL

series 200 Commodity Line

frame profiles

AMWELD

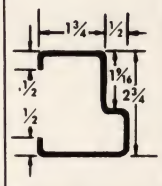
sizes available.

Ⓤ — Underwriters' Label

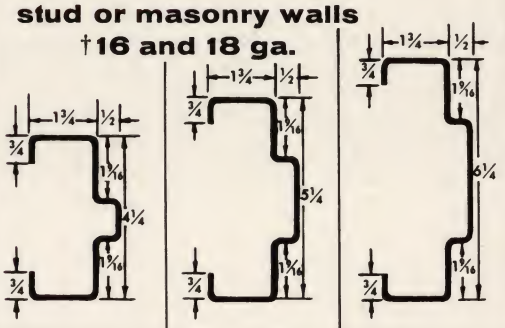
Types and sizes in shaded blocks are available in Single Frames for fast delivery. On 1¾" Frames, this applies when frame is prepared for 161 Series strike.

1⅜" frames

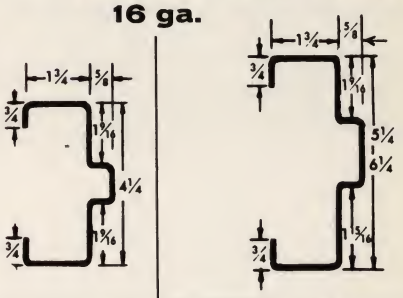
plaster walls 18 ga.



stud or masonry walls †16 and 18 ga.



underwriters' label frames 16 ga.



FRAME HGT.	SINGLE OP.	DOUBLE OP.	2¾"	4¼"	5¼"	6¼"	4¼"	5¼"	6¼"
6' 8"	1' 6"								
	2' 0"	4' 0"				*			
	2' 4" Ⓤ					*	Ⓤ	Ⓤ	Ⓤ
	2' 6" Ⓤ	5' 0"				*	Ⓤ	Ⓤ	Ⓤ
	2' 8" Ⓤ	5' 4"				*	Ⓤ	Ⓤ	Ⓤ
	3' 0" Ⓤ	6' 0"				*	Ⓤ	Ⓤ	Ⓤ
7' 0"	1' 6"								
	2' 0"	4' 0"							
	2' 4"								
	2' 6"	5' 0"							
	2' 8"	5' 4"							
	3' 0"	6' 0"							

Underwriters' label frames have welded-on adjustable masonry anchors and preparation for 1½ pair 3½" x 3½" template hinges.

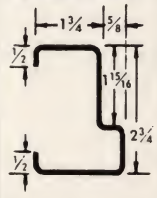
*Available in motel type frames but not on fast delivery basis.

†16 GA. FRAMES SAME CONTOUR AS UL FRAMES

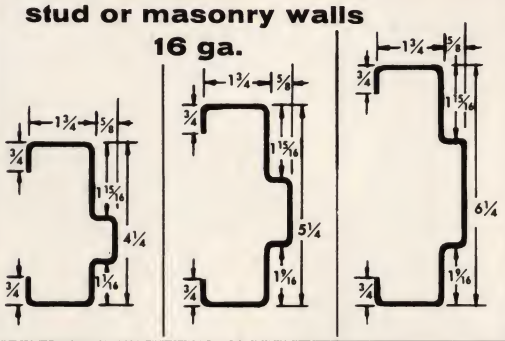
1¾" frames

plaster walls 16 ga.

ASSEMBLED & WELDED ONLY



stud or masonry walls 16 ga.

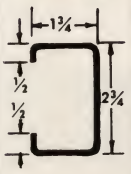


FRAME HGT.	SINGLE OP.	DOUBLE OP.	2¾	4¼"	5¼"	6¼"
6' 8"	2' 0"	4' 0"				
	2' 4"					
	2' 6" Ⓤ	5' 0"				
	2' 8" Ⓤ	5' 4"				
	3' 0" Ⓤ	6' 0"				
	3' 4" Ⓤ	6' 8"				
	3' 6" Ⓤ	7' 0"				
7' 0"	2' 0"	4' 0"				
	2' 4"					
	2' 6" Ⓤ	5' 0"				
	2' 8" Ⓤ	5' 4"				
	3' 0" Ⓤ	6' 0"				
	3' 4" Ⓤ	6' 8"				
	3' 6" Ⓤ	7' 0"				

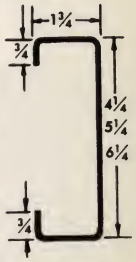
Underwriters' Label 1¾" Frames available for fast delivery in 3' 0" widths only with Series 161 strike preparation (5¼", 6¼" thickness) 6' 8" and 7' 0" high.

trimmed opening frames

plaster 18 ga.



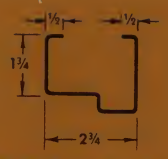
stud or masonry walls 18 ga.



FRAME HGT.	OP.	2¾"	4¼"	5¼"	6¼"
6' 8"	2' 0"				
	2' 4"				
	2' 6"				
	2' 8"				
	3' 0"				
	4' 0"				
	5' 0"				
	5' 4"				
	6' 0"				

AMWELD Commodity Line

frames in typical wall sections

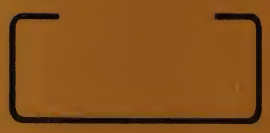


2¾" frames
(3¼" frames also available)

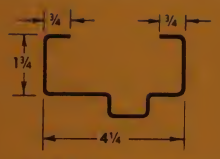
2¾" FRAME IN 2" & 2½"
ROCK LATH & PLASTER WALL

2¾" FRAME IN 2" & 2½"
METAL LATH & PLASTER WALL

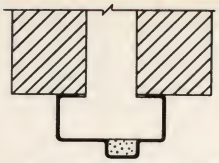
note:
complete grouting of all frames is recommended where possible.



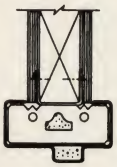
18 gauge trimmed opening available in 2¾", 4¼", 5¼" & 6¼" profiles, and for all wall conditions shown.



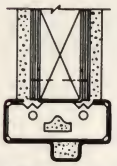
4¼" frames



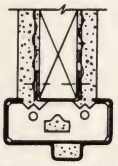
4¼" FRAME IN 6" OR 8"
CONCRETE BLOCK, OR BRICK WALL



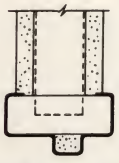
4¼" FRAME IN 1⅝" STUD
& ½" DRY WALL



4¼" FRAME IN 1⅝" STUD, ⅜"
ROCK LATH & ⅜" PLASTER WALL

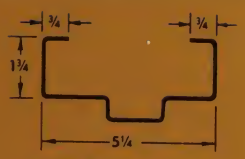


4¼" FRAME IN 1⅝" STUD,
METAL LATH & ¾" PLASTER WALL

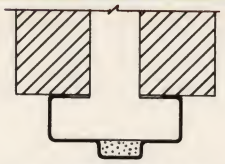


4¼" FRAME IN 2" PYROBAR®
& ¾" PLASTER WALL

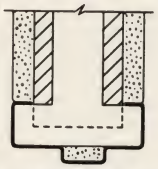
4¼" FRAME IN 2" STEEL STUD,
METAL LATH & ¾" PLASTER WALL



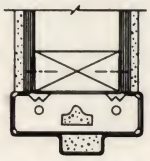
5¼" frames



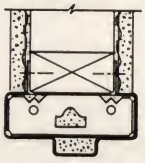
5¼" FRAME IN 6" OR 8"
CONCRETE BLOCK, OR BRICK WALL



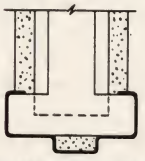
5¼" FRAME IN 3⅝" BLOCK
WALL, WITH TILE OR PLASTER



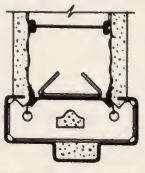
5¼" FRAME IN 3⅝" STUD, ⅜"
ROCK LATH & ⅜" PLASTER WALL



5¼" FRAME IN 3⅝" STUD,
METAL LATH & ¾" PLASTER WALL

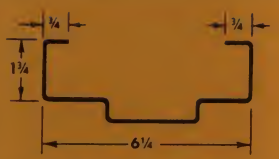


5¼" FRAME IN 3" PYROBAR®
& ¾" PLASTER WALL

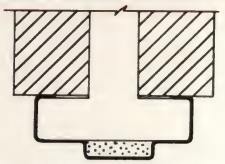


5¼" FRAME IN 3¼" STEEL STUD,
METAL LATH & ¾" PLASTER WALL

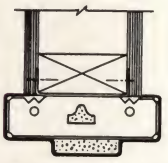
5¼" FRAME IN 2½" STEEL STUD,
⅜" ROCK LATH & ¾" PLASTER WALL



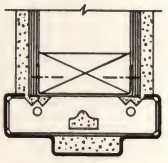
6¼" frames



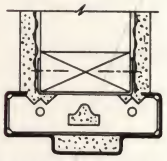
6¼" FRAME IN 8" CONCRETE
BLOCK OR BRICK WALL



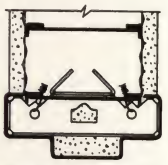
6¼" FRAME IN 3⅝" STUD &
½" DRY WALL



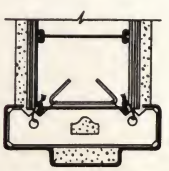
6¼" FRAME IN 3⅝" STUD, ⅜"
ROCK LATH & ½" PLASTER WALL



6¼" FRAME IN 3⅝" STUD,
METAL LATH & ¾" PLASTER WALL



6¼" FRAME IN 4" STEEL STUD,
METAL LATH & ¾" PLASTER WALL

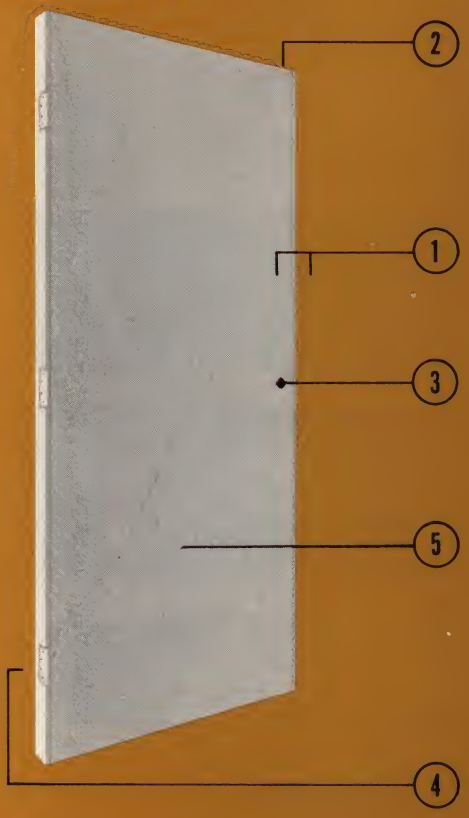


6¼" FRAME IN 3¼" STEEL STUD,
⅜" ROCK LATH & ½" PLASTER WALL

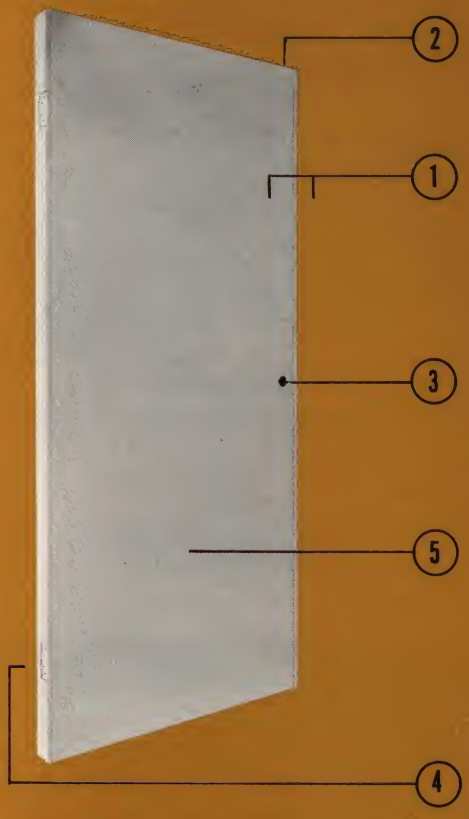
series 100 Commodity Line doors

AMWELD

1¾"



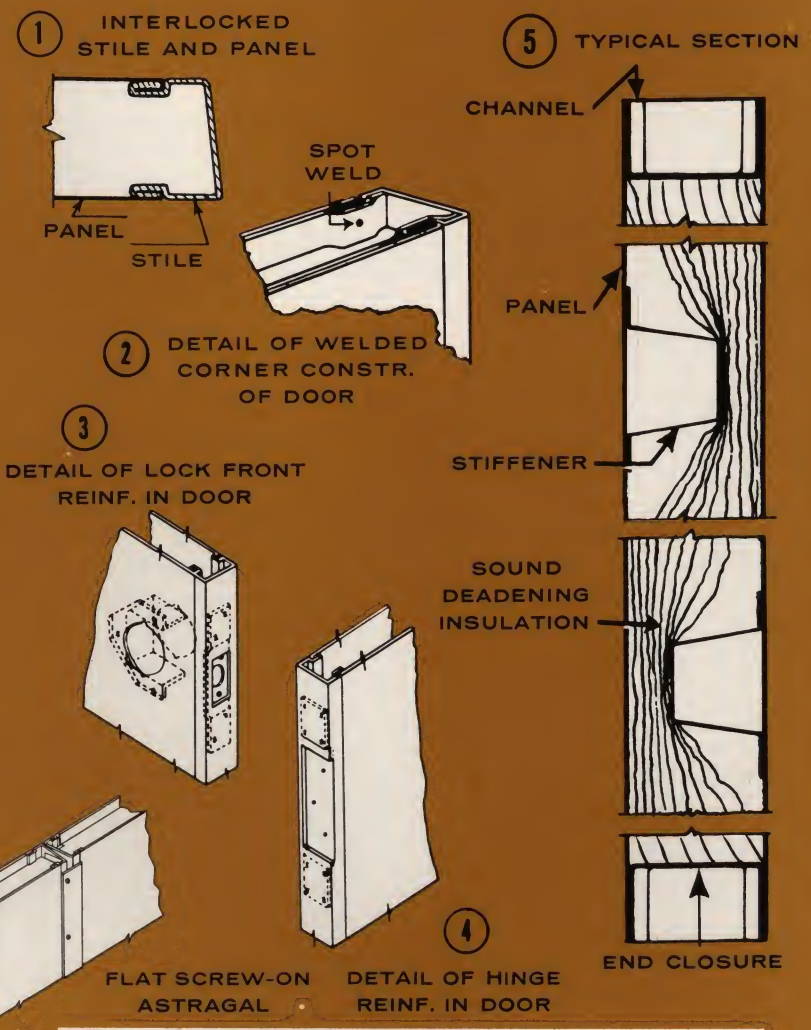
1⅜"



sturdy welded steel construction

Precision-made doors and frames manufactured by mass production methods meet the stringent requirements of architects and contractors. Styled to please, designed to function smoothly and last for years, Amweld's Commodity Line is a practical and economical solution to the door problem in many types of buildings.

Door panels are made from prime quality roll-formed sheets which interlock with heavier gauge stiles. End closures are spot-welded in place to form a rigid door. Horizontal stiffeners reinforce front and back panels and provide extra structural rigidity.



1¾" commodity line door glazing details

For suggested architect's specifications see page 8.

series 100 Commodity Line
door types and sizes

Figures in boxes below show square inches of free louver area.

1⅜" flush panel

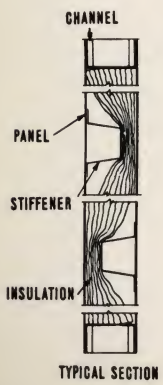
DOOR HEIGHT	SINGLE WIDTH	F	V	PL	TPL	DPL	VPL	G
6′ 8″	1′ 6″							
	2′ 0″*			16	16	32	16	
	2′ 4″			32	32	64	32	
	2′ 6″*			32	32	64	32	
	2′ 8″*			32	32	64	32	
	3′ 0″*			32	32	64	32	
7′ 0″	1′ 6″							
	2′ 0″*			16	16	32	16	
	2′ 4″			32	32	64	32	
	2′ 6″*			32	32	64	32	
	2′ 8″*			32	32	64	32	
	3′ 0″*			32	32	64	32	

1¾" flush panel

DOOR HEIGHT	SINGLE WIDTH	F	V	PL	TPL	DPL	VPL	G
6′ 8″	2′ 0″*			16	16	32	16	
	2′ 4″			32	32	64	32	
	2′ 6″*			32	32	64	32	
	2′ 8″*			32	32	64	32	
	3′ 0″*			32	32	64	32	
	3′ 4″*			32	32	64	32	
	3′ 6″*							
7′ 0″	2′ 0″*			16	16	32	16	
	2′ 4″			32	32	64	32	
	2′ 6″*			32	32	64	32	
	2′ 8″*			32	32	64	32	
	3′ 0″*			32	32	64	32	
	3′ 4″*			32	32	64	32	
	3′ 6″*							

*Inactive leaf available. Includes astragal and reinforcement for 6" surface bolts, furnished by others.

Also available as blank stile doors without astragals but reinforced for push plates or rim-type panic devices.



TYPICAL SECTION

Underwriters' Laboratories, Inc. INSPECTED

Commodity Line 1¾" flush and vision panel doors in 6′ 8″ and 7′ 0″ height can be supplied with Underwriters' Laboratories 1½ hour B labels in all widths except 2′ 0″. 1⅜" labeled doors available in 6′ 8″ height only—all widths.

The same sizes and types of doors can also be furnished with New York Board of Standards and Appeals 1½-hr. label.

sizes available.

Types and sizes in shaded blocks are available for fast delivery. (1¾" doors are prepared for Series 161 locks only.)

door swing handing must be specified on Commodity Line

To determine the "hand" of a door, face the side which opens away from you and note location of hinges. If hinges are to your left, door is "left hand". If hinges are to your right, door is "right hand".

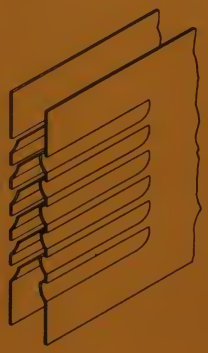
Figures in boxes below show square inches of free louver area.

GPL	AC
16	155
32	201
32	226
32	250
32	298
16	155
32	201
32	226
32	250
32	298

GPL	AC
32	201
32	226
32	250
32	298
32	345
32	201
32	226
32	250
32	298
32	345

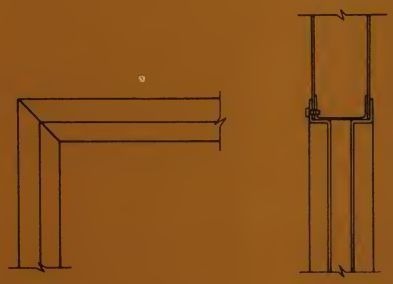
AC grilles may be substituted for pierced louvers in all door types.

details



louvers

Louvered doors have pierced louvers, with vanes stamped inward, leaving surface flush.



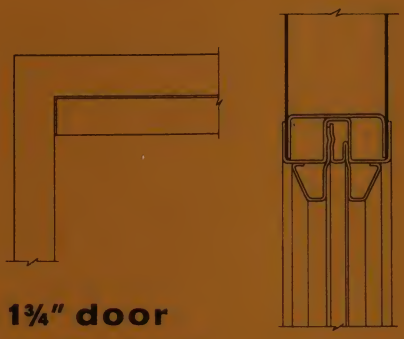
1⅜" door half glass and vision panels

Standard vision panel finished opening is 10" x 10". Glass 11" x 11", furnished by others. Secure side is on stop side of door.

air conditioning grilles

Doors with air conditioning grilles have special insert grilles in following sizes.

DOOR WIDTH	GRILLE SIZE	FREE AREA
2' 4"	17" x 14"	201 sq. in.
2' 6"	19" x 14"	226 sq. in.
2' 8"	21" x 14"	250 sq. in.
3' 0"	25" x 14"	298 sq. in.
3' 4"	29" x 14"	345 sq. in.



1¾" door half glass

Half-glass doors have secure side on stop side of door. Glass furnished by others. Half-glass doors afford additional flexibility as they can be adapted to a variety of multi-light designs by means of field-applied muntin bars.

standard door glass sizes

DOOR HEIGHT	DOOR WIDTH	G	G2	G3	G4
6' 8"	2' 4"	17⅜ x 32	17⅜ x 15⅝	17⅜ x 10¾	7½ x 15⅝
	2' 6"	19⅜ x 32	19⅜ x 15⅝	19⅜ x 10¾	9½ x 15⅝
	2' 8"	21⅜ x 32	21⅜ x 15⅝	21⅜ x 10¾	10½ x 15⅝
	3' 0"	25⅜ x 32	25⅜ x 15⅝	25⅜ x 10¾	12½ x 15⅝
	3' 4"	29⅜ x 32	29⅜ x 15⅝	29⅜ x 10¾	14½ x 15⅝
	3' 6"	31⅜ x 32	31⅜ x 15⅝	31⅜ x 10¾	15½ x 15⅝
7' 0"	2' 6"	19⅜ x 36	19⅜ x 17⅝	19⅜ x 11½	9½ x 17⅝
	2' 8"	21⅜ x 36	21⅜ x 17⅝	21⅜ x 11½	10½ x 17⅝
	3' 0"	25⅜ x 36	25⅜ x 17⅝	25⅜ x 11½	12½ x 17⅝
	3' 4"	29⅜ x 36	29⅜ x 17⅝	29⅜ x 11½	14½ x 17⅝
	3' 6"	31⅜ x 36	31⅜ x 17⅝	31⅜ x 11½	15½ x 17⅝
	3' 8"	33⅜ x 36	33⅜ x 17⅝	33⅜ x 11½	16½ x 17⅝
	4' 0"	37⅜ x 36	37⅜ x 17⅝	37⅜ x 11½	18½ x 17⅝

standard lockset preparation permits choice of locks

Commodity Line 1¾" doors can be prepared for locksets supplied by all major hardware manufacturers in accordance with Fed. Spec. FF-H-106A Series 86 (mortise), Series 161 (cylindrical), or Series 140 (integral), as shown. Commodity Line 1⅜" doors are prepared for locksets in accordance with Fed. Spec. FF-H-106A Series 160 (cylindrical 2⅜ backset).

86 MORTISE

160 CYLINDRICAL

161 CYLINDRICAL

140 INTEGRAL

Commodity Line

architect's specifications

Amweld® commodity line doors and frames.

general

Contractor shall furnish and install steel doors and frames as manufactured by Amweld Building Products, Niles, Ohio, a division of The American Welding & Manufacturing Co., Warren, Ohio, in all openings except as otherwise provided for in specifications.

1¾" doors (series 100)

Construction—Door stiles shall be formed of 18 gauge steel, and door panels shall be formed of 20 gauge steel interlocked with stiles and mechanically stiffened with 24 gauge stiffeners securely welded to the inner side of the panel. Stiles shall be provided with heavy gauge hardware reinforcements securely welded to their inside surfaces. Ends of the doors shall be closed and reinforced with channels securely spot welded to both panels and welded to panel and stile at their corners.

The interior of the door shall be provided with sound-deadening material, resistant to fire, vermin, moisture, mildew and rot. Door panels shall be prepared and reinforced for standard hardware, as specified in the hardware schedule.

1¾" frames (series 200)

Construction—Frames shall be formed of 16 gauge steel and shall be furnished knocked-down for quick field assembly. Frames shall have heavy gauge reinforcing gussets at the corners and self-aligning tabs for secure locking of assembly. (Option: furnished completely assembled and welded at the corners.) Corners shall present neat, mitered joints. Hinge jambs shall be provided with heavy gauge steel hinge reinforcements welded in place, pierced and tapped for 1½ pr. 4½" x 4½" template hinges and protected with welded-steel plaster guards. Hinges furnished by others. Strike jambs shall be provided with strike cut-out for strike plates of locksets in accordance with Fed. Spec. FF-H-106a Series 86 (mortise), Series 161 (cylindrical), Series 140 (integral), or the "Universal Strike." The welded-in steel strike reinforcement will be pierced and tapped for specified strike-plate. Strike cut-out shall be covered with integral plaster-guard. Strike jambs shall have rubber bumper mutes furnished for stops. Three steel anchors shall be provided for each jamb, and shall be stud, masonry or plaster type, as specified.

lockset preparation (1¾")

Doors and frames shall be prepared to take locksets manufactured under Federal Specifications FF-H-106a, series 161 (cylindrical), 86 (mortise), or 140 (integral), and shall accommodate standard locksets manufactured in accordance with these specifications. Holes for mounting surface-applied escutcheons to be drilled in the field by others. Lock preparations shall be on center line of door (except 7' 0" doors), enabling flush doors to be used as either right or left-hand doors by inverting. Hinge reinforcements shall be drilled and tapped for standard 4½" x 4½" template hinges, not furnished. Lock reinforcements shall be drilled and tapped.

The inactive door in pairs of doors shall be reinforced for a 6" top and bottom surface bolt, not furnished but shall include an astragal. Inactive doors for push plates or rim type panic devices shall have blank stiles and no astragal.

(Specifications subject to change without notice.)

1⅜" frames (series 200)

Construction—Frames shall be formed of 18 gauge steel. Frames to be furnished as Amweld Inter-Lok Frames for 1⅜" doors, supplied with loose headers equipped at each mitered joint with heavy gauge channel-shaped reinforcements. Jambs and header to be equipped with tabs and slots for locking assembly. (Option—May be furnished as a complete 1-piece, welded assembly with header and jambs securely welded.) The strike cut-out shall be provided with heavy gauge steel reinforcement securely spot welded in the jamb and covered with a plaster guard. Steel anchors shall be provided for solid bonding of the frame to the wall. Hinge jambs shall be provided with two 3½" x 3½" 3-knuckle hinge leaves welded in place. Primed 2-knuckle leaves of hinges and hinge pins to be furnished. (Option—May be furnished with welded reinforcement, pierced and tapped for two 3½" x 3½" template or non-template hinges, not furnished.)

1⅜" doors (series 100)

Construction—Door stiles shall be formed of 18 gauge steel, and door panels shall be formed of 20 gauge steel, interlocked with stiles and mechanically stiffened with 24 gauge stiffeners securely welded to the inner side of the panel. Stiles shall be provided with heavy gauge hardware reinforcements securely welded to their inside surfaces. Ends of the doors shall be closed and reinforced with die-formed channels securely spot welded to both panels and welded to panel and stile at their corners.

The interior of the door shall be provided with sound-deadening material, resistant to fire, vermin, moisture, mildew and rot. Door panels shall be prepared and reinforced for standard hardware, as specified in hardware schedule.

lockset preparation (1⅜")

Doors and frames shall be prepared to take locksets manufactured under Federal Specifications FF-H-106a, and shall accommodate standard locksets manufactured in accordance with specifications, series 160 (cylindrical)—2⅜" backset. Lock preparation shall be on center line of door, (except 7' 0" size), enabling flush doors to be used as either right or left hand by inverting.

identification label

This identification label is applied to all frames, frame parts, and door cartons. It indicates all facts, such as size, style, and special preparation, as well as architect and job mark number. The label is placed (a) on the floor anchor of jambs and frames, (b) inside the throat of loose headers, and (c) two places on the edge of door cartons. This placement permits distributors to determine stock without removing jambs and headers from shelves and doors from cartons. Contractors are able to properly locate doors and frames at the job site. Doors and frames can be installed and painted without removing labels.

series 700 STURDI-DOORS

AMWELD

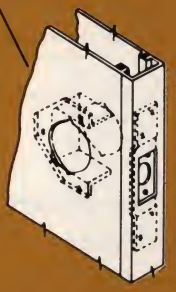
1 SPOT WELD

DETAIL OF WELDED CORNER CONSTR. OF DOOR

2 INTERLOCKED STILE AND PANEL

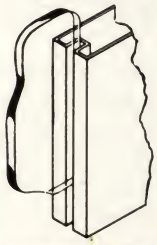
4 DETAIL OF HINGE REINF. IN DOOR

3 DETAIL OF LOCK FRONT REINF. IN DOOR

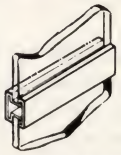


5 TYPICAL SECTION

glazing details



NEAT RIGID GLAZING GROOVE



FIELD-INSERTED MUNTIN BAR WITH SNAP-ON COVER

SNAP-IN GLAZING STRIPS

RUGGED WELDED CONSTRUCTION

Sturdi-Door is a ruggedly built door with an *economy size* price tag. Perfectly suited for those applications where the punishment of high frequency use calls for a door of sturdy construction but where price is critical.

Careful design and modern mass production techniques have combined to produce this top dollar value in 1¾" flush panel doors.

Door panels are made from prime quality 18 gauge roll-formed sheets. Interlocking stiles are of 16 gauge steel. End closures are spot welded in place to form a rigid panel assembly. Horizontal stiffeners reinforce front and back panels and provide extra structural rigidity.

For suggested architect's specifications see page 12.

series 700 STURDI-DOOR line

STURDI-DOORS are flush panel design, suitable for schools, offices, factories and commercial buildings. They present a neat, trim appearance, and are designed and constructed for long, maintenance-free service.

STURDI-DOOR types and sizes

1¾" flush panel

DOOR HEIGHT	SINGLE WIDTH	F	V	L	TL	DL	VL	G
6′ 8″	2′ 0″*	■	■	■	■	■	■	
	2′ 4″	■	■	■	■	■	■	■
	2′ 6″*	▨	■	■	■	■	■	■
	2′ 8″*	▨	■	■	■	■	■	▨
	3′ 0″*	▨	■	■	■	■	■	▨
	3′ 4″*	■	■	■	■	■	■	■
	3′ 6″*	■						■
7′ 0″	2′ 0″*	■	■	■	■	■	■	
	2′ 4″	■	■	■	■	■	■	■
	2′ 6″*	■	■	■	■	■	■	■
	2′ 8″*	■	■	■	■	■	■	■
	3′ 0″*	▨	■	■	■	■	■	▨
	3′ 4″*	■	■	■	■	■	■	■
	3′ 6″*	■						■

*Inactive leaf available. Includes astragal and reinforcement for 6″ surface bolts, furnished by others.

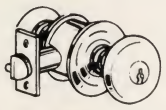
Also available as blank stile doors without astragals but reinforced for push plates or rim-type panic devices.

standard lockset preparation permits choice of locks

STURDI-DOOR LINE 1¾" doors can be prepared for locksets supplied by all major hardware manufacturers in accordance with Fed. Spec. FF-H-106A Series 86 (mortise), Series 161 (cylindrical), or Series 140 (integral), as shown.

86
MORTISE

140
INTEGRAL



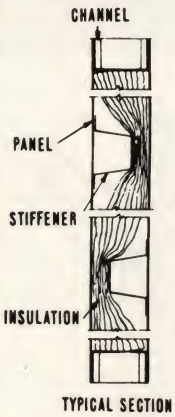
161
CYLINDRICAL

door swing

The STURDI-DOOR is universally handed. Doors may be adapted for either right or left hand swing by reversing hinges. Openings in hinge stile mortise are then concealed by means of special hinge fillers.

miscellaneous hardware

The top of the STURDI-DOOR is reinforced internally for the mounting of closers and other surface applied hardware. Blank stile doors are internally reinforced for push plates or rim type panic devices.



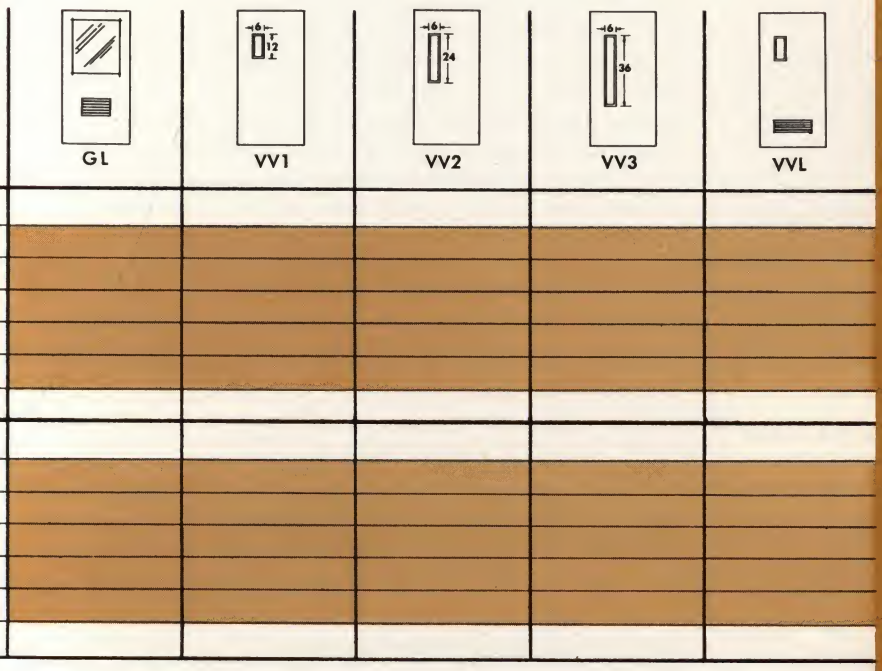
TYPICAL SECTION

Underwriters' Laboratories, Inc.
INSPECTED

STURDI-DOOR Fire Doors are filled with special fire-resistant filler approved by Underwriters' Laboratories. Doors in 6′ 8″ and 7′ 0″ height bearing Underwriters' Laboratories "B" labels (1½ hours) available in all widths except 2′ 0″. Also available with New York Board of Standards and Appeals labels—1½ hours.

choice of 12 functional door designs

Flush door types include louvered, vision-light and half-glass, as well as combinations of these, for a total of 12 styles—in standard heights and widths. Half-glass doors afford additional flexibility, as they can be adapted to a variety of multi-light designs by means of field-applied muntin bars.

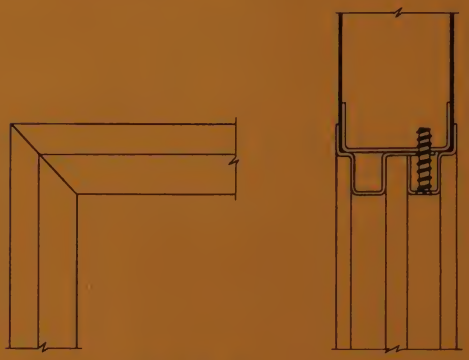


sizes available.

Types and sizes in shaded blocks are available for fast delivery on 1¾" doors prepared for Series 161 locks only.

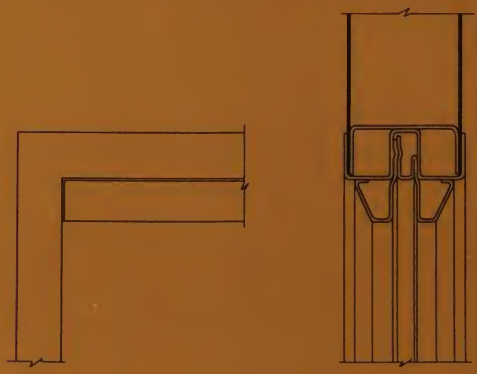
TOP and BOTTOM CAPS available where doors are to be used with vinyl insert type thresholds and weather-stripping at top. We suggest completely grouting the top cap on all exterior applications to prevent moisture entering top of door.

details



vision panels

Standard vision panel finished opening is 10" x 10". Glass 11" x 11", furnished by others. Secure side determined in the field.



half glass

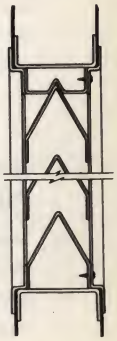
Snap-in glazing strip design permits job-site selection of secure side. Formed strips have a neat, trim appearance, with no screws. Glazing furnished by others.

DOOR WIDTH	LOUVER SIZE	FREE AREA*
2' 0"	13" x 14"	146 sq. in.
2' 4"	17" x 14"	190 sq. in.
2' 6"	19" x 14"	213 sq. in.
2' 8"	21" x 14"	235 sq. in.
3' 0"	25" x 14"	280 sq. in.
3' 4"	29" x 14"	325 sq. in.
3' 6"	31" x 14"	347 sq. in.
3' 8"	33" x 14"	370 sq. in.
4' 0"	37" x 14"	414 sq. in.

*Free Area shown is based on the standard "inverted V" blade louver. The free area will vary with the substitution of other types of louvers.

inverted V-blade louver

In addition to the standard louver shown here, the Sturdi-Door may also be furnished with "inverted Y," "Z blade," and "lightproof" louvers. Also available are adjustable louvers with either manual or "automatic fuse link" mechanisms. Louvers can also be furnished with screens of various materials and gauges.



For suggested architect's specifications see page 12.

AMWELD

STURDI-DOOR architect's specifications

general

Contractor shall furnish and install steel doors and frames as manufactured by Amweld Building Products, Niles, Ohio, a division of The American Welding & Manufacturing Co., Warren, Ohio, in all openings except as otherwise provided for in specifications.

1¾" doors (series 700)

Construction—Door stiles shall be formed of 16 gauge steel, and door panels shall be formed of 18 gauge steel interlocked with stiles and mechanically stiffened with 24 gauge stiffeners securely welded to the inner side of the panel. Stiles shall be provided with heavy gauge hardware reinforcements securely welded to their inside surfaces. Ends of the doors shall be closed and reinforced with channels securely spot welded to both panels and welded to panel and stile at their corners.

The interior of the door shall be provided with sound-deadening material, resistant to fire, vermin, moisture, mildew and rot. Door panels shall be prepared and reinforced for standard hardware, as specified in the hardware schedule.

glazing—Doors of half-glass shall be furnished with formed steel glazing strips of the snap-in type, to permit selection of secure side in the field. Muntin bars for multi-light glazing shall be of field-applied type. Glazing arrangement shall accommodate ¼" thick glass, supplied by others. Vision-light doors shall provide for field installation of glass panels. Center line of standard vision light is located 5' 3" from bottom of door, with net opening of 10" x 10". Top of vertical vision lights shall be located 5'6" from bottom of door. Net area of 72 sq. in. (6" x 12" light), 144 sq. in. (6" x 24" light), and 216 sq. in. (6" x 36" light).

hardware — Lockset preparation shall provide for field installation of locksets manufactured in accordance with Fed. Spec. FF-H-106A Series 86 (mortise), Series 161 (cylindrical) or Series 140 (integral), with flat fronts. Lock cut-outs shall be reinforced with heavy gauge steel and pierced and tapped for mounting specified locksets. Mounting holes for surface applied escutcheons shall be drilled in the field by others.

Hinge-mortises shall be reinforced with heavy gauge steel plates, welded in place and pierced and tapped for 1½ pair 4½" x 4½" template hinges. Hinges furnished by others.

Mortises shall extend full width of hinge-stile, and filler-plates shall be provided to permit installation of hinges for right-hand or left-hand swing, as specified.

miscellaneous hardware—Where called for on drawings or otherwise specified, panic hardware, closers, or other surface-mounted hardware shall be provided with reinforcement for drilling and tapping in the field.

Inactive-leaf doors, where called for on drawings or in door schedule, shall be reinforced for top and bottom surface mounted bolts. Strike stile shall be provided with screwed-on astragal. Inactive doors for push plates or rim type panic devices shall have blank panels and be furnished without astragals.

louvers — Louvers for Sturdi-Doors shall be of insert type with inverted V baffles.

finish—Exposed surfaces on doors shall be chemically cleaned and given one baked, shop coat of zinc chromate primer.

identification label

This identification label is applied to all frames, frame parts, and door cartons. It indicates all facts, such as size, style, and special preparation, as well as architect and job mark number. The label is placed (a) on the floor anchor of jambs and frames, (b) inside the throat of loose headers, and (c) two places on the edge of door cartons. This placement permits distributors to determine stock without removing jambs and headers from shelves and doors from cartons. Contractors are able to properly locate doors and frames at the job site. Doors and frames can be installed and painted without removing labels.

rust-inhibitive finish

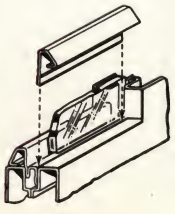
All exposed surfaces of doors are first chemically cleaned, then factory painted, under controlled conditions, with baked-on zinc chromate primer, for maximum resistance to rust and corrosion. We recommend finish painting with oil base, spirit-thinned, semi-gloss enamel.

"K-D" inter-lok frames for STURDI-DOORS

STURDI-DOORS are designed for use with Commercial and Commodity Line 1¾" K-D Inter-Lok Frames. They are formed from 16 gauge steel. Frames are furnished knocked-down for easy handling and economical shipping. Easy to erect — take only minutes to install in stud or masonry walls. Corners are mitered, presenting neat joints. Available in single or double widths. On special order, frames may be furnished assembled with corners welded. See details starting page 2 and 14.

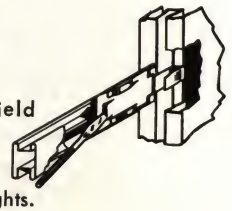
glazing simple and quick with snap-in molding

Snap-in glazing strip design permits job-site selection of secure side. Formed strips have a neat, trim appearance, with no screws. Glazing furnished by others.



field-applied muntin bars for multi-light flexibility

Muntin bars furnished "k-d", permit field adaptation of any half-glass door to multi-light designs. 6' 8" and 7' 0" doors are convertible to 2, 3, 4, or 6 lights.



Commercial Line heavy-duty doors & frames *for school, institutional and commercial buildings*

A rugged rail and stile door for high frequency service. Produced on precision-tooled assembly lines, Amweld Commercial Line doors and frames offer clean contemporary styling, quiet operation and exceptional structural strength. Unique design features also make possible new savings in installation costs.

Doors are of either flush panel or recessed panel types, 1¾" thick. Rails and stiles are of 16 gauge steel, and form a continuous tubular frame with mitered corners reinforced, face welded and ground smooth. Flush-style panels are formed of two sheets of 18 gauge steel connected by interior stiffeners, and are effectively sound deadened. Recessed-style panels are formed of double sheets of 18 gauge steel, separated by a resilient spacer. Panels inter-lock with rails and stiles to form a totally integrated rigid structure. Doors operate smoothly and quietly for long, maintenance-free life.

select from 27 functional door designs

Door types include flush, recessed panel, louvered, vision-light, half glass and full glass, as well as combinations of these, for a total of 27 styles—in standard heights and widths. Half glass doors afford additional flexibility, as they can be adapted to a variety of multi-light designs by means of field-applied muntin bars. Any door may be field-adapted for either right hand or left hand swing, as required. Doors to be used in pairs also are available, including inactive-leaf type.

"k-d" Inter-Lok frames fit variety of wall conditions

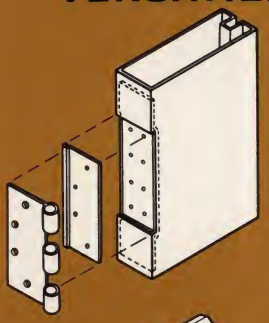
Commercial Line frames are formed of 16 gauge or 14 gauge steel, and feature a full 2" face. Frames are furnished knocked down, with self-aligning Inter-Lok corners, for quick field assembly. On special order, frames may be furnished fully assembled and welded. Corners show neat mitered joints. Unique system of interchangeable anchors permits field adaptation of any frame for either stud or masonry walls, as required. Floor anchors are adjustable. Available in single and double widths.

phosphatized finish

All exposed surfaces of both doors and frames are first chemically cleaned, then coated with a heavy phosphate deposit, chemically bonded to the surface. Factory painted under controlled conditions with baked-on zinc chromate primer, for maximum resistance to rust and corrosion.

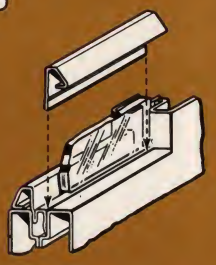
We recommend finishing with oil base, spirit-thinned semi gloss enamel.

VERSATILITY



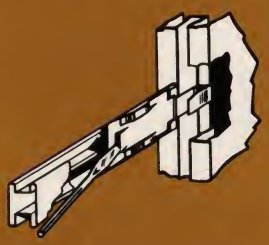
universal handing

Doors may be adapted for either right-hand or left-hand swing by reversing hinges. Openings in hinge-stile mortise are then concealed by means of special hinge-fillers. Strike stile has slightly rounded edge, enabling door to clear frame either way.



glazing simple and quick with snap-in molding

Snap-in glazing strip design permits job-site selection of secure side. Formed strips have a neat, trim appearance, with no screws. Glazing furnished by others.



field-applied muntin bars for multi-light flexibility

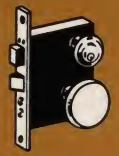
Muntin bars furnished "k-d", permit field adaptation of any half glass door to multi-light designs. 6'8" and 7'0" doors are convertible to 2, 3, or 4 lights.

standard lockset preparation permits choice of hardware

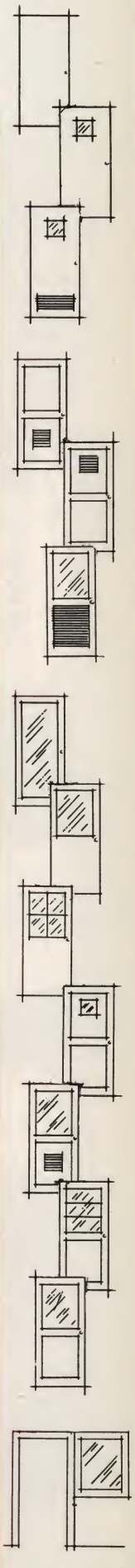
Commercial Line Doors can be prepared for locksets supplied by all major hardware manufacturers in accordance with Fed. Spec. FF-4-106A, Series 86 (mortise), Series 161 (cylindrical), or Series 140 (integral), as shown. (All locksets must have flat fronts.) Thus, with Amweld Commercial Line Doors, selection is not confined to locksets of any one manufacturer or one type. Both doors and frames are factory reinforced, mortised, pierced and tapped for 1½ pair of 4½" x 4½" template hinges (not furnished).

161
CYLINDRICAL

140
INTEGRAL

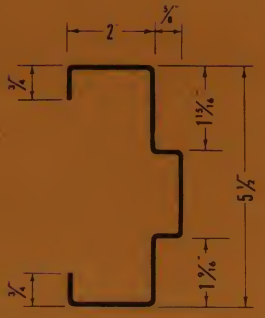


86
MORTISE

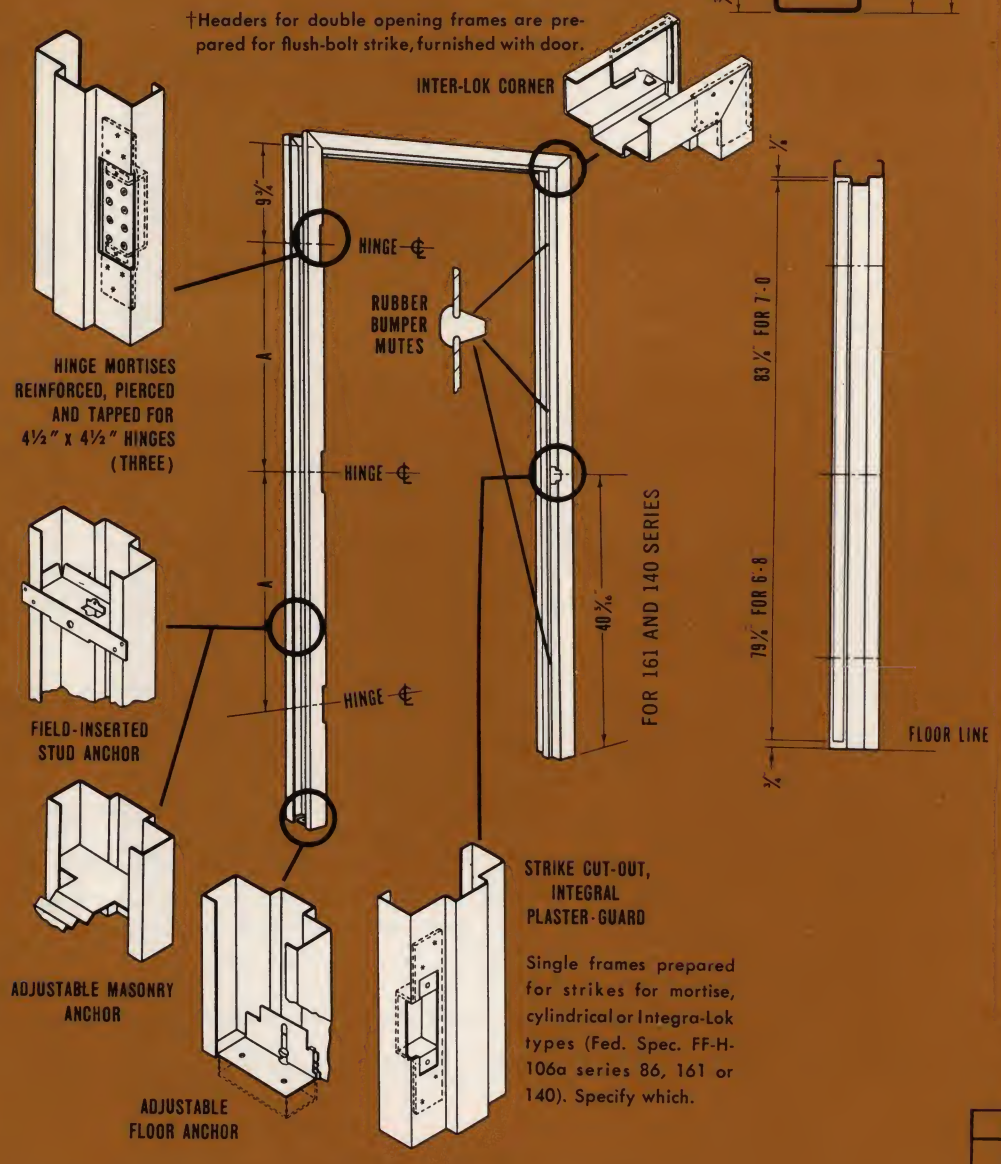


series 400 Commercial Line "K-D" inter-lok frames

Specifically made for heavy duty, Amweld Commercial Line steel frames feature a full 2" face. Formed from 16 gauge or 14 gauge steel, as specified, frames have 5½" jamb depth, and can be adapted at the job-site for use in masonry or wood stud partitions simply by applying the correct anchor. Both wood-stud and masonry anchors are removable snap-in type. Adjustable floor anchors compensate for sub-floor installations. Shipped knocked-down, frames are quickly assembled by one man using only a hammer. Self-aligning Inter-Lok mitered corners assure stability and dimensional accuracy. Hinge mortises are reinforced, pierced and tapped for 1½ pair 4½" x 4½" template hinges, not furnished. Heavily phosphatized and coated with baked-on, rust inhibitive primer. Available in sizes corresponding to Commercial Line doors, including double widths. In ordering, specify active hand.



†Headers for double opening frames are prepared for flush-bolt strike, furnished with door.



Single frames prepared for strikes for mortise, cylindrical or Integra-Lok types (Fed. Spec. FF-H-106a series 86, 161 or 140). Specify which.

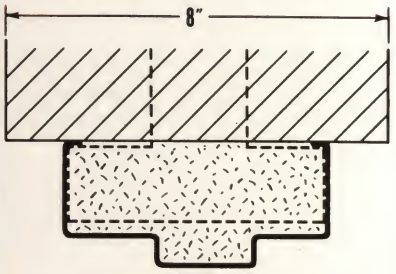
CEILING STRUTS ARE AVAILABLE FOR INSTALLATION IN PLASTER WALLS — ON SPECIAL ORDER.

"A" Dimension = Spacing of Hinges

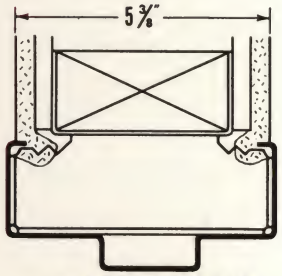
Ht.	Hinges	Size	Spacing
6' 8"	3	4½" x 4½"	29 15/16"
7' 0"	3	4½" x 4½"	31 15/16"

installation details

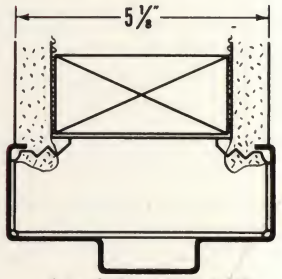
details (3"=1')



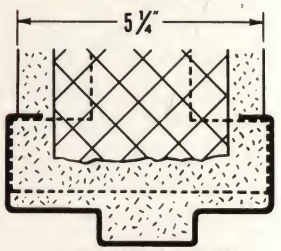
—BRICK, OR CONCRETE BLOCK WALL



—2 x 4 STUD, ROCK LATH AND PLASTER



—2 x 4 STUD, METAL LATH AND PLASTER



—4" HOLLOW TILE OR PYROBAR® PLASTERED

frame sizes

single		double	
6' 8"	7' 0"	6' 8"	7' 0"
2' 0"	2' 0"	4' 0"	4' 0"
2' 4"	2' 4"		
2' 6"	2' 6"	5' 0"	5' 0"
2' 8"	2' 8"	5' 4"	5' 4"
3' 0"	3' 0"	6' 0"	6' 0"
3' 4"	3' 4"	6' 8"	6' 8"
3' 6"	3' 6"	7' 0"	7' 0"
	3' 8"		7' 4"
	4' 0"		8' 0"

series 400 Commercial Line transoms, side lights and borrowed lights

Amweld Commercial Line transoms, side lights and borrowed lights can be installed singly, or as component parts in combination of all three—which can be put together in the field. By means of simple mullioning splines, supplied by Amweld, transoms and frames can be joined with matching side lights, borrowed lights or any combination of both—in any length. Entire partitions extending for the full length of a building can be assembled and erected by a few men, using various arrangements of these units. Glaze molding, furnished with each unit, is trim in appearance, close-fitting and easy to insert, showing no screws.

Transoms, side lights and borrowed lights with visible miter are made of prime 14 gauge steel, and are securely reinforced and welded at all joints. Exposed faces are 2" wide. Frames can be equipped in the field with anchors for wood-stud or masonry. Floor anchors are adjustable. Where more than two side lights are to be joined together, making an inaccessible mullion, special U-section floor anchors can be provided.

sizes

Transom and Borrowed Light Units

HEIGHTS—Available 1' 0" minimum to 4' 0" maximum.

WIDTHS—Equal to Standard Series 400 Frames both double and single widths.

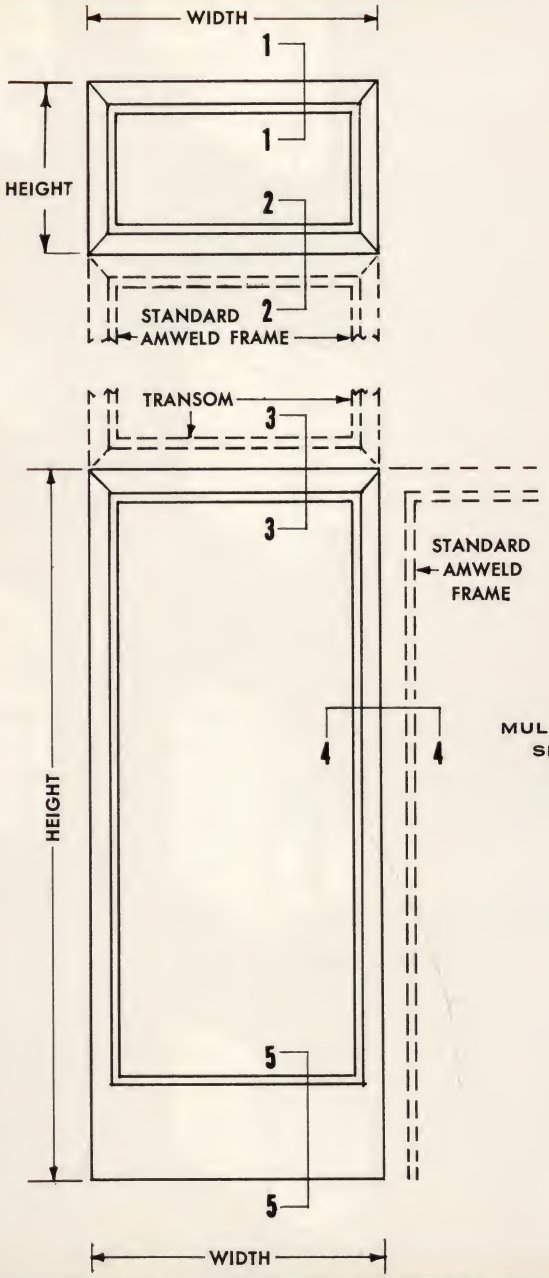
Sidelights

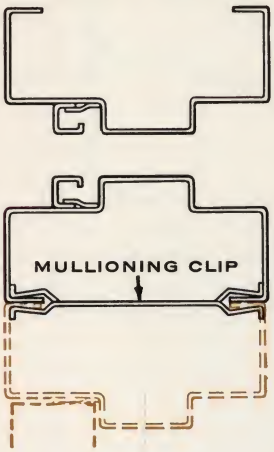
HEIGHTS—Available in 6' 8" and 7' 0".

WIDTHS—From 1' 0" minimum to 4' 0" maximum.

installation details

scale (3" = 1')

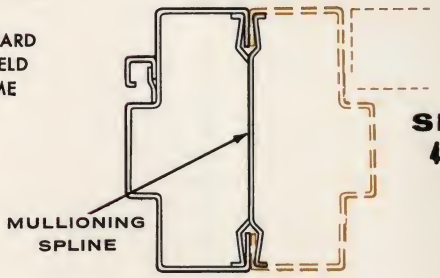




SEC. 1-1

SEC. 2-2

SEC. 3-3



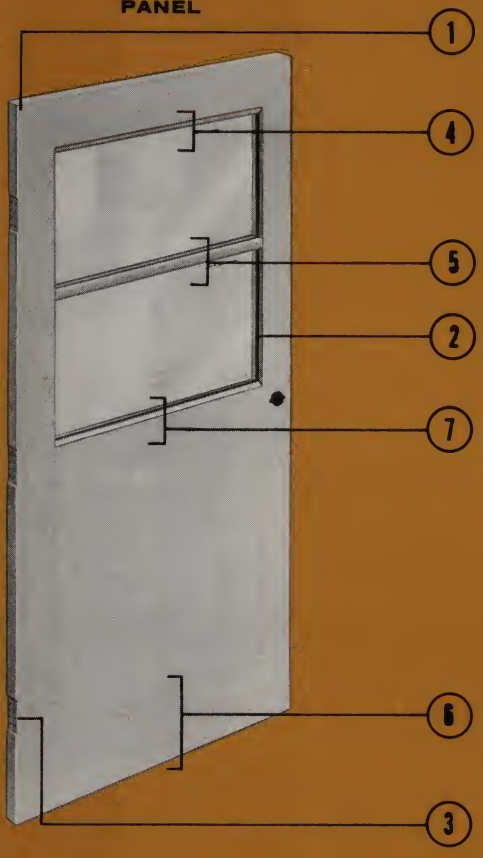
SEC. 4-4

SEC. 5-5

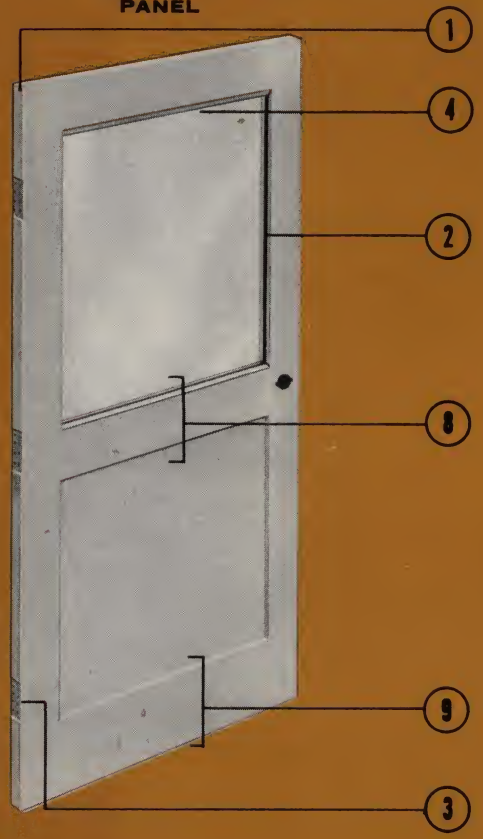
series 300 Commercial Line doors

AMWELD

FLUSH PANEL

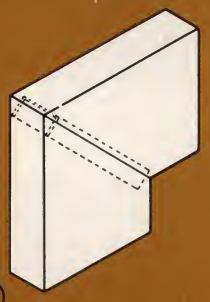


RECESSED PANEL

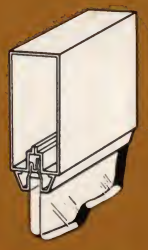


doors designed for hard service

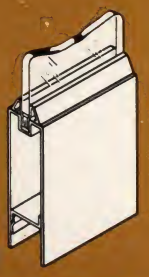
Sound engineering, precision workmanship, quality materials—plus many years of experience in the metalworking field—these are some of the ingredients that go into every door and frame that comes off the production line at Amweld. As shown in the drawings below, these rugged rail-and-stile doors are so integrated that the wear and tear of daily use is absorbed throughout their structure. Strength, rigidity and permanance are implicit in all details. The end result is lasting, trouble-free operation—handsome appearance—ease of installation—and the kind of toughness needed in today's and tomorrow's buildings.



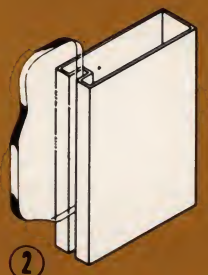
1 FULLY CLOSED RUGGED CORNER CONSTRUCTION



4 TUBULAR HEAD RAIL AND SNAP-IN GLAZING STRIPS

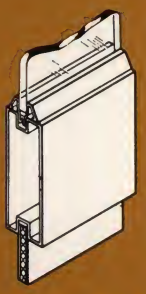


7 REINFORCED PANEL AND SNAP-IN GLAZING STRIPS

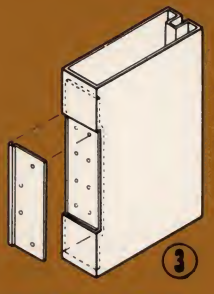


2 NEAT RIGID GLAZING GROOVE IN STILES

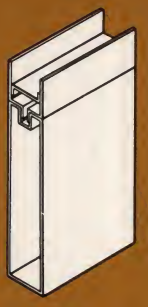
5 FIELD-INSERTED MUNTIN BAR WITH SNAP-ON COVER



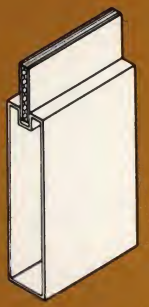
8 HEAVY CENTER RAIL WITH SNAP-IN GLAZING STRIPS AND RECESSED PANEL



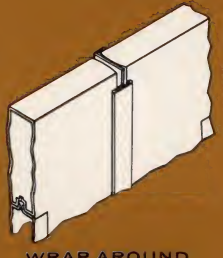
3 UNIVERSAL TYPE HINGE MORTISE



6 WIDE BOTTOM RAIL AND INTER-LOCKING PANEL



9 WIDE BOTTOM RAIL AND RECESSED PANEL



WRAP AROUND ASTRAGAL FOR PAIRS OF DOORS

Underwriters' Laboratories, Inc. INSPECTED

Doors and frames bearing Underwriters' Laboratories labels available on application. Also available with New York Board of Standards and Appeals labels—1½ hours.

AMWELD

Commercial Line architect's specifications

general

Contractor shall furnish and install steel doors and frames as manufactured by Amweld Building Products, Niles, Ohio, a division of American Welding & Manufacturing Co., Warren, Ohio, in all openings except as otherwise provided for in specifications.

frames (series 400)

construction—Frames shall be formed of (select one) 16 gauge/14 gauge steel in double rabbeted design, having 2" exposed faces and 5½" depth. Frames shall be furnished knocked-down, and designed for quick field assembly with heavy gauge channel-shaped steel gussets at the corners and self-aligning tabs for secure locking of assembly. (Option: furnished completely assembled and welded at the corners.) Corners shall present visible mitered joints. Hinge jambs shall be provided with heavy gauge steel hinge reinforcements welded in place, pierced and tapped for 1½ pair 4½" x 4½" template hinges and protected with welded-steel plaster guards. Hinges furnished by others.

Strike jambs shall be provided with strike cut-out for strike plates of locksets in accordance with Federal Spec. FF-H-106A Series 86 (mortise type), Series 161 (cylindrical type), Series 140 (integral type), or the "Universal Strike." The welded-in steel strike reinforcement will be pierced and tapped for the specified strike plate. Strike cut-out shall be covered with integral plaster-guard. Strike jambs shall have three rubber bumper mutes furnished for stops. Three steel anchors shall be provided for each jamb, and shall be stud or masonry type as specified. Anchors shall be insertable in the field. Floor anchors shall be vertically adjustable.

doors (series 300)

materials and construction—Doors shall be of rigid rail-and-stile construction in (select one) flush panel/recessed panel design. Stiles and rails shall be of 16 gauge steel mitered at the corners, reinforced with channels, face-welded and ground smooth. Panels shall be of flat 18 gauge steel, separated with inter-locking stiffeners on approximately 12" centers (recessed panels separated with resilient spacing material), and internally coated with standard sound-deadening material.

glazing—Doors of half glass or full glass types shall be furnished with formed steel glazing strips of the snap-in type, to permit selection of secure side in the field. Muntin bars for multi-light glazing shall be of field-applied type. Glazing arrangement shall accommodate ¼" thick glass, supplied by others. Vision-light doors shall provide for field installation of glass panels with center line of vision located 5' 3" from bottom of door, with net opening of 10" x 10".

hardware—Lockset preparation shall provide for field installation of locksets manufactured in accordance with Fed. Spec. FF-H-106A Series 86 (mortise), Series 161 (cylindrical) or Series 140 (integral), with flat fronts. Lock cut-outs shall be reinforced with heavy gauge steel and pierced and tapped for mounting specified locksets. Mounting holes for surface applied escutcheons shall be drilled in the field by others.

Hinge-mortises shall be reinforced with heavy gauge steel plates, welded in place and pierced and tapped for 1½ pair 4½" x 4½" template hinges. Hinges furnished by others.

Mortises shall extend full width of hinge-stile, and filler-plates shall be provided to permit installation of hinges for right-hand or left-hand swing, as specified.

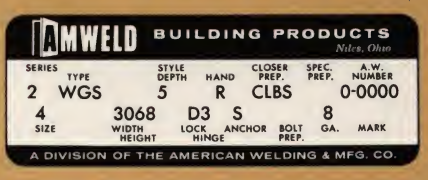
miscellaneous hardware—Where called for on drawings or otherwise specified, panic hardware, closers, or other surface-mounted hardware shall be field installed by use of Banc-Lock expansion nuts of correct size, inserted in holes spaced by template of the accessory and drilled by the contractor.

Inactive-leaf doors, where called for on drawings or in door schedule, shall be furnished with top and bottom flush bolts to mount in edge of stile and provided with strike plate for frame header. Strike stile shall be provided with welded-on wrap-around astragal. Inactive doors for push plates or rim type panic devices shall have blank stiles and be furnished without astragals.

louvers—Louvers for flush panel doors shall be of insert type with inverted V baffles, and shall occupy space between stiles and 14¼" above bottom rail. (On flush-panel half-glass doors, louver shall fill entire lower panel space—28".) Louvers for recessed panel doors shall be of the fixed type, stamped into panels in accordance with design illustrated in current manufacturer's catalog.

finish—Exposed surfaces on both doors and frames shall be phosphatized and given one baked, shop coat of zinc chromate primer.

identification label

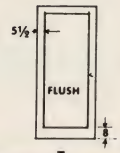
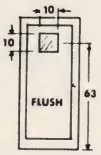
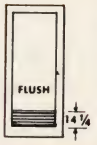
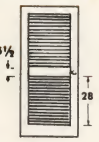
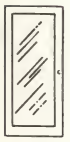


This identification label is applied to all frames, frame parts, and door cartons. It indicates all facts, such as size, style, and special preparation, as well as architect and job mark number. The label is placed (a) on the floor anchor of jambs and frames, (b) inside the throat of loose headers, and (c) two places on the edge of door cartons. This placement permits distributors to determine stock without removing jambs and headers from shelves and doors from cartons. Contractors are able to properly locate doors and frames at the job site. Doors and frames can be installed and painted without removing labels.

series 300 Commercial Line door types and sizes

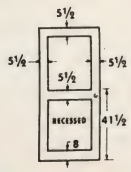
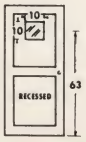
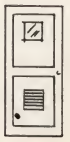
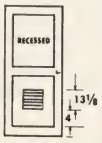
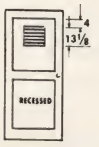
Figures in boxes below show square inches of free louver area.

flush panel

DOOR HEIGHT	DOOR WIDTH	F	V	VL	L	TL	DL	FL	FG
									
6′ 8″	2′ 0″*			124	124	124	248		
	2′ 4″			167	167	167	334		
	2′ 6″*			188	188	188	376		
	2′ 8″*			209	209	209	418	915	
	3′ 0″*			252	252	252	504	1096	
	3′ 4″*			294	294	294	588		
	3′ 6″*			315	315	315	630		
7′ 0″	2′ 0″*			124	124	124	248		
	2′ 4″			167	167	167	334		
	2′ 6″*			188	188	188	376		
	2′ 8″*			209	209	209	418	1170	
	3′ 0″*			252	252	252	504	1368	
	3′ 4″*			294	294	294	588		
	3′ 6″*			315	315	315	630		
	3′ 8″*			336	336	336	672		
	4′ 0″*			378	378	378	756		

*Inactive leaf available. Includes wrap-around astragal and top and bottom flush bolts.
Also available as blank stile doors for use with push plates or rim-type panic devices.

recessed panel

DOOR HEIGHT	DOOR WIDTH	RP	RV	RVL	RL	RTL	RDL
							
6′ 8″	2′ 0″*			32	32	32	64
	2′ 4″*			32	32	32	64
	2′ 6″*			32	32	32	64
	2′ 8″*			64	64	64	128
	3′ 0″*			64	64	64	128
	3′ 4″*			64	64	64	128
	3′ 6″*			64	64	64	128
7′ 0″	2′ 0″*			32	32	32	64
	2′ 4″*			32	32	32	64
	2′ 6″*			32	32	32	64
	2′ 8″*			64	64	64	128
	3′ 0″*			64	64	64	128
	3′ 4″*			64	64	64	128
	3′ 6″*			64	64	64	128
	3′ 8″*			64	64	64	128
	4′ 0″*			64	64	64	128

*Inactive leaf available. Includes wrap-around astragal and top and bottom flush bolts.
Also available as blank stile doors for use with push plates or rim-type panic devices.

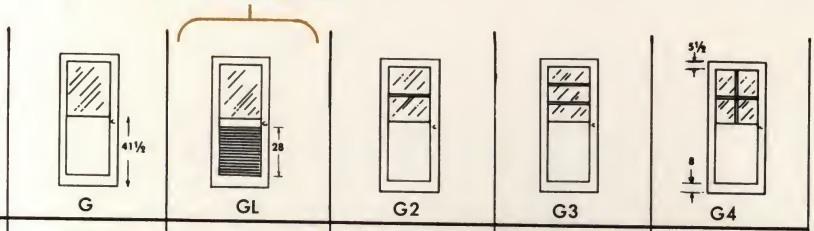
Underwriters' Laboratories, Inc. INSPECTED

Commercial Line flush panel type doors can be supplied in 2′ 6″ to 4′ 0″ widths with Underwriters' Laboratory Inspection labels. Flush panel doors (F) are available with 3-hour "A" labels or 1½ hour "B" labels. Vision panel doors (V) are available with 1½ hour "B" labels, and half-glass doors (G) are available with ¾ hour "C" labels.

standard door glass sizes — flush & recessed doors

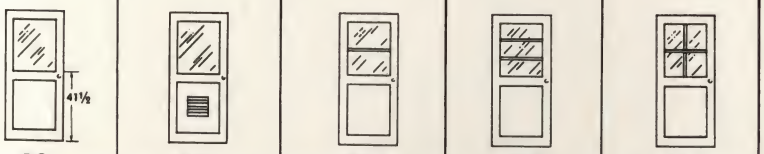
DOOR HEIGHT	DOOR WIDTH	FG	G & RG	G2 & RG2	G3 & RG3	G4 & RG4
6′ 8″	2′ 4″		17⅜ x 32	17⅜ x 15⅝	17⅜ x 10⅜	7½ x 15⅝
	2′ 6″		19⅜ x 32	19⅜ x 15⅝	19⅜ x 10⅜	9½ x 15⅝
	2′ 8″		21⅜ x 32	21⅜ x 15⅝	21⅜ x 10⅜	10½ x 15⅝
	3′ 0″	25⅜ x 65½	25⅜ x 32	25⅜ x 15⅝	25⅜ x 10⅜	12½ x 15⅝
	3′ 4″	29⅜ x 65½	29⅜ x 32	29⅜ x 15⅝	29⅜ x 10⅜	14½ x 15⅝
	3′ 6″	31⅜ x 65½	31⅜ x 32	31⅜ x 15⅝	31⅜ x 10⅜	15½ x 15⅝
7′ 0″	2′ 6″		19⅜ x 36	19⅜ x 17⅝	19⅜ x 11½	9½ x 17⅝
	2′ 8″		21⅜ x 36	21⅜ x 17⅝	21⅜ x 11½	10½ x 17⅝
	3′ 0″	25⅜ x 69½	25⅜ x 36	25⅜ x 17⅝	25⅜ x 11½	12½ x 17⅝
	3′ 4″	29⅜ x 69½	29⅜ x 36	29⅜ x 17⅝	29⅜ x 11½	14½ x 17⅝
	3′ 6″	31⅜ x 69½	31⅜ x 36	31⅜ x 17⅝	31⅜ x 11½	15½ x 17⅝
	3′ 8″	33⅜ x 69½	33⅜ x 36	33⅜ x 17⅝	33⅜ x 11½	16½ x 17⅝
	4′ 0″		37⅜ x 36	37⅜ x 17⅝	37⅜ x 11½	18½ x 17⅝

Figures in boxes below show square inches of free louver area.



G	GL	G2	G3	G4
	383			
	427			
	512			
	598			
	641			
	383			
	427			
	512			
	598			
	641			
	685			
	772			

Half-glass doors convert in field to multi-light designs shown above.



RG	RGL	RG2	RG3	RG4
	64			
	128			
	128			
	128			
	128			
	64			
	128			
	128			
	128			
	128			
	128			
	128			

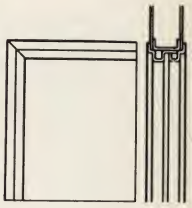
Half-glass doors convert in field to multi-light designs shown above.

sizes available.

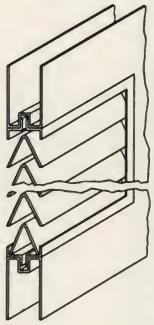
Types and sizes in shaded blocks are available for fast delivery when prepared for 161 Series locks.

vision panels

Doors with vision lights have light centered between the stiles, positioned 5′ 3″ from bottom of door to center line of vision light. Exposed glass is 10″ x 10″. Frame is simple, clean design.



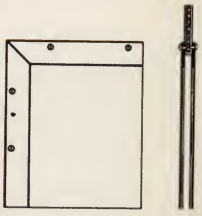
louvers



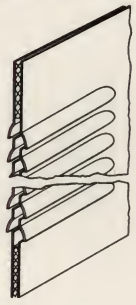
All flush panel doors have inverted V-type louvers which laterally fill space between stiles. Except in half-glass and full louvered doors, louvers are 14¼″ high. Bottom louver in the full louvered doors and in half-glass doors are 28″ high. Top and bottom louver in the full louvered doors are separated by a 5½″ center rail.

vision panels

Recessed Panel doors are available with vision lights centered between stiles in the upper panel, positioned 5′ 3″ from bottom of door to center line of vision light, regardless of door height. Exposed glass is 10″ x 10″.



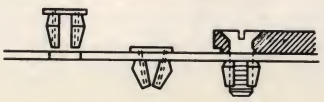
louvers



In Recessed Panel doors, louvers are of the pierced type, as shown in illustration (left). 2′ 0″ and 2′ 6″ doors have louvers 9″ x 13⅛″, larger doors have louvers 18″ x 13⅛″.

miscellaneous hardware

Mounting of closers and other surface-applied hardware, is performed in the field by use of "Banc-Lok" nuts, supplied by Amweld. These are hand-inserted in holes drilled at proper locations for receipt of mounting screws, making special reinforcements unnecessary.



For suggested architect's specifications see page 17

AMWELD steel folding closet door units

series 500
Prestige Line
louvered panels

colonial styling

These precision-made louvered closet units lend classic beauty to any style interior. They are particularly well suited to entry way closets, bedroom wardrobes, or wherever the convenience of folding doors is desired and a decorator touch is called for. Top half is louvered. Attractive molding surrounds louvered area and conceals all edges.

sizes

Prestige Line units are available in 6' 8" and 8' 0" high, in 3' 0", 4' 0", 5' 0" and 6' 0" widths. Furnished as a package, complete with brass door pulls, upper and lower track and all hardware required.

antique ivory finish

Prestige units come ready to install. Factory applied, baked-on enamel finish requires no additional painting—or can serve as base coat where different color is desired.

louvered design

FREE CIRCULATION

Louvered area permits circulation of fresh air to closet interior. Prevents mildew, particularly in humid climates.

KEEPS DIRT OUT

Solid lower panels keep out dust from sweeping. Clothes stay clean longer—free from intruding dust and lint.

SOUND DEADENED

The molding surrounding louvered area is repeated on lower panel—effectively sound deadens each panel. Makes the Prestige Line folding door extremely quiet in operation.

EASY OPERATION

Prestige Line units operate smoothly on lifetime nylon pivots. Open and close at finger-tip touch.

suggested applications for folding closet door units

ATTICS

GARAGES

WARDROBES

CUPBOARDS

BASEMENTS

CLOSETS

BEDROOMS

series 500 Commodity Line

folding closet units

standard 6′ 8″

Standard height folding door units can be trimmed to match height of standard door openings. Finished with rust-inhibiting prime coat, ready for painting.

king-size 8′ 0″ saves money

Also available in 8′ 0″ high, king-size units. This floor-to-ceiling unit provides additional overhead storage. Eliminates extra cost of building wall down from ceiling. Ideal for wardrobes, closets and, when used as multiple units, can make a complete storage wall in basement, multi-purpose room, or garage.

packed in single carton

Amweld folding closet door units are packed singly in carton. Each carton contains panels, tracks, handles, and all hardware required for installation. Single opening units (two panels) are available and are also packed singly.

architect's specifications folding closet units series 500 prestige line or commodity line

Panels—Panels shall be of 24 gauge steel formed at the edges to give maximum rigidity and shall contain top and bottom horizontal stiffeners. Flush panels furnished with sound-deadening material for quiet operation.

Top and Bottom Track shall be formed of heavy gauge metal and fitted with anti-friction bearings at pivot points.

Guides and pivots to be of long-wearing, low-friction material. Each panel shall be reinforced with metal stiffeners and fitted with attractive finger pulls. Furnished with baked-on neutral color prime coat electrostatically applied and controlled.

Option—18 gauge "K-D" steel frames formed to Amweld standard profiles shall be used to mount folding door units.

FINISH—All exposed surfaces shall be primed with a neutral color, rust-inhibiting, baked-on synthetic enamel, electrostatically applied and controlled.

sizes

series 500 folding closet units

	COMMODITY LINE			PRESTIGE LINE
	6′ 8″ Standard	8′ 0″ King Size	6′ 8″ & 8′ 0″ Full Louvered	6′ 8″ & 8′ 0″ Louvered
Double Opening	3′ 0″ 4′ 0″ 5′ 0″ 6′ 0″	3′ 0″ 4′ 0″ 5′ 0″ 6′ 0″	3′ 0″ 4′ 0″ 5′ 0″ 6′ 0″	3′ 0″ 4′ 0″ 5′ 0″ 6′ 0″
Single Opening	1′ 6″ 2′ 0″ 2′ 6″ 3′ 0″	1′ 6″ 2′ 0″ 2′ 6″ 3′ 0″	1′ 6″ 2′ 0″ 2′ 6″ 3′ 0″	1′ 6″ 2′ 0″ 2′ 6″ 3′ 0″

Available for fast delivery.

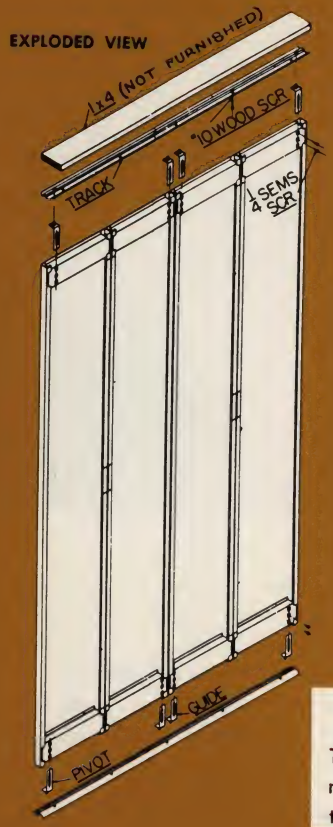
flush panels

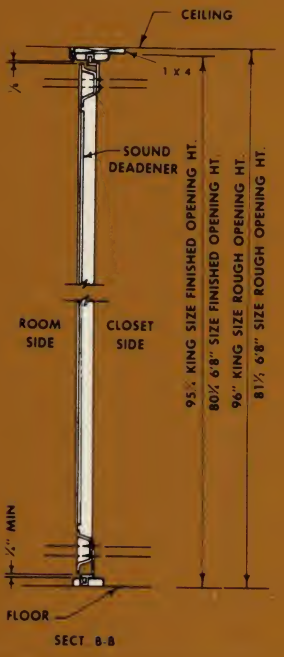
The most convenient door for any closet, wardrobe or storage area. Provides full access without sacrificing valuable floor space. Consists of four panels, hinged in pairs. Doors open by folding to each side. The 3′ unit projects about 5″ into room when opened, the 4′ only 7″, the 5′ only 9″ and the 6′ unit 11″. Unit is sound deadened and operates smoothly on self-lubricating nylon pivots.

full louvered panels

Amweld 6′ 8″ and 8′ 0″ high folding door units are now available fully louvered top-to-bottom with decorative center rail. Provides attractive and practical closet closure, particularly for humid climates. Keeps dust out and permits ventilation.

AMWELD "K-D" steel folding closet door units

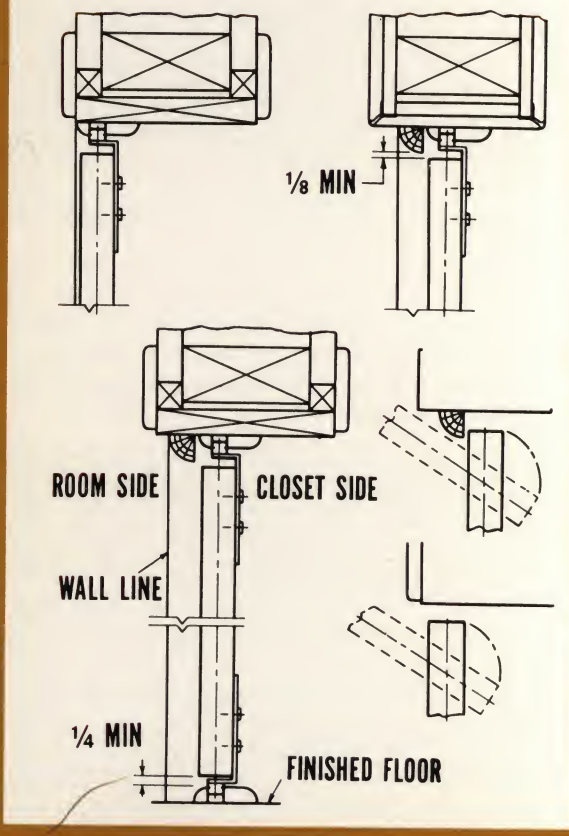


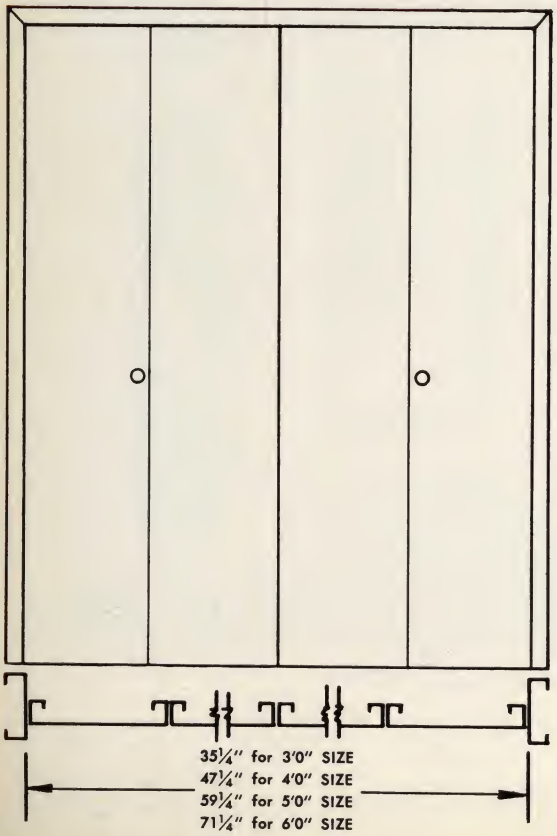


easy installation

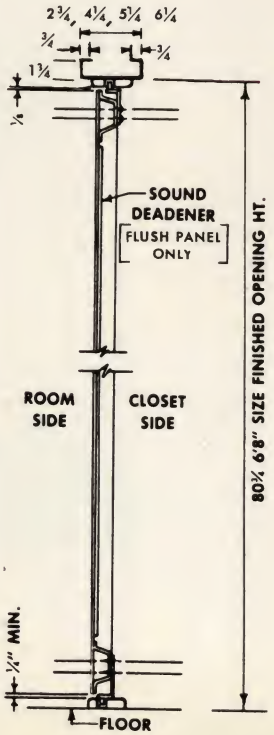
These units can be installed by any workman in minutes. Screw driver is only tool needed.

optional methods of trim





NOTE:
2¾" frame has
½" plaster return



series 500

Commodity Line

framed steel folding door units

Steel frames for trimming opening and folding closet door units can be furnished as a complete unit. Requires no facing trim. Consists of 2 jambs and 1 header, top and bottom track, panels, handles and all hardware required for installation.

sizes	Commodity Line 6' 8" Flush Panel	Prestige and Commodity Line 6' 8" Louver Design
DOUBLE OPENING	3' 0" 4' 0" 5' 0" 6' 0"	3' 0" 4' 0" 5' 0" 6' 0"
SINGLE OPENING	2' 0" 2' 6" 3' 0"	2' 0" 2' 6" 3' 0"

E-Z frames for wood doors

AMWELD

heavy gauge steel

Made of 22 gauge rust-resistant steel.

installs over drywall

Fast, economical method of framing room opening. Requires one man less than 15 minutes to install. Eliminates mortising, drilling and fitting of jambs.

attachment

Frames are securely anchored to studs by use of wood screws through the hinges and strike plates. Wall anchors at the base of jambs keep frame plumb. (Base anchors are covered by base mouldings.)

mitered corners

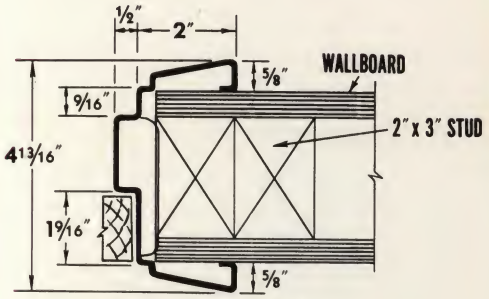
Frames are self aligning, mitered corners present neat, hairline closure.

ready to paint

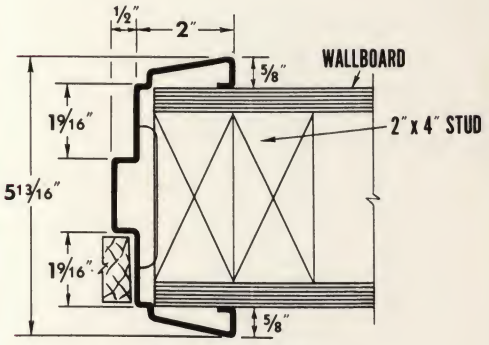
E-Z Frames are specially treated at factory to prepare surface for painting. Require no special priming.

installation details

scale (3″=1′)



4 13/16″ FRAME IN DRYWALL



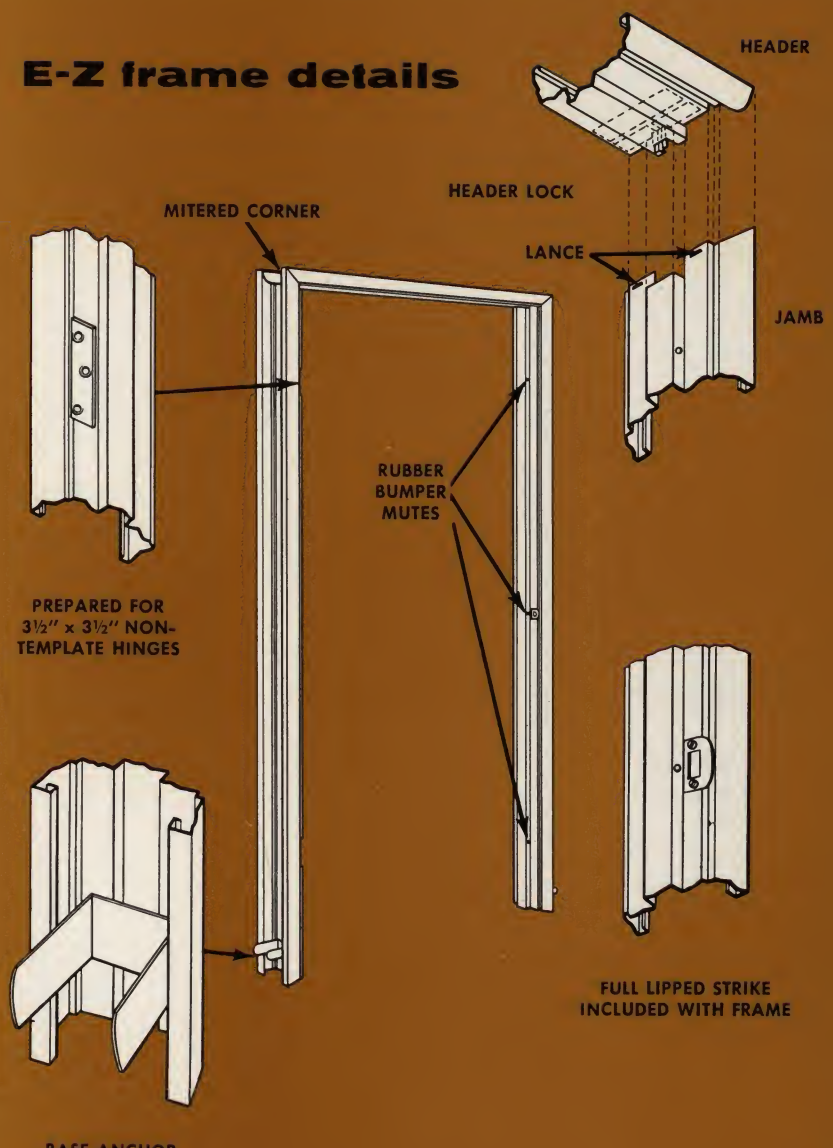
5 13/16″ FRAME IN DRYWALL

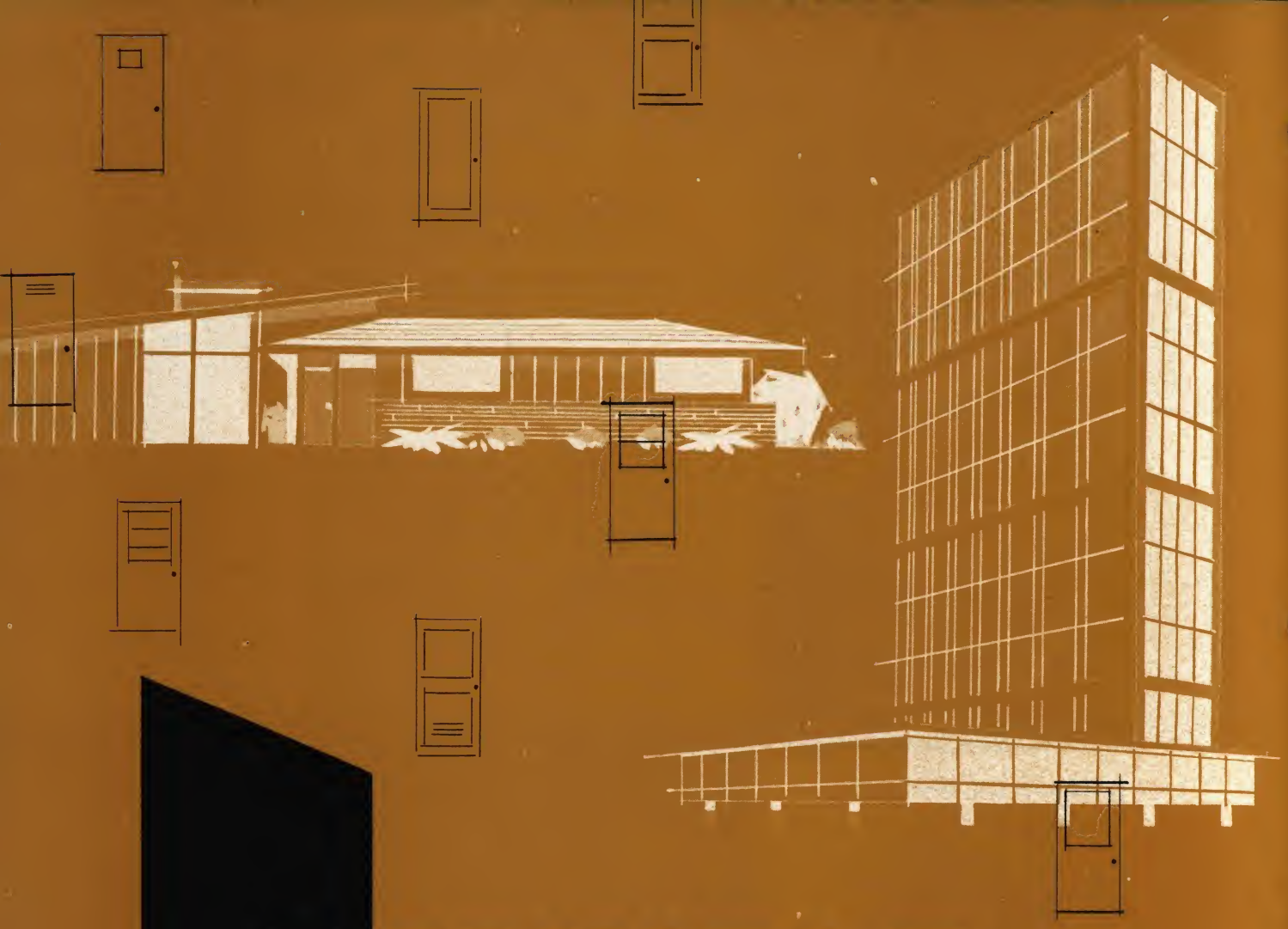
sizes

Frame Height	Opening	Frame Height	Opening
6′ 6″	1′ 6″	6′ 8″	1′ 6″
	2′ 0″		2′ 0″
	2′ 2″		2′ 2″
	2′ 4″		2′ 4″
	2′ 6″		2′ 6″
	2′ 8″		2′ 8″
	3′ 0″		3′ 0″

ALL SIZES AVAILABLE FOR FAST DELIVERY.

E-Z frame details





AMWELD®

BUILDING PRODUCTS

PLANT STREET, NILES, OHIO

A Division of The American Welding & Manufacturing Co., Warren, Ohio

Quality Guarantee

★

This steel door and or frame meets all requirements of the applicable Commercial Standard, CS211-57, CS212-57, or CS213-57, issued by the U. S. Department of Commerce.

BY

AMWELD©
BUILDING PRODUCTS
A DIVISION OF
THE AMERICAN WELDING AND MANUFACTURING COMPANY
NILES, OHIO

MEMBER OF

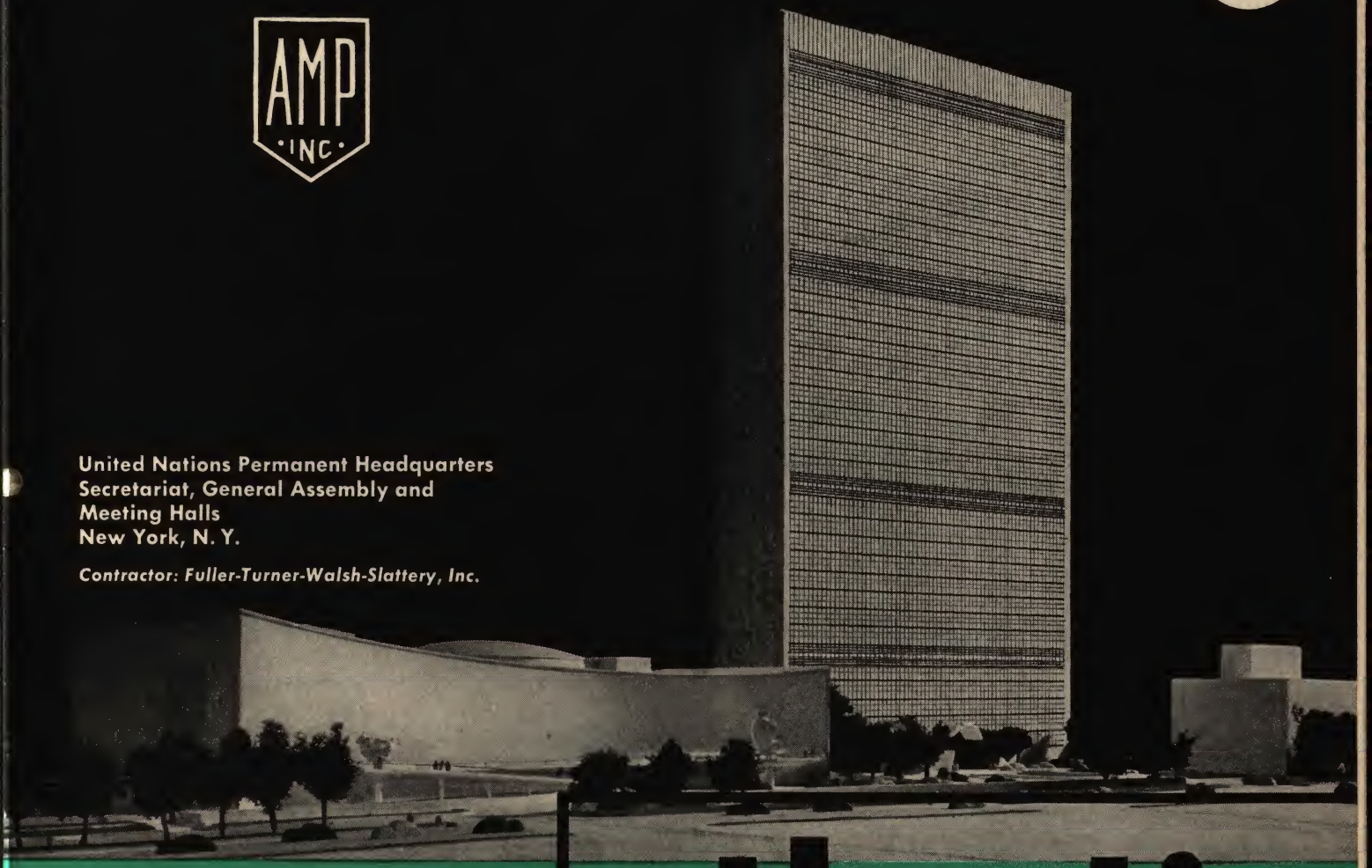
SDI STEEL DOOR INSTITUTE

BP825 40MCL

Litho in U.S.A.

16b
At

AMP
INC



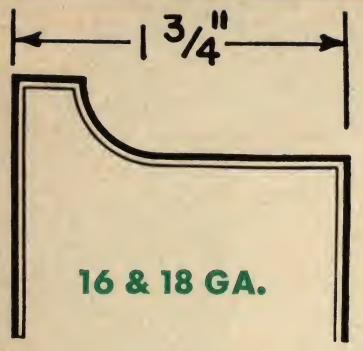
United Nations Permanent Headquarters
Secretariat, General Assembly and
Meeting Halls
New York, N. Y.

Contractor: Fuller-Turner-Walsh-Slattery, Inc.

atlantic
metal products, inc.

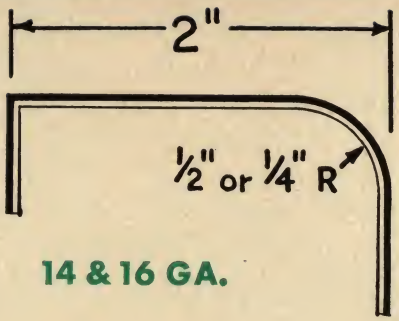
- hollow metal doors, jambs and trim
- combination steel door frames
- elevator and dumbwaiter enclosures
- kalamein doors, jambs and trim
- tin clad fire doors and hardware
- custom built metal specialties
- Underwriters Laboratories label service

26 YEARS OF QUALITY SERVICE



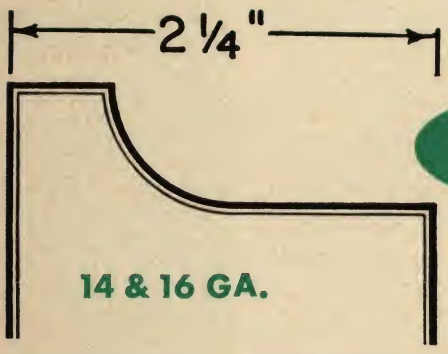
900A

16 & 18 GA.



1300

14 & 16 GA.



900B

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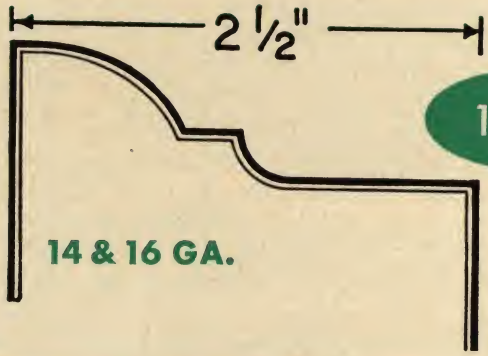

1400

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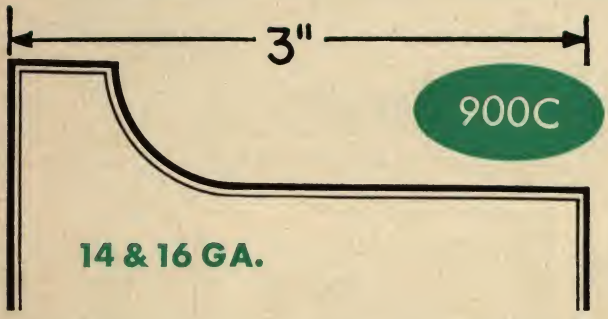
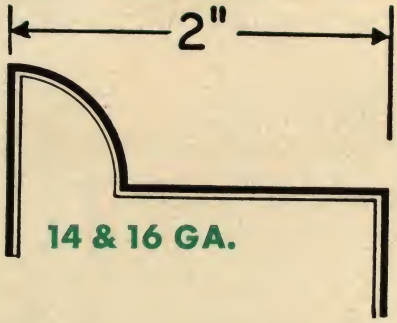


900C

14 & 16 GA.



1500

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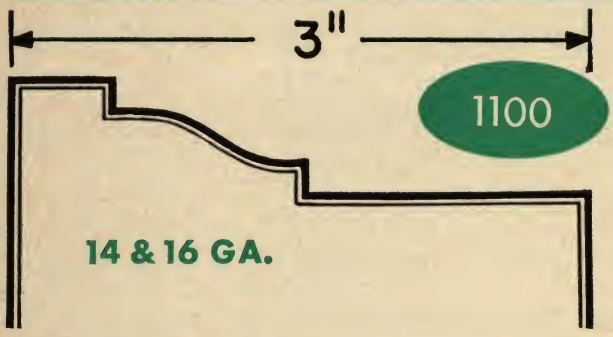

1100

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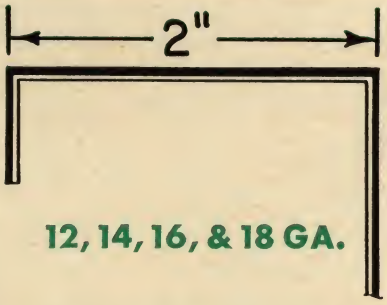
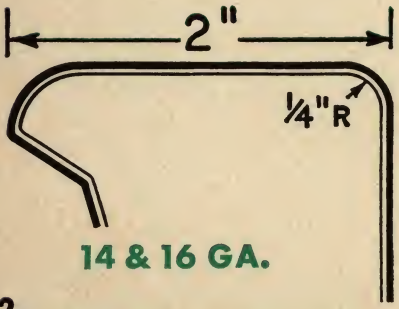


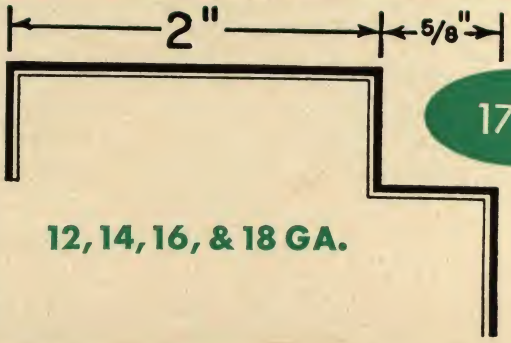
1600

12, 14, 16, & 18 GA.



1200

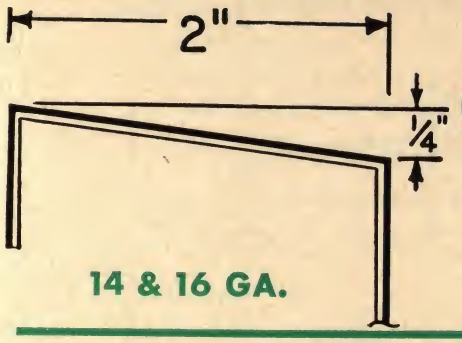
14 & 16 GA.



1700

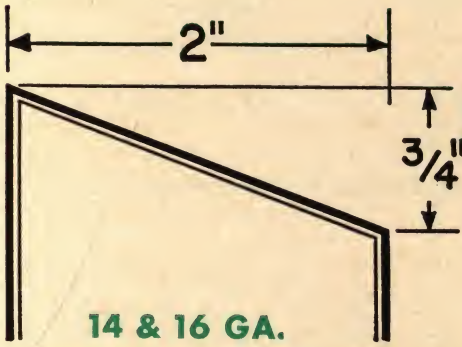
12, 14, 16, & 18 GA.

NOTE : please refer to page 6 for complete specifications covering combination frames



1800A

14 & 16 GA.



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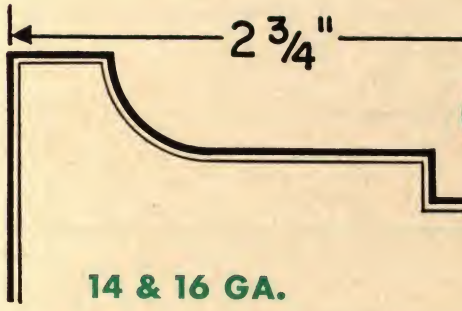

1900

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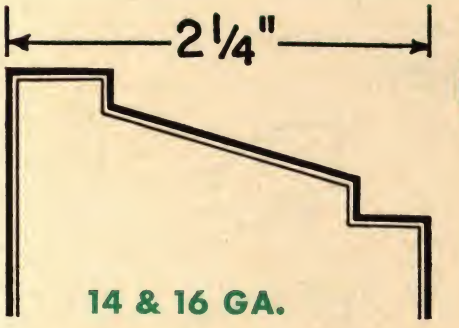

2000A

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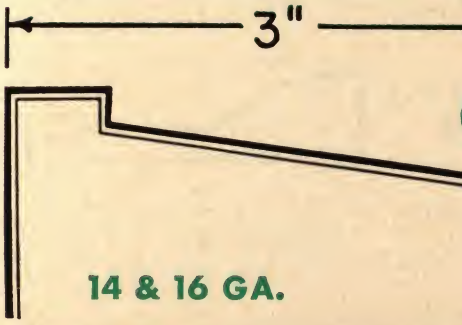

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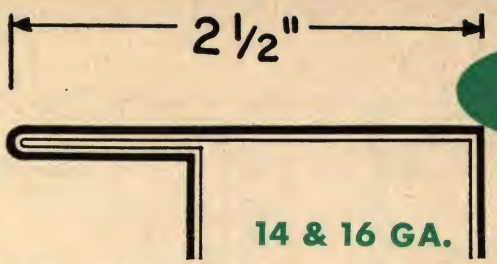
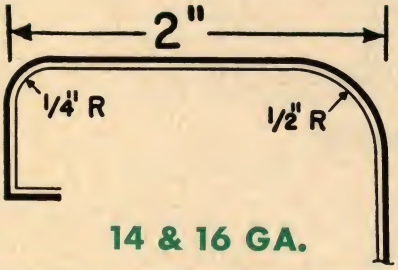


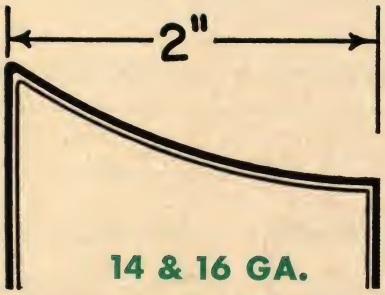
2100

14 & 16 GA.



2200

14 & 16 GA.



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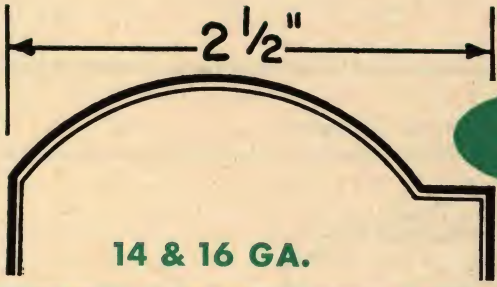
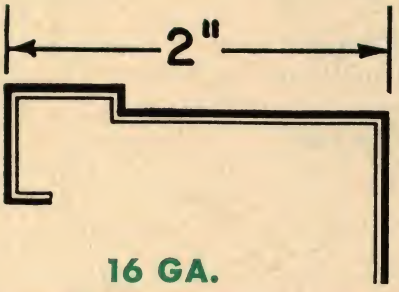


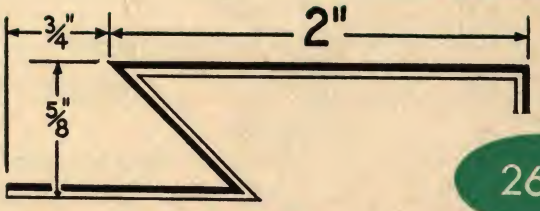
2400

14 & 16 GA.



2500

16 GA.



2600

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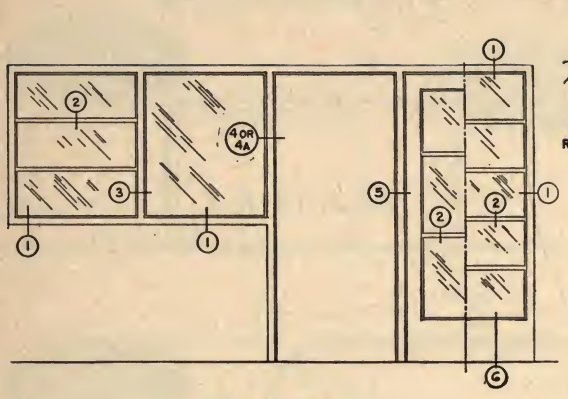
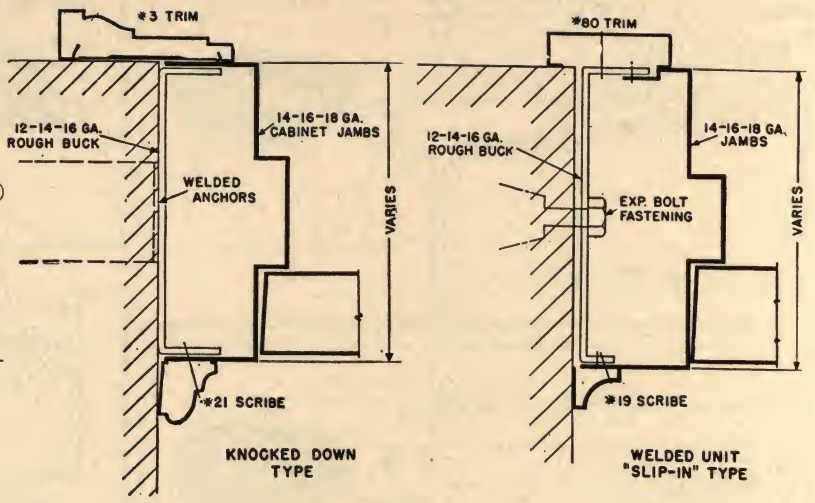
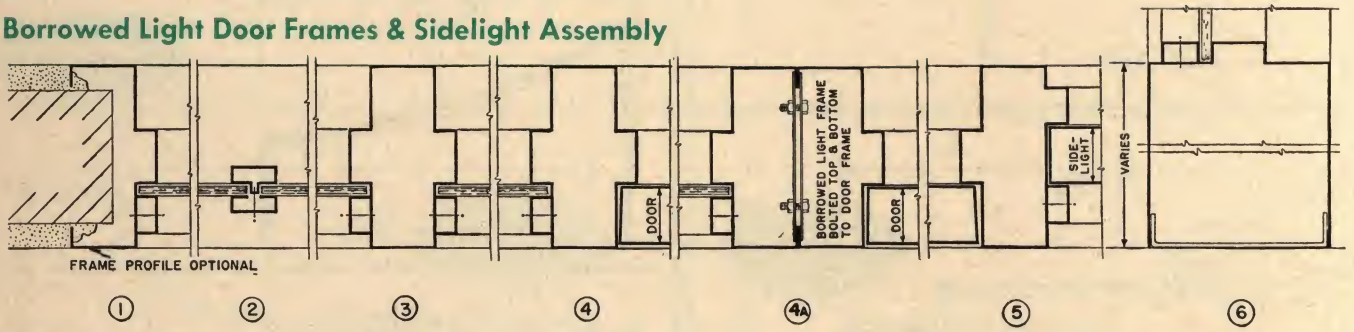


Elevation

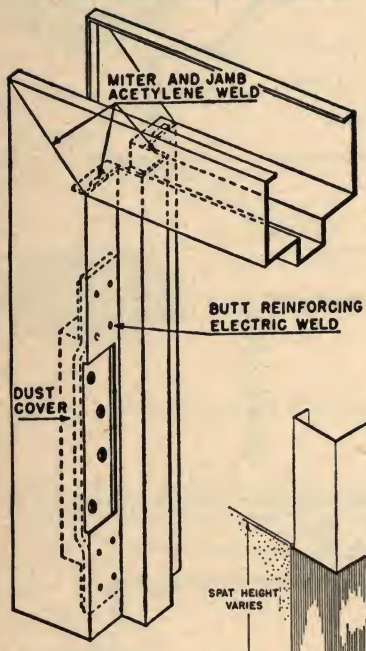


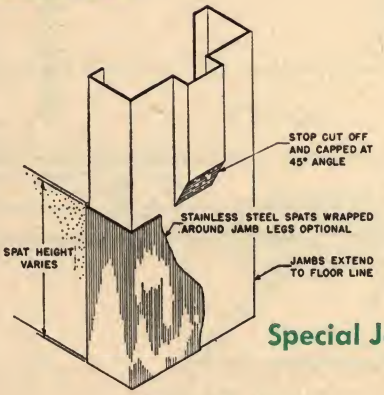
Rough Buck Cabinet Jamb & Trim Assembly

Borrowed Light Door Frames & Sidelight Assembly

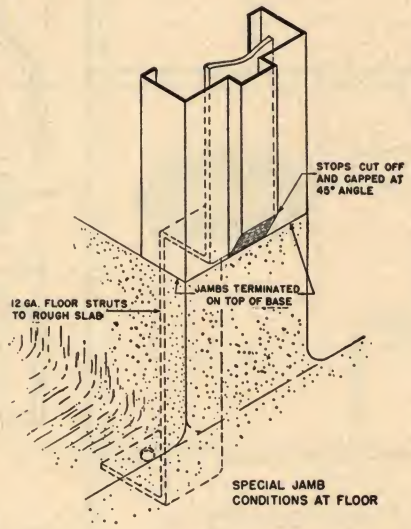


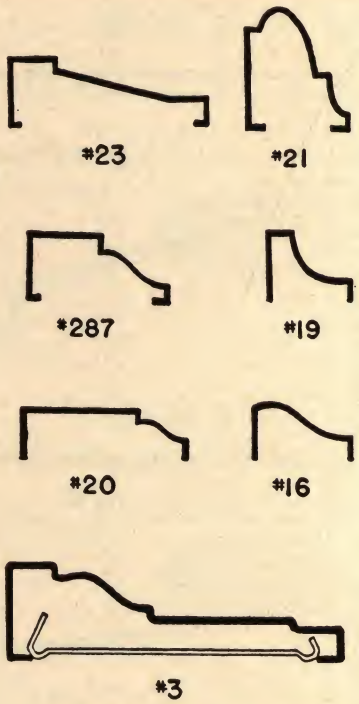
Isometric Frame Section




STOP CUT OFF AND CAPPED AT 45° ANGLE
STAINLESS STEEL SPATS WRAPPED AROUND JAMB LEGS OPTIONAL
SPAT HEIGHT VARIES
JAMBS EXTEND TO FLOOR LINE

Special Jamb Conditions at Floor


STOPS CUT OFF AND CAPPED AT 45° ANGLE
12 GA. FLOOR STRUTS TO ROUGH SLAB
JAMBS TERMINATED ON TOP OF BASE
SPECIAL JAMB CONDITIONS AT FLOOR



Stock Scribes and Trim
½ full size

custom-standard 18 ga. doors & 16 ga. frames provide:

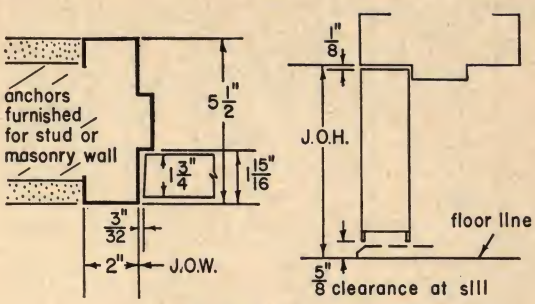
- greater economy
- custom quality construction
- wide choice of types and sizes
- varied hardware preparation
- prompt shipment — three weeks
- label service

single units

2′–6″ x 6′–8″	2′–6″ x 7′–0″
2′–8″ x 6′–8″	2′–8″ x 7′–0″
3′–0″ x 6′–8″	3′–0″ x 7′–0″
3′–6″ x 6′–8″	4′–6″ x 7′–0″
4′–0″ x 6′–8″	4′–0″ x 7′–0″
4′–0″ x 8′–0″	

pair swing units

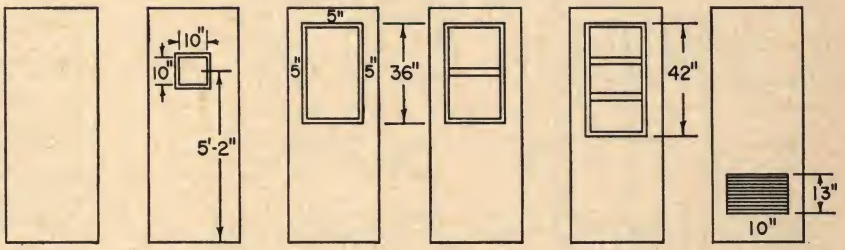
5′–0″ x 6′–8″	6′–0″ x 7′–0″
6′–0″ x 6′–8″	7′–0″ x 7′–0″
5′–0″ x 7′–0″	8′–0″ x 8′–0″



JAMB HEAD & SILL DATA

TYPE 1600 FRAME

DOOR TYPES



HARDWARE PREPARATION

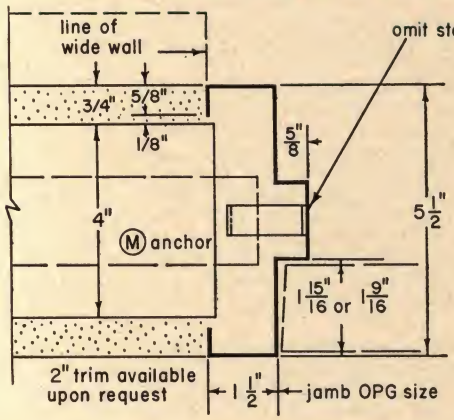
Hinges: Reinforcement for 1 ½ pair Stanley No. 146, 4 ½″ x 4 ½″ hinges.

Locks:

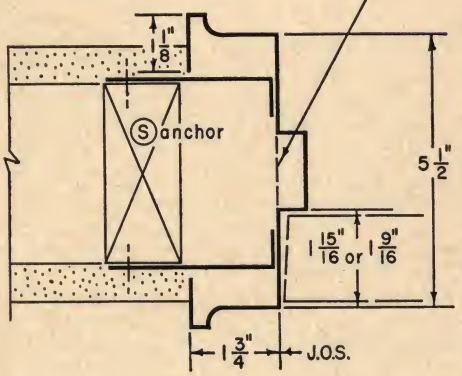
Schlage D	Lockwood H, 5100
Yale 5400, 8000	Russwin 400, 2000
Corbin 800, 7300, 7500, 7700, 7900	Sargent 7600, 7700

Top and bottom flush bolts furnished for inactive leaf of pairs of doors.
Surface door closers and rubber bumpers.

economy frames 16 ga. & 18 ga.



use (M) to denote anchors for masonry
use (S) to denote anchors for 4" wood or steel studs



TYPE E1600

TYPE E900

- Available in all widths x 6′–8″ and 7′–0″ heights.
- Shipment within 3 weeks.
- Write for more information on both Custom-Standard and Economy lines.

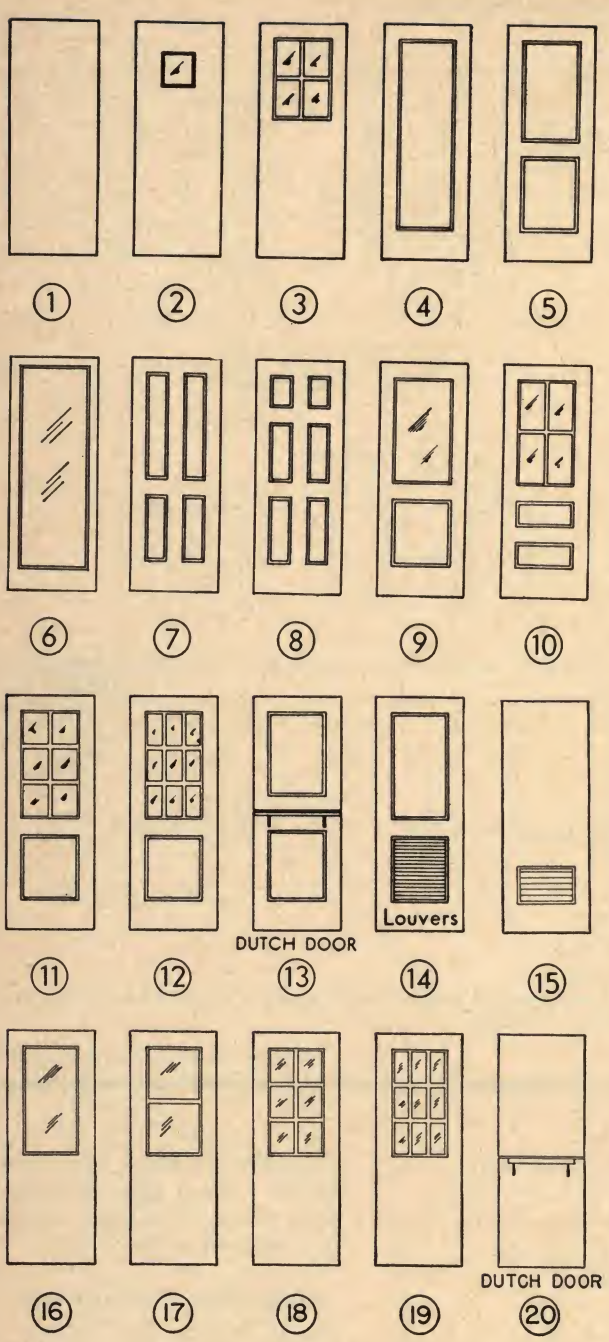
ECONOMY frames are completely welded units, manufactured under the highest quality standards of construction.

HARDWARE PREPARATION

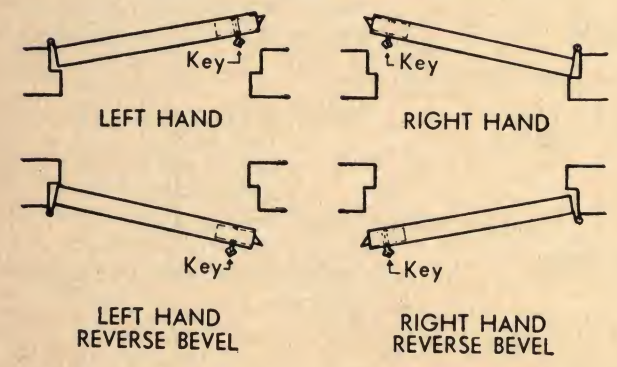
Hinges: Stanley No. 804 3 ½″ or 4″ hinges with one leaf spot welded to frame or drilled and tapped reinforcement plates for Stanley #146, 4″ x 4″ or 4 ½″ x 4 ½″.

Locks: Schlage D;
Yale 5400;
Corbin 800;
Lockwood H;
Russwin 400.

Surface door closer and rubber bumpers.



HAND AND BEVEL OF DOORS



UNDERWRITERS LABELED DOORS				
CLASS OF OPG.	DOOR TYPE	MAXIMUM GLASS	MAX. OPG.	
			SINGLE	PAIR
"A"	1-4-5-7-8	No Glass Permitted	4′x10′	8′x10′
"B"	1-2-4-5-7-8	100 Sq. In. per Op'g.	4′x10′	8′x10′
"C"	1 to 12 incl.	1296 Sq. In. Each Light	4′x10′	8′x10′
"D"	1-4-5-7-8	No Glass Permitted	4′x10′	8′x10′
"E"	1 to 12 incl.	720 Sq. In. 4′-6″ High Max. Each Light	4′x10′	8′x10′

Types 13-14-15 Cannot be Labeled

UNDERWRITERS LABELED FRAMES		
GAUGE	MAXIMUM OPENING	
	SINGLE	PAIR
#16	3′-6″x7′-6″	5′-0″x7′-6″
#14 and #12	4′-0″x10′-0″	8′-0″x10′-0″

SPECIFICATIONS

FRAMES—Combination frames with integral trim are to be formed of #12, #14 and #16 U.S. standard gauge, best grade commercial furniture stock steel. Corners shall be mitered, fitted, welded the full length, and ground smooth. Not less than 3 anchors on each jamb to suit wall condition, and floor angle clips with 2 holes for sill anchorage are to be provided for each frame. Steel angle spreaders shall be welded at the bottom to insure parallel alignment.

All frames shall be mortised and reinforced properly and as necessary for the installation of finished hardware. Reinforcing plates at the butts shall be not less than ⅛″ gauge x 10″ long, with #26 gauge galvanized plaster guards, spot-welded to protect tapped holes from mortar.

Drilling and tapping for door checks, brackets and transom operators shall be done in field by the door erectors.

DOORS—Flush type doors shall be constructed of 2 plates of not less than #18 gauge, assembled and reinforced with interlocking vertical stiffeners, spaced approximately 5″ on centers and spot-welded to both sides. All doors shall be provided with suitable insulation to reduce metallic sound.

Panelled type doors shall be constructed of #18 gauge stiles and rails, with #20 gauge panels and mouldings. Stiles, rails and panels to be filled with proper insulation. Joints to be welded and dressed smooth. Where glass panels are indicated, provide removable stops secured with countersunk oval head screws.

All doors shall be mortised and reinforced for required hardware and drilled and tapped to receive mortise hardware. Drilling and tapping for surface applied hardware shall be done in the field.

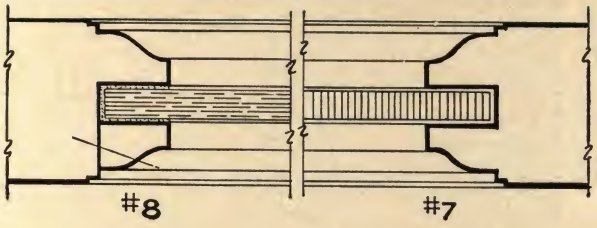
Screen doors of stock design to be panelled type with dividing middle rail. Top and bottom panels to be provided with #16 mesh insect screen, lower panel to be furnished with wire mesh protective guard.

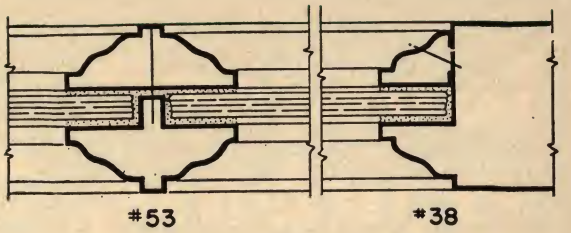
LABEL SERVICE—Where doors and frames are called for on drawings as labeled, their construction shall conform to all requirements of the National Board of Fire Underwriters and/or the New York Board of Standards & Appeals.

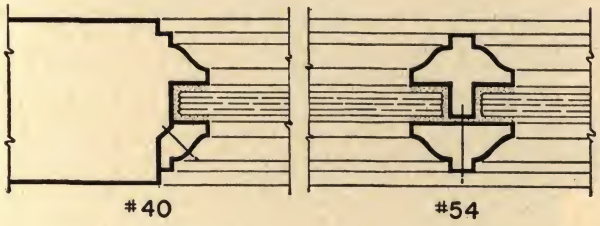
FINISHES—After assembly, all metal is to be thoroughly cleaned of rust, oil and grease and given a coat of rust-resisting metallic primer with filler as required.

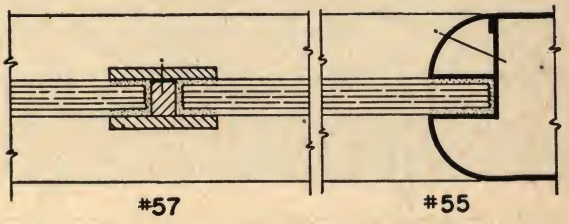
When doors and frames are to receive a baked enamel finish, they are to be cleaned and primed as above specified and given two additional coats of enamel. Each coat shall be baked and sanded smooth, the final coat to be rubbed to an egg shell gloss. Grained finishes are to receive two coats of varnish baked on and rubbed to an egg shell gloss.

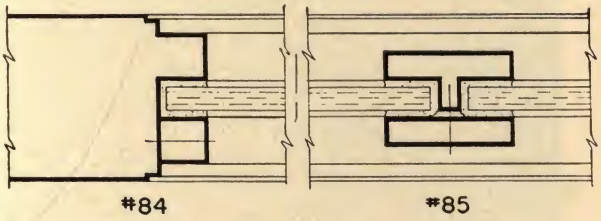
Door Mouldings



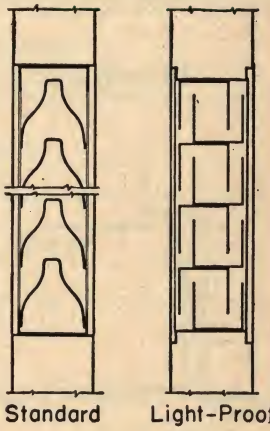








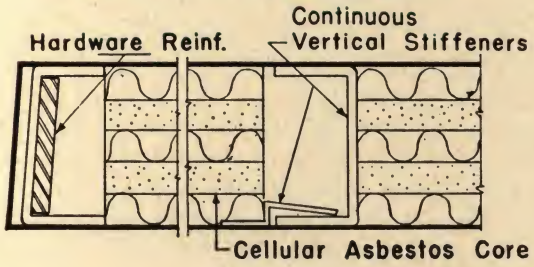
Louvre Details



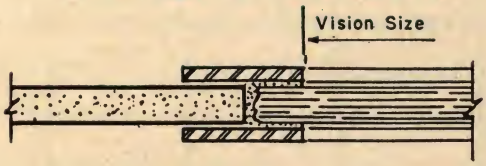
DOOR STANDARDS

Door Thickness 1¾″
Stiles, Top Rails 5″
Intermediate Rails 5″
Bottom Rails 10″

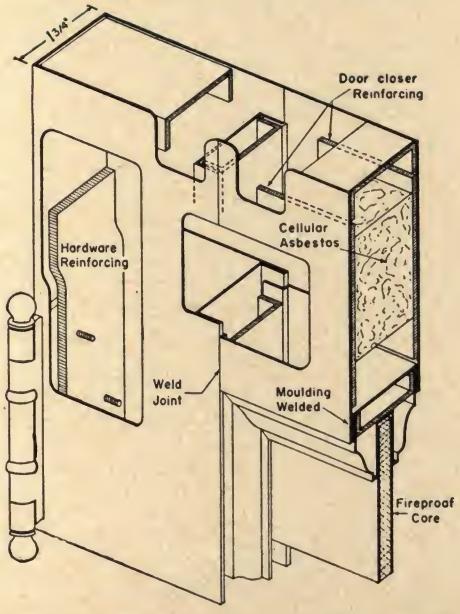
Part Section Thru Flush Door



Vision Light for Paneled Door



Corner Section of Paneled Door



KALAMEIN DOORS, JAMBS AND TRIMS

SPECIFICATIONS—Doors manufactured of standard thicknesses and have cores of selected non-resinous white pine properly kiln-dried and covered with #24 or #26 gauge patent levelled furniture steel or galvanized iron. All seams are flushed with solder and scraped smooth.

The panels are of asbestos, fibre board or other fire-resisting materials and covered on both sides with metal the same as the doors, and are glued under hydraulic pressure. Jambs and trim are to be of the same material as the doors. All stiles, rails and mouldings are to be drawn through steel dies to assure sharp arises and smooth surfaces.

All kalamein material is to receive a coat of rust-resisting metal primer.

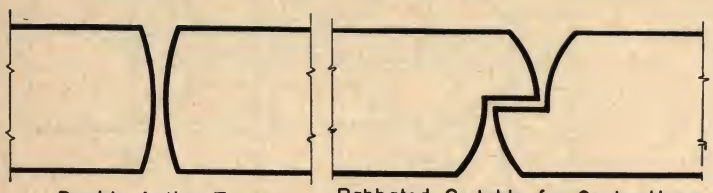
MORTISING AND REINFORCING FOR HARDWARE—Where desired, all kalamein material is to be mortised at the factory to receive hardware. In addition, kalamein material may be reinforced to receive mortised hardware, this reinforcing to consist of steel plates inserted under metal covering and securely fastened to the wood core. Kalamein material can also be furnished in copper and bronze.

TIN-CLAD FIRE DOORS AND HARDWARE

SPECIFICATIONS—Tin-clad doors shall be constructed of 2 or 3-ply white pine core covered with standard terne plate sheets and bearing Underwriters' Laboratory label. Suitable automatic fire door hardware furnished to complete the assembly. We recommend that the structural steel frames for tin-clad doors be purchased locally.

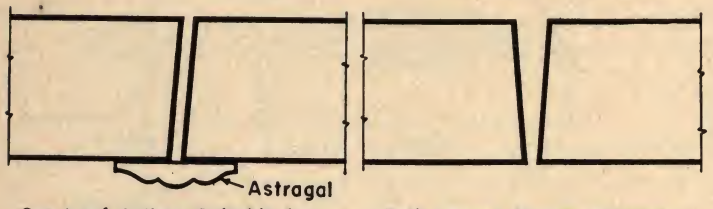
additional door data

Meeting Stile Types



Double Acting Type

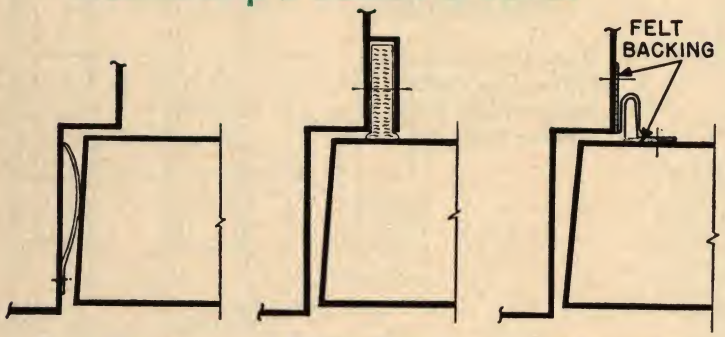
Rabbated Suitable for Center Hung Single Acting Floor Checks



One Leaf Active–Suitable for use with Knob Lock Hardware

Both Leaves Active–Suitable for use with Push and Pull or Panic Hardware

Weatherstrip & Gaskets at Jambs

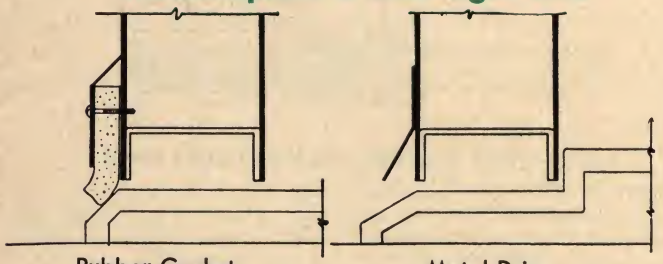


Spring Bronze #20

Rubber Gasket #30

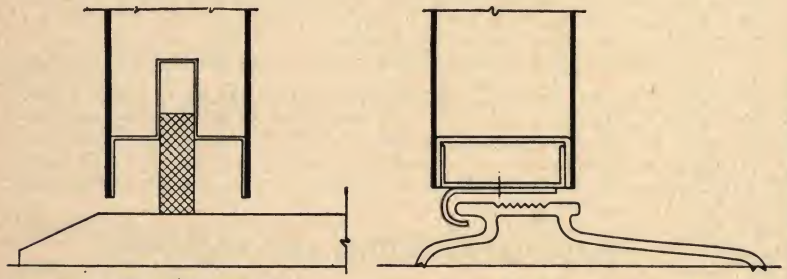
Interlocking #40

Weatherproof & Dust-tight Sills



Rubber Gasket #50

Metal Drip #60



Automatic Door Bottom Gasket #70

Hook Strip & Weatherproof Saddle #80

installations

Hanes Park Elementary School
Wiley Junior High School
Winston-Salem, N.C.
Architect—Lashmit, James, Brown & Pollock
Contractor—George W. Kane Construction Company

Conemaugh Township High School, Davidsville, Penna.
Architect—Buchart Associates
Contractor—Constructors, Inc.

New Juvenile Detention Home & Alteration to Juvenile Court Building, Detroit, Michigan
Architect—H. E. Beyster & Associates, Inc.
Contractor—Darin & Armstrong, Inc.

U.S. Naval Hospital, Portsmouth, Virginia
Architect—Skidmore, Owings & Merrill
Contractor—Paul Tishman General Contractor, Inc.

Winter Park Junior High School, Wilmington, N.C.
Architect—Leslie N. Boney
Contractor—Anderson Construction Company

Cleveland Heights High School, Cleveland Heights, Ohio
Architect—Outcalt-Guenther & Assocs.
Contractor—William Passalacqua Builders, Inc.

Albert Einstein Medical Center, Philadelphia, Penna.
Architect—Abraham Levy
Contractor—James McGraw Company

Blossom Hill School for Girls, Brecksville, Ohio
Architect—The George S. Rider Company
Contractor—The Hoelzl Martini Construction Company

Prairie Shores Trust Apartments, Chicago, Illinois
Architect—Loebl, Schlossman & Bennett
Contractor—Sumner Sollitt Company

Men's Residence Halls, Pennsylvania State University, University Park, Penna.
Architect—Harbeson, Hough, Livingston and Larson
Contractor—John McShain, Inc.

Greece Senior High School, Greece, New York
Architect—Faragher & Macomber
Contractor—Robert F. Hyland & Sons, Inc.

The Chase Manhattan Building, Nassau-Liberty-William-Pine Streets, New York, New York
Architect—Skidmore, Owings & Merrill
Contractor—Turner Construction Company

Madison College Dormitories, Harrisonburg, Virginia
Architect—Walford & Wright
Contractor—Nielsen Construction Co., Inc.

General Science Building, Purdue University, West Lafayette, Indiana
Architect—Walter Scholer & Assoc.
Contractor—J. L. Simmons Company

Southeast Junior High School, Salt Lake City, Utah
Architect—Lowell E. Parrish
Contractor—Paulsen Construction Company

Fine Arts Building, Ohio State University, Columbus, Ohio
Architect—Crumley-Musson
Contractor—Robt. W. Setterlin & Sons Co.

St. Joseph's Hospital, Fort Worth, Texas
Architect—Joseph R. Pelich
Contractor—Thos. S. Byrne Inc.

Sumner County Hospital, Gallatin, Tennessee
Architect—Taylor & Crabtree
Contractor—Southern Builders, Inc. and South & Patton, Inc.

Nurses Training School & Internes Quarters, University of Tennessee, Knoxville, Tennessee
Architect—Baumann and Baumann, Inc.
Contractor—V. L. Nicholson Company

South Junior High School, Rapid City, South Dakota
Architect—Ewing & Forrette
Contractor—M. A. Garland Construction Company

Men's Dormitories, Vanderbilt University, Nashville, Tennessee
Architect—Edward D. Stone
Contractor—Foster & Creighton Company

Representatives in principal cities

ATLANTIC METAL PRODUCTS INC.

5-15 48th Avenue • Long Island City 1, N. Y.

Printed in U.S.A.

Atlas fireproof products

Sound Conditioned Metal Door Openings

service

Your inquiries handled promptly.
Your orders engineered efficiently.
Details furnished immediately.

dependability

More than 30 years of service to the building industry.
Specifications strictly adhered to.
Delivery schedules maintained.

quality

High level of manufacturing standards maintained.
Careful shop inspection before delivery.

Hollow Metal Doors	16b / AtL
Hollow Metal Door Frames	
Structural Door Frames	
Kalamein Jambs and Trim	
Kalamein Doors	
Fire Doors	
Underwriter Labeled Products	
Kalamein Windows	
New York City Approved 1, 1½ and 3-Hr. Test Doors	
Special Openings	
Hardware	

***ATLAS FIREPROOF DOOR COMPANY, INC.**
73-79 Provost Street *fireproof metal products* Brooklyn 22, N. Y.
Telephone: EVergreen 9-4252

designs of KALAMEIN and HOLLOW METAL DOORS

The standard designs shown are those most frequently used. We can furnish any special door type required.

HOLLOW METAL DOORS

Construction — Made of best quality open-hearth cold rolled, pickled, patent leveled, sheet steel; galvanized or bonderized sheet steel. Stiles and rails filled with mineral wool for sound deadening purposes. Joints and mitres welded throughout, ground smooth, and made invisible. Flush doors filled with mineral wool and reinforcing webs provided 6″ on center or as required by specifications. Doors mortised and reinforced for necessary hardware.

Doors can be furnished in 14, 16, 18 or 20 gauge.

Finishes — All hollow metal doors cleaned of dirt, oil and impurities. All tool marks and joints filled with mineral filler and sanded smooth. One shop coat of best metallic primer applied and baked on. Doors may be finished on request in solid color or grained finish baked enamel. Baked enamel to consist of at least 6 coats of paint baked on and rubbed to an eggshell gloss.

The above specifications apply also to hollow metal transom sash and smokescreen openings.

KALAMEIN DOORS

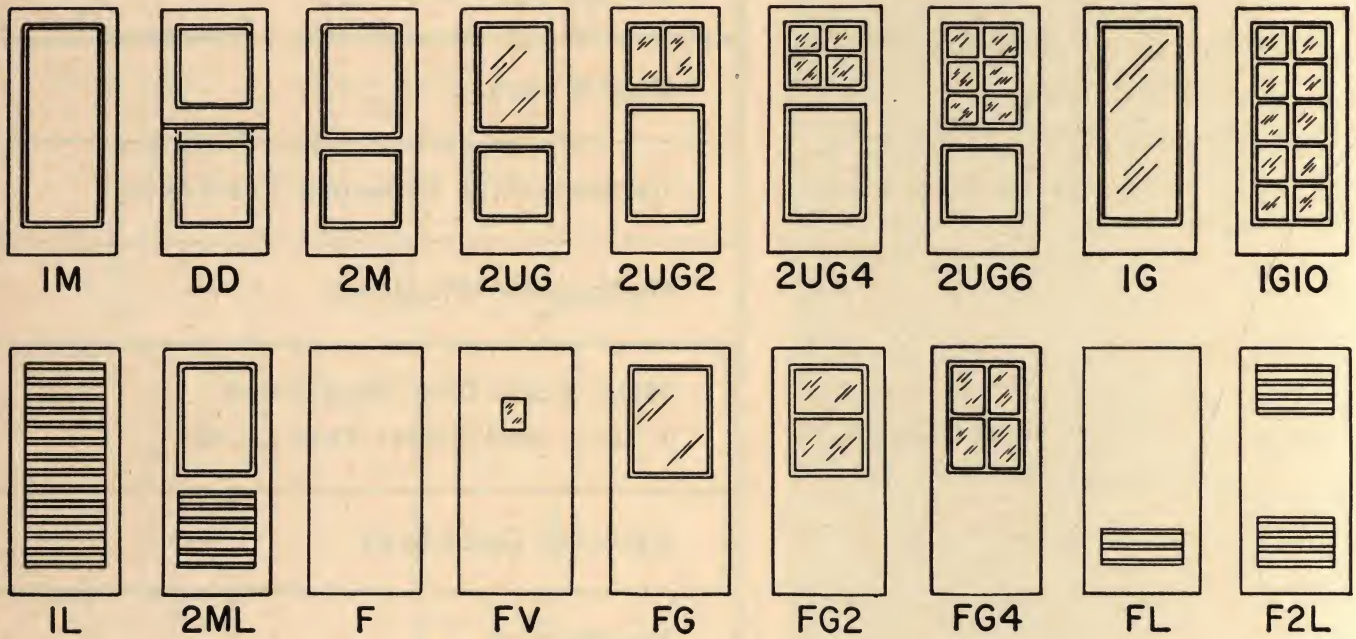
Construction—Cores of doors are solid, kiln dried, white pine, milled cores, mortised and tenoned and covered with galvanized or furniture steel sheets; gauges as required. Panels are ⅜″ asbestos millboard glued under pressure with metal on both sides (except non-labeled door panels which are ¼″ composition or plywood cores). Stiles drawn through steel dies to insure tightness to core, when required. All joints and mitres cleaned, soldered, and scraped smooth. Panel moldings can be furnished in either kalamein or hollow metal, as required.

Doors can be reinforced and mortised for hardware where required.

All exposed surfaces cleaned of impurities and finished with one prime coat of metallic paint.

Kalamein transom sash and smokescreen openings are similar in construction to kalamein doors.

All kalamein products are available covered in copper, bronze, aluminum, or stainless steel. Aluminum and bronze doors can be furnished with extruded edges.



LABELING SERVICES

We can furnish doors in hollow metal, tin clad, metal clad and kalamein carrying the label of the N.Y. City Board of Standards and Appeals. Doors can also be furnished with the National Board of Fire Underwriters label. Design of these doors restricted to certain types.

FOR ECONOMY AND PROMPT DELIVERY

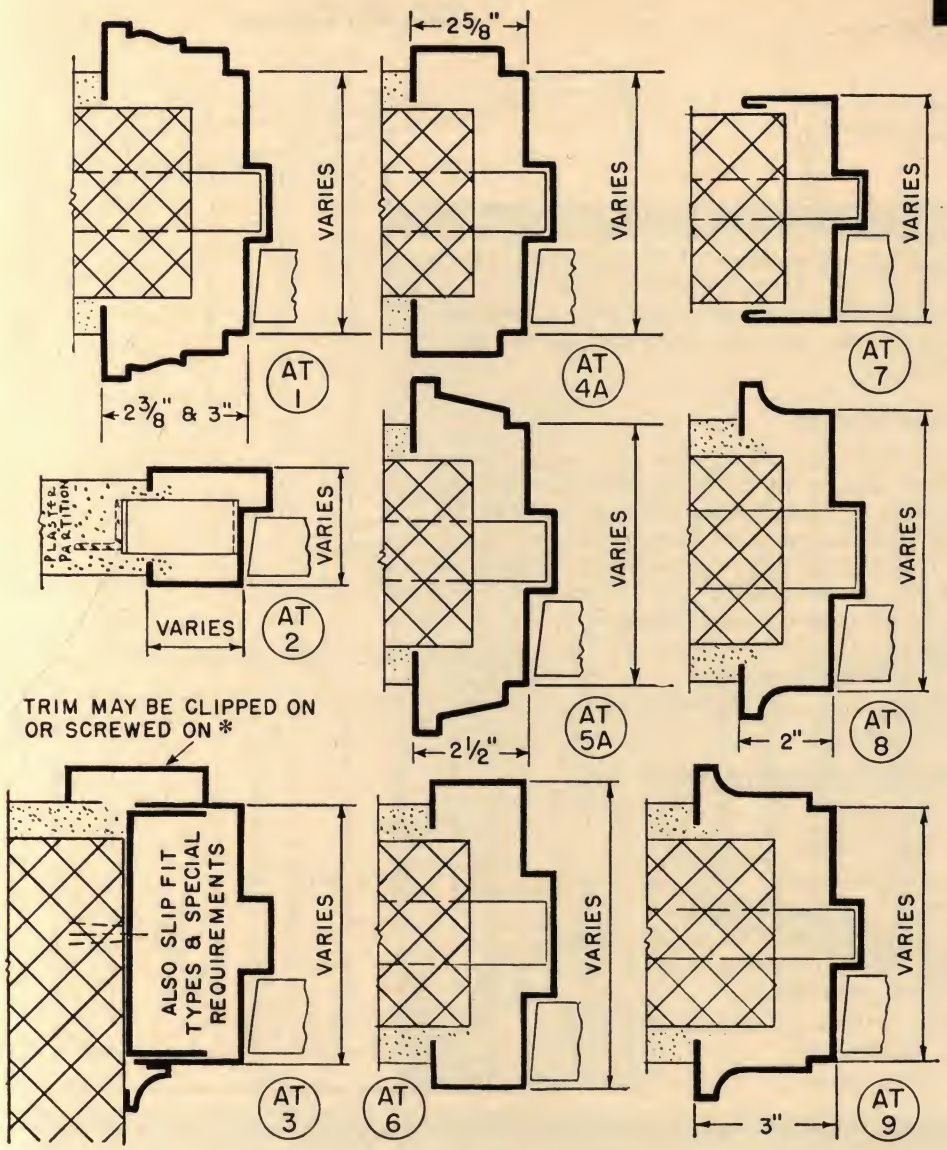
Atlas stocks a variety of bucks in popular door sizes. Doors to fit stock bucks are available in some types, also doors and bucks may be purchased with hardware and saddles. Doors and frames will be fitted for hardware at our plant on request.

Practical engineering service to suit architectural needs.

typical ATLAS BUCK SECTIONS

with various variations

Atlas fireproof products



* Trim may also be moulded type.

Combinations of various trims are possible.

Hollow metal frames can be furnished of cold rolled steel, galvanized, or bonderized sheets in 12, 14, 16 or 18 gauge, with anchors provided to suit any wall requirements.

Interior bucks for wood doors can be furnished with welded-on hinges and applied strike.

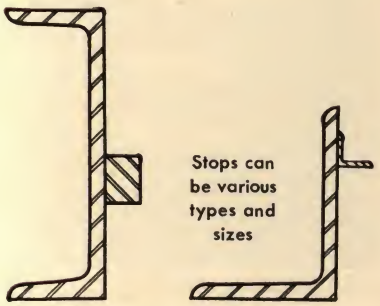
Bucks requiring mortise type hardware will be reinforced, mortised, drilled and tapped to templates.

Labeling Service — bucks carrying the label of the National Board of Fire Underwriters are available.

Other products available in hollow metal are borrowed lights, smokescreen openings, pass windows, cased openings, etc.

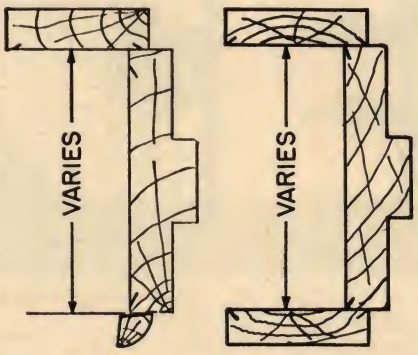
Finish — All bucks to receive one shop coat of rust inhibiting paint. Frames can be furnished in baked prime or baked enamel finish. Enamel finish in solid or grained.

Send us your requirements.



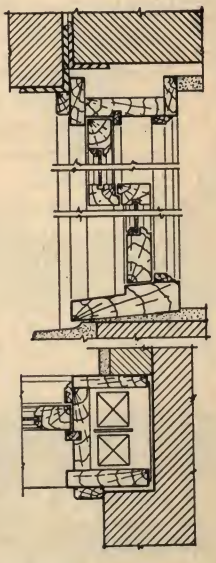
Anchors to suit wall conditions

Structural frames furnished for fire doors or heavy installations. Constructed of suitable size structural members with approved masonry anchors. Finish with shop coat metallic primer.



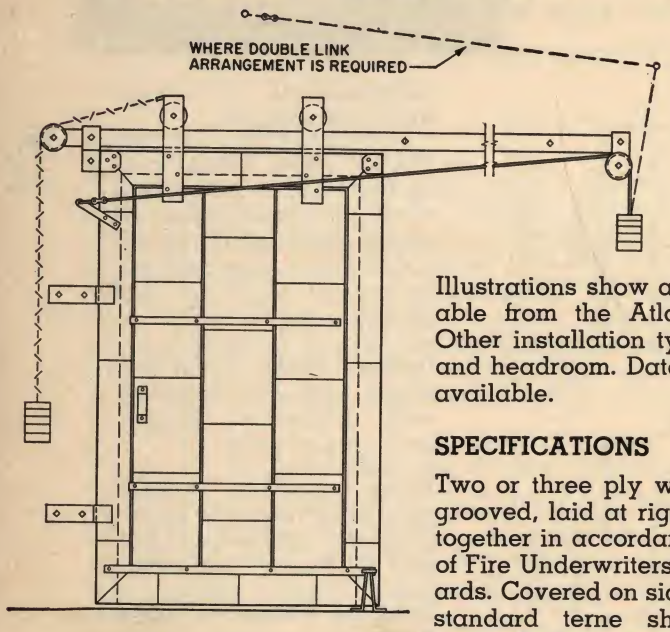
Kalamein jambs and trim available in a variety of stock trims. For construction and finish specifications, see heading under kalamein doors.

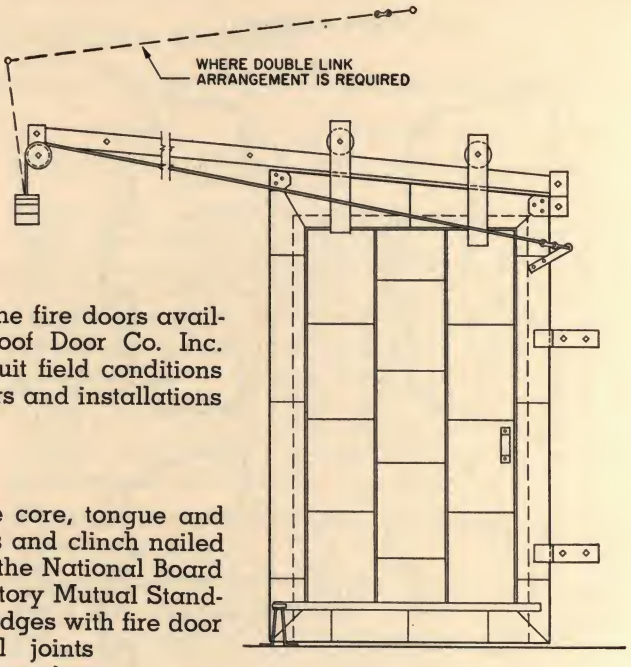
Double-hung kalamein windows and casement sash are made up to suit any requirement. New York City ¾ hour test windows can be furnished.



***ATLAS FIREPROOF DOOR CO., INC.**

Atlas FIRE DOORS



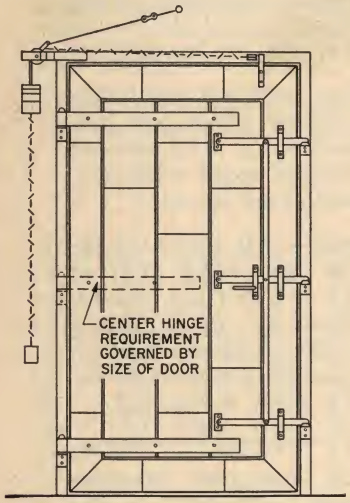


Illustrations show a few of the fire doors available from the Atlas Fireproof Door Co. Inc. Other installation types to suit field conditions and headroom. Data on doors and installations available.

SPECIFICATIONS

Two or three ply white pine core, tongue and grooved, laid at right angles and clinch nailed together in accordance with the National Board of Fire Underwriters and Factory Mutual Standards. Covered on sides and edges with fire door standard terne sheets. All joints double-lock seams, sheets flat against core. (Can also be furnished in 24-gauge galvanized sheets)

Label Service — see "Labeling Services" on page 2.



HEADROOM REQUIREMENTS FOR FIRE DOORS

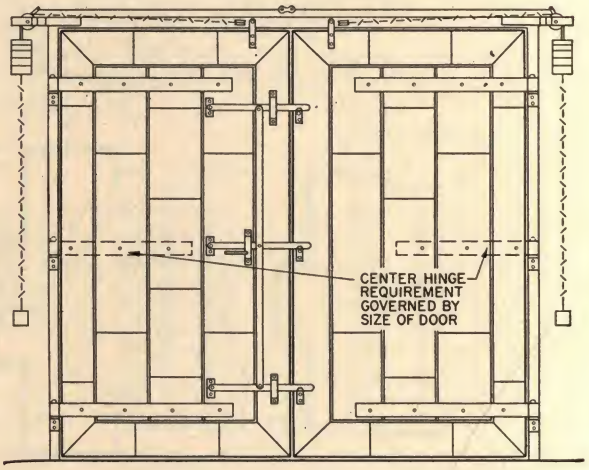
Level head doors — 14".

Incline head doors — 14" low point plus ¾" per foot in rise.

Level head doors hung on drop brackets—9" (depending upon construction conditions).

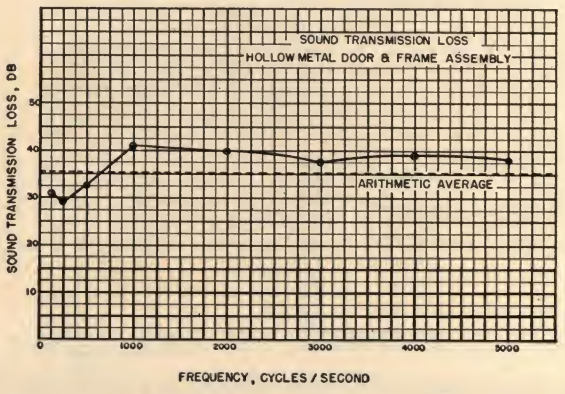
Swinging doors in structural frame —6" (minimum).

Lap swing doors — 10".



SOUND CONDITIONED DOOR OPENINGS

Doors—Hollow Metal 1¾" thick; minimum of 16 gauge steel.
Types available—F-FV-FG
Door frames—Hollow Metal minimum of 14 gauge steel.
Finish—as desired.
Rating—40 decibels @ 2000 cycle—transmission loss 35.6 average.
—41 decibels @ 2000 cycle—transmission loss 42.0 average.



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73-79 Provost Street *fireproof metal products* Brooklyn 22, N. Y.
Telephone: EVergreen 9-4252

CECO STEEL PRODUCTS CORPORATION

A.I.A. File No. 16-A

hollow metal doors

CECO

1960

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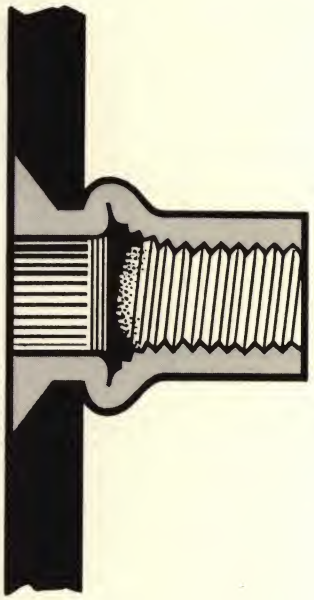
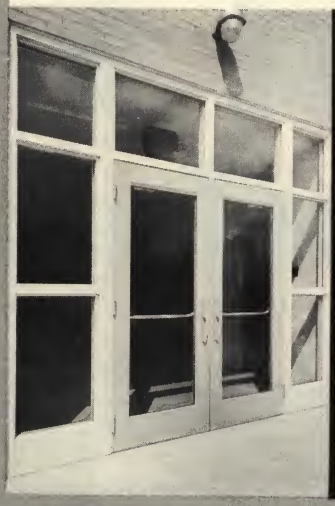
RIVNUTS HOLD HARDWARE RIGID



Permanent holding power for surface-applied hardware is provided by the Rivnut, which has a tested load power of 930 lbs. This is equivalent to a No. 10 screw 1¼" long in kiln-dried oak. Each Rivnut has seven full threads, providing a holding power greater than the sectional area of the screw.



hollow metal doors

You benefit because you obtain your hollow-metal doors, frames and hardware from *one source*—Ceco—with all components engineered *in a "package"* for long trouble-free use. Then—by referring to this catalog—you can quickly select the door and hardware operations you need...no referring to separate hardware catalogs. You save time and trouble—you obtain quality engineered products. Here's why:

COMPLETE ENGINEERING—Ceco engineers the hardware and its attachment to doors and frames. This provides you with a *completely developed* "package"—doors and frames prepared for hardware—hardware prepared for doors and frames. *Cautionary note:* Be alert to so-called "packages" which require hardware preparation on the job. With Ceco you have no such problems, because everything fits...no drilling, no tapping, no expediting problems. Ceco's "total design" program assures you the highest standards of door performances.

EASY HARDWARE SELECTION—You become your own hardware expert when you use this Ceco catalog, because Ceco hardware is clearly described and numbered for easy selection. You simply select the hardware and door operations to suit your requirements.

QUALITY PRODUCTS—A full range of doors and frames and hollow-metal work, such as side-lights and borrowed-lights, is manufactured under rigid control. Quality is maintained by technical and mechanical know-how developed through years of experience. Die cut mortises for flush hardware assure accuracy. Reinforced tapped holes for surface hardware provide rugged holding power. This is custom quality in factory-made doors.

HIDDEN COSTS ELIMINATED—Because Ceco prepares all doors and frames for all hardware items in the catalog, *the hidden costs of door and frame preparation are eliminated.* You are not faced with modifying hardware or its application in the field. Doors and hardware are quickly erected with hand tools. All in all, the Ceco door "package" spells higher value for you.

UNDIVIDED RESPONSIBILITY—Ceco accepts responsibility for doors, frames, hardware, and hardware attachment. With Ceco doors you eliminate the problems posed by non-engineered door and hardware assembly. With the Ceco "package" the doors must be right for the hardware, and the hardware right for the doors...no separate suppliers...no hardware templates...no mismatched holes. You save time, you get the functions you want and the high quality you deserve...and your clients benefit throughout the years when you specify from this catalog.

Hollow Metal Medallion Doors • types and sizes

All doors except MV design carried in Chicago or Company warehouses.
Standard 5½" depth frames are carried in stock in company warehouses.

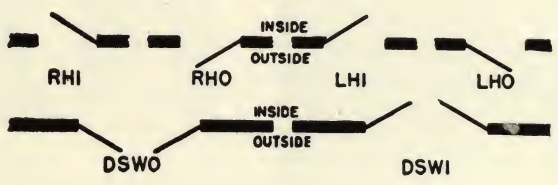
SINGLE SWING DOORS

DESIGN	NUMBER	DOOR OPENING WIDTH	DOOR OPENING HEIGHT	GLASS SIZE WIDTH	GLASS SIZE HEIGHT
M	M-2068M	2'-0"	6'-8"	NO GLAZING	
	M-2668M	2'-6"	6'-8"		
	M-2868M	2'-8"	6'-8"		
	M-3068M	3'-0"	6'-8"		
	M-3468M	3'-4"	6'-8"		
	M-2070M	2'-0"	7'-0"		
	M-2670M	2'-6"	7'-0"		
	M-2870M	2'-8"	7'-0"		
	M-3070M	3'-0"	7'-0"		
	M-3470M	3'-4"	7'-0"		
	M-3870M	3'-8"	7'-0"		
MV	M-2068MV	2'-0"	6'-8"	10½"	10½"
	M-2668MV	2'-6"	6'-8"		
	M-2868MV	2'-8"	6'-8"		
	M-3068MV	3'-0"	6'-8"		
	M-3468MV	3'-4"	6'-8"		
	M-2070MV	2'-0"	7'-0"		
	M-2670MV	2'-6"	7'-0"		
	M-2870MV	2'-8"	7'-0"		
	M-3070MV	3'-0"	7'-0"		
	M-3470MV	3'-4"	7'-0"		
	M-3870MV	3'-8"	7'-0"		
G	M-2068G	2'-0"	6'-8"	12¾"	27¼"
	M-2668G	2'-6"	6'-8"	18¾"	27¼"
	M-2868G	2'-8"	6'-8"	20¾"	27¼"
	M-3068G	3'-0"	6'-8"	24¾"	27¼"
	M-3468G	3'-4"	6'-8"	28¾"	27¼"
	M-2070G	2'-0"	7'-0"	12¾"	31¼"
	M-2670G	2'-6"	7'-0"	18¾"	31¼"
	M-2870G	2'-8"	7'-0"	20¾"	31¼"
	M-3070G	3'-0"	7'-0"	24¾"	31¼"
	M-3470G	3'-4"	7'-0"	28¾"	31¼"
	M-3870G	3'-8"	7'-0"	32¾"	31¼"
G2	M-2068G2	2'-0"	6'-8"	12¾"	13 5/16"
	M-2668G2	2'-6"	6'-8"	18¾"	13 5/16"
	M-2868G2	2'-8"	6'-8"	20¾"	13 5/16"
	M-3068G2	3'-0"	6'-8"	24¾"	13 5/16"
	M-3468G2	3'-4"	6'-8"	28¾"	13 5/16"
	M-2070G2	2'-0"	7'-0"	12¾"	15 5/16"
	M-2670G2	2'-6"	7'-0"	18¾"	15 5/16"
	M-2870G2	2'-8"	7'-0"	20¾"	15 5/16"
	M-3070G2	3'-0"	7'-0"	24¾"	15 5/16"
	M-3470G2	3'-4"	7'-0"	28¾"	15 5/16"
	M-3870G2	3'-8"	7'-0"	32¾"	15 5/16"
G3	M-2068G3	2'-0"	6'-8"	12¾"	8 5/8"
	M-2668G3	2'-6"	6'-8"	18¾"	8 5/8"
	M-2868G3	2'-8"	6'-8"	20¾"	8 5/8"
	M-3068G3	3'-0"	6'-8"	24¾"	8 5/8"
	M-3468G3	3'-4"	6'-8"	28¾"	8 5/8"
	M-2070G3	2'-0"	7'-0"	12¾"	10"
	M-2670G3	2'-6"	7'-0"	18¾"	10"
	M-2870G3	2'-8"	7'-0"	20¾"	10"
	M-3070G3	3'-0"	7'-0"	24¾"	10"
	M-3470G3	3'-4"	7'-0"	28¾"	10"
	M-3870G3	3'-8"	7'-0"	32¾"	10"

DOUBLE SWING DOORS

DESIGN	NUMBER	DOOR OPENING WIDTH	DOOR OPENING HEIGHT	GLASS SIZE WIDTH	GLASS SIZE HEIGHT
M	M-4068M	4'-0"	6'-8"	NO GLAZING	
	M-5068M	5'-0"	6'-8"		
	M-5468M	5'-4"	6'-8"		
	M-6068M	6'-0"	6'-8"		
	M-6868M	6'-8"	6'-8"		
	M-4070M	4'-0"	7'-0"		
	M-5070M	5'-0"	7'-0"		
	M-5470M	5'-4"	7'-0"		
	M-6070M	6'-0"	7'-0"		
	M-6870M	6'-8"	7'-0"		
	M-7470M	7'-4"	7'-0"		
MV	M-4068MV	4'-0"	6'-8"	10½"	10½"
	M-5068MV	5'-0"	6'-8"		
	M-5468MV	5'-4"	6'-8"		
	M-6068MV	6'-0"	6'-8"		
	M-6868MV	6'-8"	6'-8"		
	M-4070MV	4'-0"	7'-0"		
	M-5070MV	5'-0"	7'-0"		
	M-5470MV	5'-4"	7'-0"		
	M-6070MV	6'-0"	7'-0"		
	M-6870MV	6'-8"	7'-0"		
	M-7470MV	7'-4"	7'-0"		
G	M-4068G	4'-0"	6'-8"	12¾"	27¼"
	M-5068G	5'-0"	6'-8"	18¾"	27¼"
	M-5468G	5'-4"	6'-8"	20¾"	27¼"
	M-6068G	6'-0"	6'-8"	24¾"	27¼"
	M-6868G	6'-8"	6'-8"	28¾"	27¼"
	M-4070G	4'-0"	7'-0"	12¾"	31¼"
	M-5070G	5'-0"	7'-0"	18¾"	31¼"
	M-5470G	5'-4"	7'-0"	20¾"	31¼"
	M-6070G	6'-0"	7'-0"	24¾"	31¼"
	M-6870G	6'-8"	7'-0"	28¾"	31¼"
	M-7470G	7'-4"	7'-0"	32¾"	31¼"
G2	M-4068G2	4'-0"	6'-8"	12¾"	13 5/16"
	M-5068G2	5'-0"	6'-8"	18¾"	13 5/16"
	M-5468G2	5'-4"	6'-8"	20¾"	13 5/16"
	M-6068G2	6'-0"	6'-8"	24¾"	13 5/16"
	M-6868G2	6'-8"	6'-8"	28¾"	13 5/16"
	M-4070G2	4'-0"	7'-0"	12¾"	15 5/16"
	M-5070G2	5'-0"	7'-0"	18¾"	15 5/16"
	M-5470G2	5'-4"	7'-0"	20¾"	15 5/16"
	M-6070G2	6'-0"	7'-0"	24¾"	15 5/16"
	M-6870G2	6'-8"	7'-0"	28¾"	15 5/16"
	M-7470G2	7'-4"	7'-0"	32¾"	15 5/16"
G3	M-4068G3	4'-0"	6'-8"	12¾"	8 5/8"
	M-5068G3	5'-0"	6'-8"	18¾"	8 5/8"
	M-5468G3	5'-4"	6'-8"	20¾"	8 5/8"
	M-6068G3	6'-0"	6'-8"	24¾"	8 5/8"
	M-6868G3	6'-8"	6'-8"	28¾"	8 5/8"
	M-4070G3	4'-0"	7'-0"	12¾"	10"
	M-5070G3	5'-0"	7'-0"	18¾"	10"
	M-5470G3	5'-4"	7'-0"	20¾"	10"
	M-6070G3	6'-0"	7'-0"	24¾"	10"
	M-6870G3	6'-8"	7'-0"	28¾"	10"
	M-7470G3	7'-4"	7'-0"	32¾"	10"

HAND AND SWING DIAGRAMS



ORDERING INFORMATION

When ordering doors and frames always give complete information, including type, size, style and hand and swing. For example: M-3070-G-RHO or M-6070-G-DSWI-BA.

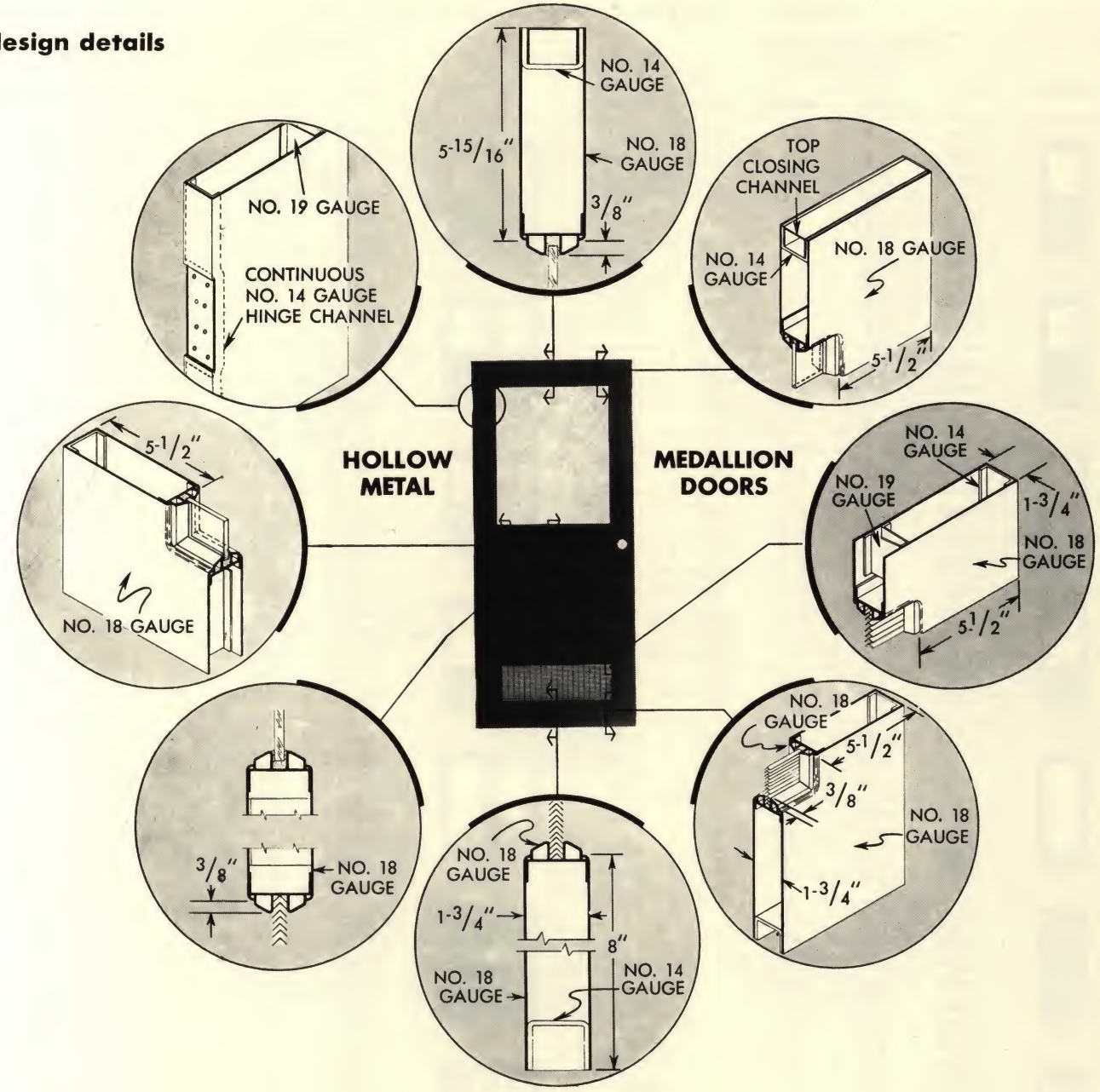
When ordering double doors indicate swing of door leaves and hand of active leaf. For example:

DSWI-RA—Double swing in right hand leaf active.
DSWO-LA—Double swing out left hand leaf active.
DSWO-BA—Double swing out both leaves active.

When both leaves are active, indicate if no astragal or split astragal is required. Split astragal used only on doors with both leaves active.

See Page 27-d for astragals.

design details



Hollow Metal Medallion Doors are fabricated from No. 18 gauge furniture-quality cold-rolled stretcher leveled steel sheets, 1¾" thick. Vertical No. 19 gauge steel stiffeners are spaced approximately 6" apart, spot welded to one face sheet and projection welded to the opposite sheet. Top and bottom channels are No. 14 gauge steel, spot welded to face sheets not less than 3" on centers. Vertical edges of the door are reinforced with No. 14 gauge steel channels the entire height of the door. Doors are insulated with spun mineral wool.

Ceco doors and frames are die cut and reinforced for Cylindrical type locksets or for Mortise type locksets. Bottom of doors have weep holes to eliminate interior condensation.

Lock stiles are formed to allow ⅛" operating clearance.

Hinges are mortised and reinforced. Glazing beads are recessed behind the formed opening in the face sheet, beveled and attached without screws.

Doors are bonderized and painted with one coat of rust inhibitive zinc chromate primer, grey in color, oven dried. All doors are shipped in individual protective cartons. Each carton is marked for door size, hand and swing, and location or mark number.

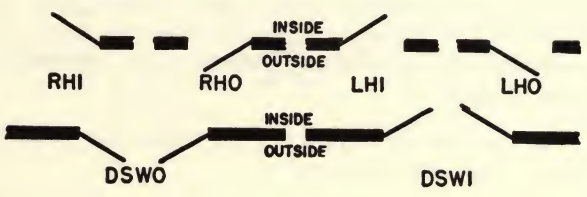
Refer to pages No. 10 and 11 for Underwriters' Labelled doors, frames and hardware.

Hollow Metal Flush Panel Doors • types and sizes

All doors except LG, FG, and SG carried in Chicago or Company warehouses.
Standard 5½" depth frames are carried in stock in company warehouses.

SINGLE SWING DOORS						DOUBLE SWING DOORS					
DESIGN	TYPE	DOOR OPENING		GLASS SIZE		DESIGN	TYPE	DOOR OPENING		GLASS SIZE	
		WIDTH	HEIGHT	WIDTH	HEIGHT			WIDTH	HEIGHT	WIDTH	HEIGHT
G	F-2668G	2'-6"	6'-8"	19½"	29⅛"	G	F-5068G	5'-0"	6'-8"	19½"	29⅛"
	F-2868G	2'-8"	6'-8"	21½"	29⅛"		F-5468G	5'-4"	6'-8"	21½"	29⅛"
	F-3068G	3'-0"	6'-8"	25½"	29⅛"		F-6068G	6'-0"	6'-8"	25½"	29⅛"
	F-3468G	3'-4"	6'-8"	29½"	29⅛"		F-6868G	6'-8"	6'-8"	29½"	29⅛"
	F-2670G	2'-6"	7'-0"	19½"	33⅛"		F-5070G	5'-0"	7'-0"	19½"	33⅛"
	F-2870G	2'-8"	7'-0"	21½"	33⅛"		F-5470G	5'-4"	7'-0"	21½"	33⅛"
	F-3070G	3'-0"	7'-0"	25½"	33⅛"		F-6070G	6'-0"	7'-0"	25½"	33⅛"
	F-3470G	3'-4"	7'-0"	29½"	33⅛"		F-6870G	6'-8"	7'-0"	29½"	33⅛"
	F-3870G	3'-8"	7'-0"	33½"	33⅛"		F-7470G	7'-4"	7'-0"	33½"	33⅛"
	F-4070G	4'-0"	7'-0"	37½"	33⅛"		F-8070G	8'-0"	7'-0"	37½"	33⅛"
G2	F-2668G2	2'-6"	6'-8"	19½"	14⅛"	G2	F-5068G2	5'-0"	6'-8"	19½"	14⅛"
	F-2868G2	2'-8"	6'-8"	21½"	14⅛"		F-5468G2	5'-4"	6'-8"	21½"	14⅛"
	F-3068G2	3'-0"	6'-8"	25½"	14⅛"		F-6068G2	6'-0"	6'-8"	25½"	14⅛"
	F-2670G2	2'-6"	7'-0"	19½"	16⅛"		F-5070G2	5'-0"	7'-0"	19½"	16⅛"
	F-2870G2	2'-8"	7'-0"	21½"	16⅛"		F-5470G2	5'-4"	7'-0"	21½"	16⅛"
	F-3070G2	3'-0"	7'-0"	25½"	16⅛"		F-6070G2	6'-0"	7'-0"	25½"	16⅛"
G4	F-2668G4	2'-6"	6'-8"	9⅜"	14⅛"	G4	F-5068G4	5'-0"	6'-8"	9⅜"	14⅛"
	F-2868G4	2'-8"	6'-8"	10⅜"	14⅛"		F-5468G4	5'-4"	6'-8"	10⅜"	14⅛"
	F-3068G4	3'-0"	6'-8"	12⅜"	14⅛"		F-6068G4	6'-0"	6'-8"	12⅜"	14⅛"
	F-3468G4	3'-4"	6'-8"	14⅜"	14⅛"		F-6868G4	6'-8"	6'-8"	14⅜"	14⅛"
	F-2670G4	2'-6"	7'-0"	9⅜"	16⅛"		F-5070G4	5'-0"	7'-0"	9⅜"	16⅛"
	F-2870G4	2'-8"	7'-0"	10⅜"	16⅛"		F-5470G4	5'-4"	7'-0"	10⅜"	16⅛"
	F-3070G4	3'-0"	7'-0"	12⅜"	16⅛"		F-6070G4	6'-0"	7'-0"	12⅜"	16⅛"
	F-3470G4	3'-4"	7'-0"	14⅜"	16⅛"		F-6870G4	6'-8"	7'-0"	14⅜"	16⅛"
	F-3870G4	3'-8"	7'-0"	16⅜"	16⅛"		F-7470G4	7'-4"	7'-0"	16⅜"	16⅛"
	F-4070G4	4'-0"	7'-0"	18⅜"	16⅛"		F-8070G4	8'-0"	7'-0"	18⅜"	16⅛"
LG	F-3070LG	3'-0"	7'-0"	25½"	52¾"	LG	F-6070LG	6'-0"	7'-0"	25½"	52¾"
	F-3470LG	3'-4"	7'-0"	29½"	52¾"		F-6870LG	6'-8"	7'-0"	29½"	52¾"
	F-3870LG	3'-8"	7'-0"	33½"	52¾"		F-7470LG	7'-4"	7'-0"	33½"	52¾"
FG	F-2868FG	2'-8"	6'-8"	21½"	64¾"	FG	F-5468FG	5'-4"	6'-8"	21½"	64¾"
	F-3070FG	3'-0"	7'-0"	25½"	68¾"		F-6070FG	6'-0"	7'-0"	25½"	68¾"
	F-3470FG	3'-4"	7'-0"	29½"	68¾"		F-6870FG	6'-8"	7'-0"	29½"	68¾"
	F-3870FG	3'-8"	7'-0"	33½"	68¾"		F-7470FG	7'-4"	7'-0"	33½"	68¾"
M	F-2068M	2'-0"	6'-8"			M	F-4068M	4'-0"	6'-8"		
	F-2668M	2'-6"	6'-8"				F-5068M	5'-0"	6'-8"		
	F-2868M	2'-8"	6'-8"				F-5468M	5'-4"	6'-8"		
	F-3068M	3'-0"	6'-8"				F-6068M	6'-0"	6'-8"		
	F-3468M	3'-4"	6'-8"	FULL			F-6868M	6'-8"	6'-8"	FULL	
	F-2070M	2'-0"	7'-0"				F-4070M	4'-0"	7'-0"		
	F-2670M	2'-6"	7'-0"	METAL			F-5070M	5'-0"	7'-0"	METAL	
	F-2870M	2'-8"	7'-0"				F-5470M	5'-4"	7'-0"		
	F-3070M	3'-0"	7'-0"	PANEL			F-6070M	6'-0"	7'-0"	PANEL	
	F-3470M	3'-4"	7'-0"				F-6870M	6'-8"	7'-0"		
	F-3870M	3'-8"	7'-0"				F-7470M	7'-4"	7'-0"		
	F-4070M	4'-0"	7'-0"				F-8070M	8'-0"	7'-0"		
SG	F-2868SG	2'-8"	6'-8"	6½"	64¾"	SG	F-5468SG	5'-4"	6'-8"	6½"	64¾"
	F-3070SG	3'-0"	7'-0"	6½"	68¾"		F-6070SG	6'-0"	7'-0"	6½"	68¾"
	F-3470SG	3'-4"	7'-0"	6½"	68¾"		F-6870SG	6'-8"	7'-0"	6½"	68¾"
	F-3870SG	3'-8"	7'-0"	6½"	68¾"		F-7470SG	7'-4"	7'-0"	6½"	68¾"

HAND AND SWING DIAGRAMS



When ordering doors and frames always give complete information, including type, size, style and hand and swing. For example: F-3070-G2-RHO or F-6070-LG-DSWI-BA.

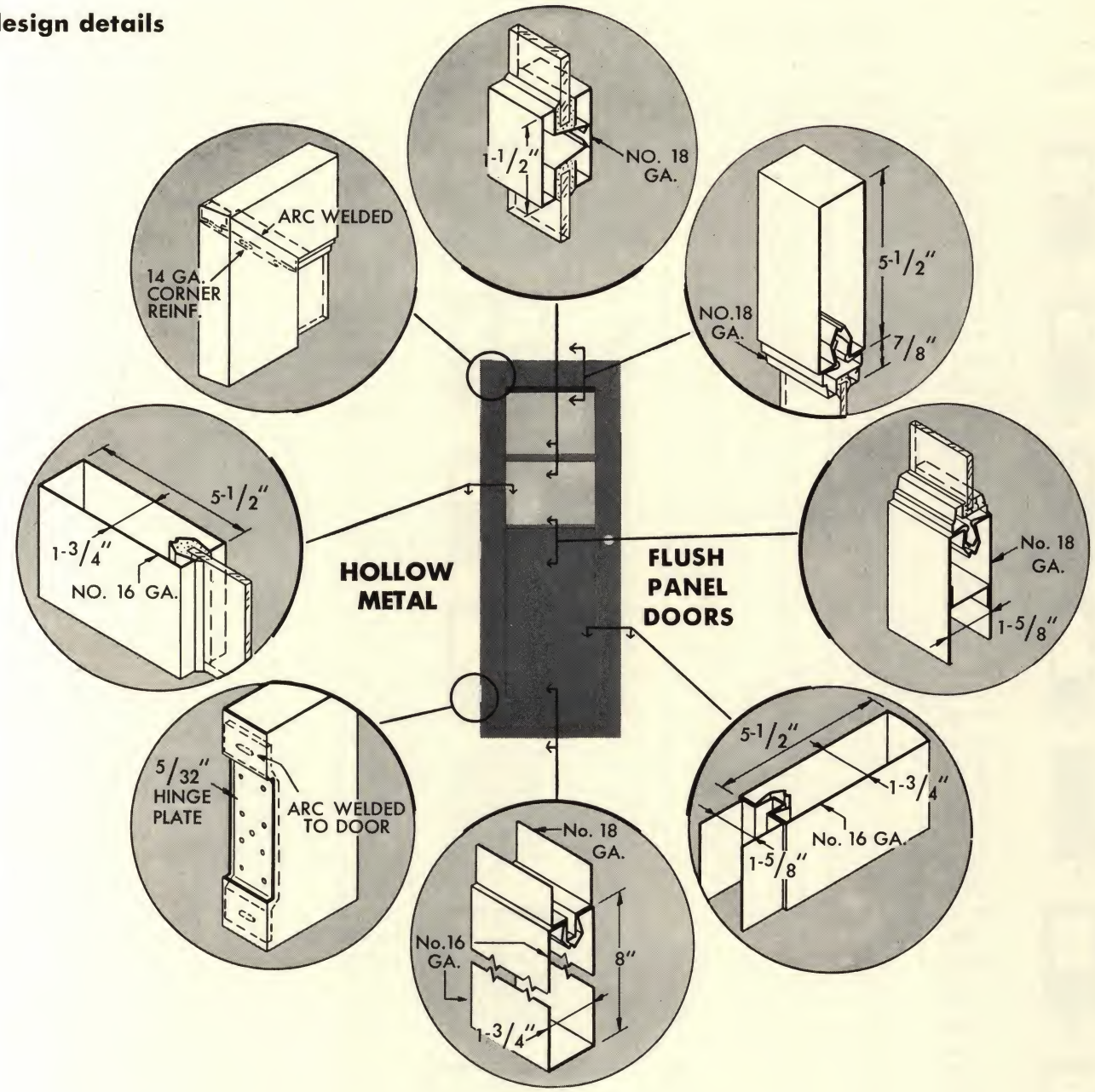
When ordering double doors indicate swing of door leaves and hand of active leaf. For example:

DSWI-RA—Double swing in right hand leaf active.
DSWO-LA—Double swing out left hand leaf active.
DSWO-BA—Double swing out both leaves active.

When both leaves are active, indicate if no astragal or split astragal is required. Split astragal used only on doors with both leaves active.

See page 27-d for astragals.

design details



Hollow Metal Flush Panel Doors are fabricated from No. 16 gauge steel sheets. Stiles, and top rails are 5½" x 1¾". Bottom rails are 8" x 1¾". Metal panels are No. 18 gauge steel sheet and have Z stiffeners. Interiors of metal panels are undercoated with sound deadening material.

Lock stiles are formed to allow ⅛" operating clearance.

Ceco Doors and Frames are die cut and reinforced for Cylindrical-type locksets or for Ceco Mortise-type locksets; no fillers or universal type strikes are used.

Bottom rails have weep holes for elimination of interior condensation.

Corners are mitred, reinforced, face welded, ground smooth.

Hinges are mortised and reinforced.

Moldings, glazing beads, muntins and glazing stops are No. 18 gauge roll formed steel.

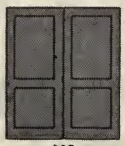
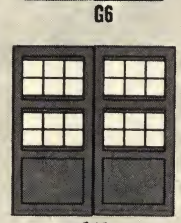
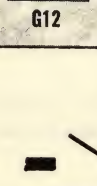
Glazing beads and muntin glazing stops are always on the inside of the door and are held in place with Phillips-head screws.

Doors are bonderized and painted with one coat of zinc chromate rust-resisting primer, neutral grey in color.

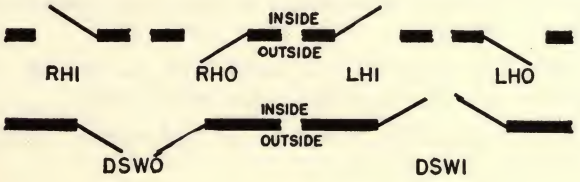
Refer to pages No. 10 and 11 for Underwriters' Labelled doors, frames and hardware.

Hollow Metal Panel Doors • types and sizes

Doors shown on this page carried in stock in company or Chicago warehouses.
Standard 5½" depth frames are carried in stock in company warehouses.

DESIGN	SINGLE SWING DOORS					DESIGN	DOUBLE SWING DOORS				
	TYPE	DOOR OPENING		GLASS SIZE			TYPE	DOOR OPENING		GLASS SIZE	
		WIDTH	HEIGHT	WIDTH	HEIGHT			WIDTH	HEIGHT	WIDTH	HEIGHT
G	P-2668G	2'-6"	6'-8"	19½"	29⅛"	G	P-5068G	5'-0"	6'-8"	19½"	29⅛"
	P-2868G	2'-8"	6'-8"	21½"	29⅛"		P-5468G	5'-4"	6'-8"	21½"	29⅛"
	P-3068G	3'-0"	6'-8"	25½"	29⅛"		P-6068G	6'-0"	6'-8"	25½"	29⅛"
	P-3468G	3'-4"	6'-8"	29½"	29⅛"		P-6868G	6'-8"	6'-8"	29½"	29⅛"
	P-2670G	2'-6"	7'-0"	19½"	33⅛"		P-5070G	5'-0"	7'-0"	19½"	33⅛"
	P-2870G	2'-8"	7'-0"	21½"	33⅛"		P-5470G	5'-4"	7'-0"	21½"	33⅛"
	P-3070G	3'-0"	7'-0"	25½"	33⅛"		P-6070G	6'-0"	7'-0"	25½"	33⅛"
	P-3470G	3'-4"	7'-0"	29½"	33⅛"		P-6870G	6'-8"	7'-0"	29½"	33⅛"
	P-3870G	3'-8"	7'-0"	33½"	33⅛"		P-7470G	7'-4"	7'-0"	33½"	33⅛"
	P-4070G	4'-0"	7'-0"	37½"	33⅛"		P-8070G	8'-0"	7'-0"	37½"	33⅛"
	P-4080G	4'-0"	8'-0"	37½"	45⅛"		P-8080G	8'-0"	8'-0"	37½"	45⅛"
G2	P-2668G2	2'-6"	6'-8"	19½"	14⅛"	G2	P-5068G2	5'-0"	6'-8"	19½"	14⅛"
	P-2868G2	2'-8"	6'-8"	21½"	14⅛"		P-5468G2	5'-4"	6'-8"	21½"	14⅛"
	P-3068G2	3'-0"	6'-8"	25½"	14⅛"		P-6068G2	6'-0"	6'-8"	25½"	14⅛"
	P-2670G2	2'-6"	7'-0"	19½"	16⅛"		P-5070G2	5'-0"	7'-0"	19½"	16⅛"
	P-2870G2	2'-8"	7'-0"	21½"	16⅛"		P-5470G2	5'-4"	7'-0"	21½"	16⅛"
	P-3070G2	3'-0"	7'-0"	25½"	16⅛"		P-6070G2	6'-0"	7'-0"	25½"	16⅛"
G4	P-2668G4	2'-6"	6'-8"	9⅜"	14⅛"	G4	P-5068G4	5'-0"	6'-8"	9⅜"	14⅛"
	P-2868G4	2'-8"	6'-8"	10⅜"	14⅛"		P-5468G4	5'-4"	6'-8"	10⅜"	14⅛"
	P-3068G4	3'-0"	6'-8"	12⅜"	14⅛"		P-6068G4	6'-0"	6'-8"	12⅜"	14⅛"
	P-3468G4	3'-4"	6'-8"	14⅜"	14⅛"		P-6868G4	6'-8"	6'-8"	14⅜"	14⅛"
	P-2670G4	2'-6"	7'-0"	9⅜"	16⅛"		P-5070G4	5'-0"	7'-0"	9⅜"	16⅛"
	P-2870G4	2'-8"	7'-0"	10⅜"	16⅛"		P-5470G4	5'-4"	7'-0"	10⅜"	16⅛"
	P-3070G4	3'-0"	7'-0"	12⅜"	16⅛"		P-6070G4	6'-0"	7'-0"	12⅜"	16⅛"
	P-3470G4	3'-4"	7'-0"	14⅜"	16⅛"		P-6870G4	6'-8"	7'-0"	14⅜"	16⅛"
	P-3870G4	3'-8"	7'-0"	16⅜"	16⅛"		P-7470G4	7'-4"	7'-0"	16⅜"	16⅛"
	P-4070G4	4'-0"	7'-0"	18⅜"	16⅛"		P-8070G4	8'-0"	7'-0"	18⅜"	16⅛"
LG	P-3068LG	3'-0"	6'-8"	25½"	48¾"	 LG	P-6068LG	6'-0"	6'-8"	25½"	48¾"
	P-3468LG	3'-4"	6'-8"	29½"	48¾"		P-6868LG	6'-8"	6'-8"	29½"	48¾"
	P-3070LG	3'-0"	7'-0"	25½"	52¾"		P-6070LG	6'-0"	7'-0"	25½"	52¾"
	P-3470LG	3'-4"	7'-0"	29½"	52¾"		P-6870LG	6'-8"	7'-0"	29½"	52¾"
M2	P-2068M2	2'-0"	6'-8"	TWO METAL PANELS		M2	P-4068M2	4'-0"	6'-8"	TWO METAL PANELS	
	P-2668M2	2'-6"	6'-8"				P-5068M2	5'-0"	6'-8"		
	P-2868M2	2'-8"	6'-8"				P-5468M2	5'-4"	6'-8"		
	P-3068M2	3'-0"	6'-8"				P-6068M2	6'-0"	6'-8"		
	P-3468M2	3'-4"	6'-8"				P-6868M2	6'-8"	6'-8"		
	P-2070M2	2'-0"	7'-0"				P-4070M2	4'-0"	7'-0"		
	P-2670M2	2'-6"	7'-0"				P-5070M2	5'-0"	7'-0"		
	P-2870M2	2'-8"	7'-0"				P-5470M2	5'-4"	7'-0"		
	P-3070M2	3'-0"	7'-0"				P-6070M2	6'-0"	7'-0"		
	P-3470M2	3'-4"	7'-0"				P-6870M2	6'-8"	7'-0"		
	P-3870M2	3'-8"	7'-0"				P-7470M2	7'-4"	7'-0"		
	P-4070M2	4'-0"	7'-0"				P-8070M2	8'-0"	7'-0"		
	P-4080M2	4'-0"	8'-0"				P-8080M2	8'-0"	8'-0"		
	P-50100M3	5'-0"	10'-0"	THREE PANEL			P-100100M3	10'-0"	10'-0"	THREE PANEL	
G6	P-4080G6	4'-0"	8'-0"	18¼"	14⅜"	 G6	P-8080G6	8'-0"	8'-0"	18¼"	14⅜"
 G12	P-50100G12	5'-0"	10'-0"	16"	14½"	G12	P-100100G12	10'-0"	10'-0"	16"	14½"

HAND AND SWING DIAGRAMS



When ordering doors and frames always give complete information including type, size, style and hand and swing. For example: P-3070-G2-RHO or P-6070-LG-DSWI-BA.

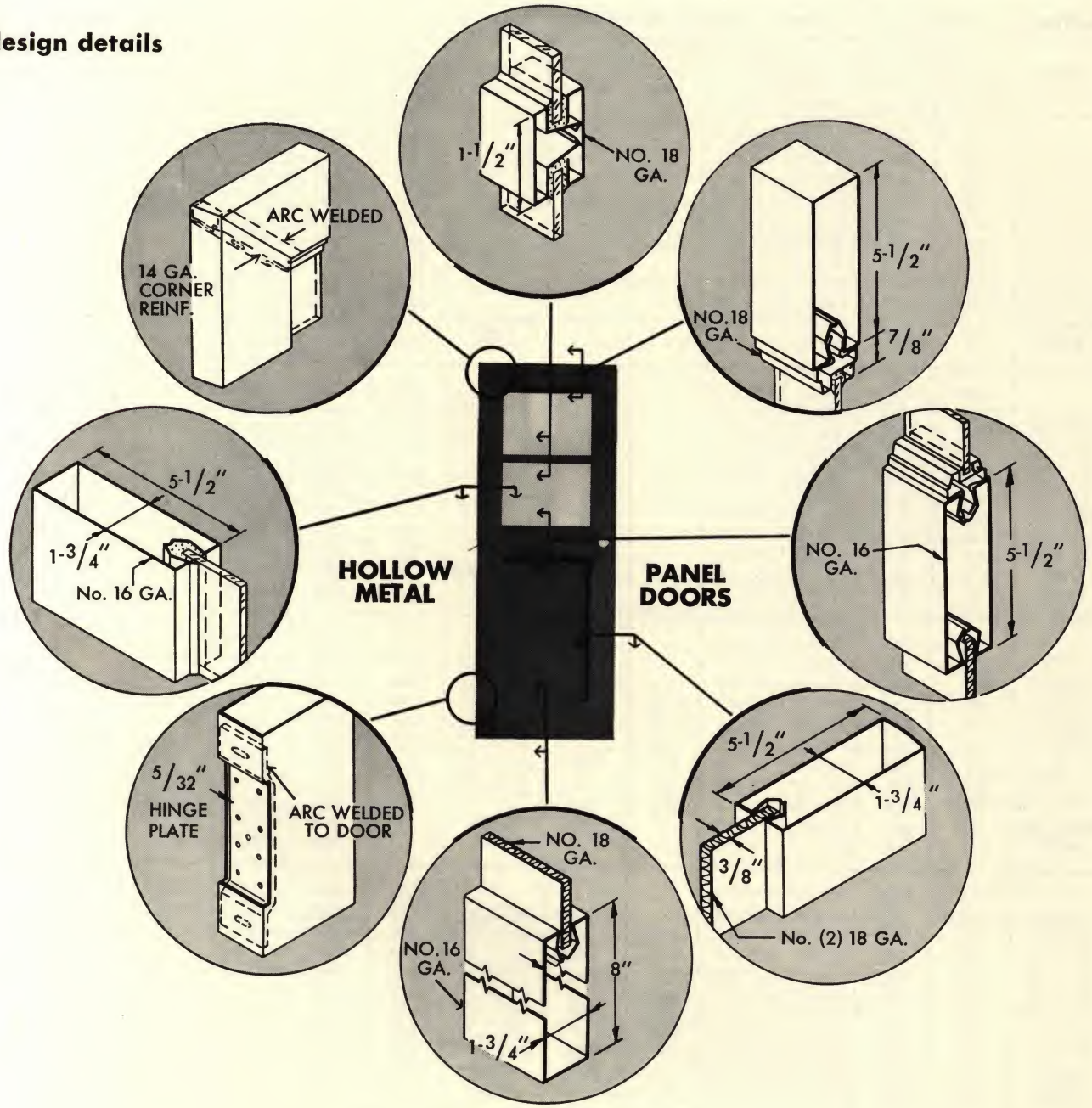
When ordering doors and frames always give complete information, hand of active leaf. For example:

DSWI-RA—Double swing in right hand leaf active.
DSWO-LA—Double swing out left hand leaf active.
DSWO-BA—Double swing out both leaves active.

When both leaves are active, indicate if no astragal or split astragal is required.

See page 27-d for astragals.

design details



Hollow Metal Panel Doors are fabricated from No. 16 gauge steel sheets. Stiles, top rails and center rails are 5½" x 1¾". Bottom rails are 8" x 1¾".

Metal panels are two No. 18 gauge steel sheets with insulating filler between sheets. Thickness of panel ⅜".

Lock stiles are formed to allow ⅛" operating clearance.

Ceco Doors and Frames are die cut and reinforced for Cylindrical-type locksets or for Ceco Mortise-type locksets; no universal type strikes are used.

Corners are mitred, reinforced, face welded and ground smooth. Center rails are face welded to stiles, ground smooth.

Hinges are mortised and reinforced.

Moldings, glazing beads, muntins and glazing stops are No. 18 gauge roll formed steel.

Glazing beads and muntin stops are always on the inside of the door and are held in place with Phillips-head screws.

Doors are bonderized and painted with one coat of zinc chromate rust-resisting primer, neutral grey in color.

Refer to pages No. 10 and 11 for Underwriters' Labelled doors, frames and hardware.

Underwriters' Labelled Doors and Frames

3-Hour, 1½ Hour, ¾ Hour — A - B - C - D and E

DOOR DESIGN	DOOR SIZES		DOOR OPENING		GLASS AREA	U.L. RATING
	SINGLE SWING	DOUBLE SWING	SINGLE	DOUBLE		
MEDALLION DOOR	2068	4068	2'0"x6'8"	4'0"x6'8"	No Glass	3-Hour "A" Label 250° or 650° Rated
	2668	5068	2'6"x6'8"	5'0"x6'8"		
	2868	5468	2'8"x6'8"	5'4"x6'8"		
	3068	6068	3'0"x6'8"	6'0"x6'8"		
	3468	6868	3'4"x6'8"	6'8"x6'8"		
	2070	4070	2'0"x7'0"	4'0"x7'0"		
	2670	5070	2'6"x7'0"	5'0"x7'0"		
	2870	5470	2'8"x7'0"	5'4"x7'0"		
	3070	6070	3'0"x7'0"	6'0"x7'0"		
	3470	6870	3'4"x7'0"	6'8"x7'0"		
	3870	7470	3'8"x7'0"	7'4"x7'0"		
FLUSH PANEL	2068	4068	2'0"x6'8"	4'0"x6'8"	No Glass	3-Hour "A" Label 250° or 650° Rated
	2668	5068	2'6"x6'8"	5'0"x6'8"		
	2868	5468	2'8"x6'8"	5'4"x6'8"		
	3068	6068	3'0"x6'8"	6'0"x6'8"		
	3468	6868	3'4"x6'8"	6'8"x6'8"		
	2070	4070	2'0"x7'0"	4'0"x7'0"		
	2670	5070	2'6"x7'0"	5'0"x7'0"		
	2870	5470	2'8"x7'0"	5'4"x7'0"		
	3070	6070	3'0"x7'0"	6'0"x7'0"		
	3470	6870	3'4"x7'0"	6'8"x7'0"		
	3870	7470	3'8"x7'0"	7'4"x7'0"		
MEDALLION DOOR	2068	4068	2'0"x6'8"	4'0"x6'8"	100 Sq. Inches Max. Each Wall Opng.	1½-Hour "B" Label 250° or 650° Rated
	2668	5068	2'6"x6'8"	5'0"x6'8"		
	2868	5468	2'8"x6'8"	5'4"x6'8"		
	3068	6068	3'0"x6'8"	6'0"x6'8"		
	3468	6868	3'4"x6'8"	6'8"x6'8"		
	2070	4070	2'0"x7'0"	4'0"x7'0"		
	2670	5070	2'6"x7'0"	5'0"x7'0"		
	2870	5470	2'8"x7'0"	5'4"x7'0"		
	3070	6070	3'0"x7'0"	6'0"x7'0"		
	3470	6870	3'4"x7'0"	6'8"x7'0"		
	3870	7470	3'8"x7'0"	7'4"x7'0"		
FLUSH PANEL	2068	4068	2'0"x6'8"	4'0"x6'8"	100 Sq. Inches Max. Each Wall Opng.	1½-Hour "B" Label 250° or 650° Rated
	2668	5068	2'6"x6'8"	5'0"x6'8"		
	2868	5468	2'8"x6'8"	5'4"x6'8"		
	3068	6068	3'0"x6'8"	6'0"x6'8"		
	3468	6868	3'4"x6'8"	6'8"x6'8"		
	2070	4070	2'0"x7'0"	4'0"x7'0"		
	2670	5070	2'6"x7'0"	5'0"x7'0"		
	2870	5470	2'8"x7'0"	5'4"x7'0"		
	3070	6070	3'0"x7'0"	6'0"x7'0"		
	3470	6870	3'4"x7'0"	6'8"x7'0"		
	3870	7470	3'8"x7'0"	7'4"x7'0"		
PANEL DOOR	2068	4068	2'0"x6'8"	4'0"x6'8"	No Glass	1½-Hour "D" Label Not Rated
	2668	5068	2'6"x6'8"	5'0"x6'8"		
	2868	5468	2'8"x6'8"	5'4"x6'8"		
	3068	6068	3'0"x6'8"	6'0"x6'8"		
	3468	6868	3'4"x6'8"	6'8"x6'8"		
	2070	4070	2'0"x7'0"	4'0"x7'0"		
	2670	5070	2'6"x7'0"	5'0"x7'0"		
	2870	5470	2'8"x7'0"	5'4"x7'0"		
	3070	6070	3'0"x7'0"	6'0"x7'0"		
	3470	6870	3'4"x7'0"	6'8"x7'0"		
	3870	7470	3'8"x7'0"	7'4"x7'0"		
PANEL DOOR	2068	4068	2'0"x6'8"	4'0"x6'8"	100 Sq. Inches Max. Each Wall Opng.	1½-Hour "B" Label Not Rated
	2668	5068	2'6"x6'8"	5'0"x6'8"		
	2868	5468	2'8"x6'8"	5'4"x6'8"		
	3068	6068	3'0"x6'8"	6'0"x6'8"		
	3468	6868	3'4"x6'8"	6'8"x6'8"		
	2070	4070	2'0"x7'0"	4'0"x7'0"		
	2670	5070	2'6"x7'0"	5'0"x7'0"		
	2870	5470	2'8"x7'0"	5'4"x7'0"		
	3070	6070	3'0"x7'0"	6'0"x7'0"		
	3470	6870	3'4"x7'0"	6'8"x7'0"		
	3870	7470	3'8"x7'0"	7'4"x7'0"		
MEDALLION DOOR	2068	4068	2'0"x6'8"	4'0"x6'8"	1296 Sq. Inches Max. Each Glass Opng.	¾-Hour "C" Label Not Rated
	2668	5068	2'6"x6'8"	5'0"x6'8"		
	2868	5468	2'8"x6'8"	5'4"x6'8"		
	3068	6068	3'0"x6'8"	6'0"x6'8"		
	3468	6868	3'4"x6'8"	6'8"x6'8"		
	2070	4070	2'0"x7'0"	4'0"x7'0"		
	2670	5070	2'6"x7'0"	5'0"x7'0"		
	2870	5470	2'8"x7'0"	5'4"x7'0"		
	3070	6070	3'0"x7'0"	6'0"x7'0"		
	3470	6870	3'4"x7'0"	6'8"x7'0"		
	3870	7470	3'8"x7'0"	7'4"x7'0"		
FLUSH PANEL	2068	4068	2'0"x6'8"	4'0"x6'8"	No Glass	1½-Hour "D" Label 250° or 650° Rated
	2668	5068	2'6"x6'8"	5'0"x6'8"		
	2868	5468	2'8"x6'8"	5'4"x6'8"		
	3068	6068	3'0"x6'8"	6'0"x6'8"		
	3468	6868	3'4"x6'8"	6'8"x6'8"		
	2070	4070	2'0"x7'0"	4'0"x7'0"		
	2670	5070	2'6"x7'0"	5'0"x7'0"		
	2870	5470	2'8"x7'0"	5'4"x7'0"		
	3070	6070	3'0"x7'0"	6'0"x7'0"		
	3470	6870	3'4"x7'0"	6'8"x7'0"		
	3870	7470	3'8"x7'0"	7'4"x7'0"		
MEDALLION DOOR	2068	4068	2'0"x6'8"	4'0"x6'8"	720 Sq. Inches Max. Each Glass Opng.	¾-Hour "E" Label Not Rated
	2668	5068	2'6"x6'8"	5'0"x6'8"		
	2868	5468	2'8"x6'8"	5'4"x6'8"		
	3068	6068	3'0"x6'8"	6'0"x6'8"		
	3468	6868	3'4"x6'8"	6'8"x6'8"		
	2070	4070	2'0"x7'0"	4'0"x7'0"		
	2670	5070	2'6"x7'0"	5'0"x7'0"		
	2870	5470	2'8"x7'0"	5'4"x7'0"		
	3070	6070	3'0"x7'0"	6'0"x7'0"		
	3470	6870	3'4"x7'0"	6'8"x7'0"		
	3870	7470	3'8"x7'0"	7'4"x7'0"		

"250° rating" means that the heat transmission through the door at the end of 30 minutes during the fire test was less than 250°F.
"650° rating" means that the heat transmission through the door at the end of 30 minutes during the fire test was less than 650°F.
"Not rated" means that the heat transmission through the door at the end of 30 minutes during the fire test was more than 650°F.
See page—11-d for ordering procedures.

Underwriters' Labelled Doors—Frames and Hardware

UNDERWRITERS' LABEL APPLICATION TABLE	
LABEL RATING	**TYPICAL LOCATIONS**
3-Hour (A) Label 250° or 650° Rated	Firewalls, Division Walls, Inflammable Areas, Areas with Hazardous Content.
1½-Hour (B) Label 250°, 650° or not Rated	Openings in Vertical Shaft, Stairwell, and Elevator Shaft.
1½-Hour (D) Label 250°, 650° or not Rated	Exterior Wall Openings, Fire Escapes.
¾-Hour (C) Label—Not Rated	Corridor or Room Partition Openings.
¾-Hour (E) Label—Not Rated	Exterior Wall Openings Subject to Moderate Exposure.

FIRE DOOR RATINGS

The rating of 3-hour, 1½-hour or ¾-hour indicates the duration of exposure to the fire. The letters A, B, C, D and E following the hourly rating, designate the location for which the assembly is designed.

The 250°, 650° and Not Rated classifications, indicate the maximum heat transmission through the door at 30 minutes of fire test. The Not Rated classification, indicates a temperature rise in excess of 650° at 30 minutes of fire test.

The required heat transmission classification is to be indicated by the architect or contractor after consulting with the local fire code officials.

Local fire codes in the various cities and towns, should always be examined before various fire door label ratings are specified.

ORDERING PROCEDURE: All Underwriters' doors and frames use the same identification letters and numbers as the standard doors and frames with the following prefix added:

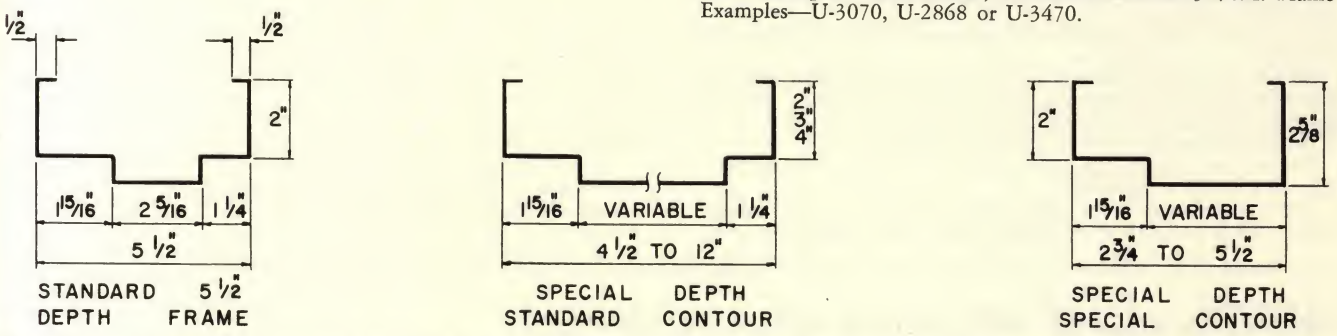
DOORS ONLY

A2 —3-hour "A" label door with a 250° rating.
A6 —3-hour "A" label door with a 650° rating.
B2 —1½-hour "B" label door with a 250° rating.
B6 —1½-hour "B" label door with a 650° rating.
BN—1½-hour "B" label door with no rating.
CN—¾-hour "C" label door with no rating.
D2 —1½-hour "D" label door with a 250° rating.
D6 —1½-hour "D" label door with a 650° rating.
DN—1½-hour "D" label door with no rating.
EN—¾-hour "E" label door with no rating.

FRAMES

All frames are prefixed with the letter "U".

Door Examples—A6-F3070M, A2-2868M or BN-P3470M. Frame Examples—U-3070, U-2868 or U-3470.



Ceco Underwriters' Labelled Frames are available in standard 5½" depth (knock-down) construction of #16 gauge steel. Special depth frames as illustrated, are available in #16 gauge or #14 gauge steel with all welded construction when required.

HARDWARE—Ⓛ

This insignia will appear throughout the hardware section of this catalog. All hardware that shows this insignia can be used on Underwriters' Labelled Doors and Frames. Hardware that does not show this insignia in this catalog, cannot be used on label doors under any circumstances.

Under the label procedure issued by the Underwriters' Laboratories, Ceco is permitted to prepare doors and frames for hardware only as approved by the National Board of Fire Underwriters. Doors and frames prepared for hardware, not approved, will be rejected by the Underwriters' inspector prior to shipment. Hardware added by the contractor after receipt of approved material, can cause complete rejection of the opening by the local authorities, if the hardware is not in full compliance with their requirements.

Three hour (A) Labelled Doors must be shipped with the lockcase installed in the door and hinges must be applied to the hinge cutouts. The frame must be shipped with the lock-strike plate attached. Items such as door closers, kickplates, surface bolts and etc., are not required to be mounted.

Note. (A) Label three hour fire doors over 3'0" in width, must use number 2624 or 2724 extra heavy steel hinges. See page 24-D.

GLAZED OPENINGS

(A) Three hour (A) Labelled Doors must be all metal with no glazing permitted.

(B) One and one-half hour (B) Labelled Doors can have 100 square inches of glass area on any one door opening. Double doors can have 100 square inches of glass in the active leaf with none in the inactive leaf, or 50 square inches of glass area in each door leaf. Only one glass opening is permitted on any one door leaf. Two 50 square inch vision lights on one door leaf is not permitted. No glass opening dimension can exceed 12 inches.

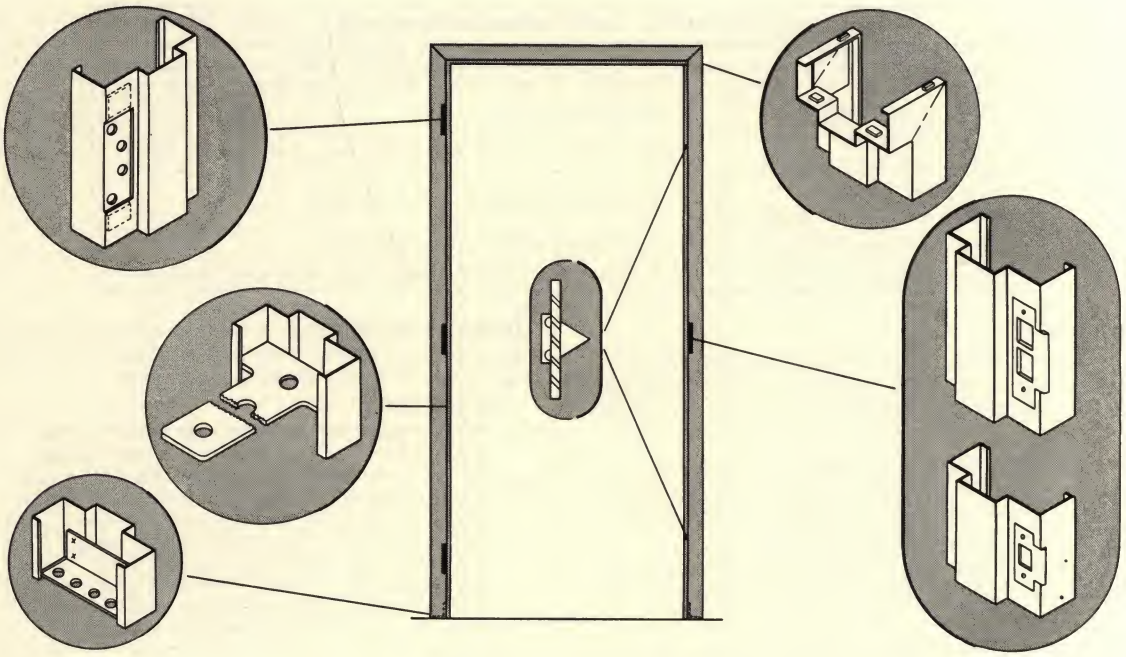
(D) One and one-half hour (D) Labelled Doors must be all metal with no glazing permitted.

(C) Three-quarter hour (C) Labelled Doors can have 1296 square inches of glass area for each glass opening. There are no restrictions on the number of glass openings per each door leaf, as long as no dimension exceeds 54 inches.

(E) Three-quarter hour (E) Labelled Doors can have 720 square inches of glass area for each glass opening. There are no restrictions on the number of glass openings per each door leaf, as long as no dimension exceeds 54 inches.

Note. All glass openings must be glazed with wire glass.

Hollow Metal Door Frames



Ceco Hollow Metal Door Frames can be used with Medallion, Flush Panel and Panel doors.

Frames are formed from No. 16 gauge steel sheet 5½" deep with 2" face and ⅝" integral stop.

Head corners are mitred for best possible appearance. Standard size frames have die cut mitred corners with steel tabs for quick assembly. Frames are shipped knocked-down.

Frames are mortised and reinforced for hinges.

Frames are mortised for cylindrical type lock strikes or mortised type lock strikes as required.

Dust boxes (sometimes called plaster guards) are provided to protect hinge and lock strike preparations during installation.

Air cushion gum rubber mutes (2) are furnished with each frame.

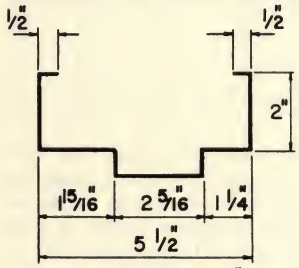
Six adjustable masonry anchors are furnished with each frame, three to be used on each jamb.

Ceco standard door frames with standard lock mortises can be used with 1¾" thick wood doors (see hardware section for hardware for wood doors).

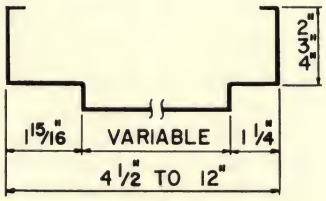
Frames are bonderized and flow-coat painted one prime coat of rust-inhibitive zinc chromate neutral grey color.

Standard door frames 5½" depth are carried in stock in company warehouses. Transom frames, sidelights, and borrowed lights are manufactured to order. Special depth frames are available when required.

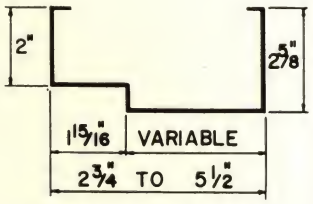
FRAMES: STANDARD AND SPECIAL DEPTH OR CONTOUR



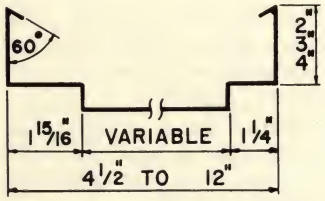
STANDARD DEPTH 5½" FRAME



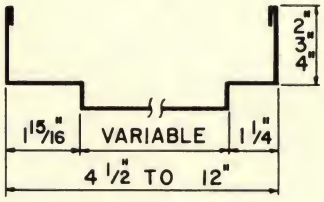
SPECIAL STANDARD DEPTH CONTOUR



SPECIAL SPECIAL DEPTH CONTOUR



SPECIAL SPECIAL DEPTH CONTOUR



SPECIAL SPECIAL DEPTH CONTOUR

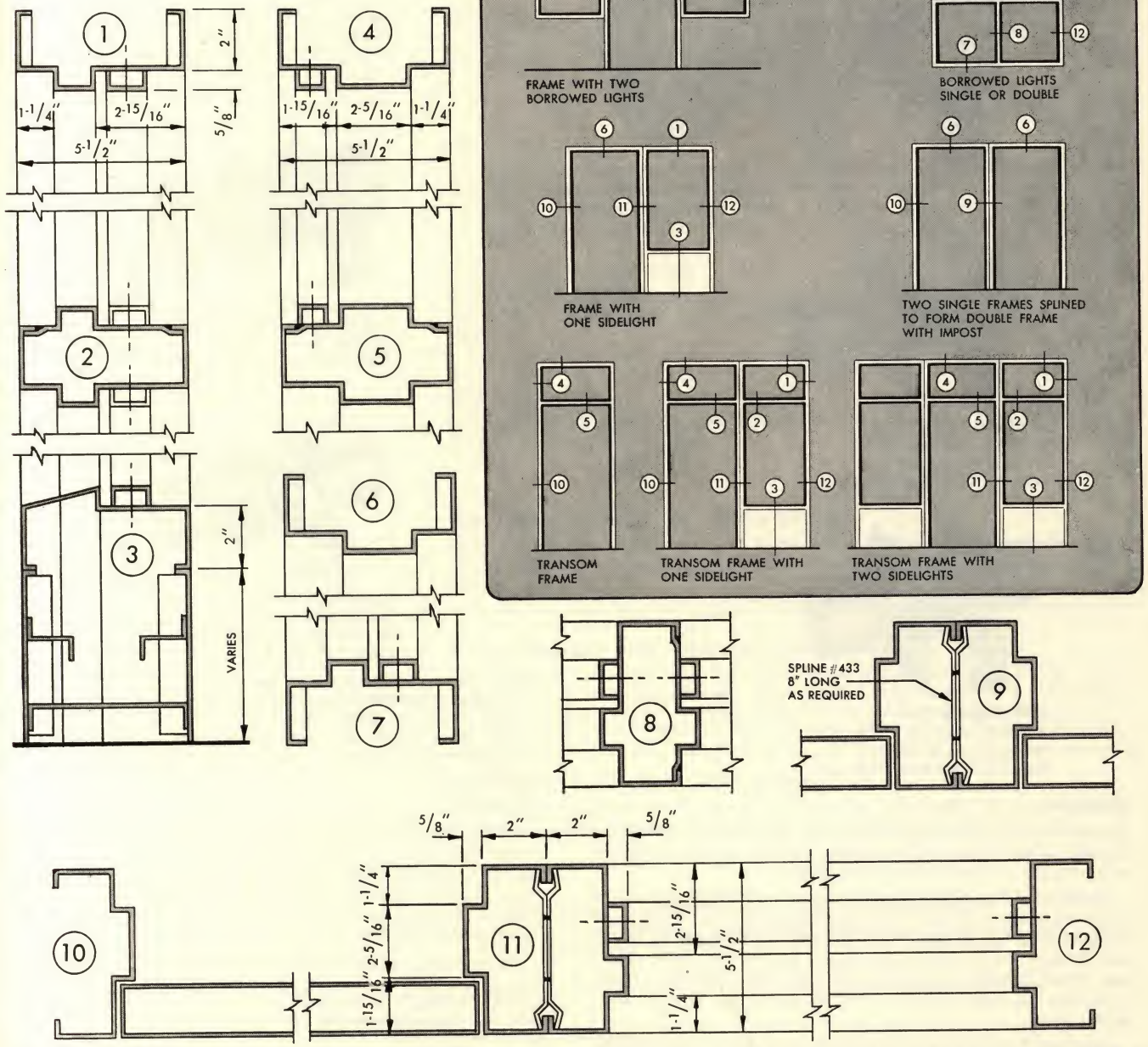
All frames shown are fabricated from No. 16 gauge cold-rolled steel sheets. Frames other than the Ceco 5½" standard depth are shipped with welded corners. When specifying special depth or contour frames, be sure to indicate depth and contour required. For contours other than those shown, consult Ceco's Chicago door engineering department.

No. 14 gauge frames can be furnished when required.

Sidelights • Borrowed Lights • Transom Frames

construction details

scale 3/16" = 1'-0"



Ceco Transom Frames, Sidelights and Borrowed Lights are designed to furnish completely welded-up units, with all corners welded and ground smooth, that can be easily and accurately installed adjacent to each other to obtain the best possible finished appearance and strength.

Rooms within rooms or partitions can be built using Ceco Transom Frames and Borrowed Lights to the ceiling with masonry wall below the Borrowed Lights.

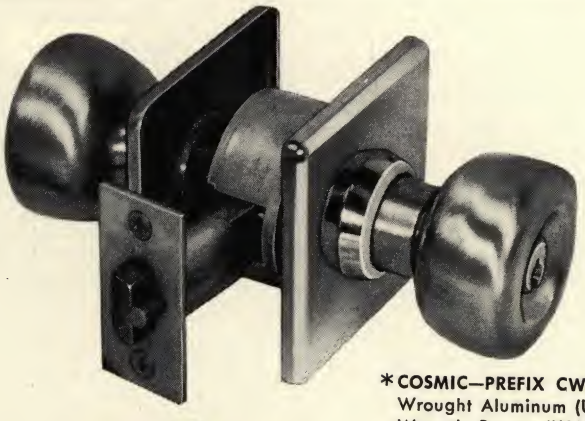
TRANSOM DOOR FRAMES are fabricated on order for standard size doors to any height up to 14'-0", and any depth to meet job requirements. Standard 5½" depth is lower in cost than special depths. Can be furnished in fixed glazed, fixed or ventilated sash or with metal panels.

SIDELIGHTS are fabricated on order to fit adjacent to standard or transom frames to widths up to 8'-0" and only in 5½" depth. Can be furnished with muntins or horizontal impost (Section 5) as required. Bottom panel furnished to match glass heights in Doors (FG, LG, G). Sidelights with panels to height of glass in G Doors furnished only up to 4'-0" in width. Multiple sidelights can be used adjacent to each other.

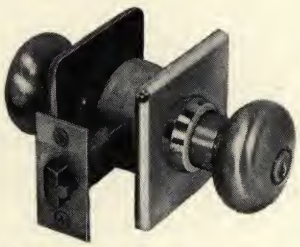
BORROWED LIGHTS are fabricated to order in any size and depth to meet job requirements. Standard 5½" depth to match standard frames are lower in cost than special depths. Borrowed Lights can be used in multiples for long runs and can be furnished with corner plates where required.

Borrowed Lights used in exterior walls or in exterior entrances, with masonry below (Short Sidelight) or clear to floor can be furnished with sill section as used in Sidelights (Section 3).

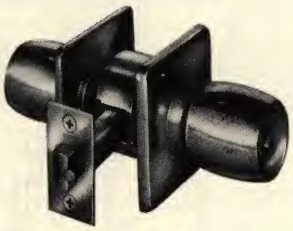
Standard Duty Cylindrical Locksets



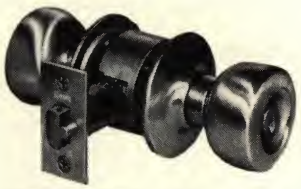
***COSMIC—PREFIX CWS**
Wrought Aluminum (US28)
Wrought Bronze (US10)
Knobs 2⅛" Dia. Rose 3" Square



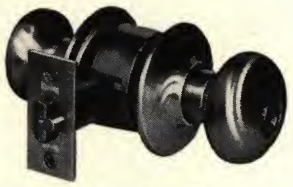
HADDAM—PREFIX HWS
Wrought Aluminum (US28)
Wrought Bronze (US10)
Knob 2⅛" Dia. Rose 3" Square



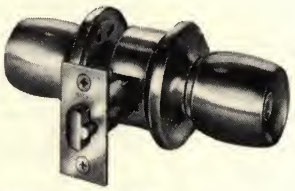
TEMPO-PREFIX TWS
Wrought Aluminum (US28)
Wrought Bronze (US10)
Knob 2⅛" Dia. Rose 3" Square



COSMIC—PREFIX CWR
Wrought Aluminum (US28)
Wrought Bronze (US10)
Knobs 2⅛" Dia. Rose 2⅝" Dia.



HADDAM—PREFIX HWR
Wrought Aluminum (US28)
Wrought Bronze (US10)
Knobs 2⅛" Dia. Rose 2⅝" Dia.



TEMPO-PREFIX TWR
Wrought Aluminum (US28)
Wrought Bronze (US10)
Knob 2⅛" Dia. Rose 2¾" Dia.

****Cosmic Wrought Square design locksets (prefix CWS) carried in stock in company warehouses or Chicago in dull bronze (US10) and alumilited aluminum (US28) finishes — KD, KA, MKA, and MKD. (Other locks shown on this page, other finishes, and special keying are all manufactured to order — consult Ceco district sales office for delivery time.)***

GENERAL

Standard Duty Cylindrical Locks are recommended for commercial industrial and office locations where normal frequency of operation is planned and expected.

Standard Duty Cylindrical Locksets are designed and engineered to assure long life and resistance to wear. Dual brass on steel bearings in each knob provide rigid knob assembly and prevent knob wabble and assure longer life. Self aligning thrust bearing on spindle prevents knob binding. Latch retraction carriage glides on ball bearings for smooth easy knob action.

Standard Duty Cylindrical Locksets fit standard preparation in Ceco doors and frames. Backset 2¾" Front 1⅛" x 2¼". Locksets for steel doors are furnished with flat fronts and all machine screws. Locks for wood doors and Ceco frames are furnished with bevelled front ⅛" in 2" and with wood screws for lock, machine screws for strikes.

Standard Duty Cylindrical Locksets can be furnished keyed alike, keyed different, or master-keyed with Heavy Duty Cylindrical Locksets and Heavy Duty Mortise Locksets as required.

These locks can be furnished only with Russell & Erwin key systems. They cannot be keyed to other manufacturers' keys.

They are reversible for any hand and swing of door. Cylinders can be reversed in the field so that key slot is in the correct position for any hand of door.

ORDERING

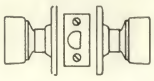
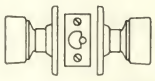
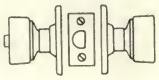
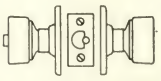
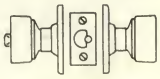
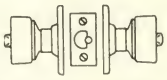
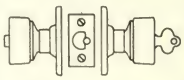
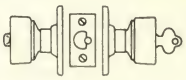
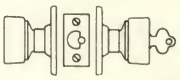
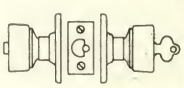
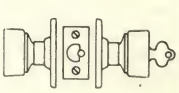
When ordering locks always give the complete number, including finish. When ordering locksets the letter prefix shown under the illustrations denotes the design. The operation of each lockset is denoted by number as shown on page 15-d. The complete number of any one lockset is, for example: CWS-340 KA-US28.

If lockset is required to be keyed different the "KA" would change to "KD". If master-keyed, the KA would change to MKA or MKD as required.

FINISHES
US28—Alumilited Satin Finish on Aluminum
US10—Dull Bronze Finish on Bronze
US26—Polished Chrome Plate on Brass
US26D—Dull Chrome Plate on Brass

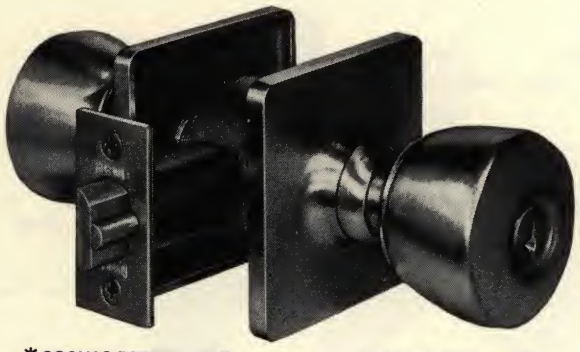
Split finishes can be furnished on order. Always give hand and swing of door and finish required on outside so that finish of strike will match outside trim. When locks with keys and/or buttons are used with split finishes, state which side gets which finish. For example: CWS - 340 KD - US28 key side — US26 button side for LHI Door.

In this example the strike would be finished in US26. Standard Duty Cylindrical locksets cannot be used on Underwriters Labelled Doors.

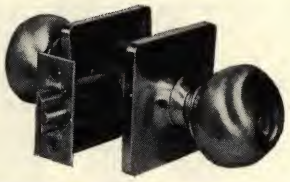
CECO Number	GOV. Number	SILHOUETTE	OPERATION
310 *	160-N		**FOR PASSAGE DOORS** Latch bolt by knob either side. Each knob always free.
314 *	160-NX		**FOR EXIT DOORS** Latch bolt by knob inside only. Inside knob always free. Outside knob fixed. Dead locking latch.
320 *	160-L		**FOR BATHROOM** Latch bolt by knob each side. Inside knob always free. Push button dead locks outside knob. Push button released by turning inside knob or closing door . . . also released by emergency key through outside knob. Stocked in split finish US10/US26 and US28/US26.
322 *	160-P		**FOR INNER OFFICE DOORS** Latch bolt by knob either side. Push button dead locks outside knob. Inside knob always free. Turning inner knob or closing door releases push button. Dead locking latch.
326 *	160-Q		**FOR EXIT DOORS** Latch bolt by knob either side. Turn button locks or unlocks outside knob. Inside knob always free. Dead locking latch.
328 *	160-M		**FOR COMMUNICATING OR OFFICE DOORS** Latch bolt by knob either side. Turn button in either knob locks both knobs. Door can be opened only when turn buttons on both sides are in unlocked position. Dead locking latch.
335 *	160-E		**FOR RESTROOMS AND PUBLIC STATION DOORS** Latch bolt by knob either side. Inside knob push button locks outside knob. Latch bolt retracted by key in outside knob. Locking button released by turning inside knob, by key in outside knob or by closing door. Locking button has slot in head. Can be fixed in locked position by turning button with a screw driver or coin. Dead locking latch.
340 *	160-A		**FOR FRONT, REAR, AND OFFICE DOORS** Latch bolt by knob each side. Inside knob always free. Turn button dead locks outside knob. Key retracts latch bolt when outside knob is locked. Dead locking latch.
340-58 *	160-R		**FOR CLASSROOM, VESTIBULE AND UTILITY ROOM DOORS** Latch bolt by knob either side. Inside knob always free. Outside knob dead locked by key in outside knob. Dead locking latch.
346 *	160-B		**FOR OFFICE DOORS** Latch bolt by knob either side. Push button dead locks outside knob. Inside knob always free. Turning inside knob releases push button. Key retracts latch bolt and releases push button. Dead locking latch. Closing door does not release push button.
352 *	160-D		**FOR UTILITY ROOM, STOREROOM AND EXIT DOORS** Latch bolt by inside knob only. Outside knob fixed. Latch bolt may be retracted by key in cylinder in outside knob. Dead locking latch.

** These locksets carried in company warehouses or Chicago stocks in Cosmic Wrought Square design (prefix CWS) in dull bronze (US10) and alumilited aluminum (US28) finishes — KD, KA, MKA, or MKD.*

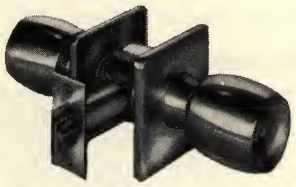
Heavy Duty Cylindrical Locksets



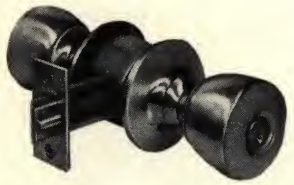
***COSMIC-PREFIX CWS** — **FLARE-PREFIX (FCS)**
Wrought Aluminum (US28) — Cast Aluminum (US28)
Wrought Bronze (US10) — Cast Bronze (US10)
Knobs 2 3/16" Dia. Rose 3" Square



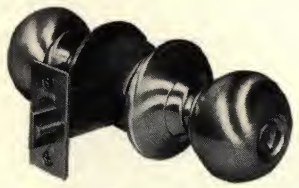
HADDAM—PREFIX HWS — **BRISTOL—PREFIX BCS**
Wrought Aluminum (US28) — Cast Aluminum (US28)
Wrought Bronze (US10) — Cast Bronze (US10)
Knobs 2 5/16" Dia. Rose 3" Square



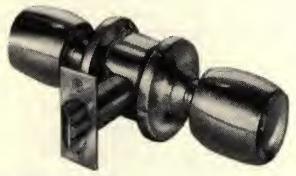
TEMPO-PREFIX TWS — **COMET-PREFIX CCS**
Wrought Aluminum (US28) — Cast Aluminum (US28)
Wrought Bronze (US10) — Cast Bronze (US10)
Knob Dia. 2 3/16" Rose 3" Square



COSMIC—PREFIX CWR — **FLARE—PREFIX FCR**
Wrought Aluminum (US28) — Cast Aluminum (US28)
Wrought Bronze (US10) — Cast Bronze (US10)
Knobs 2 3/16" Dia. Rose 2 5/8" Dia.



HADDAM—PREFIX HWR — **BRISTOL—PREFIX BCR**
Wrought Aluminum (US28) — Cast Aluminum (US28)
Wrought Bronze (US10) — Cast Bronze (US10)
Knobs 2 5/16" Dia. Rose 2 5/8" Dia.



TEMPO-PREFIX TWR — **COMET-PREFIX CCR**
Wrought Aluminum (US28) — Cast Aluminum (US28)
Wrought Bronze (US10) — Cast Bronze (US10)
Knob Dia. 2 3/16" Rose 2 3/4" Dia.

Cosmic Wrought Square design locksets (prefix CWS) carried in stock in company warehouses or Chicago in dull bronze (US10) and alumilited aluminum (US28) finishes — KD, KA, MKA, and MKD. (Other locks shown on this page, other finishes, and special keying are all manufactured to order — consult Ceco district sales office for delivery time.)

GENERAL

Heavy Duty Cylindrical Locksets are recommended for schools, hospitals, commercial, industrial and institutional buildings. Designed for high-frequency locations, and to give long life under hard service. Knob shanks are of seamless tubular design to obtain full torsional strength. Wrought knobs are reinforced to prevent denting and to give strength equivalent to that of cast knobs. Outside roses are tamper proof.

Flare, Bristol and Comet Designs have cast knobs and cast roses. They can be furnished with cast knobs and wrought roses where cost is a factor, yet cast knobs are desired. The prefix to the lock number would then change, for example: Flare Design with cast rose is FCR or FCS. With wrought rose the prefix would be FWR or FWS.

Heavy Duty Cylindrical Locksets fit standard preparation in Ceco doors and frames. Backset 2 3/4" Front 1 1/8" by 2 1/4". Locksets for steel doors are furnished with flat fronts and all machine screws. Locks for wood doors and Ceco frames are furnished with bevelled front 1/8" by 2" and with wood screws for lock, machine screws for strikes.

Heavy Duty Cylindrical Locksets can be furnished keyed alike, keyed different or master keyed with Standard Duty Cylindrical Locksets and Heavy Duty Mortised Locksets as required.

These locks can be furnished only with Russell & Erwin key systems. They cannot be keyed to other manufacturers' keys.

They are reversible for any hand and swing of door. Cylinders can be reversed in the field so that key slot is in the correct position for any hand of door.

ORDERING

When ordering locks always give the complete number including finish. The letter prefix shown under the illustrations denotes the design and whether roses are wrought or cast. The design name and letter denotes when knobs are wrought or cast. The prefix letters also denote where the rose is round or square.

The operation of each lockset is denoted by number as shown on page 17-d. The complete number of any one lockset is, for example:

CWS - 440KA - US28

If lockset is required to be keyed different the KA would change to KD if master keyed the KA would change to MKA or MKD as required.

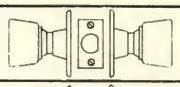
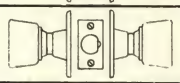
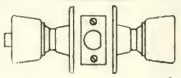
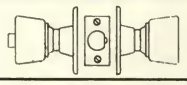
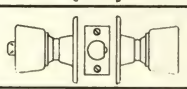
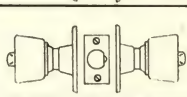
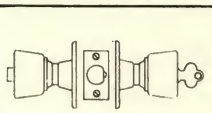
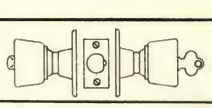
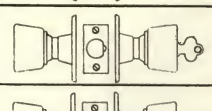
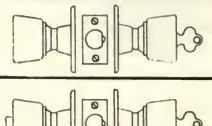
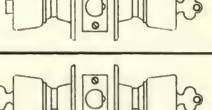
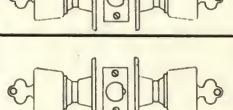
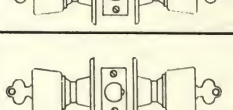
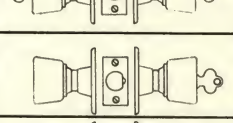
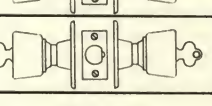
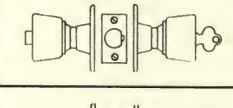
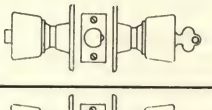
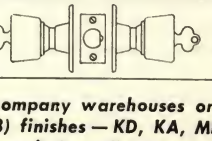
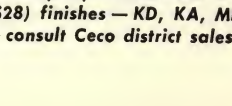
FINISHES
US28—Alumilited Satin Finish on Aluminum
US10—Dull Bronze Finish on Bronze
US26—Polished Chrome Plate on Brass
US26D—Dull Chrome Plate on Brass

Split finishes can be furnished on order. Always give hand and swing of door and finish required on outside so that finish of strike will match outside trim. When locks with keys and/or buttons are used with split finishes, state which side gets which finish. For example:

CWS - 440 KD - US28 key side—US26 button side for LHI Door

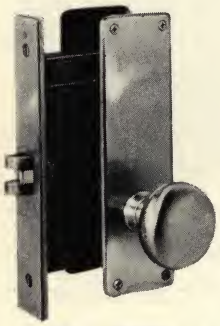
In this example the strike would be finished in US26.

All locksets and latchsets shown on this page can be used with Underwriters Labelled Doors except No. H-440-58.

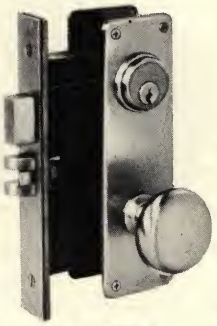
CECO NUMBER	GOV. NUMBER	SILHOUETTE	OPERATION
410 * Ⓛ	161-N		**FOR PASSAGE DOORS** Latch bolt by knob either side. Each knob always free.
414 Ⓛ	161-NX		**FOR EXIT DOORS** Latch bolt by knob inside only. Inside knob always free. Outside knob fixed. Dead locking latch.
420 * Ⓛ	161-L		**FOR BATHROOM** Latch bolt by knob each side. Inside knob always free. Push button dead locks outside knob. Push button released by turning inside knob or closing door . . . also released by emergency key through outside knob. Stocked in split finish US10/US26 and US28/US26.
422 * Ⓛ	161-P		**FOR BEDROOM AND INNER OFFICE DOORS** Latch bolt by knob either side. Push button dead locks outside knob. Inside knob always free. Turning inner knob or closing door releases push button. Dead locking latch.
426 Ⓛ	161-Q		**FOR EXIT DOORS** Latch bolt by knob either side. Turn button locks or unlocks outside knob. Inside knob always free. Dead locking latch.
428 Ⓛ	161-M		**FOR COMMUNICATING HOTEL OR OFFICE DOORS** Latch bolt by knob either side. Turn button in either knob locks or unlocks opposite knob. Dead locking latch. To prevent accidental lockout, this lock should not be used on doors between rooms which have no other entrance.
433EM Ⓛ	161-H		**FOR HOTEL CORRIDOR DOORS** Latch bolt by key only outside and knob inside. Outside knob always rigid. Push button shuts off all keys except emergency key and throws out visual occupancy indicator in face of cylinder. Either closing door or operating inside knob will release the shutout mechanism and retract the visual occupancy indicator unless button has been turned with spanner key fixing it in locked position.
440 * Ⓛ	161-A		**FOR FRONT, REAR AND OFFICE DOORS** Latch bolt by knob each side. Inside knob always free. Turn button dead locks outside knob. Key retracts latch bolt when outside knob is locked. Dead locking latch.
440-58 * Ⓛ	161-R		**FOR CLASSROOM, VESTIBULE AND UTILITY ROOM DOORS** Latch bolt by knob either side. Inside knob always free. Outside knob dead locked by key in outside knob. Dead locking latch.
H440-58 *	NONE		**FOR CLASSROOM, VESTIBULE AND UTILITY ROOM DOORS WITH LATCH HOLD-BACK** Same as 440-58 but may be locked with bolt in retracted position.
446 Ⓛ	161-B		**FOR OFFICE DOORS** Latch bolt by knob each side. Push button deadlocks outside knob. Inside knob always free. Turning inside knob releases push button. Key retracts latch bolt and releases push button. Dead locking latch. Closing door does not release push button.
446-12 * Ⓛ	161-C		**FOR APARTMENT, OFFICE BUILDING AND CORRIDOR DOORS** Latch bolt by knob each side. Inside knob always free. Outside knob dead locked by key in inside knob. Key in outside knob retracts latch bolt when outside knob is locked. Dead locking latch.
448-12 Ⓛ	161-G		**FOR ENTRANCE AND COMMUNICATING DOORS** Latch bolt by knob either side except when both knobs are locked simultaneously by key in either knob. When both knobs are locked from either side, key from either side will unlock both knobs. Dead locking latch.
450-12 Ⓛ	161-F		**CYLINDER COMMUNICATING HOTEL OR OFFICE DOORS** Latch bolt by knob either side. Key in each knob locks or unlocks opposite knob. Dead locking latch. To prevent accidental lockout, this lock should not be used on doors between rooms which have no other entrance.
452 * Ⓛ	161-D		**FOR UTILITY ROOM, STOREROOM AND EXIT DOORS** Latch bolt by inside knob only. Outside knob fixed. Latch bolt may be retracted by key in cylinder in outside knob. Dead locking latch.
452-12 Ⓛ	161-W		**FIXED KNOB LOCK FOR PASSAGE DOORS** Latch bolt by key from either side. Both knobs fixed. Dead locking latch.
453 Ⓛ	161-T		**FOR DORMITORY BEDROOMS AND PUBLIC RESTROOM DOORS** Latch bolt by knob either side. Inside knob always free. Push button deadlocks outside knob. Turning inside knob or closing door releases push button. Key releases push button and unlocks outside knob. Key in outside knob can also be used to lock outside knob. Dead locking latch.
456 Ⓛ	161-U		**FOR COMMUNICATING DOORS** Latch bolt by knob either side. Pushing in button in inside knob locks outside knob. Locking button released by key from outside, knob from inside or closing door. Both knobs locked by key in outside knob. Dead locking latch.
456-12 Ⓛ	161-S		**FOR COMMUNICATING DOORS** Latch bolt by knob either side except when key in either knob locks its own knob only. Dead locking latch.

**These locksets carried in company warehouses or Chicago stocks in Cosmic Wrought Square design (prefix CWS) in dull bronze (US10) and alumilited aluminum (US28) finishes — KD, KA, MKA, or MKD. (Other locks shown on this page, other finishes, and special keying are all manufactured to order — consult Ceco district sales office for delivery time.)*

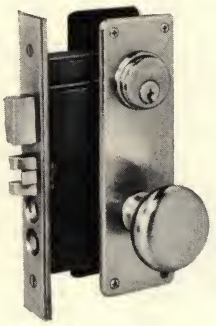
Heavy Duty Mortise Locksets



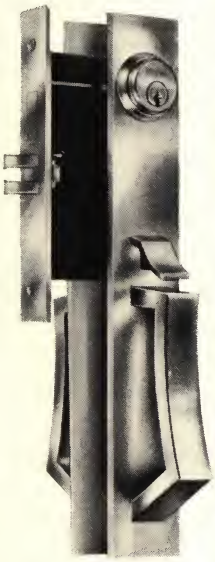
No. 5110



No. 5211



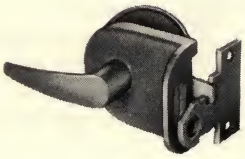
No. 5221



No. 5251

No. 5311

No. 5231



No. 1500

GENERAL

Ceco Mortised Locksets are heavy duty commercial grade. Russell & Erwin "Ten Strike" 2000 series, Federal Specifications Series 86, and should not be compared to standard or lighter grades of mortised locksets.

All latch bolts are anti-friction type for easy closing operation and long life.

Doors and frames are accurately die cut and reinforced for rigid attachment of locks and strikes.

All locksets are reversible and interchangeable in the standard lock mortise.

These locksets can be used with 1¾" wood doors and Ceco metal frames. The adjustable bevel front permits use of the lock with the front flat for Ceco Hollow Metal Doors, or with the front bevelled for 1¾" wood doors.

Locksets for Ceco Hollow Metal Doors are furnished with machine screws. Locksets for wood doors are furnished with wood screws for lockset and machine screws for strike.

KEYING

All Heavy Duty Locksets use single cam, ball-bearing pin tumblers, cast bronze 1¼" long 1.153" 32 U. S. thread. Furnished with two keys for each cylinder. Cylinders by other lock manufacturers with the same thread can be used with Ceco Mortised locks, which are furnished with or without key cylinders. All locks take cylinders with cloverleaf cams, except lockset No. 5321 which takes key cylinder with standard cam.

Key cylinders are furnished Keyed Alike (KA) or Keyed Different (KD) or Master-Keyed as required.

When locks must be keyed to an existing masterkey system other than Ceco, cylinders must be obtained from the manufacturer and Ceco locks will be furnished without cylinders.

FINISHES

US28—Alumilited Aluminum
US10—Dull Bronze
US26D—Dull Chrome
US26—Polished Chrome

ORDERING

When ordering Mortise Locksets always give the complete number, which is the operation number shown on page 19, followed by the keying information, followed by the finish. For example: 5211-KD-US28.

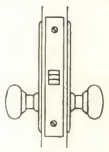
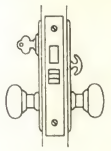
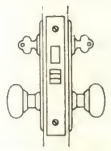
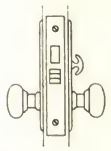
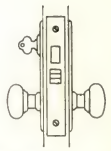
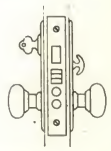
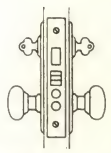
When ordering locks without key cylinders the number should read 5211-NC-US28.

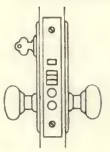
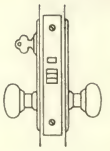
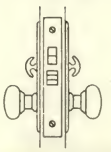
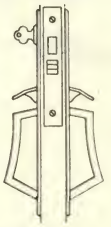
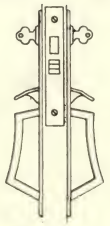
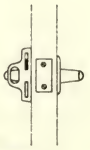
When laying out hardware schedules for jobs with key alike, key different and master keys use the listing 5211-US28 and furnish keying list or diagram.

UNDERWRITERS' DOORS

All locksets and latchsets shown on this page can be used with Underwriters' labelled doors except the No. 1500 surface latch.

Locks shown on this page are the most popular functions and meet most occupational requirements. Other functions of the Russwin Heavy Duty "Ten Strike" 2000 Series (Rockford Design) are available upon request. Russwin 2000 Series locksets are modified for Ceco to function properly in Ceco Doors, and to fit door preparation accurately.

SILHOUETTE	OPERATIONS
 Gov. Number 86N-4 Ceco Number *5110Ⓛ	**5110—FOR DOORS NOT REQUIRING LOCKS.** Latch Bolt operated by knobs both sides. No locking feature. Used to latch door closed.
 Gov. Number 86B-4 Ceco Number *5211Ⓛ	**5211—FOR ROOMS WITH ONE DOOR AND GENERAL USE.** Latch Bolt operated by knobs both sides, dead-bolt operated by key outside, by thumb turn inside.
 Gov. Number 86C-4 Ceco Number *5212Ⓛ	**5212—FOR DOORS REQUIRING LOCKING BOTH SIDES.** Latch Bolt operated by knobs both sides. Dead-bolt operated by key cylinder both sides.
 Gov. Number 86L-4 Ceco Number *5213Ⓛ	**5213—FOR TOILET DOORS.** Latch bolt operated by knobs both sides. Dead bolt operated by thumb turn inside. No key cylinder operations outside.
 Gov. Number NONE Ceco Number *5214Ⓛ	**5214—FOR METER ROOMS AND ISOLATED DOORS.** Latch bolt operated by knobs both sides. Dead bolt operated by key cylinder outside only.
 Gov. Number 86A-4 Ceco Number *5221Ⓛ	**5221—FOR OFFICES, FRONT DOORS AND ENTRANCES.** Latch bolt operated by knobs outside when stops are not set, by key when stops are set, inside by knob. Dead-bolt operated outside by key, inside by thumb turn.
 Gov. Number NONE Ceco Number *5222Ⓛ	**5222—FOR OFFICES AND ENTRANCES.** Latch bolt operated outside by knob when stops are not set, by key when stops are set, inside by knob. Dead-bolt operated by key both sides.

SILHOUETTE	OPERATIONS
 Gov. Number 86E-4 Ceco Number *5311Ⓛ	**5311—FOR OFFICES, EXITS AND STAIR WELLS.** Latch bolt operated outside when stops are not set, by key when stops are set. Latch bolt by inside knob at all times. Cannot be locked from inside. Auxiliary bolt deadlocks latch bolt.
 Gov. Number 86J-4 Ceco Number *5321Ⓛ	**5321—FOR SCHOOL CLASSROOM AND EXITS.** Latch bolt operated outside by knob when interior stops are not set by key, by key when stops are set. Latch bolt operated inside by knob at all times. Cannot be locked from inside. Auxiliary bolt deadlocks latch.
 Gov. Number 86M-4 Ceco Number *5231Ⓛ	**5231—FOR COMMUNICATING DOORS.** Latch bolt by knob either side when thumb turns are inactive. Split dead-bolt by thumb turn opposite sides. Can be locked from either side. Cannot be unlocked from opposite side.
 Gov. Number 123 Ceco Number *5251Ⓛ	**5251—FOR ENTRANCE DOORS.** Latch bolt by thumb piece both sides, dead-bolt operated by key cylinder outside. Cylinder can be placed on inside if desired.
 Gov. Number 123A Ceco Number *5252Ⓛ	**5252—FOR ENTRANCE DOORS.** Latch bolt by thumb piece both sides, dead-bolt operated by key cylinder both sides. Door can be locked from either side.
 Gov. Number NONE Ceco Number *1500Ⓛ	**1500—SURFACE LATCH.** Latch bar operated by lever handles both sides. Padlock eyes in latch and strike. Padlock not furnished. Reversible. Fits doors and frames prepared for cylindrical locks only. Case with latch bar and padlock eyes mounted on hinge side of door. Case, lever handles and escutcheon cast brass. Latch bar and strike manganese brass.

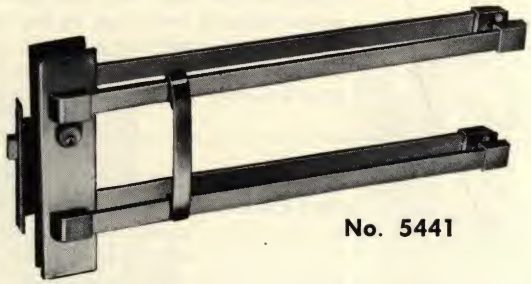
Ceco entrance locksets No. 5251 and 5252 are furnished with solid extruded bronze or aluminum pull plates 2½" x 14". The handles are solid bronze or aluminum contoured to fit the hand. The lockset is fastened to the door by use of through bolts, with no screws removable from the exterior side of the door.

All Ceco mortise knob operated locksets, are furnished with cast shank knobs and phillips head machine screws, for longer wear and neater appearance.

Locksets carried in company warehouses or Chicago stocks in dull bronze (US10) and alumilited aluminum (US28) finishes—KD, KA, MKD, or MKA. Other finishes or special keying manufactured to order.

Heavy Duty Mortise Dead-Bolt Locksets

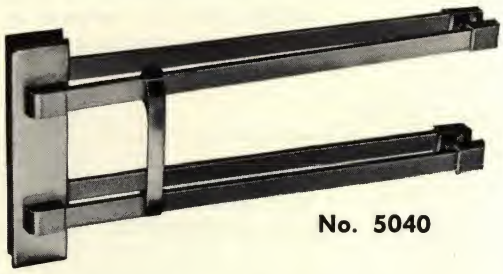
PUSH BAR AND PULL BAR DEAD-BOLT LOCKSET



No. 5441

This lockset is used on main entrances, is generally used on FG or LG type doors. Push Bars protect the long glass against accidental breakage and prevent marring by hands.

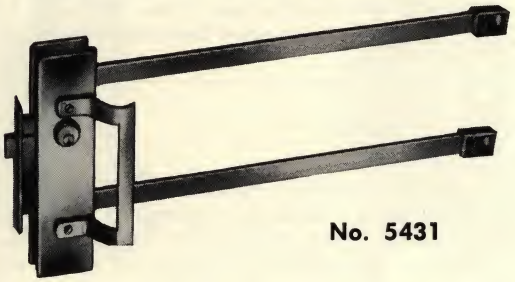
PUSH BAR AND PULL BAR SET



No. 5040

These bars are used on vestibule doors and in similar entrance locations where no lock is required. On double entrance doors use this set on one leaf with No. 5441 lockset on the other leaf.

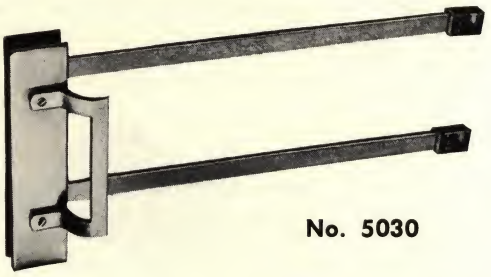
PULL HANDLE AND PUSH BAR DEAD-BOLT LOCKSET



No. 5431

This lockset is used on main entrances and is generally used with FG and LG type doors. This set is particularly offered for swing out FG or LG doors when full area of glass is desired for architectural effect, signs, lettering in glass, etc.

PULL HANDLE AND PUSH BAR SET



No. 5030

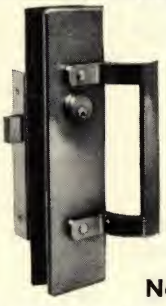
These bars are used on vestibule doors and similar entrance locations where no lock is required. On double entrance doors use this set on one leaf with No. 5431 lockset on the other leaf.

PUSH PLATE AND PULL PLATE

No. 5010

This set used on high frequency doors such as vestibules and locker rooms. On double entrance doors use this set on one leaf with lockset No. 5411 on the other leaf.

PUSH PLATE AND PULL PLATE DEAD-BOLT LOCKSET



No. 5411

This lockset is used on entrances, locker rooms, and other high frequency doors. This set is designed for good appearance on entrance doors as well as for interior doors.

DEAD-BOLT LOCKSET

No. 5421

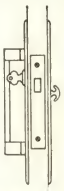
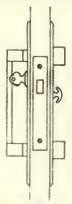
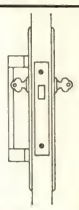
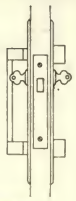
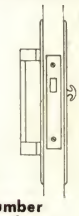
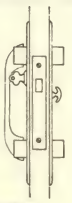
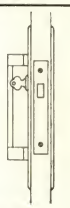
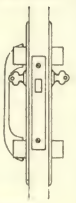
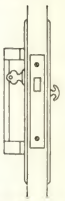
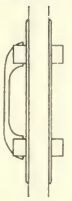
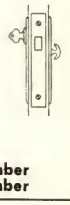
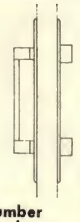
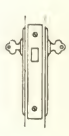
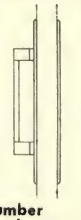
This lockset is used on doors normally closed and locked such as meter rooms, transformer vaults and access doors. Do not use door closers with this lock because the door can be opened only by pulling on key when turned in key cylinder.

Heavy Duty Mortise Locksets and Push and Pull Sets shown on this page are furnished in Alumilited Aluminum (US28), Dull Bronze (US10) or Dull Chrome (US26D) plated on Bronze.

All sets fit into standard CECO lock preparation in both doors and frames. Sets without locks are furnished with filler plates for the edge of the door and the strike preparation in the frame of the same material and finish.

Double doors in exterior walls with both leaves active use split astragal No. 4421; in interior walls the astragal can be omitted. Strike No. 555 is used on double doors to take the dead-bolt in the locked position.

When ordering all sets on this page give the complete number. For example: No. 5411-KA-US28. For bar sets also give the door width. For example: No. 5431-30-KA-US28 for a 3′-0″ wide door.

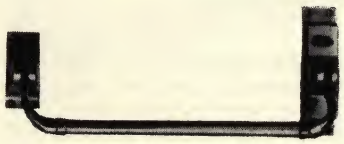
SILHOUETTE	OPERATION	SILHOUETTE	OPERATION
 Gov. Number NONE Ceco Number ⁎5411	**5411—ENTRANCES, LOCKER ROOMS.** Dead-bolt operated by key outside and by thumb turn inside. Use door closer with this lock. When door is unlocked operation is push and pull.	 Gov. Number NONE Ceco Number ⁎5431	**5431—ENTRANCE DOORS.** Dead-bolt operated by key outside and by thumb turn inside. Use door closer with this lock. When door is unlocked operation is push and pull.
 Gov. Number NONE Ceco Number ⁎5412	**5412—ENTRANCES, LOCKER ROOMS.** Dead-bolt operated by key both sides, use door closer with this lock. When door is unlocked operation is push and pull.	 Gov. Number NONE Ceco Number ⁎5432	**5432—ENTRANCE DOORS.** Dead-bolt operated by key both sides, use door closer with this lock. When door is unlocked operation is push and pull.
 Gov. Number NONE Ceco Number ⁎5413	**5413—LOCKER ROOM AND TOILET DOORS.** Dead bolt operated by thumb turn inside only. Use door closer with this lock. When door is in unlocked position, operation is push-pull.	 Gov. Number NONE Ceco Number ⁎5441	**5441—ENTRANCE DOORS.** Dead-bolt operated by key outside and by thumb turn inside. Use door closer with this lock. When door is unlocked operation is push and pull.
 Gov. Number NONE Ceco Number ⁎5414	**5414—ENTRANCE DOORS.** Dead bolt operated by key outside only. Use door closer with this lock. When door is in unlocked position, operation is push-pull.	 Gov. Number NONE Ceco Number ⁎5442	**5442—ENTRANCE DOORS.** Dead-bolt operated by key both sides, use door closer with this lock. When door is unlocked operation is push and pull.
 Gov. Number 86-P Mod. Ceco Number ⁎5415	**5415—CLASSROOM DOORS.** Dead bolt operated by key outside only. Inside thumb turn will retract, but will not project the dead bolt. Use door closer with this lock. When door is in unlocked position, operation is push-pull.	 Gov. Number NONE Ceco Number ⁎5040	**5040 — VESTIBULES AND LOCKER ROOMS.** Operation push and pull only. No locking or latching device. Door closer must be used.
 Gov. Number 86P Ceco Number ⁎5421	**5421—TRANSFORMER VAULTS, METER ROOMS, CLOSETS.** Dead-bolt operated by key outside and by thumb turn inside. No latching device. Use of closer not recommended.	 Gov. Number NONE Ceco Number ⁎5030	**5030 — VESTIBULES AND LOCKER ROOMS.** Operation push and pull only. No locking or latching device. Door closer must be used.
 Gov. Number 86T Ceco Number ⁎5422	**5422—ACCESS DOORS AND STOCK ROOM DOORS.** Dead-bolt operated by key both sides. Use of door closer not recommended. Door is free swinging when dead-bolt is retracted.	 Gov. Number NONE Ceco Number ⁎5010	**5010 — VESTIBULES AND LOCKER ROOMS.** Operation push and pull only. No locking or latching device. Door closer must be used.

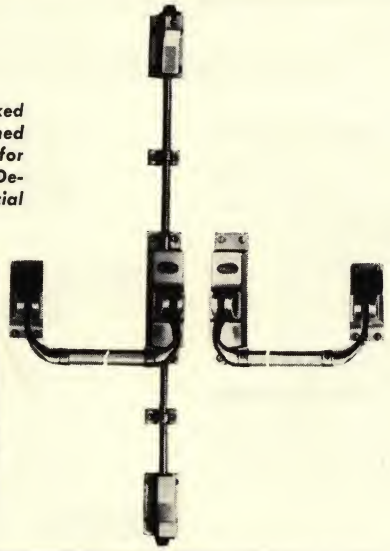
Locksets carried in company warehouses or Chicago stocks in dull bronze (US10) and alumilited aluminum (US28) finishes—KD, KA, MKD, or MKA. Bars for doors larger than 3470 Leaf size on special order.

Anti-Panic Devices

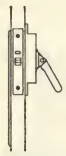
Mortise, Combination and Vertical Rod devices stocked in Chicago. Doors prepared for these devices furnished from Chicago. Standard 5½" depth frames prepared for these devices furnished from company warehouses. Devices for doors larger than 3870 leaf size on special order. Stocked in Dull Bronze (US10) and Alumilited Aluminum (US28) finishes.

(RUSSWIN NO. 50 LINE)

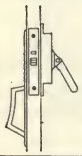




SINGLE DOOR MORTISE DEVICES

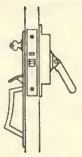


E-10—EXIT ONLY
No outside control.
Ⓛ

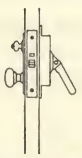


E-11—ENTRANCE AND EXIT
Outside operation by pull handle when latch bolt is retracted. Door closer is recommended.
Ⓛ

E-12—ENTRANCE AND EXIT
Outside operation by pull handle when latch bolt is retracted. By key when latch bolt is not retracted. Door closer is recommended.
Ⓛ

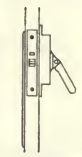


E-23—ENTRANCE AND EXIT
Outside operation by thumb piece, when not locked by key. Key locks thumb piece. Door closer is optional.
Ⓛ

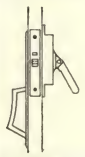


E-24—ENTRANCE AND EXIT
Outside operation by knob when not locked by key. Key locks knob. Door closer is optional.
Ⓛ

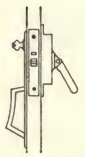
DOUBLE DOOR COMBINATION DEVICES



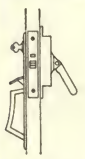
E-1030—EXIT ONLY
No outside controls on either leaf. Door closers not required. Use overlapping astragal No. 4411.



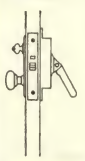
E-1130—ENTRANCE AND EXIT, ONE LEAF ACTIVE
Outside operation of active leaf by pull handle when latch bolt is retracted. No outside control on inactive leaf. Door closer recommended on active leaf, optional on inactive leaf.



E-1230—ENTRANCE AND EXIT, ONE LEAF ACTIVE
Outside operation of active leaf by pull handle when latch bolt is retracted. By key when latch bolt is not retracted. No outside control on inactive leaf. Door closer recommended on active leaf.

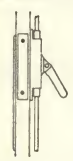


E-2330—ENTRANCE AND EXIT, ONE LEAF ACTIVE
Outside operation of active leaf by thumb piece when not locked by key. Key locks thumb piece. Closer optional. No outside control on inactive leaf with vertical rod device.

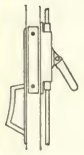


E-2430—ENTRANCE AND EXIT, ONE LEAF ACTIVE
Outside operation of active leaf by knob when not locked by key. Key locks knob. Closer optional. No outside control on inactive leaf with vertical rod device.

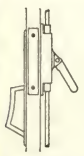
DOUBLE DOOR VERTICAL ROD DEVICES



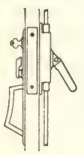
E-3030—EXIT ONLY
No outside control on either leaf. Door closers not required. Split astragal No. 4421 required on exterior doors.



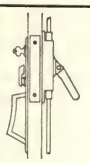
E-3130—EXIT ONLY
Outside operation of active leaf by pull handle when vertical rods are retracted. No outside control on inactive leaf. Split astragal No. 4421 is recommended.



E-3131—EXIT ONLY
Outside operation of both leaves by pull handle when vertical rods are retracted. Split astragal No. 4421 required on exterior doors. Door closers are recommended on both leaves.



E-3230—ENTRANCE AND EXIT, ONE LEAF ACTIVE
Outside operation of active leaf by pull handle when vertical rods are retracted. By key and lever handle on active leaf when latch bolt is not retracted. No outside control on inactive leaf. Door closer is recommended on both leaves.



E-3231—ENTRANCE AND EXIT, ONE LEAF ACTIVE
Outside operation of both leaves by pull handle when vertical rods are retracted. By key and lever handle on active leaf when not retracted.
Door closers recommended on both leaves.

KNOB AND CYLINDER

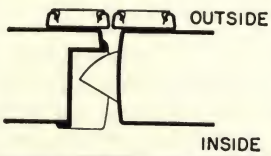
NO OUTSIDE CONTROLS

PULL HANDLE

PULL AND CYLINDER

PULL, THUMB-PIECE AND CYLINDER

PULL, CYLINDER AND LEVER HANDLE



OPEN BACK STRIKE No. A75 is used on double doors with combination anti-panic devices and split astragal No. 4421 to make both leaves active to exit traffic.

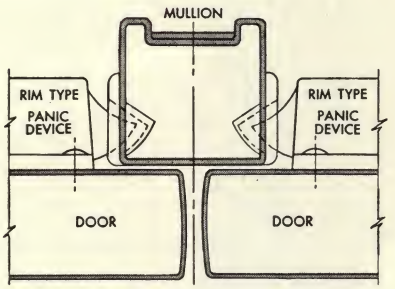
Note: Mortise panic devices can be used on the active leaf of Underwriters' double doors. Use surface or flush bolts on inactive leaf.

OVERLAPPING ASTRAGAL No. 4411 is used with anti-panic devices where the inactive leaf is used only in emergency. Cannot be used with double vertical rod devices or No. A75 open back strike.

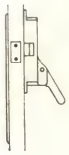
Rim type panic devices are stocked in Chicago. Panel doors and standard 5½" depth frames all prepared for rim devices furnished from company warehouses. Devices for doors larger than 3870 leaf size on special order. Stocked in US10—Dull Bronze and US28—Alumilited Aluminum.

Rim panic devices are Heavy Duty (Russwin No. 466-467 Line), and are not to be confused with Medium Duty or Light Duty grades.

AE-65

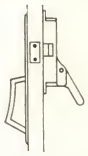


RIM TYPE PANIC DEVICES

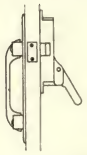


E-50—EXIT ONLY
No outside controls. Closer optional.

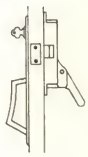
E-53—ENTRANCE AND EXIT
Outside operation by thumb piece and pull handle when not locked by key. Key locks the thumb piece. Door closer is recommended.



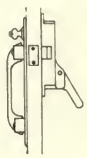
E-51—ENTRANCE AND EXIT
Outside operation by pull handle only when latch is held retracted. Door closer is recommended.



E-54—ENTRANCE AND EXIT
Outside operation by pull bars when latch bolt is held retracted. Door closer is recommended.



E-52—ENTRANCE AND EXIT
Outside operation by pull handle only when latch is held retracted. By key when latch bolt is not retracted. Door closer recommended.



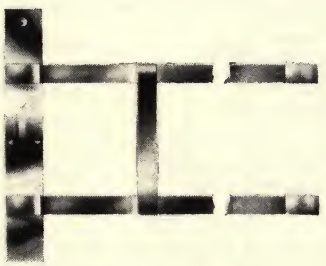
E-55—ENTRANCE AND EXIT
Outside operation by pull bars when latch is held retracted. By key when latch bolt is not retracted. Door closer is recommended.

NO OUTSIDE CONTROL

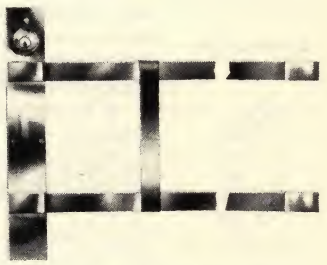
PULL ONLY

PULL WITH CYLINDER

PULL WITH THUMB PIECE AND CYLINDER



PULL BARS ONLY



PULL BARS WITH CYLINDER

STEEL REMOVABLE MULLION

No. AE-65 size 2⅜" x 2⅜" can be furnished for double swing doors using rim panic devices on both leaves. The Ceco **No. AE-65** Mullion is easily removed when a full double door opening is desired. Provides protection for the latch bolt so that no instrument can be inserted between the latch and strike plate. Each door opens independently of one another and affords two way traffic. Full weather protection is provided at meeting of doors. No astragal is required.

INSIDE OPERATIONS ON ALL ANTI-PANIC DEVICES

The purpose of anti-panic devices is to provide rapid exit, at all times, by pushing the inside cross-bar. They cannot be locked on the inside. They are always used on swing out doors. Latch bolts can be held retracted by dogging down cross-bar with the dogging key making the door push and pull operation, requiring door closers.

Hinges—Closers

FULL MORTISE HINGES
FOR PRESSED METAL FRAMES

2110

PLAIN BEARING HINGES
Normally used on low frequency doors.

Do not use on doors with closers, use ball bearing hinges.

Ⓛ*No. 2110-USP (Steel—Paint)
Ⓛ*No. 2110-US10 (Steel — Bronze Plate)
Ⓛ*No. 2110-LS (Steel—Aluminum)
Ⓛ No. 2110-US26D (Steel—Chrome Plate)

2112-2212

TWO BALL BEARING HINGES are recommended on doors of average to high frequency.

Ⓛ*No. 2112-USP (Steel—Paint)
Ⓛ*No. 2112-US10 (Steel — Bronze Plate)
Ⓛ*No. 2112-LS (Steel—Aluminum)
Ⓛ No. 2112-US26D (Steel—Chrome Plate)
*No. 2212-US10 (Bronze)
No. 2212-US26D (Bronze—Chrome Plate)

2114-2214

FOUR BALL BEARING HINGES are recommended for use on high frequency doors, entrances, locker rooms, etc.

Ⓛ*No. 2114-USP (Steel—Paint)
Ⓛ*No. 2114-US10 (Steel — Bronze Plate)
Ⓛ No. 2114-LS (Steel—Aluminum)
Ⓛ No. 2114-US26D (Steel—Chrome Plate)
*No. 2214-US10 (Bronze)
No. 2214-US26D (Bronze—Chrome Plate)
Ⓛ No. 2624-USP (Steel—Paint) Extra heavy for (A) Label Doors over 3'-0" wide.

The above hinges are interchangeable and reversible and are hinge manufacturers standard of quality 4½" x 4½" full mortise regular weight templated, packed with screws and hinge closing plate. Three hinges are used on doors up to 7'-6" high, four hinges on doors 7'-6" to 10'-0" high.

Non-Removable Pin Hinges can be furnished on order. Suffix hinge number with letters NRP (2310NRP-USP). NRP hinges have a set screw in barrel inaccessible when door is closed.

HALF MORTISE HINGES
FOR STRUCTURAL STEEL FRAMES

2310

PLAIN BEARING HINGES
Normally used on low frequency doors. Do not use with door closers.

Ⓛ*No. 2310-USP (Steel—Paint)
Ⓛ*No. 2310-US10 (Steel — Bronze Plate)
Ⓛ*No. 2310-LS (Steel—Aluminum)
Ⓛ No. 2310-US26D (Steel—Chrome Plate)

2312

TWO BALL BEARING HINGES are recommended for use on average to high frequency doors.

Ⓛ*No. 2312-USP (Steel—Paint)
Ⓛ*No. 2312-US10 (Steel — Bronze Plate)
Ⓛ*No. 2312-LS (Steel—Aluminum)
Ⓛ No. 2312-US26D (Steel—Chrome Plate)

2314

FOUR BALL BEARING HINGES are recommended for high frequency doors.

Ⓛ*No. 2314-USP (Steel—Paint)
Ⓛ*No. 2314-US10 (Steel — Bronze Plate)
Ⓛ No. 2314-LS (Steel—Aluminum)
Ⓛ No. 2314-US26D (Steel—Chrome Plate)
Ⓛ No. 2724-USP (Steel—Paint) Extra heavy for (A) Label Doors over 3'-0" wide.

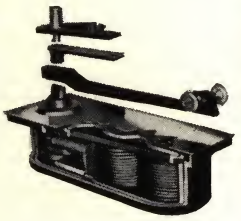
*Full mortise and half mortise hinges stocked in company and/or Chicago warehouses.

Half Mortise Hinges are furnished for doors with structural frames. Hinge manufacturers standard of quality 4½" x 4½" regular weight and are packed with screws and hinge closing plates.

Half Mortise Hinges are interchangeable and fit the standard hinge mortise in doors, and are reversible.

DOUBLE ACTING

No. 22 and No. 23



SINGLE ACTING

No. 18 and No. 19

FLOOR CHECKING HINGES
SINGLE AND DOUBLE ACTING

No. 22 (Gov. No. 3510-I)

DOUBLE ACTING FLOOR CHECKING HINGE for use on interior doors size 3470 or smaller, on exterior doors 2870 or smaller.

No. 23 (Gov. No. 3510-II)

DOUBLE ACTING FLOOR CHECKING HINGE for use on interior doors size 4070 or smaller, on exterior doors 3470 or smaller.

No. 18 (Gov. No. 3520A-II)

SINGLE ACTING FLOOR CHECKING HINGE for use on interior doors size 3470 or smaller. On exterior doors size 2870 or smaller.

No. 19 (Gov. No. 3520A-III)

SINGLE ACTING FLOOR CHECKING HINGE for use on interior doors size 4070 or smaller. On exterior doors 3470 or smaller.

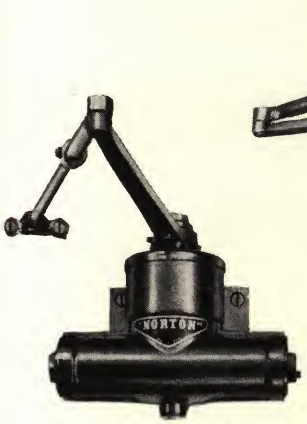
Single acting floor checking hinges are available with hold-open feature. Suffix "HA" after hinge number.

EXAMPLE: No. 19 HA-US10

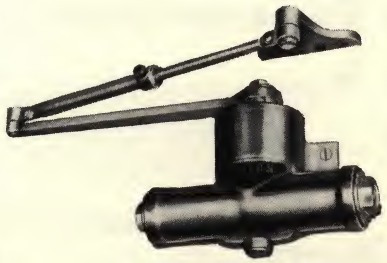
FLOOR CHECKING HINGES are hydraulic piston torsion spring type, furnished with top pivot and cement case. Can be used with or without thresholds. Furnished in **Dull Bronze (US10), or Dull Chrome (US26D).**

Furnished on special order only. Doors and frames requiring floor checking hinges manufactured on special order.

Manufactured by Shelby Hinge Company.



REGULAR ARM
3000 SERIES



PARALLEL ARM
3000 SERIES

3000 SERIES

SURFACE DOOR CLOSERS

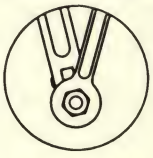
Door closers are liquid checking, rack and pinion type, with flat motor clock spring. Reversible, standard finish Bronze. Corner brackets used to mount closures on inside of swing out exterior doors. Doors subject to strong drafts should have next larger size closer than shown in table below. Available in aluminum finish.

Parallel arm closers are designated by suffixing (PA) after the closer number. Example: 3031 PA. Corner brackets are never used with this type closer. Parallel arm closers are so designed as to replace closer with corner bracket when required. Not stocked.

CECO NUMBER	TYPE OF ARM	DOOR LEAF SIZES		GOV. NO.	MFG'S. NO.
		INTERIOR	EXTERIOR		
*3031 Ⓛ	Regular Arm	2668 to 2868 3068 to 3468 2670 to 3070 2870	2668 2868 2670 2870	III	3 or C
*3032	Hold Open Arm				
*3033 Ⓛ	Fusible Link Arm				
*3034 Ⓛ	Corner Bracket for Above Closers				
*3041 Ⓛ	Regular Arm	3470 3870 4070 4080	3070 3470 3870	IV	4 or D
*3042	Hold Open Arm				
*3043 Ⓛ	Fusible Link Arm				
*3044 Ⓛ	Corner Bracket for Above Closers				
*3051 Ⓛ	Regular Arm	50100	4070 4080	V	5 or E
*3052	Hold Open Arm				
3053 Ⓛ	Fusible Link Arm				
*3054 Ⓛ	Corner Bracket for Above Closers				
3061 Ⓛ	Regular Arm		50100	VI	6 or F
3062	Hold Open Arm				
3063 Ⓛ	Fusible Link Arm				
3064 Ⓛ	Corner Bracket for Above Closers				

FOR MEDALLION—FLUSH PANEL OR PANEL DOORS

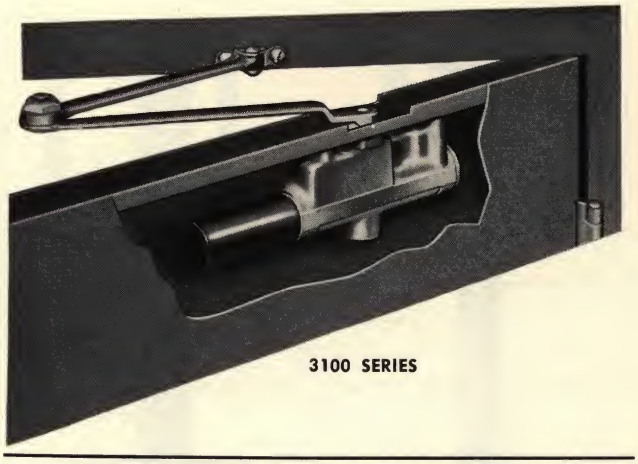
REGULAR ARM
Ball and Socket construction at Knuckle. No hold open device.



HOLD OPEN ARM
Friction type. Adjustable to hold door open at any angle from 0° to 100°.

FUSIBLE LINK ARM
Hold open arm with fusible link release at 160° F., allowing door to close.

*Closers stocked in company warehouses in bronze finish.
Aluminum finish available on special order.



3100 SERIES

INADOR DOOR CLOSERS

FOR MEDALLION DOORS ONLY

The Ceco Inador closer is rack and pinion construction. Non-gumming, non-freezing hydraulic fluid permanently lubricates every moving part. Double adjusting levers at top of closer controls the closer speed and the latching action. The case is an extruded aluminum shell.

CECO INADOR CLOSER SELECTION TABLE

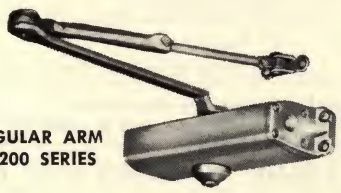
CECO NUMBER	CLOSER DESCRIPTION	INT. LOW FREQUENCY	INT. HIGH FREQUENCY	EXT. LOW FREQUENCY
*3121 Ⓛ *3122	Regular Arm Hold-Open Arm (90°)	2668 to 3068 2670 to 3070	2668 to 2670 2868 to 2870	
*3131 Ⓛ *3132 *3133 Ⓛ	Regular Arm Hold-Open Arm (90°) Fusible-Link Arm	3468 to 3470 3870	3068 to 3070 3468 to 3470	
*3141 Ⓛ *3142 *3143 Ⓛ	Regular Arm Hold-Open Arm (90°) Fusible-Link Arm		3870	2668 to 2670 2868 to 2870 3068 to 3070

NOTE: Inador closers can be used on low frequency exterior doors only when opening is protected from wind.

Interior doors subject to draft conditions use the next larger size closer.

3200 SERIES

SURFACE DOOR CLOSERS



REGULAR ARM
3200 SERIES

3200 series door closers are rack and pinion construction, as manufactured by the Norton Door Closer Company.

Swing out exterior doors use parallel arm closers. Suffix (PA) after closer number.

CECO NUMBER	TYPE OF ARM	DOOR LEAF SIZES		GOV. NO.	MFG'S. NO.
		INTERIOR	EXTERIOR		
*3231 Ⓛ *3232 *3233 Ⓛ	Regular Arm Hold Open Arm Fusible Link Arm	2668 to 2868 3068 to 3468 2670 to 3070 2870	2668 2868 2670 2870	III	3 or C
*3241 Ⓛ *3242 *3243 Ⓛ	Regular Arm Hold Open Arm Fusible Link Arm	3470 3870 4070 4080	3070 3470 3870	IV	4 or D
*3251 Ⓛ *3252 3253 Ⓛ	Regular Arm Hold Open Arm Fusible Link Arm	50100	4070 4080	V	5 or E

Surface Bolts — Flush Bolts — Door Stops and Holders

TOP BOLT BOTTOM BOLT

SURFACE BOLTS

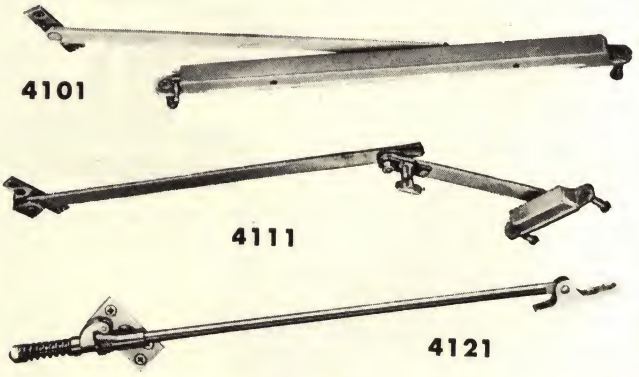
No. 4031 - US2C Ⓛ *	8" Bottom Bolt Steel Cadmium Plated. For all doors.
No. 4031 - US10 Ⓛ *	8" Bottom Bolt Steel Bronze Plated. For all doors.
No. 4032 - US2C Ⓛ *	8" Top Bolt Steel Cadmium Plated. For doors up to 7'-0" high.
No. 4032 - US10 Ⓛ *	8" Top Bolt Steel Bronze Plated. For doors up to 7'-0" high.
No. 4033 - US2C *	20" Top Bolt Steel Cadmium Plated. For 8'-0" high doors.
No. 4034 - US2C *	44" Top Bolt Steel Cadmium Plated. For 10'-0" high doors.
No. 4041 - US10 *	8" Bottom Bolt Bronze. For all doors.
No. 4042 - US10 *	8" Top Bolt Bronze. For doors up to 7'-0" high.
No. 4051 - US28 *	8" Bottom Bolt Aluminum. For all doors.
No. 4052 - US28 *	8" Top Bolt Aluminum. For doors up to 7'-0" high.

Surface bolts stocked in company warehouses. US26D (dull chrome) finish is fabricated to order.

FLUSH EXTENSION BOLT

No. 194 Ⓛ Flush extension bolts are used on the top and bottom of inactive leaf of double swing doors. Normally used in pairs for maximum security. Singular use not recommended. Lever type operation permits positive action and affords a concealed appearance when doors are in the closed position. Ordering example: 2-194-US10.

FLUSH BOLTS FURNISHED ON SPECIAL ORDER.
Available in US10, US28 and US26D Finishes. Doors requiring flush extension bolts are fabricated to order. Standard 5½" depth frames from company warehouses.



OVERHEAD DOOR HOLDERS

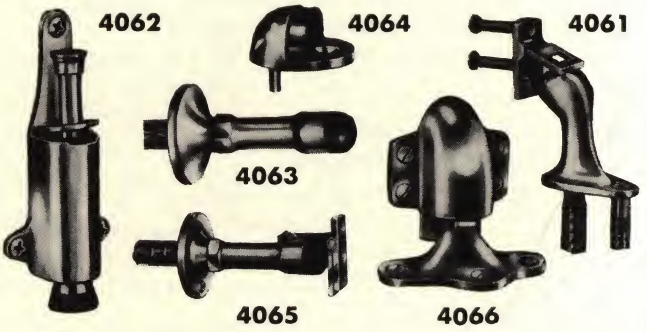
No. 4101 Slide action overhead door holder. Spring shock absorber stops door at maximum position of 90°. Quarter turn of control handle disengages hold-open action. Not reversible.

No. 4111 Arm action overhead door holder. Spring shock absorber stops door at maximum opening position of 90°. Quarter turn of control handle disengages hold-open action. Not reversible.

No. 4121 Slide action economy overhead door holder spring shock absorber. Stops door at maximum position of 90°. Hold-open action can be readily disengaged.

OVERHEAD DOOR HOLDERS NOT STOCKED.

DOOR STOPS AND BUMPERS



***No. 4061 FLOOR TYPE HOLDER AND BUMPER** Door Bumper with Manual hold-open feature. Cannot be held open unintentionally. Attached to door in field with thru-bolts. Attached to floor with expansion shield. Finishes Dull Bronze (US10) Aluminum (US28).

***No. 4062 PLUNGER TYPE DOOR HOLDER** Plunger Type Door Holder holds door open at any angle. Throw of bolt variable to 1¼". Rubber shore grips door firmly. 6" high. Finishes Dull Bronze (US10) Aluminum (US28).

Ⓛ***No. 4063 WALL BUMPER** Wall Type Door Bumper. Fastened to wall with wall expansion shields. 3¾" long 2" Base dia. Finishes Dull Bronze (US10) Aluminum (US28).

Ⓛ***No. 4064 FLOOR BUMPER** Floor Type Door Bumper fastened to floor with expansion shield. 1" high 2" Base dia. Finishes Dull Bronze (US10) Aluminum (US28).

***No. 4065 WALL BUMPER AND HOLDER** Wall Type Bumper that incorporates a door holder. 3½" long 2⅜" Base dia. Fastens to wall with expansion shield.

***No. 4066 FLOOR TYPE BUMPER AND HOLDER** Automatic Door Holder and Bumper, pull-release. Attached to door in field with thru-bolts. Strike attached to floor with expansion shields. Finishes Dull Bronze (US10) Aluminum (US28).

*All door stops and bumpers in US10 or US28 finishes are stocked in company and/or Chicago warehouses. US26D (Dull Chrome) finish door stops and bumpers are fabricated to order.

Miscellaneous Hardware and Accessories

KICKPLATES

Ⓛ*No. 4301 Bronze Kickplate 6" high, .050" thick, width to suit door. Finish Bronze (US10).

Ⓛ*No. 4311 Aluminum Kickplate 6" high, .050" thick, width to suit door. Finish Alumilited Aluminum (US28).

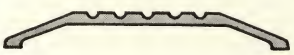
Ⓛ*No. 4321 Plastic Kickplate 6" high and ⅛" thick, in width to suit door. Furnished in color Black only.

*Kickplates stocked in company and/or Chicago warehouses in US10 or US28 finishes. Plastic Kickplates stocked in black only. Kickplates are shipped with hardware and attached to doors in the field, or attached to doors in factory when specified.

ROLLER LATCH—HOSPITAL PULL

No. 5601 ROLLER LATCH. Can be used with CECO push-pull handle or bar sets. This latch silently engages the strike and holds the door closed. Available in US10 or US26D finishes.

No. 4075 HOSPITAL ARM PULL is normally used with the No. 5601 roller latch. Allows personnel to open door while carrying trays, etc. Available in US10 or US26D finish.



No. 4201-4211 — THRESHOLDS

Ⓛ*No. 4201 Bronze Threshold

Ⓛ*No. 4211 Aluminum Threshold

Thresholds are 4" wide and ½" high corrugated. Furnished drilled with rawl plugs and attachment screws.

Furnished slightly larger than door opening width for accurate cutting in field to fit.

*Thresholds stocked in company and/or Chicago warehouses in US10 or US28 finishes.

*4801

*4811

VISION LIGHTS

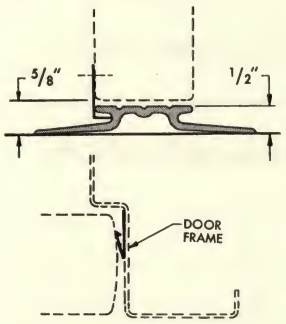
Ⓛ **No. 4801** VISION LIGHT 10" x 10"
For Panel Type Doors

Ⓛ **No. 4811** VISION LIGHT 10" x 10"
For Flush Type Doors

Vision lights are furnished unglazed with ⅜" glass rebate for ¼" plate or wire glass. Can be used in Underwriters' "B" Labelled Doors.

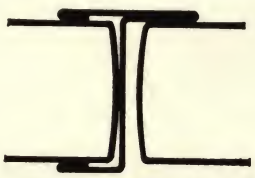
* Stocked in company or Chicago warehouses.

WEATHERSTRIP AND THRESHOLD KIT

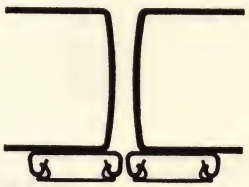


Ⓛ*No. 4221 Thresholds are 4" wide and ½" high. Available in bronze (US10) or aluminum (US28) finish. Hook strip and spring type weatherstrip included with necessary attachment screws.

Doors 3070 or smaller use #4221-3070. Doors 3870 or smaller use #4221-3870. Double doors 6070 or smaller use #4221-6070. Double doors 7470 or smaller use #4221-7470. Larger sizes on special order.



*4411



*4421

Ⓛ **No. 4411** OVERLAPPING ASTRAGALS are used on double doors with one leaf inactive. Always attached to inactive leaf. Astragals are mortised for cylindrical or mortised lock strikes as required. Do not use on doors with both leaves active. Rolled No. 16 gauge steel.

* Stocked in warehouses.

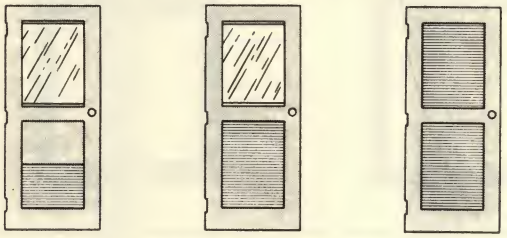
No. 4421 SPLIT ASTRAGALS are used on double doors in exterior walls that have both leaves active. They are horizontally adjustable to reduce operating clearance to a minimum. Attachment screws are concealed by continuous cover plate.

Always attached to outside of door. Astragal No. 18 gauge, cover, No. 22 gauge rolled steel.

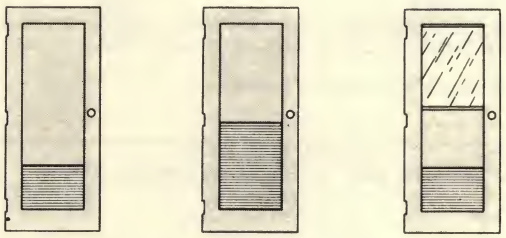
* Stocked in warehouses.

Louvers: Air Conditioning and Stamped Type

FLUSH PANEL AND PANEL DOORS



PANEL DOORS



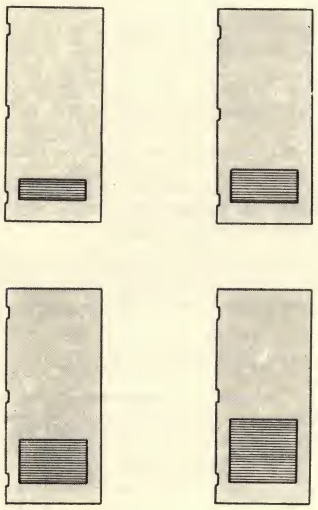
FLUSH PANEL DOORS

HALF BOTTOM LOUVER	
NUMBER	FREE AIR PASSAGE
4621-26	232 Square Inches
4621-28	256 Square Inches
4621-30	305 Square Inches
4621-34	354 Square Inches
4621-38	403 Square Inches
FULL BOTTOM LOUVER	
NUMBER	FREE AIR PASSAGE
4622-26	464 Square Inches
4622-28	512 Square Inches
4622-30	610 Square Inches
4622-34	708 Square Inches
4622-38	806 Square Inches
FULL TOP LOUVER	
NUMBER	FREE AIR PASSAGE
4623-26	526 Square Inches
4623-28	581 Square Inches
4623-30	692 Square Inches
4623-34	807 Square Inches
4623-38	914 Square Inches

Specifications:

The Ceco air conditioning type louver is sight-tight, steel ⅜" thick with ⅛" fin spacing. Vertical stiffener ribs are on 1" centers. This grid type construction provides 81.5% of free air area. Louvers are furnished completely installed in Ceco doors.

MEDALLION DOORS



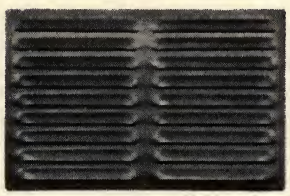
8" IN HEIGHT		12" IN HEIGHT	
NUMBER	FREE AIR	NUMBER	FREE AIR
4641-20	75 Sq. Inches	4642-20	117 Sq. Inches
4641-26	113 Sq. Inches	4642-26	176 Sq. Inches
4641-28	126 Sq. Inches	4642-28	202 Sq. Inches
4641-30	151 Sq. Inches	4642-30	234 Sq. Inches
4641-34	176 Sq. Inches	4642-34	273 Sq. Inches
4641-38	202 Sq. Inches	4642-38	313 Sq. Inches
16" IN HEIGHT		**24" IN HEIGHT**	
NUMBER	FREE AIR	NUMBER	FREE AIR
4643-20	159 Sq. Inches	4644-20	232 Sq. Inches
4643-26	238 Sq. Inches	4644-26	348 Sq. Inches
4643-28	264 Sq. Inches	4644-28	387 Sq. Inches
4643-30	317 Sq. Inches	4644-30	464 Sq. Inches
4643-34	370 Sq. Inches	4644-34	542 Sq. Inches
4643-38	423 Sq. Inches	4644-38	619 Sq. Inches

Specifications:

The Ceco air conditioning type louver is sight-tight, steel ⅜" thick with ⅛" fin spacing. Vertical stiffener ribs are on 1" centers. This grid type construction provides 81.5% of free air area. Louvers are furnished completely installed in Ceco doors.

STAMPED AND AIR CONDITION TYPE

No. 4601 Fixed Slot Louvers are No. 16 gauge steel. Use with Medallion, Flush Panel or Panel Doors.



No. 4601

CECO NUMBER	DESCRIPTION
4601-12	Stamped Louver 12" x 12" for doors 2' 0" and over
4601-19	Stamped Louver 19" x 12" for doors 2' 8" and over
4601-24	Stamped Louver 19" x 24" for doors 2' 8" and over

No. 4631

No. 4631 Air Condition Louvers are sight-tight, steel ⅜" thick with ⅛" fin spacing. Vertical stiffener ribs are on 1" centers. Grid type construction provides 81.5% of free air area. Use with Medallion or Flush Panel Doors.

CECO NUMBER	DESCRIPTION
4631-12	Air Condition Louver 12" x 8" for doors 2' 0" and over. (Applied)
4631-18	Air Condition Louver 18" x 12" for doors 2' 8" and over. (Applied)

Special Dutch Doors and Trucking Doors

dutch doors

Dutch doors are used in check rooms, tool rooms, locker rooms, parts rooms, ticket booths and other similar locations where a dispensing operation occurs.

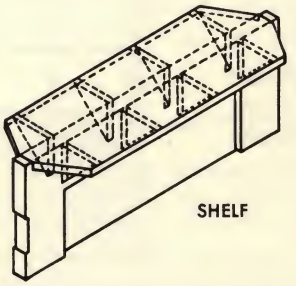
They are manufactured to order in Panel, Flush Panel and Medallion types. Sizes are from 2668 to 3468 and 2670 to 3470 in single swing doors and from 5068 to 6868 and 5070 to 6870 in double swing doors. Double swing doors are supplied with one leaf or both leaves in Dutch style.

The upper half of the Dutch leaves can be furnished in glass panel or in solid metal as required.

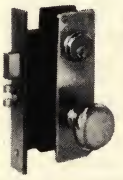
Dutch doors are furnished for cylindrical locks or latches and for mortised locks or latches, in any function desired. The lockset or latchset is always placed in the lower leaf.

The upper leaf has the surface bolt on the inside to lock the upper leaf to the lower leaf. When the surface bolt is engaged, the door operates as a single swing one-piece door. The hardware for Dutch doors is listed separately.

Shelves: Dutch doors are furnished with or without shelves as desired. Shelves are twelve inches wide and made of fourteen gauge steel, with four brackets on each side to withstand rough usage.



SHELF



MORTISE LOCK

Mortise locks or latches as shown on pages 18-D and 19-D, can be furnished on Dutch doors. Push-pull bar sets and anti-panic devices are not recommended.

CYLINDRICAL LOCK

Heavy duty 400 Series and standard duty 300 Series cylindrical locksets can be furnished. See pages 14-D, 15-D, 16-D and 17-D for selection.

SURFACE BOLT

Surface bolts used to lock the upper door leaf can be furnished in steel, bronze or aluminum in eight inch lengths. See page 26-D for selections.

trucking doors

Trucking doors are fabricated to order. The lower portion of the door has twelve gauge steel plates on both sides. The hinge side of the door is reinforced with a twelve gauge steel tube to properly support the hinges. Rubber astragals and retaining angles are used on exterior doors for weathering.

Spring bumpers are located at heights to fit hand trucks and are through-bolted to the door. Spring bumpers are nineteen inches long and eight inches in height and are made of twelve gauge spring steel. The width of the doorway should be twice the width of the hand trucks used. Doors should always be glazed in the upper portion, so the traffic can be seen approaching from either direction.

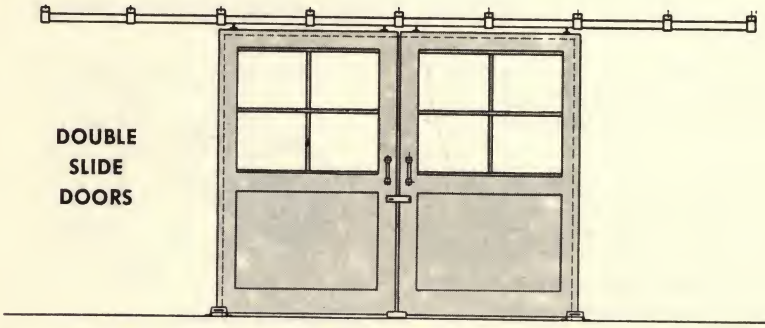
Hardware: Double acting trucking door hinges, number 2521, are extra heavy wrought steel, sixteen inches in height. Each hinge has four individual springs which gives this hinge about twice the closing strength of other similar hinges. The Ceco number 2521 hinge will make only five oscillating movements before stopping. NO HANGING STRIPS ARE REQUIRED WITH CECO TRUCKING DOOR HINGES. Hinges are through-bolted to the door.

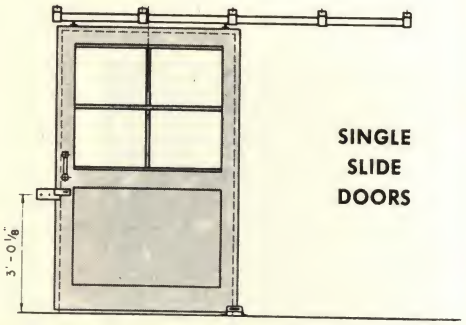
Trucking doors cannot be used for entrance from the outside. They are furnished with or without slide bolts for locking from the inside only. See page 26-D for slide bolts available.

Trucking doors are not furnished larger than 4'-0" x 8'-0" leaf size. Doors up to 6070 have two hinges per leaf. Doors over 6070 to 8080 have three hinges per leaf. Pressed steel frames CANNOT be used with trucking doors. Complete frame preparation details are furnished on request for preparing structural frames.

DO NOT USE MOTORIZED EQUIPMENT TO OPEN TRUCKING DOORS

Hollow Metal Panel Slide Doors





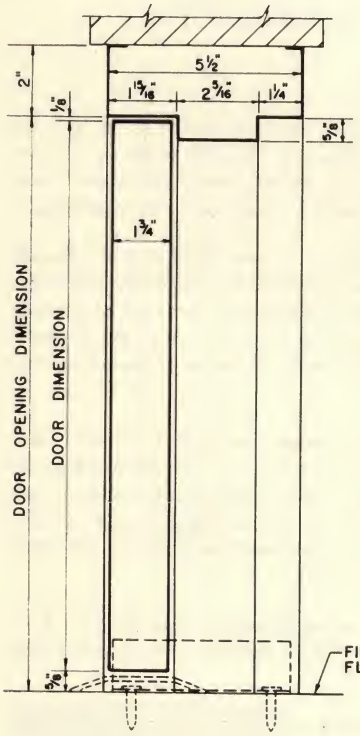
DOUBLE SLIDE DOORS				
DOOR NUMBER	DOOR SIZE		DOOR OPENING	
	WIDTH	HEIGHT	WIDTH	HEIGHT
PS-6070	5'-11⅞"	6'-11¼"	5'-8"	6'-10"
PS-8080	7'-11⅞"	7'-11¼"	7'-8"	7'-10"
PS-100100	9'-11⅞"	9'-11¼"	9'-8"	9'-10"

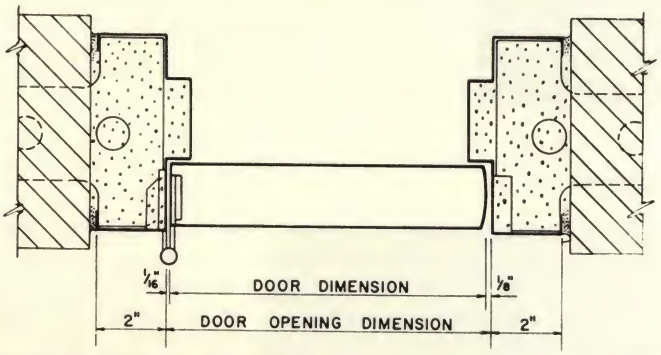
Slide doors are furnished complete with hardware including track, brackets, trolleys, guide rollers, pulls, hasp and staple. All attachment bolts are furnished except wall bolts. Frames and track flashing are not furnished. For full details, contact nearest Ceco office.

SINGLE SLIDE DOORS				
DOOR NUMBER	DOOR SIZE		DOOR OPENING	
	WIDTH	HEIGHT	WIDTH	HEIGHT
PS-3070	2'-11 13/16"	6'-11¼"	2'-8"	6'-10"
PS-4080	3'-11 13/16"	7'-11¼"	3'-8"	7'-10"
PS-50100	4'-11 13/16"	9'-11¼"	4'-8"	9'-10"

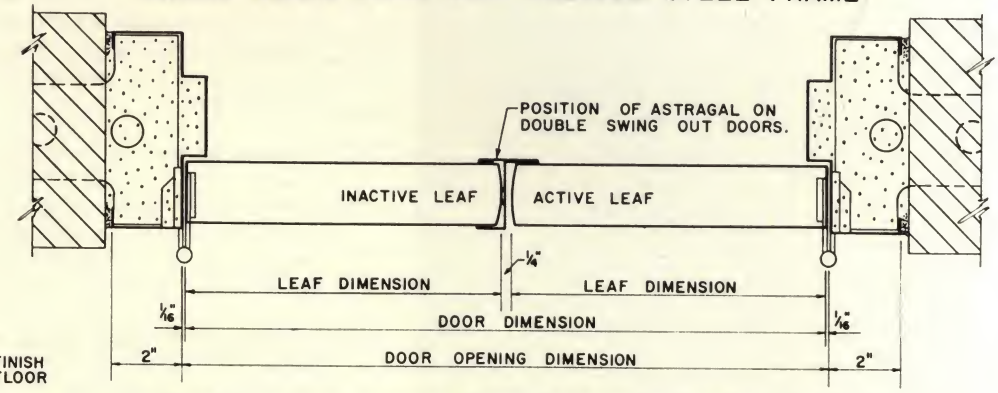
Doors are always handed when facing the exterior side of the door and the outside of the opening. Doors in interior walls are generally handed when facing the outside of the door and the corridor side or the larger room side.

STANDARD DETAILS



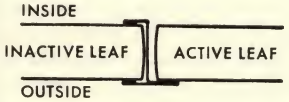


SINGLE SWING DOOR WITH PRESSED STEEL FRAME

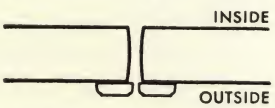


DOUBLE SWING DOORS WITH PRESSED STEEL FRAME

DOUBLE SWING OUT SHOWN



POSITION OF ASTRAGAL ON DOUBLE SWING IN DOORS. OVERLAPPING ASTRAGALS ALWAYS ON INACTIVE LEAF.



SPLIT ASTRAGAL REQUIRED ON EXTERIOR DOORS WHEN BOTH LEAVES ARE ACTIVE.

Specifications

1. General

All steel doors, door frames and hardware shall be as manufactured and furnished by Ceco Steel Products Corporation. Doors shall be Standardized Hollow Metal Medallion, Flush Panel, and Panel types.

Door hardware shall be furnished by the door manufacturer with doors mortised, machined and prepared for hardware attachment.

2. Door Construction

Medallion doors shall be 1¾" thick, constructed of two No. 18 gauge furniture-quality cold-rolled, stretcher leveled pickled and oiled steel sheets. Vertical stiffeners shall be No. 19 gauge steel, on approximately 6" spacing, of hat shape, spot-welded to one face sheet and projection welded to the opposite sheet to provide rigid construction. Top and bottom channels shall be No. 14 gauge, spot-welded to the face sheets not less than 3" on center. Vertical edges of the door shall be reinforced with No. 14 gauge steel channels the entire height of the door.

The vertical joint between the two face sheets shall be tight against the vertical stiffener and this joint continuously welded closed and to the vertical stiffener. All doors will be furnished with top closing channels of No. 18 gauge steel. All doors shall be sound deadened with spun mineral wool.

Doors with openings for glass lights and/or louvers shall have the openings formed into the face sheets so that no frame is required. Beads shall be recessed behind the formed opening in the face sheet, beveled, and attached without the use of screws.

Flush Panel and Panel doors shall be 1¾" thick, with stiles and rails formed from No. 16 gauge steel sheets into rectangular tubes with integral rebates; intermittently welded inside the rebates for structural rigidity. Stiles, top rails and center rails shall be 5½". Bottom rails shall be 8" high. Lock stiles shall be formed for ⅛" jamb clearance.

Door corners shall be mitred, reinforced continuously face-welded and ground smooth; center rails shall be continuously face-welded to stiles and ground smooth.

Glazing rebates in moldings and muntins shall be ⅜" wide for installation of ¼" thick glass.

Moldings, glazing beads, muntins and muntin glazing stops shall be No. 18 gauge steel.

Doors shall be mortised for hinges and locks, and template prepared for other surface hardware, attached with through bolts, or with screws into reinforced, tapped holes. No hardware shall be attached to doors and frames with self-tapping screws or sheet metal screws.

Double doors shall have astragals if required. One piece overlapping astragals shall be No. 16 gauge. Two piece astragals shall be No. 18 gauge with No. 22 gauge cover plates.

Hollow Metal Flush Doors

Hollow Metal Flush Panel Doors shall be manufactured as specified above and shall have 1⅜" panels of two No. 18 gauge steel sheets with No. 18 gauge steel "Z" shape stiffeners spaced approximately 12" apart, between the two panels. Sound deadening material 1/16" thick shall be placed on the inside of the panel sheets.

Hollow Metal Panel Doors

Hollow Metal Panel Doors shall be manufactured as specified above and shall have ⅜" thick panels of two No. 18 gauge steel sheets with insulating filler between. Lower panels shall be locked into rebates in stiles and rails when assembled. Upper panels shall have moldings to retain glass or ⅜" metal panels.

Underwriters' Labelled Doors and Frames

Doors designated as 3 hour or 1½ hour labelled doors shall carry Underwriters' label on the door and on the frame. Double doors shall have overlapping rolled steel astragal.

Medallion, Flush Panel and Panel Doors and frames shall be constructed to meet Underwriters' Laboratories specific approval according to current procedure for 3 hour or 1½ hour fire rating. Procedure No. R-3791 and R-3821 as listed by Underwriters.

3. Frames

Frames shall be formed from No. 16 gauge steel, with 2" face, 5½" depth and ⅝" integral stop.

Frame corners shall be mitred. Hinge jambs mortised for hinges, lock jambs mortised for lock strike with mortises protected by metal plaster guards. Frames are shipped knocked-down.

Jambs shall be flush with finished floor, with floor anchors attached to jambs with bolts, to set on the finished floor, or 1" below the finished floor.

Patented rubber door silencers, air cushion type shall be furnished for strike jambs of single doors and for frame heads of double doors.

Frames shall be prepared for attachment of all required hardware. All hardware screw holes shall be reinforced. No hardware shall be attached to frames with self-tapping or sheet metal screws.

4. Hardware

Cylindrical Type Locksets and Latchsets shall be Heavy Duty or Standard Duty as designated by the lock numbers. The Heavy Duty Lockset has a steel, zinc plated cylindrical case. Dichromate Dip 2 1/16" in diameter. The front shall be wrought bronze or aluminum, 2¼" x 1⅛" in size with a flat front. Latch bolt shall be solid brass with a ⅝" throw.

The Standard Duty Lockset has a steel, zinc plated cylindrical case. Dichromate Dip 2 1/16" in diameter. The front shall be wrought bronze or aluminum, 2¼" x 1⅛" in size with a flat front. Latch bolt shall be solid brass with a ⅜" throw.

Mortised Type Locksets and Latchsets shall be manufacturers' Heavy Duty Commercial Grade. Locks and mortise latches shall have armored fronts. Cases and caps shall be cast iron. Escutcheons, lock fronts, cylinder rings, strikes and knobs, shall be wrought bronze for locksets finished (US10) dull bronze (US26D) dull chrome.

Locksets with (US28) alumilited aluminum finish shall have wrought aluminum trim. Dead-bolts, latch bolts, thumb turns, pull bars and handles shall be cast bronze (US10) dull bronze finish or (US26D) dull chrome finish. Cast aluminum on (US28) alumilited aluminum finish.

Latch bolts are anti-friction type with a ⅝" throw. Dead-bolts are cast bronze with a ⅝" throw.

Hinges shall be hinge manufacturers' standard of quality 4½" x 4½" full mortise regular weight, templated button tips, reversible, in steel or bronze, furnished with attachment screws. Hinges for structural frames shall be as above except half mortise type.

Closers shall be rack and pinion, with flat motor-clock type spring. Closers shall have an aluminum shell and shall be reversible. Checking fluid non-evaporating non-gumming mineral oil of stabilized viscosity. Standard finish bronze.

Other hardware shall be as listed and described in current catalogs.

5. Painting and Glazing

All doors and frames shall be bonderized and painted one coat rust inhibitive zinc chromate primer, neutral grey color, oven dried. All finish painting, glass and glazing, putty, mastic, and other necessary compounds are not furnished by Ceco Steel Products Corporation.

6. Shop Drawings

All doors, frames and hardware shall be as shown on shop drawings prepared by Ceco Steel Products Corporation and approved by the architect before fabrication is started.

Contract
SALES OFFICES AND WAREHOUSES

Atlanta 9, Ga., 1401 Peachtree St., N.E.
Birmingham 7, Ala., 3500 - 27th Ave., N.
Charlotte 1, N. C., 314 W Trade St.
Chicago 50, Ill., 1926 S. 52nd Ave.
Cincinnati 6, Ohio, 700 E. McMillan St.
Cleveland 9, Ohio, 1503 Brookpark Road
Dallas 35, Texas, 6901 Forest Park Rd.
Denver 16, Colo., 6121 Clermont St.
Des Moines 9, Iowa, 404 Hubbell Bldg.
Detroit 27, Mich., 15216 Castleton Ave.
Hartford, Conn., 621 Farmington Ave.
Hillside 5, N. J., 625 Glenwood Ave.
Houston 10, Texas, 1902 Weber St.
Indianapolis 2, Ind., 1538 N. Meridian St.
Jacksonville 3, Fla., 115 Park St.
Kansas City 6, Mo., 602 Pickwick Bldg.
Los Angeles 23, Calif., 1450 Mirasol St.
Miami, Fla., 2264 W. Flagler
Milwaukee 6, Wisc., 711 W. Capitol Dr.
Minneapolis 13, Minn., 2900 E. Hennepin Ave.
New Orleans 13, La., 1539 Jackson Ave.
Oklahoma City 5, Okla., 421 N.E. 29th
Omaha 1, Nebr., 1141 N. 11th St.
Philadelphia 3, Pa., 1700 Walnut St.
Pittsburgh 36, Pa., 1501 Lebanon Church Rd.
St. Louis 17, Mo., 8310 Eager Rd.
St. Petersburg, Fla., 1644 - 3rd Ave., N.
San Antonio 12, Texas, 206 Olmos Dr., W.
San Francisco 24, Calif., 401 Tunnel Ave.
Toronto 5, Can., 57 Bloor St., W.
Washington 27, D. C., 1701 - 47th Ave., N.E.

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Concrete Reinforcing Bars
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Corrugated Double-Drain Roofing
Roofing Accessories
Rain Carrying Goods
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115915MG

AIA FILE NO. 16-B

Coast Line

CUSTOM ENGINEERED Hollow Metal

- doors
- frames
- special openings

AIA FILE NO. 16-A
AIA FILE No. 16-B

COAST LINE STEEL PRODUCTS, INC.
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COAST LINE

facilities

Know-how and skill are fundamental factors in hollow metal which call for a combination of both practical experience in fabrication and the production facilities capable of turning out the product.

Coast Line is exceptionally qualified to meet the most exacting requirements of architects, engineers and contractors. Its organization comprises men who have pioneered and developed hollow metal to its present notable importance in the field of metal products. Its continually expanding plant is manned by a crew of highly trained and exceptionally qualified craftsmen who know hollow metal "from the ground up." Its modern production equipment and facilities are amply geared to undertake the most challenging projects and to assure prompt service in meeting progress schedules.

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engineering service

Coast Line offers the expert knowledge of its engineering staff, without obligation, for consultation on any complex problem involving the development or fabrication of special hollow metal items.

■ SPECIFICATION

hollow metal doors

Doors shall be as manufactured by Coast Line Steel Prod., Inc., Maspeth, N.Y.

Doors shall be fabricated from 16ga. or 18ga. cold rolled sheet steel, prime commercial quality. Filler shall be rock mineral wool, cellular asbestos or equal sound deadener and fire retardant insulation. Tops of all exterior doors to be closed flush, to insure against seepage. Where Underwriter label doors are specified, insulate in accordance with Underwriter Laboratory requirements.

FLUSH DOORS: Shall be constructed from full flush face sheets, of gauge specified, with continuous interlocking vertical stiffeners welded to inner side of surface sheets full height of door, spaced a minimum of 6" on centers. Continuous channels of adequate gauge are to be welded full width of door, top and bottom, to provide proper rigidity and strength.

PANEL DOORS: Stiles and rails shall be formed of 16 or 18ga., as specified, panels and moulding of 20 gauge. Panel filler a minimum of ¼" asbestos board or equal insulating material. Glass panels shall have removable stops held in place by oval head machine screws. Joints of stiles and rails and mitres of all panel mouldings are to be welded and ground smooth.

HARDWARE PREPARATION: Doors shall be mortised and reinforced for hardware furnished by hardware contractor. Drilling and tapping to be done at factory for all mortise hardware from templates furnished by others. Doors shall be reinforced only for surface applied hardware, drilling and tapping to be done in the field by door erectors.

FINISH: All material to be thoroughly cleaned, filled and sanded smooth to conceal all weldments and seams. Apply shop coat of rust inhibitive primer, followed by a second coat of metallic primer baked on. Bonderizing, baked enamel and other special finishes furnished on request.

hollow metal frames

Frames shall be as manufactured by Coast Line Steel Prod., Inc., Maspeth, N.Y.

Frames shall be combination type with integral trim, formed of ..... gauge sheet steel, prime commercial quality. Profiles shall be formed true and sharp. Heads and jambs to be accurately mitred, welded and ground smooth. Where Underwriter labeled frames are specified, provide same in accordance with Underwriter Laboratory requirements.

ANCHORAGE: Provide at least 3 anchors per jamb for anchoring of frame to masonry, wood stud or steel stud wall or partition. Anchor to be the standard type used by frame manufacturer for the particular type of wall construction. Floor anchors shall consist of angle clips welded to jamb members, properly punched for anchoring to floor construction. Provide removable angle spreaders securely fastened at bottom of jambs.

HARDWARE PREPARATIONS: Mortise, reinforce, drill and tap as required to accommodate all mortised template hardware. Drilling and tapping for surface applied hardware to be done by frame erector in field.

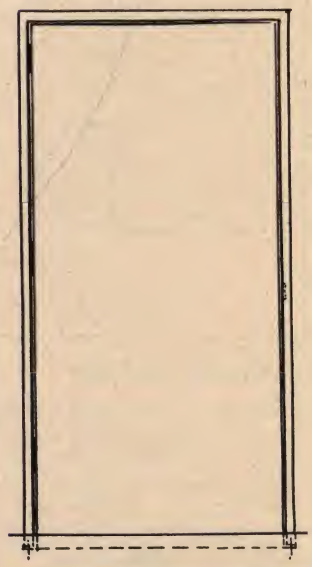
Reinforcements to be at least ⅛" thick at hinge and lock locations spotwelded to inner surfaces of jambs. Cutouts to be protected by pressed steel cover boxes, spotwelded to buck or inside of frames opposite mortises to prevent mortar fill.

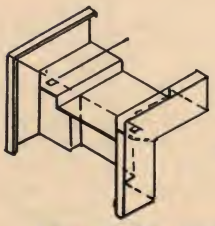
FINISH: Frames shall receive shop coat of rust-inhibitive metallic primer. Prior to painting, all frames shall be cleaned, all welds ground smooth, to provide proper surfaces for finish painting.

■ FRAMES

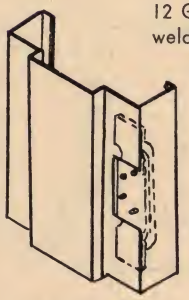
standard construction

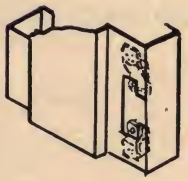
Unit frames are fabricated as set-up, fully welded units complete with lock and strike cutouts, plaster boxes, spreaders and floor knees; anchorage to depend upon wall or partition construction. Variations may occur where floor and wall conditions require special anchorage.



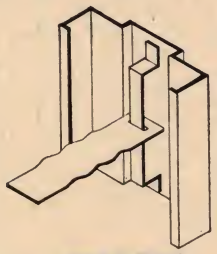


CORNER CONSTRUCTION

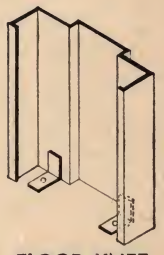




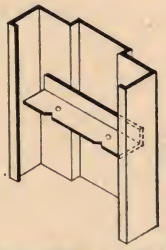
anchor details



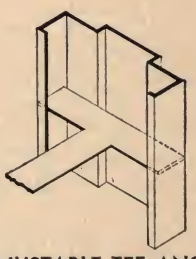
YOKE TYPE
UNDERWRITER ANCHOR



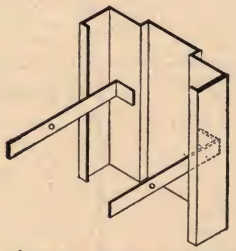
FLOOR KNEE



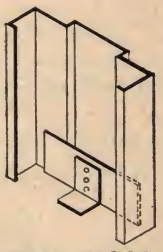
STEEL STUD ANCHOR



ADJUSTABLE TEE ANCHOR



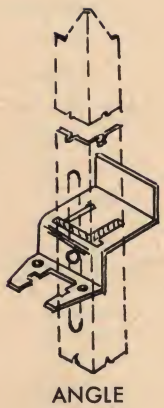
WOOD STUD ANCHOR



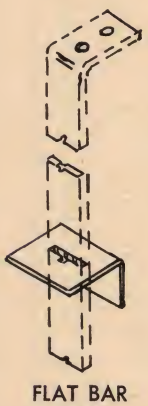
ADJUSTABLE FLOOR KNEE

plaster partition frame

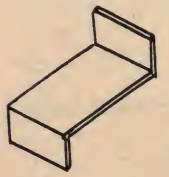
Where solid plaster partitions occur, these frames are especially popular. Most widely used profiles are those shown. Other profiles are also available. Where struts are required for additional rigidity they can be furnished in either flat bar, channel, or angle shape.



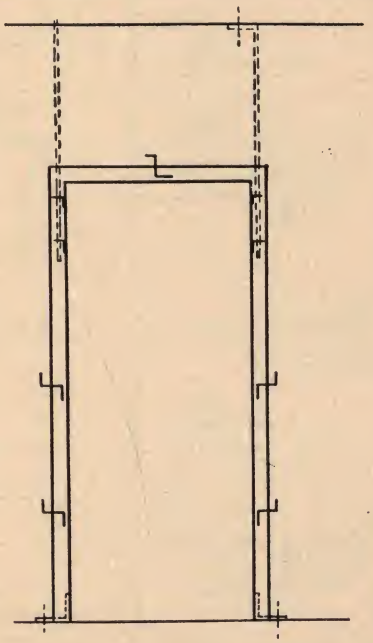
ANGLE
STRUT

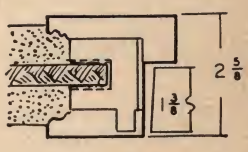


FLAT BAR
STRUT

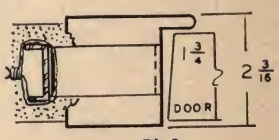


ZEE CLIP

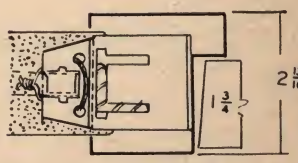




PL 1



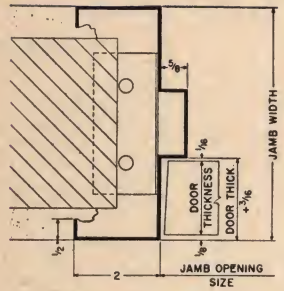
PL 2



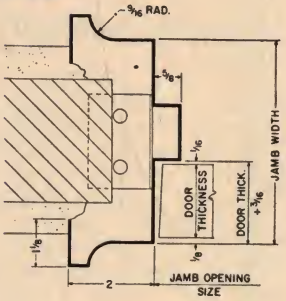
PL 3

■ FRAMES

standard frame profiles



CL1 (18-16-12 GA)



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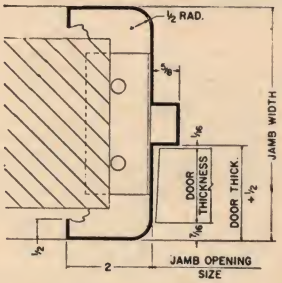

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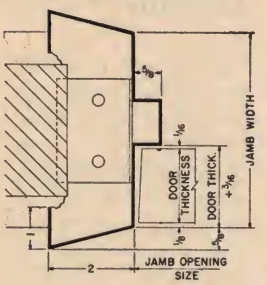

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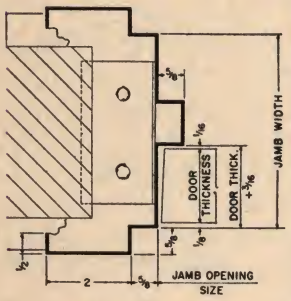
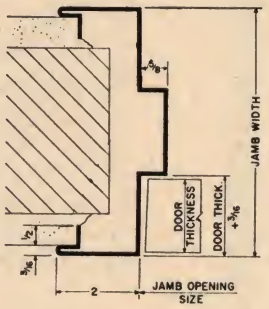
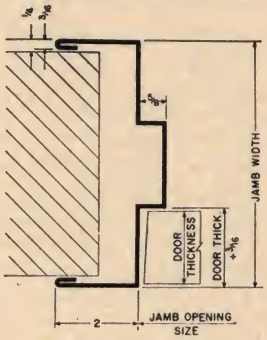


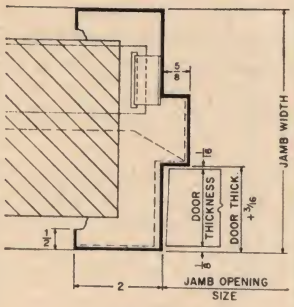
CL5 (18-16-14-12 GA)



CL7 (18-16-14 GA)



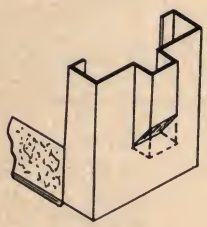
CL8 (18-16-14-12 GA)



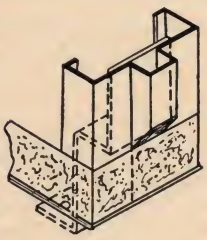
LEAD LINED

cut off stops

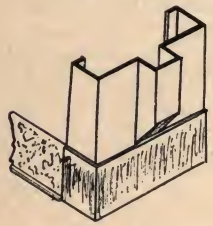
- sanitary base
- stainless steel spats



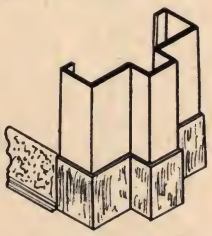
Stop cutoff and capped at 45° or 90°



Stop cutoff and capped at 45° or 90° jamb sets on base stilts to rough slab



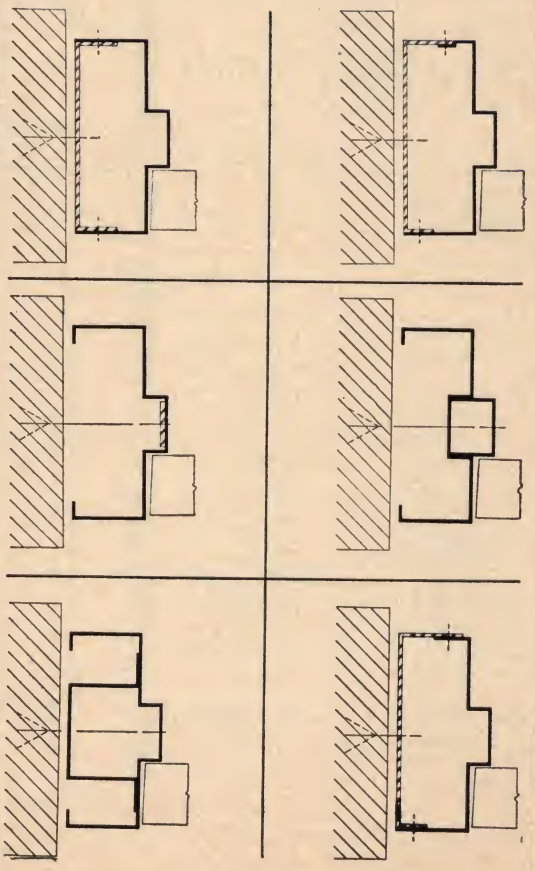
Stop cutoff and capped at 45° or 90° jamb extends to or below floor.*



Jambs & stop extend to or below floor.*

* Stainless steel spats wrapped around jamb legs.

rough buck and cabinet jambs



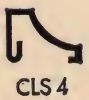
moulding and trim

Sections, for use with rough buck, cabinet jamb openings or for decorative purposes. Snap-on clips for attaching are available only on certain types of moulding.

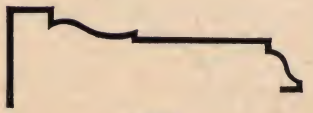
CLS 1

CLS 2

CLS 3



CLS 4

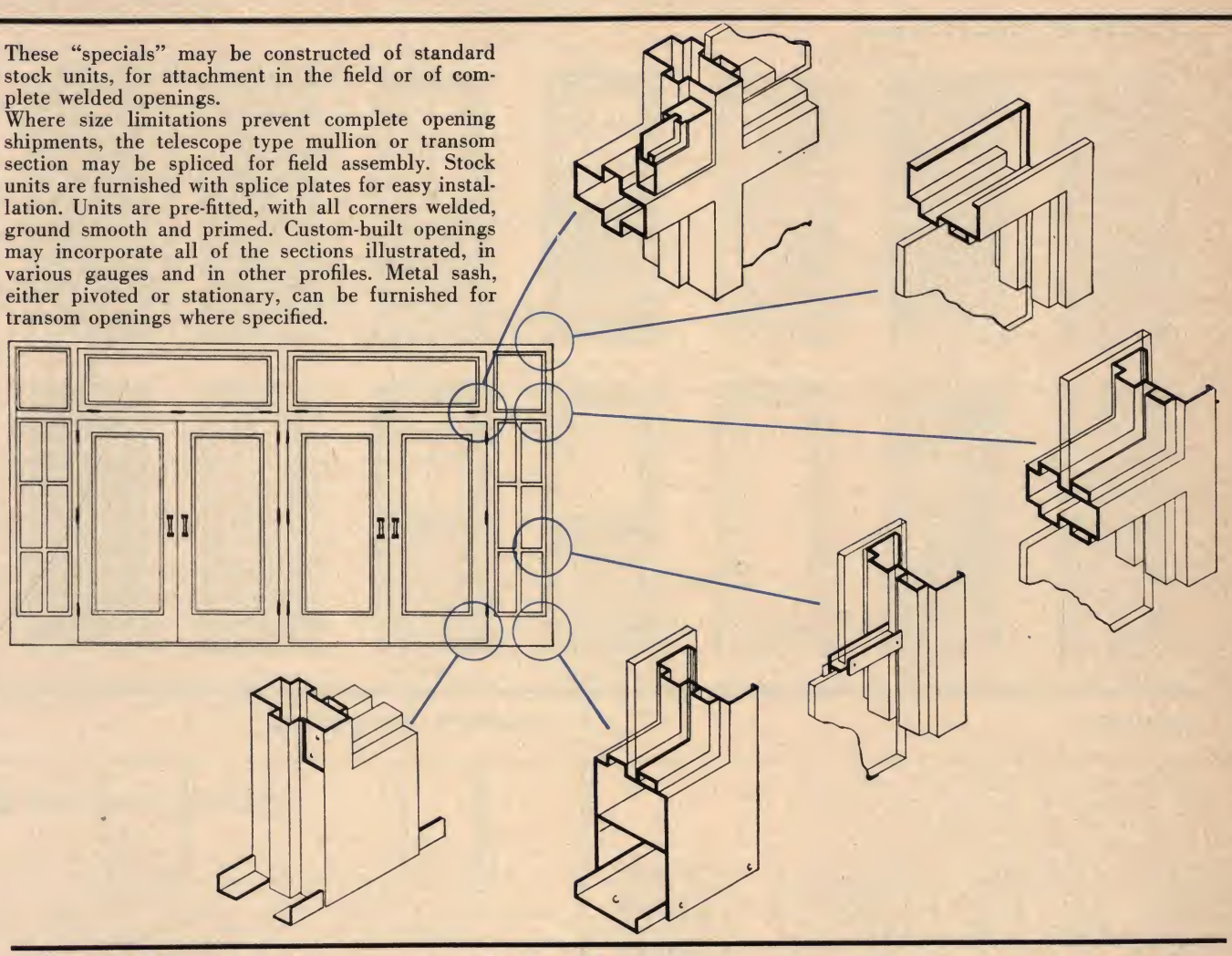


CLS 5

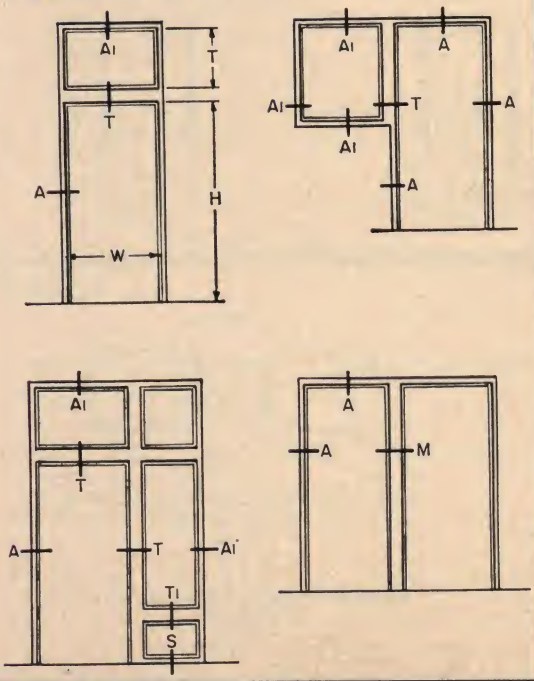
HOLLOW METAL DOORS AND FRAMES

■ SPECIAL OPENINGS

These "specials" may be constructed of standard stock units, for attachment in the field or of complete welded openings.
Where size limitations prevent complete opening shipments, the telescope type mullion or transom section may be spliced for field assembly. Stock units are furnished with splice plates for easy installation. Units are pre-fitted, with all corners welded, ground smooth and primed. Custom-built openings may incorporate all of the sections illustrated, in various gauges and in other profiles. Metal sash, either pivoted or stationary, can be furnished for transom openings where specified.

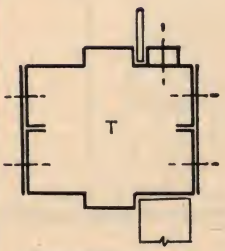


typical elevations



details

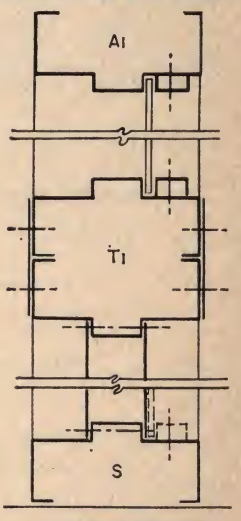
No Scale



TRANSOM BAR

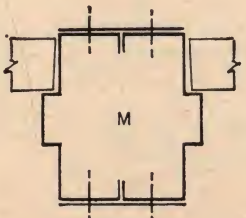
TELESCOPE MULLION

BORR. LITE OR
TRAN. JAMB & HEAD



BOTTOM PANEL
OR GLASS

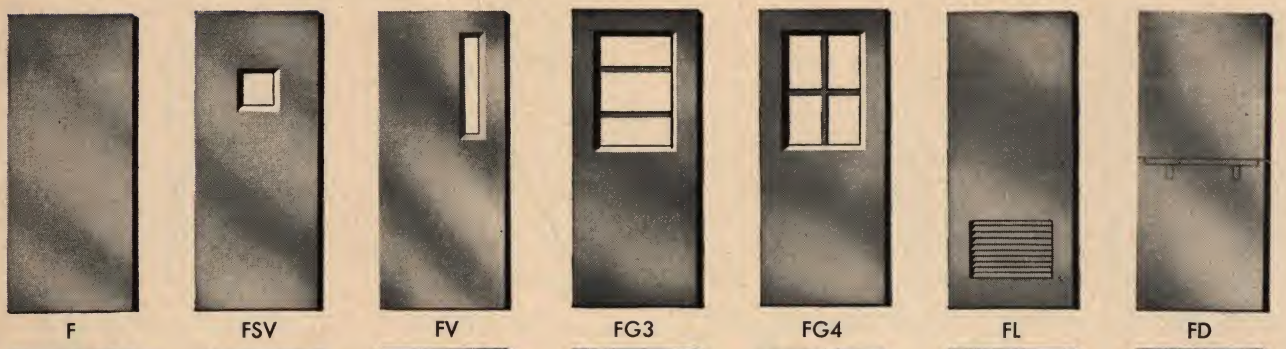
DOOR JAMB

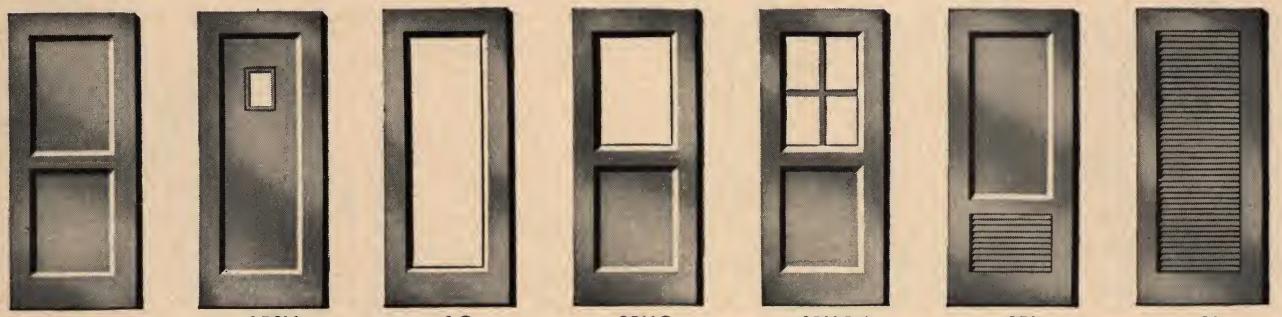


MULLION

■ DOORS

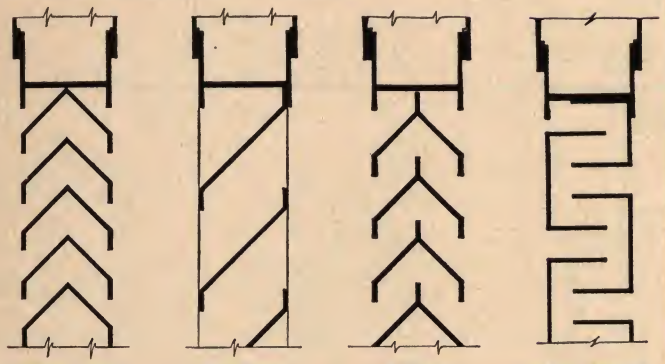
standard door types



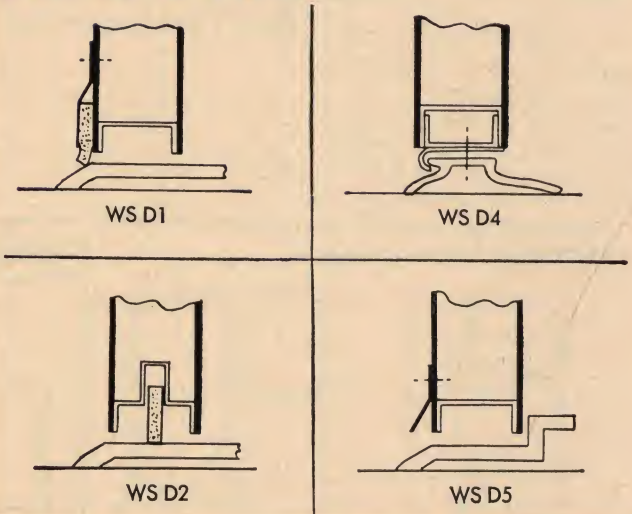


louvers

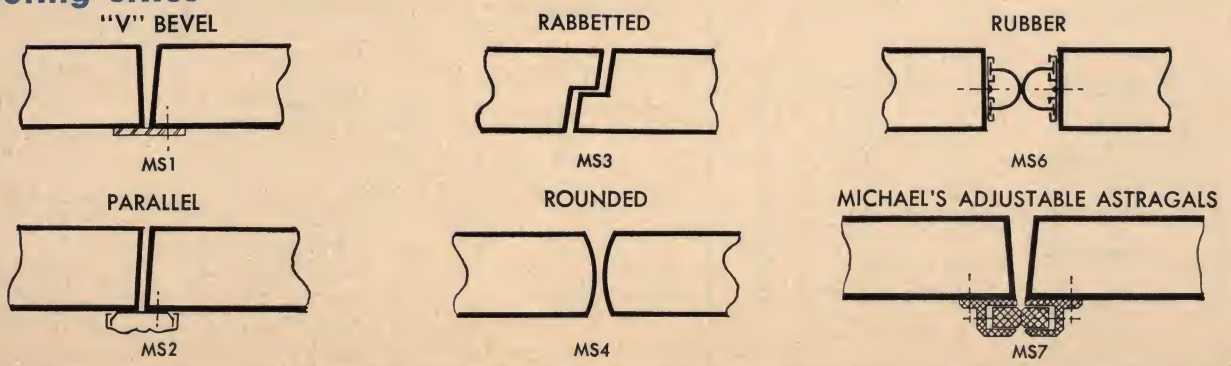
Standard types shown below may be furnished in all sizes. Adjustable louvers can be furnished on special order. Louvers made in 16, 18 and 20 gauge. Louvers installed in doors prior to shipment.



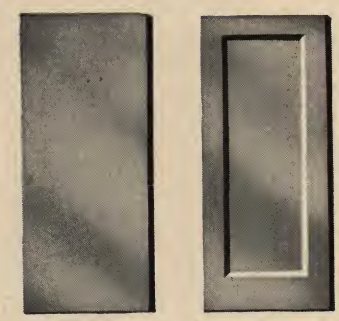
weather stripping



meeting stiles

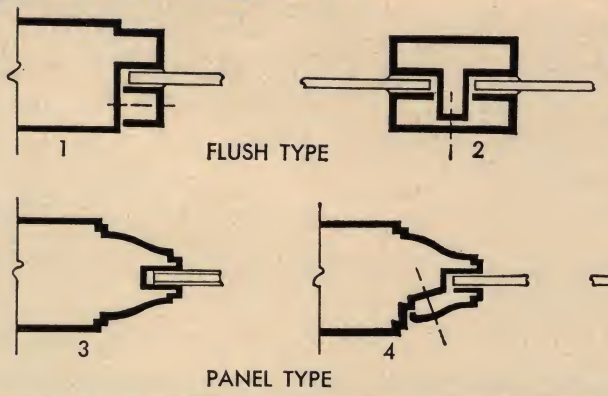


sizes and types



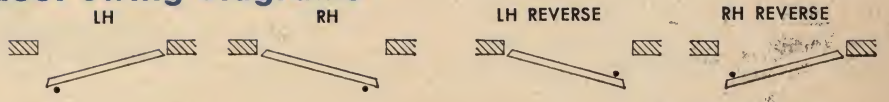
See specifications (page 2) for construction of flush and panel type doors. Both types may be fabricated in all variations of glass openings and sizes, panels, panels with glass openings, louvers of all sizes and various types. Oversize doors of both types made in accordance with architect's specifications in gauges and thickness specified. Hollow metal industrial steel doors, stile and rail panel types, made to specifications.

glass moulding details



1. square moulding
2. muntin bar
3. Panel moulding
4. Panel glass moulding
5. Panel glass muntin.

door swing diagrams



• key or cylinder side.

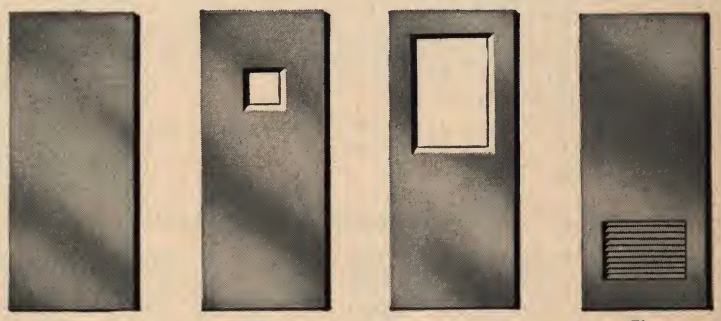
UNDERWRITERS LABEL SERVICE

Doors and frames furnished to meet Underwriters' Laboratories requirements from class "A" through class "E". Glass sizes permissible vary with different label requirements depending on location in building. Catalog sheet table of sizes furnished on request.

■ ECONODOR

A flush type, seamless face door, constructed to the same standards as the custom-engineered door, but with lock seam at edges. Ideal as budget-priced interior doors—fully insulated and rigidly reinforced.

Choice of standard sizes
20 gauge steel
Rust inhibitive prime finish
Mortised and reinforced for 1½ pair hinges.
Reinforced for surface closers
Prepared for cylindrical locks:
Schlage A-C-D series, 2⅜" & 2¾" backset;
Corbin 800 series, Russin 400 series;
Lockwood 110-130-140-160-180; Yale & Towne 5400 series.
Prepared for standard cylinder locks—lockface not to exceed 1" x 8".



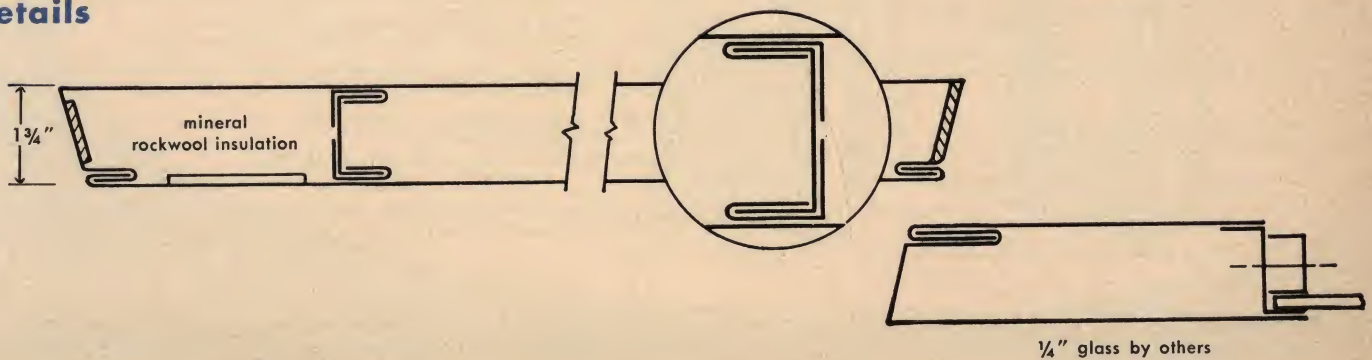
F

FSV
glass area
10" x 10"

FGI
glass area
20" x 20"
maximum

FL
louver height
12" maximum

details



¼" glass by others

REPRESENTATIVE INSTALLATIONS

Western Electric Distributing Plant
Plymouth, Michigan
Architect: Lockwood Greene
Contractor: Bryant & Detwiler

Medical Center
Mid-State Baptist Hospital
Nashville, Tennessee
Architect: Hart, Freeland & Roberts
Contractor: Nile E. Yearwood

Anheuser-Busch Plant—Tampa, Fla.
Architect: Sverdrup & Parcel, Inc.; Contractor: Mills & Jones

Mid-State Baptist Hospital Medical Center—Nashville, Tenn.
Architect: Hart, Freeland & Roberts; Contractor: Nile E. Yearwood

Research Extension, Bldg. 4500—Atomic Energy Commission, Oak Ridge, Tenn.
Architect: A. M. Kinney, Inc.; Contractor: J. A. Jones Const. Co.

Computations Laboratory, Redstone Arsenal—Huntsville, Alabama
Architect: Ralph M. Parsons Co.; Contractor: Blount Bros. Co.

Dining Hall & Kitchen, Columbia College—Columbia, S. C.
Architect: Lafaye Fair LaFaye; Contractor: Atlantic Bldg. Corp., Columbia, S. C.

Glynco Naval Air Station—Glynco, Ga.
Architect: Patchen & Zimmerman; Contractor: A. B. Newton Co.

Library & Fine Arts Bldg.—Pensacola College, Florida
Architect: Hart & Leitch; Contractor: Dyson & Co.

1st Baptist Church—Rome, Ga.
Architect: Cooper, Barrett, Skinner & Woodbury; Contractor: J. P. Roberts

National Guard Armory—Dublin, Ga.
Architect: W. Elliott Dunwody, Sr.; Contractor: Dublin Const. Co.

Adamsville Pumping Station—Atlanta, Ga.
Architect: M. A. Tucker; Contractor: Arthur Pew Const. Co.

Mobile Medical Center—Mobile, Alabama
Architect: Hammond & Woods; Contractor: E. H. Cropp Const. Co.

Calvary Hospital—San Pierre, Ind.
Architect: A. M. Strauss, Inc.; Contractor: Van Keppel Const. Co.

G. M. Training Center—Houston, Texas
Architect: Wyatt C. Hendrick; Contractor: Le Blane, Inc.

Educational Bldg., South Side Baptist Church—Jacksonville, Fla.
Architect: Saxelbye & Powell; Contractor: Geo. D. Auchter Co.

Peachtree Baker Building—Atlanta, Ga.
Contractor: Consolidated Realty Inv.

Medical Dental Building—Arlington, Virginia
Architect: J. H. Sanders; Contractor: J. E. Nebel Co.

Army Reserve Training Center—Augusta, Ga.
Architect: Corps of Engineers, Savannah; Contractor: Guy Smith Const. Co.

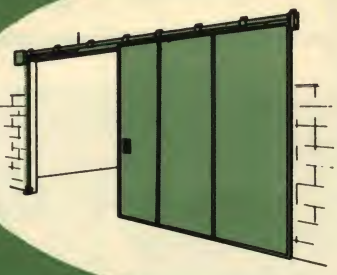
COAST LINE STEEL PRODUCTS, INC.

53-01 NURGE AVE • MASPETH 78, LONG ISLAND, N.Y.

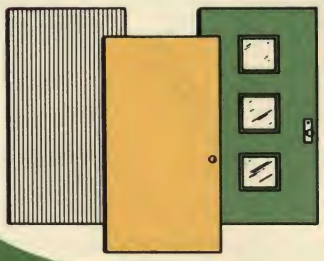
1960 CATALOG

16b / Du

D-H "The Complete Door Line"



PyroDor®
SLIDING
UL Class "A"
Flush Design
(See Sweet's Architectural File 16b/Du)



DecorDor

ALUMINUM and
VINYL-ON-STEEL
FLUSH DOORS
(See Sweet's Architectural File 16a/Du)

PyroDor®

Integral DOOR and FRAME UNITS

DecorDor

Mineral Core
FLUSH WOOD DOORS
(See Sweet's Architectural File 16c/Du)

FLUSH DESIGN

STEEL SWING

MANY DOOR DESIGNS

CHOICE OF FRAME TYPES

COMPLETE HARDWARE SELECTION

A. I. A. FILE NO. 16-A

DUSING and HUNT, INC., LE ROY, N. Y.

D AND H

PyroDor

The Complete Door Line

Motel de Ville
Denver, Colorado
Architect: Colbert and Lowry Associates, New Orleans, La.
Contractor: Fortner Bros., Midwest Corp., Denver, Colorado
Fabricated and supplied — W. Ray Crabb, Inc.

"The Complete Door Line"

D-H DOORS - FRAMES - HARDWARE

Product listing

STEEL SWING FLUSH DOORS, FRAMES and HARDWARE

Catalog DHS2060*

ALUMINUM — VINYL-ON-STEEL FLUSH DOORS

Catalog DHSV-60*

WOOD FLUSH DOORS — Labeled and Non Labeled

Catalog DHSW-60*

SLIDING Pyro-Dors — Class A Labeled

Catalog DHSL-60*

Scaled Details on Frames available on request

* *See Sweet's Architectural and Industrial Construction Files or write for copies.*

DOOR & FRAME UNITS

NOW, Dusing and Hunt, Inc. offers the most complete line of flush doors in the industry . . . including Steel, Vinyl-on-Steel, Aluminum and Wood. Architects and engineers have a wide latitude of door selections of superior construction (See listing) from one source. This catalog describes in detail the PyroDor Steel Swing Door Units with mineral core construction.

Many leading architects and engineers have long voiced the need for standard INTEGRAL steel door and frame units which have sufficient flexibility to overcome basic objections to many types of standard or custom-built units heretofore available.

Dusing and Hunt, from its more than 50 years experience in manufacturing steel door units, offers a realistic answer not only to quality, but to the eternal affliction of custom hollow metal deliveries. This solves the procurement problem for frames and doors, as they are stocked and shipped complete . . . under one responsibility for manufacturing and delivery.

We gratefully acknowledge the counsel and assistance of several of the country's leading architects, engineers and contractors in the designing of our line of INTEGRAL metal door and frame units.

Every PyroDor

with Underwriters' Label

GUARANTEED FOR LIFE

Dusing and Hunt will give a Warranty on every PyroDor against warping, twisting, shrinking, swelling or any defect in workmanship and materials — for the life of the building in which it is originally installed.

HOOKER RESEARCH CENTER • HOOKER CHEMICAL CORPORATION

Night view of front entrance of $3,600,000 Hooker Research Center, Grand Island, N.Y., dedicated June 2, 1959. At left, Executive offices downstairs and laboratories upstairs. At Right, Product Development offices downstairs, Research Library upstairs.

Architects: Wigton-Abbott Corp. Plainfield, N. J.
Contractor: Wigton-Abbott Corp. Plainfield, N. J.

COLUMBINE BUILDING
Denver, Colorado
Architect: Jas. A. Sudler
Contractor: Columbine Commercial Contractors

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MICHIGAN BELL TELEPHONE CO.
Plymouth, Michigan
Architect: Giffels & Vallet & L. Rossetti, Detroit, Mich.
Contractor: Perron Construction Co., Detroit, Mich.

EDUCATIONAL BUILDING
St. Giles Presbyterian Church — Richmond, Virginia
Architects: Budina & Freeman-Richmond
Contractor: C. E. Nuckols-Richmond

D-H PyroDor

superior construction

Every PyroDor has incorporated into its basic steel construction a solid, structural mineral core. Yet, it's light in weight, remarkable in insulating properties, greater strength and completely incombustible.

CALCIUM SILICATE CORE

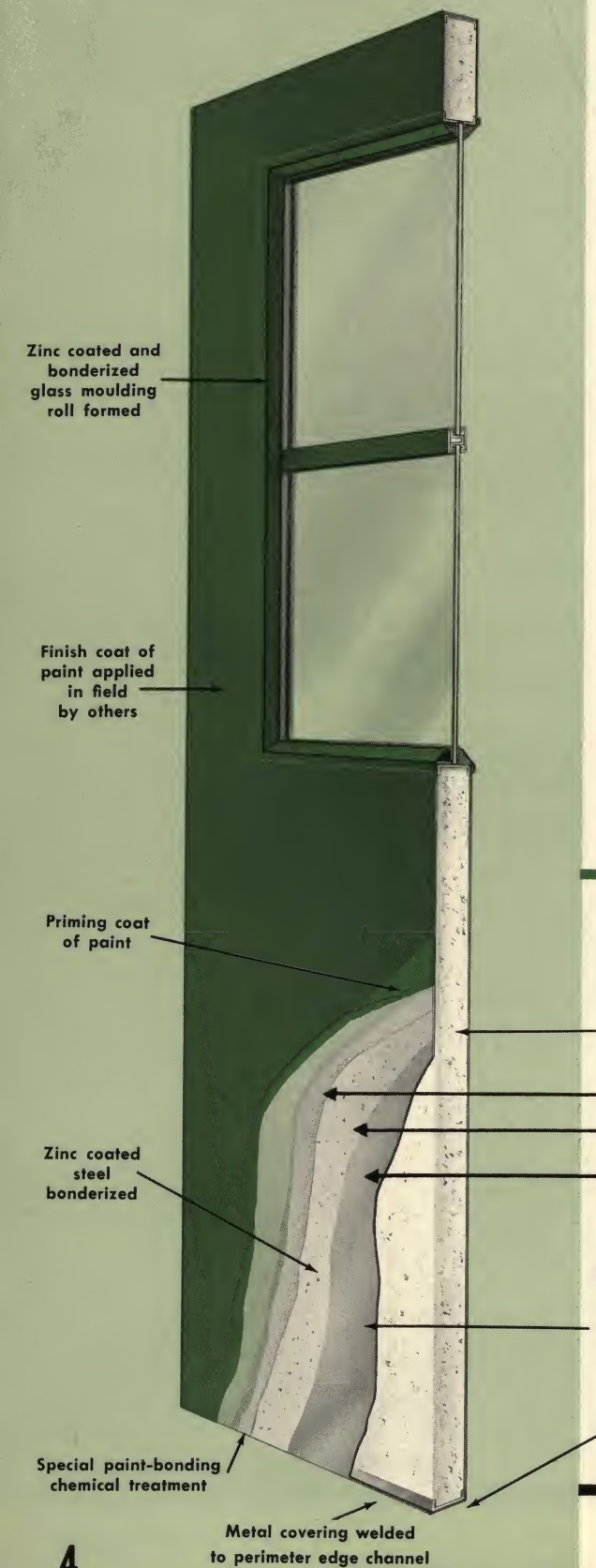
Calcium silicate mineral core material on all Underwriters' Labeled PyroDors has millions of microscopic air spaces — in a cubic foot the total surface of air cells would be equivalent to more than 100 acres.

- Modulus of rupture 175# per square inch
- Modulus of elasticity 160,000# per square inch
- Compressive strength 500# per square inch

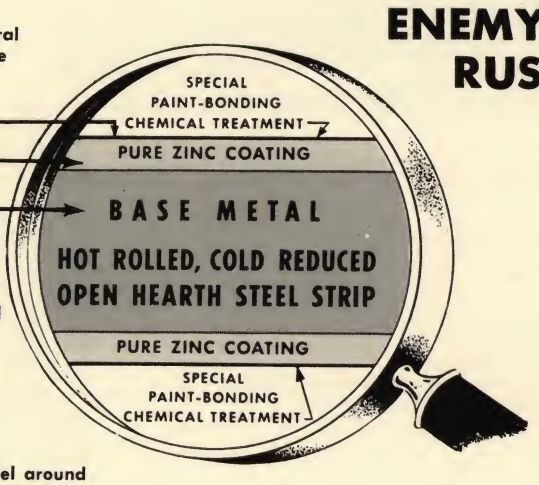
The core material has a nominal density sufficient to provide the most desirable combination of low thermal conductivity, weight and strength.

ZINC COATED AND BONDERIZED STEEL

Zinc coated and bonderized steel is a premium priced material. We feel its use is mandatory to provide maximum corrosion resistance. The electrolytic zinc coating is the most uniform obtainable — no blow-holes or pits vulnerable to rust. The bonderizing affords exceptional paint adhesion and if the paint coating is fractured, creep of rust is negligible.


Zinc coated and bonderized glass moulding roll formed
Finish coat of paint applied in field by others
Priming coat of paint
Solid structural mineral core
Zinc coated steel bonderized
Metal bonded to core by hot plate process with Resorcinol adhesive
Edge channel around entire perimeter of door
Special paint-bonding chemical treatment
Metal covering welded to perimeter edge channel

The Only Steel Door Guaranteed for Life



advantages

corrosion resistance

The combination of solid structural core with zinc coated, bonderized steel, provides corrosion resistance heretofore unobtainable in steel doors. No problems with condensation for exterior or interior doors.

lower maintenance cost

Exterior or Interior Doors — Field studies indicate PyroDors, particularly on exterior openings, generally require less maintenance than other types. 3 or 4 repaintings can cost as much as the door did originally.

sound reduction

PyroDor, 1¾″ thick, has a rating of 35 Decibels at average frequencies of 125 to 2000. Compare this with other types of metal doors.

great strength for weight

Tests by certified testing laboratories prove PyroDors have exceptional structural resistance to corner loads, transverse loads and impact. Certified data available on request.

warp-proof

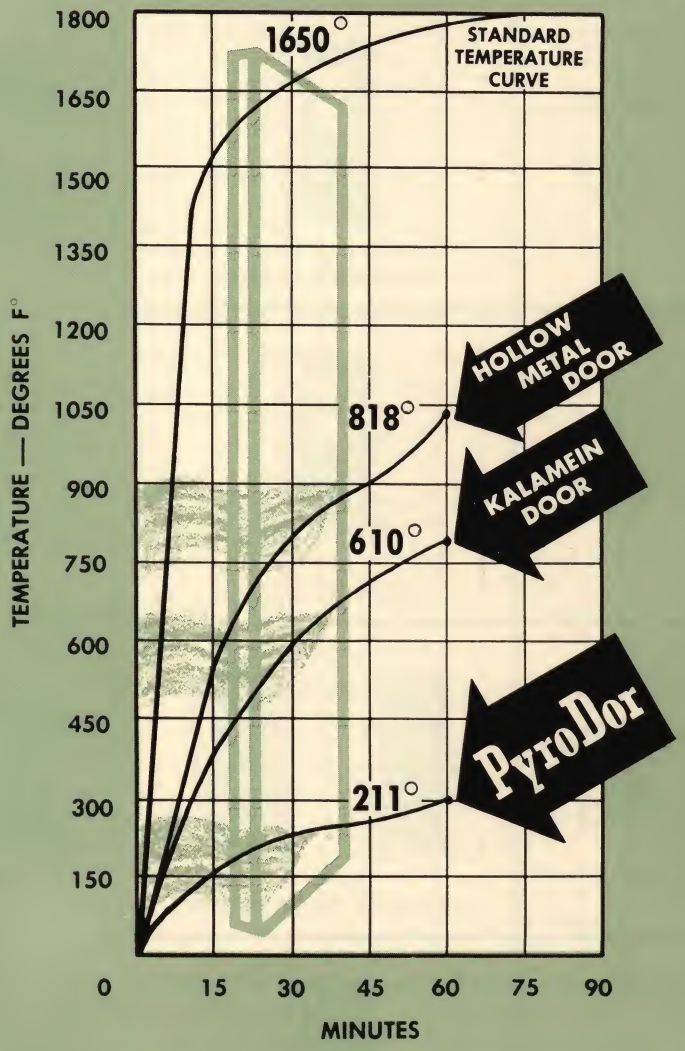
Rigid steel construction, with mineral core unaffected by temperature changes makes for sturdiness that withstands shocks of heavy traffic.

lowest heat transmission

Excessive heat transmission through doors has contributed to the loss of many lives and spread of fire. In several hotel and institutional fires, loss of life was appreciably increased by lack of low heat transmission qualities in doors to rooms and stairwells. It has become increasingly recognized by fire protection authorities that fire doors must be constructed for low heat transmission as well as to retard fire:

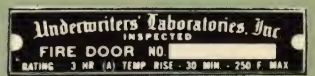
The great superiority of PyroDors in reducing heat transmission compared to other metal door constructions is dramatically demonstrated in the adjacent chart. PROTECT LIVES AND PROPERTY WITH PyroDors. Transmitted temperatures above 250° F. will snuff out life — above 500° F. will create combustion in many situations.

HEAT TRANSMISSION COMPARISON CHART



Taken from Fire Test Report Underwriters' Laboratories, Inc.
Others from U. S. Senate Hearings on Safety at Sea.

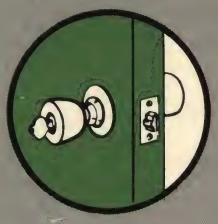
Typical PyroDor
Heat Transmission Test
at Underwriters' Laboratories, Inc.



Flush Door Model Data

MODEL CU

CYLINDRICAL LOCK



Prepared for Heavy Duty Cylindrical Locks (Government Series 161) and Template Hinges.
Surface Closers.

UL Class "B", "C", "D" and "E" Situations.

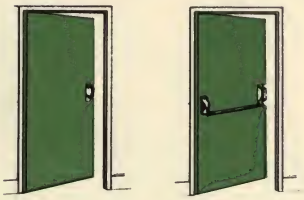
MODEL MU

MORTISE LOCK

Prepared for Heavy Duty Mortise Locks (Government Series 86) and Template Hinges. Surface Closers.

UL Class "B", "C", "D" and "E" Situations.

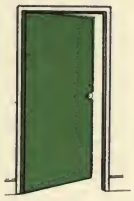
MODEL NLP



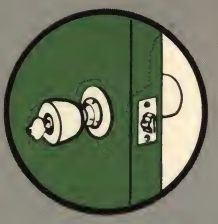
NO LOCK PREPARATION

Suitable for Rim Panic Bolts, Surface Closers and other Surface Applied Hardware.

MODEL SA



CYLINDRICAL LOCK



With Single Point Locks, Cylindrical or Mortise, Template Hinges, Fusible Link Closer.

Class "A", 3 Hour Test.

MODEL STP

MORTISE LOCK

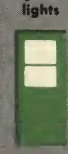
With Single Point Lock, either Heavy Duty Cylindrical or Mortise Types, Template Hinges, Surface Closers, Removable Transom Bar and Transom Panel for Clear Openings up to 10′ 0″ High.

Class "A", 3 Hour Test.

STANDARD PyroDor SWINGING TYPES AND SIZES

Models "CU" and "MU" labeled for class "B," "C," "D," "E" situations

D AND H

door no.	opening sizes single	opening sizes pairs	glass size (inches) single or pairs width x height — each light	underwriters data and remarks
30 flush	2068 *			* Model SA Sizes indicated in green. 3 Hr. Rating
	2070 *	4068 *		
	2468 *	4070 *		Carries Class "B" Label. For stairways and vertical shafts. Also suitable for Class "C," "D" and "E" situations.
	2470 *			
	2668 *			
	2670 *	5068 *		
	2868 *	5070 *		
	2870 *	5468 *		1½ Hour Rating. 250° F. Max. Temp. Rise.
	3068 *	5470 *		
	3070 *	6068 *		
30T	3468 *	6070 *	30T - 3 Hour Max. 4070 Door with 3' Removable Transom Panel	
	3470 *	6868		
	3668 *	6870		
	3670 *	7068		
	3868 *	7070		
	3870 *	7470		
	4068 *	8068		
	4070 *	8070		
	4080	8080		
30D dutch doors with shelf	2868		For Upper Glass Light Specify Type 34D	CANNOT BE LABELED
	2870			
	3068			
	3070			
	3468			
	3470			
31 flush with vision light	2868	5468	11½x11½ Vision Light 10"x10"	Carries Class "B" Label. For stairways and vertical shafts. Also suitable for Class "C" and "E" situations. Not class "D." 1½ Hour Rating 250° F. Max. Temp. Rise.
	2870	5470		
	3068	6068		
	3070	6070		
	3468	6868		
	3470	6870		
	3670	7070		
	3870	7470		
	4070	8070		
	4080	8080		
34 flush with upper glass light	2668	5068	17½x31⅝	Carries Class "C" Label. For corridors and room partitions. ¾ Hour Rating. Temp. Rise, No Rating.
	2670	5070	17½x35⅝	
	2868	5468	19½x31⅝	
	2870	5470	19½x35⅝	
	3068	6068	23½x31⅝	
	3070	6070	23½x35⅝	
	3468	6868	27½x31⅝	
	3470	6870	27½x35⅝	
	3670	7070	29½x35⅝	
	3870	7470	31½x35⅝	
	4068	8068	35½x31⅝	
	4070	8070	35½x35⅝	
	4080	8080	35½x47⅝	
35 flush with two upper glass lights 	2668	5068	17½x15⅜	Carries Class "C" Label. For corridors and room partitions. Also suitable for Class "E" situations. ¾ Hour Rating. Temp. Rise. No Rating.
	2670	5070	17½x17⅜	
	2868	5468	19½x15⅜	
	2870	5470	19½x17⅜	
	3068	6068	23½x15⅜	
	3070	6070	23½x17⅜	
	3468	6868	27½x15⅜	
	3470	6870	27½x17⅜	
	3670	7070	29½x17⅜	
	3870	7470	31½x17⅜	
	4068	8068	35½x15⅜	
	4070	8070	35½x17⅜	
	4080	8080	35½x23⅜	

door no.	opening sizes single	opening sizes pairs	glass size (inches) single or pairs width x height — each light	underwriters data and remarks
35A flush with three upper glass lights	2668	5068	17½x10 1/16	Carries Class "C" Label. For corridors and room partitions. Also suitable for Class "E" situations. ¾ Hour Rating. Temp. Rise, No Rating.
	2670	5070	17½x11⅜	
	2868	5468	19½x10 1/16	
	2870	5470	19½x11⅜	
	3068	6068	23½x10 1/16	
	3070	6070	23½x11⅜	
	3468	6868	27½x10 1/16	
	3470	6870	27½x11⅜	
	3670	7070	29½x11⅜	
	3870	7470	31½x11⅜	
	4068	8068	35½x10 1/16	
	4070	8070	35½x11⅜	
	4080	8080	35½x15⅜	
36 flush with four upper glass lights	2668	5068	8 5/16x15⅜	Carries Class "C" Label. For corridors and room partitions. Also suitable for Class "E" situations. ¾ Hour Rating. Temp. Rise, No Rating.
	2670	5070	8 5/16x17⅜	
	2868	5468	9 5/16x15⅜	
	2870	5470	9 5/16x17⅜	
	3068	6068	11 5/16x15⅜	
	3070	6070	11 5/16x17⅜	
	3468	6868	13 5/16x15⅜	
	3470	6870	13 5/16x17⅜	
	3670	7070	14 5/16x17⅜	
	3870	7470	15 5/16x17⅜	
	4068	8068	17 5/16x15⅜	
	4070	8070	17 5/16x17⅜	
	4080	8080	17 5/16x23⅜	
39 full glass	2670	5070	19½x58⅞	Bottom Rail is 18". Carries Class "C" Label. ¾ Hour Rating. Temp. Rise, No Rating.
	3068	6068	23½x54⅞	
	3070	6070	23½x58⅞	
41 two muntins	2670	5070	17½x19⅜	Bottom Rail is 18". Carries Class "C" or "E" Labels. ¾ Hour Rating. Temp. Rise, No Rating.
	3068	6068	23½x18	
	3070	6070	23½x19⅜	
42 bottom louvre	2068			CANNOT BE LABELED
	2070			
	2468	5068		
	2470	5070		
	2668	5468		
	2670	5470		
	2868	6068		
	2870	6070		
	3068			
	3070			

Special Sizes available on Special Order. *D & H also prepares PyroDors for Rixson No. 25 and No. 30 Hinges*

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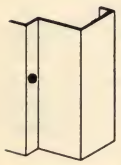
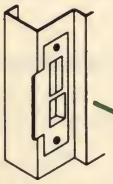
FRAMES for wood or metal doors

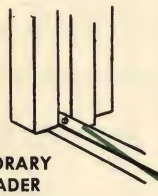
- Delivery in Days — Not Months
- Seven Profiles — Any Wall Condition
- Transoms — Sidelights — Borrowed Lights (Details, Pages 10-11)
- Cold Rolled or Zinc Coated and Bonderized Steel — 16 Gauge
- Mortised and Reinforced for Template Hinges and Locks
- Underwriters Inspected — if desired
- Universal Strikes permit use of Locks and Latches of All Major Manufacturers



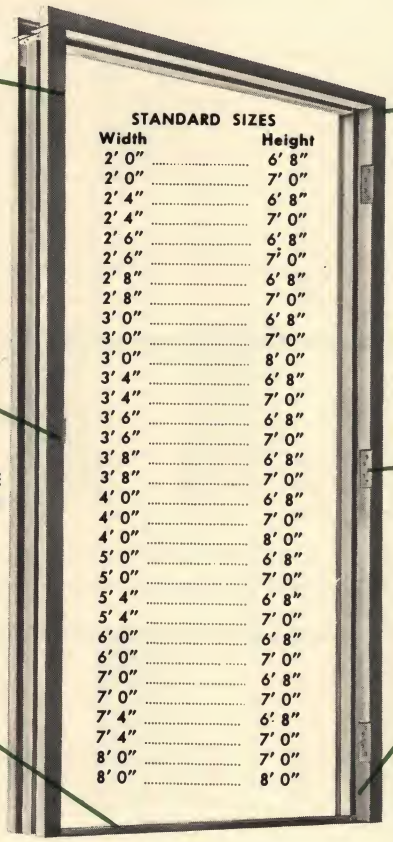
RUBBER SILENCERS



UNIVERSAL STRIKE with mortar guard

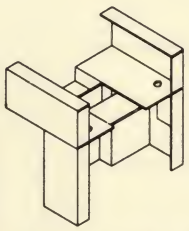


TEMPORARY SPREADER

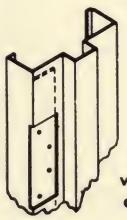


STANDARD SIZES

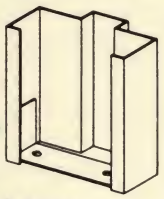
Width	Height
2' 0"	6' 8"
2' 0"	7' 0"
2' 4"	6' 8"
2' 4"	7' 0"
2' 6"	6' 8"
2' 6"	7' 0"
2' 8"	6' 8"
2' 8"	7' 0"
3' 0"	6' 8"
3' 0"	7' 0"
3' 0"	8' 0"
3' 4"	6' 8"
3' 4"	7' 0"
3' 6"	6' 8"
3' 6"	7' 0"
3' 8"	6' 8"
3' 8"	7' 0"
4' 0"	6' 8"
4' 0"	7' 0"
4' 0"	8' 0"
5' 0"	6' 8"
5' 0"	7' 0"
5' 4"	6' 8"
5' 4"	7' 0"
6' 0"	6' 8"
6' 0"	7' 0"
7' 0"	6' 8"
7' 0"	7' 0"
7' 4"	6' 8"
7' 4"	7' 0"
8' 0"	7' 0"
8' 0"	8' 0"



CORNER CONSTRUCTION HEAD JOINT



HINGE MORTISE with reinforcement and mortar guard



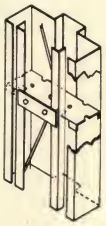
FLOOR ANGLE

ACCESSORIES

CS-4
Ceiling Strut for PF-27 (2'6" Height Max.)

PC-1

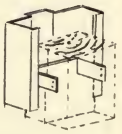
FC-1
Anchorage for 2" Solid Plaster Wall



SC-3 Series
Metal Stud Anchor

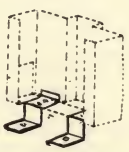
S-6
Saddle Filler Plates

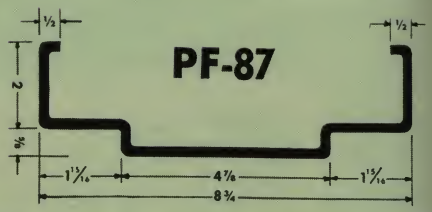
M-1
Masonry Anchor

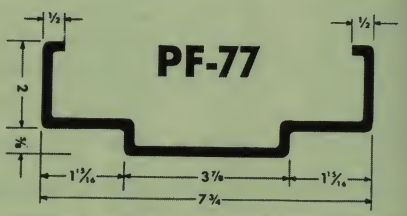


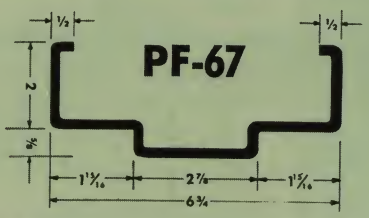
WC-2
Wood Stud Anchor

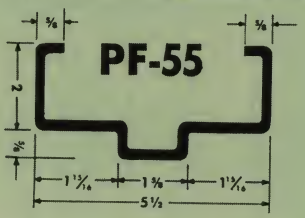
FA 5
Rough Floor Extension Angle— 1", 1½" and 2" Heights

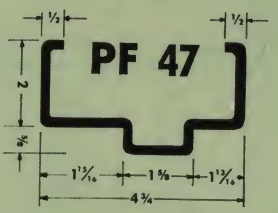


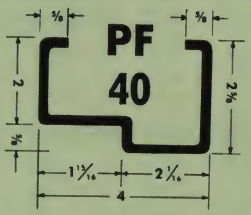


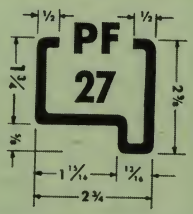






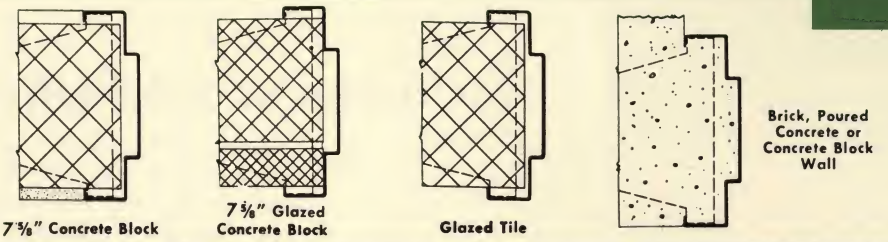




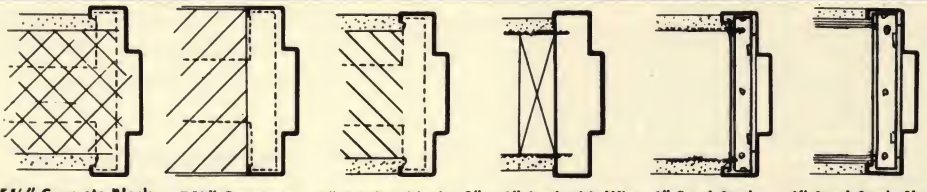


Request Form SF658 for Scaled Details

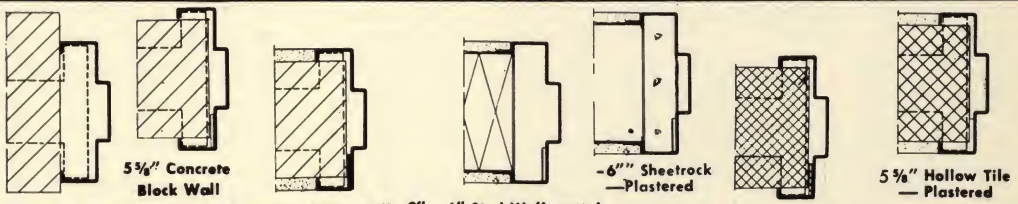
PFC-87



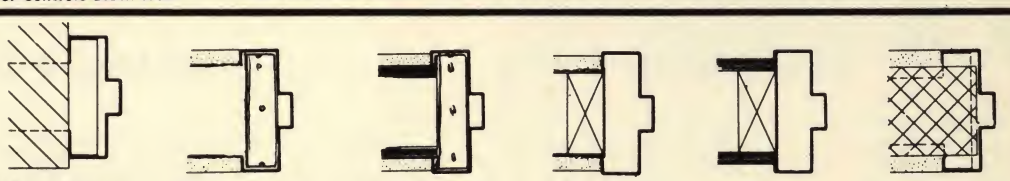
PFC-77


5⅝" Concrete Block or 5⅝" Hollow Tile Wall — plastered
7⅝" Concrete Block Wall
6" Pyrobar block plastered
2" x 6" Stud with Wire Lath — Plastered
6" Steel Stud — Wire lath and Plastered
6" Steel Stud, Sheet-rock — Plastered

PFC-67


Brick, Poured Concrete or Concrete Block Wall
5⅝" Concrete Block Wall
5⅝" Concrete Block Wall Plastered two sides
2" x 6" Stud Wall, metal lath, plastered two sides
-6"" Sheetrock —Plastered
5¾" Glazed Tile Wall
5⅝" Hollow Tile — Plastered

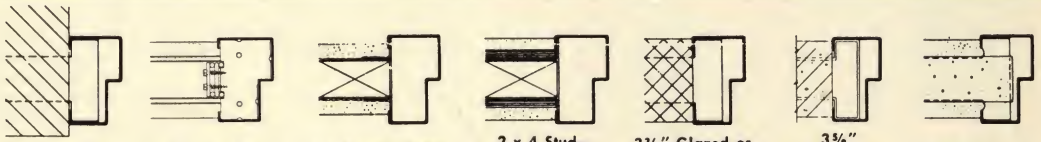
PFC-55


Brick, Poured Concrete or Concrete Block Wall
4" Metal Stud— Lath and Plastered
3¼" Metal Stud —½" Sheetrock —Plastered
2 x 4 Stud— Metal lath Plastered
2 x 4 Stud—Dry Wall Construction
4" Hollow Tile or Pyrobar Plastered

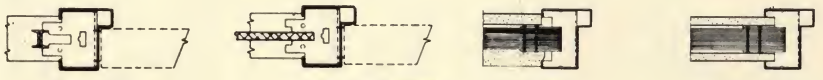
PFC-47

Brick, Poured Concrete or Concrete Block Wall
3⅝" Hollow Tile or Concrete Block Plastered
3¼" Metal Stud with Lath and Plaster
2½" Metal Stud Sheetrock— Plastered
2 x 4 Stud—Metal Lath—Plastered
2 x 4 Stud—Dry Wall Construction
3" Pyrobar— Plastered

PFC-40


Brick, Poured Concrete or Concrete Block Wall
1⅜" Metal Stud Sheetrock plastered two sides
2 x 4 Stud—Metal Lath and Plaster
2 x 4 Stud— Sheetrock— Plastered
3¾" Glazed or Hollow Tile
3⅝" Concrete Block Wall
2" Pyrobar— Plastered

PFC-27



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INTEGRATED SUB-ASSEMBLIES

. . . for transoms, sidelights, borrowed lights

TUCKASEEGEE SCHOOL — Mecklenburg County, N. C.
Architect: Walter Hook & Associates, Charlotte, North Carolina
Contractor: G. L. Wilson Building Company, Statesville, N. C.

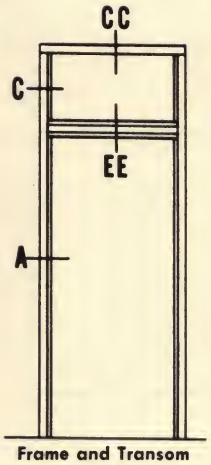
LINCOLN ELEMENTARY SCHOOL — Livonia, Michigan
Architect: Yamasaki, Leinweber Associate, Royal Oak, Michigan
Contractor: R. O. Buckland, Dearborn, Michigan

These frames are often needed first — received last — carrier damage is frequent — handling is very difficult.

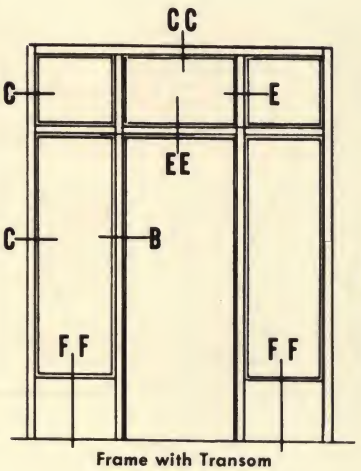
Dusing and Hunt has developed a system to eliminate these problems by Standardized Integrated Sub-Assemblies. Note these features:

- Prompt Delivery
- Zinc Coated and Bonderized Steel
- Narrow Mullions and Transom Bars
- Dimensions are Variable
- Machined to Fit
- Easy to Handle and Erect

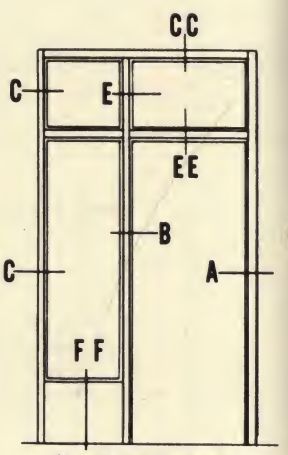
ELEVATIONS (not to scale)



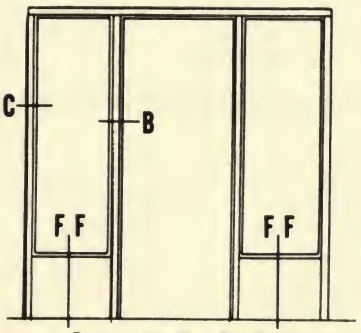
Frame and Transom



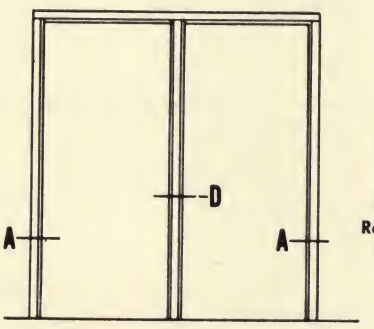
Frame with Transom Two Sidelights and Bottom Panels



Frame with Transom and One Sidelight. Opposite Side Similar



Frame with Two Sidelights

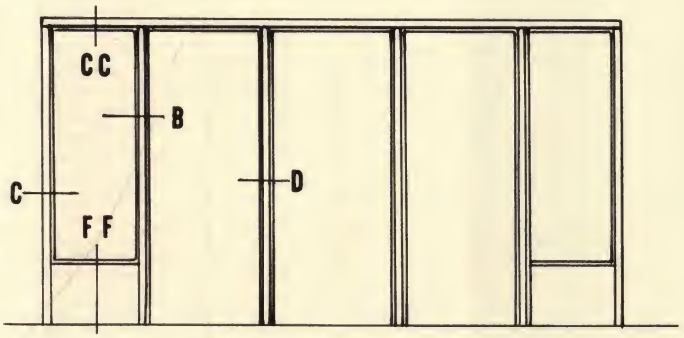


Double Frame with Fixed or Removable Mullion

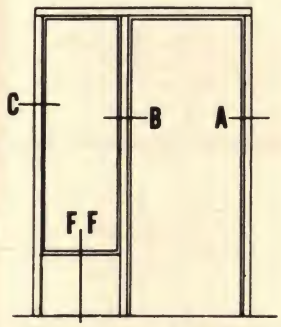
ANY KIND OF MULTIPLE OPENING IS FEASIBLE

The photographs at the left and these typical elevations are a sample of what can be done with Dusing and Hunt Integrated Sub-Assemblies. The first rational answer to the worst of all hollow metal problems.

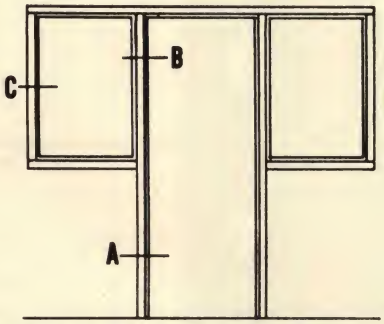
Call on your Dusing and Hunt Distributor to demonstrate the simplicity of it.



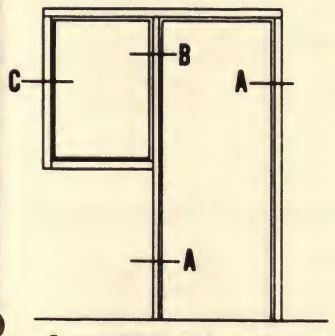
Triple Frame with Two Sidelights



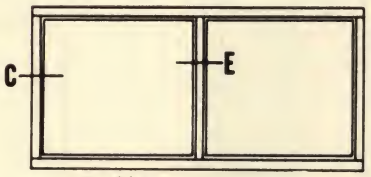
Frame with One Sidelight. Opposite Side Similar



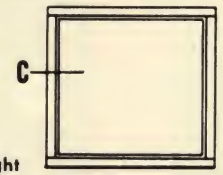
Frame with Two Borrowed Lights



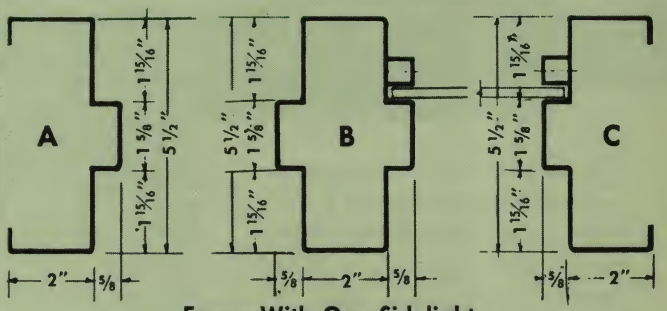
Frame with One Borrowed Light



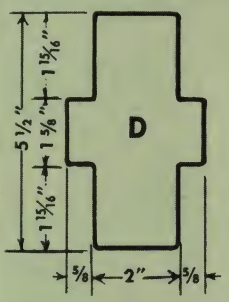
Double Borrowed Light

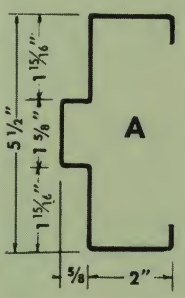


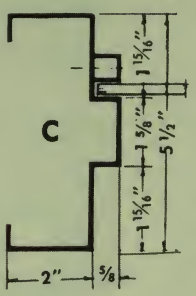
Single Borrowed Light

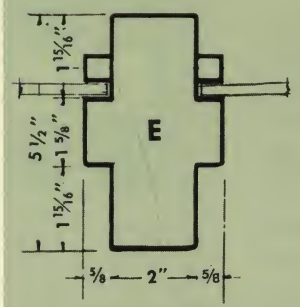


Frame With One Sidelight



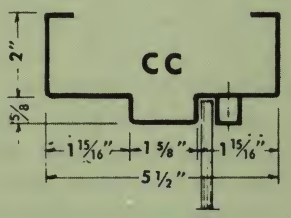


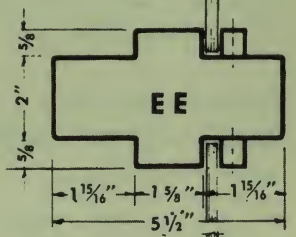


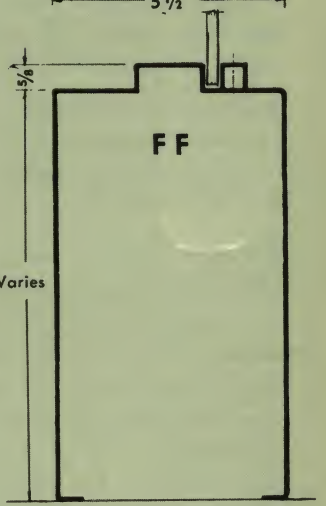


Borrowed Light With Mullion

SECTION ELEVATION
Sidelight with Transom and Bottom Panel







NOTE — PANELS MAY BE FLUSH IF DESIRED

UL CHART

One basic standard, revolutionary construction for all PyroDors make each and every door eligible for the Underwriters' Label. This uniform construction easily meets the standard fire exposure rating for the maximum of 3 hours and is also considerably below the required standards (250°F. max. in 30 min.) for measurement of transmitted temperatures through the door surface. Actual recorded temperature was 211°F. in 30 minutes. No other construction for a metal face fire door can equal this combination of high standards for fire and heat resistance, without additional, special or costly construction features or materials being incorporated in the door assembly.

Limitations for Underwriters' Labels on PyroDors

- Doors provided with Push and Pull Hardware or Dead Locks may not be labeled.
- Doors of the double acting type when equipped with floor or jamb spring hinges may not be labeled.
- Doors, when provided for over the maximum opening sizes established by the Underwriters' Laboratories, cannot be labeled. However, certificates can be furnished for oversize doors, certifying by inspection that doors are constructed in accordance with Underwriters' standards for labeled doors.

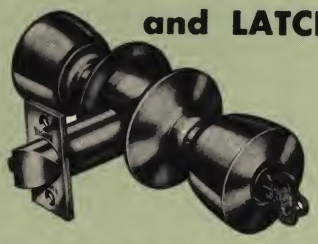
Model and Design	U.L. Letter Designation	Fire Exposure Rating	Heat Transmission Rating	Location in Building
SA 30	A	3 Hrs.	250° in 30 Min.	Openings in Fire Walls Curtain & Division Walls Areas to High Hazard Contents, Film Storage Vaults
STP 30 T	A	3 Hrs.	250° in 30 Min.	STP – For use in any opening when extra height is required occasionally to permit removal of equipment for repairs. (Boiler Rooms, Transformer Vaults.)
SL	A	3 Hrs.	250° in 30 Min.	SL – For use in any opening requiring a Sliding UL Fire Door. (See Catalog – DHSL-60)
MU and CU 30 31	B	1 ½ Hrs.	250° in 30 Min.	Openings in Vertical Shafts Stairwells Elevator Shafts
31 30	C	1 ½ Hrs.	250° in 30 Min. Not Rated	C Openings in Corridor and Room Partitions
34 35 39 35 A 41 36	E	¾ Hr.	Not Rated	E Openings in Exterior Walls where Exposure to Fire is moderate or less severe. Fire Escapes
30	D	1 ½ Hrs.	250° in 30 Min.	Openings in Exterior Walls where exposure to Fire is severe

Thickness	Maximum Glass Area	Maximum Opening Sizes		HARDWARE REQUIREMENTS				
		Single	Pairs	Hinges	Locks or Latches	Panic Devices	Doors in Pairs	Closing Devices
1¾″	None Permitted	48″ x 84″	72″ x 84″	1½ Pr. Steel Weight Template 4½″ Per Door	Underwriter's Label Listed Cylindrical or Mortised Single Point Type Pairs Only Require 3/4″ Throw Latch Bolt	Mortise with Push Bar operation	SFB or SFBU (See Below)	SC-FL Series Fuse Link Door Closers
		48″ x 84″ Door Opening plus Removable Transom Bar and Panel over 120″ clearance opening height	None Permitted	Steel Series "SH"	Series SP-400 SP-2000		STP None Permitted	
		For openings not to exceed 90 sq. ft. in area. Approval pending for openings up to 120 sq. ft. in area.		Underwriter's Labeled Sliding Door "Series 700 Guardian" Hardware, Track Hangers, Guide Rollers, Binders and Intermediate Latching Devices, Door Pulls.				Ⓤ Automatic Sliding Door Closer D & H "PyroMatic" Device
1¾″	100 sq. in. per Opening	48″ x 96″	90″ x 96″	Steel Series "SH"	Series SP-400 SP-2000	Mortise with Push Bar operation	SFB Flush Bolts for Inactive or Stationary Doors SFBU Self Latching Flush Bolts When Inactive Door is Self-Closing Lock or Latch Always Required for Active Door	Series SC Door Closer required for openings of egress SC-FL (automatic self-closing) when required by local authorities having jurisdiction Coordinating Devices Required for Doors in Pairs When Both Doors are Active
1¾″	**C** 1296 sq. in per light							
1¾″	**E** 720 sq. in. per light					Consult local authorities having jurisdiction where Panic Devices are required		
1¾″	None Permitted							

STANDARD HARDWARE

Shown below are types most frequently used.

CYLINDRICAL LOCKS and LATCHES

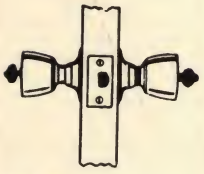


For Model CU PyroDors
Government Series 161

Russwin, or equivalent, heavy duty is standard.
Cosmic Design — Wrought Bronze or Aluminum.

Finishes
Stock — Dull Bronze US 10.
Special Order — Aluminum or Brass.

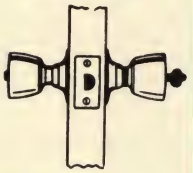
SP 456½ lock
for communicating doors



Govt. No. 161S

Latch bolt by knob either side except that key in either knob locks own knob only.
Dead locking latch.

SP 440 * lock
for front or rear doors in offices, institutions and factories



Govt. No. 161A

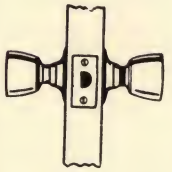
Latch Bolt by knob each side.
Turn Button dead locks outside knob.
Key retracts latch bolt when outside knob is locked.
Dead locking latch.

SP 426 * latch
for exit doors

Govt. No. 161Q

Latch bolt by knob either side.
Turn button locks or unlocks outside knob.
Inside knob always free.

SP 410 * simple latch
for passage doors



Govt. No. 161N

Latch bolt by knob either side.
Each knob always free. No key.

MORTISE LOCKS and LATCHES

anti-friction latch bolt

For Model MU PyroDors
Government Series 86

Russwin "Ten Strike," Heavy Duty, or equivalent, is standard.
Anti-friction Latch Bolts.
Rockford Trim-Cast.

Finishes
Stock — Dull Bronze US 10.
Special Order — Aluminum or Brass.

SP 2018½ lock *
entrances to all types building

Govt. No. 123A

Similar to 121A except dead bolt operated inside by key instead of turnpiece.
Latch bolt operated by thumb piece either side, except when outside thumb piece is locked by stop in front. When thumb piece is locked, latch and dead bolts by key either side

SP 2048 lock *
for front doors — all types of buildings

Govt. No. 86A

Latch bolt operated by knob from either side *except* when outside knob is locked by stop in front. Then by key outside or knob inside.
Dead bolt operated by key outside and turn piece inside.

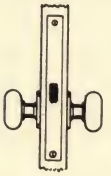
SP 2007 * cylinder dead lock
for store doors and entrances to public buildings

Govt. No. 86P

Dead bolt operated by key outside and turn piece inside.

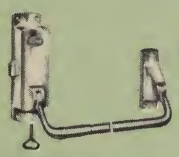
SP 2025 simple latch *
for passage and closet doors

Govt. No. 86N



Latch bolt operated by knob from either side.

PANIC EXIT DEVICES (Rim Type)



Government Series 810

Special Heavy Cast Bronze.
Car Latch with ¾" Throw.
Dogging Device at Lock Case and Pivot Bracket.

Finishes
Stock — Dull Bronze US 10.
Special Order — Satin Aluminum. Anodized — US 28.
Dull Chrome — US 26D.

Mortise Type Devices Available on Special Order — SED 820 Series

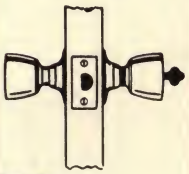
SINGLE DOORS			PAIRS
SED 810 Inside and Outside Operation	**SED 811** Inside and Outside Operation	**SED 812** Inside and Outside Operation	**SED 810 x SRM** Inside and Outside Operation
Inside by Bar Outside by Key and Pull Handle Outside by Pull only when Bar is dogged	Inside by Bar Outside by Pull Handle when Bar is dogged	Inside by Bar Outside by Thumb Piece when not locked Key locks Thumb piece	Both Leaves Active Inside by Bar Outside by Key and Pull Handle Outside by Pull only when Bar is dogged
Govt. No. 810H x 421	Govt. No. 810H x 439	Govt. No. 810H x 421 (with Thumb Piece)	Govt. No. 810H x 421 x 810H

*Carried in Stock

HARDWARE BY OTHERS — If hardware is furnished by others the following lock series of other manufacturers will fit the standard lock preparation for Model CU or Model MU PyroDors.

Many others available — supplemental catalog furnished on request.

SP 440 5/8 * lock
for classrooms, vestibules and utility rooms



Govt. No. 161R

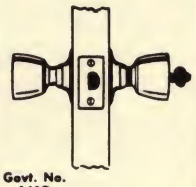
Latch bolt by knob either side.
Inside knob always free.
Outside knob dead locked by key in outside knob.
Dead locking latch.

SP 446 * lock
for inside office or factory doors

Govt. No. 161B

Latch Bolt by knob each side.
Push Button dead locks outside knob.
Inside knob always free.
Turning inside knob releases push button.
Key retracts latch bolt and releases push button.
Closing door does not release push button.
Dead locking latch.

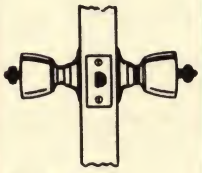
SP 452 * lock
for utility room, store room and exit doors



Govt. No. 161D

Latch bolt by inside knob only.
Outside knob fixed.
Latch bolt retracted by key in outside knob.
Dead locking latch.

SP 448 1/2 lock
for institutional and communicating doors



Govt. No. 161G

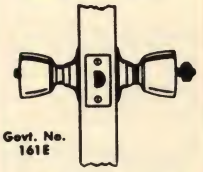
Latch bolt by knob either side *except* that both knobs are locked simultaneously by key in either knob. When locked can be unlocked by key only.
Dead locking latch.

SP 446 1/2 * lock
for entrances and corridors, all types of buildings

Govt. No. 161C

Latch bolt by knob each side.
Inside knob always free.
Outside knob dead locked by key in inside knob.
Key in outside knob retracts latch bolt when knob is locked.
Dead locking latch.

SP 435 lock
for rest rooms and public station doors



Govt. No. 161E

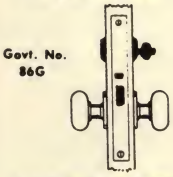
Latch bolt by knob either side.
Button of inside knob locks outside knob.
Latch bolt can be retracted by key in outside knob.
Locking button released by turning inside knob by outside key or closing door, spanner holes in head and can be fixed in locking position with spanner key.
Dead locking latch

SP 2056 lock *
for corridors and vestibule doors

Govt. No. 86E

Latch bolt operated by knob either side except when outside knob is locked by stop in front. By key outside at all times. Auxiliary latch dead locks latch bolt and stop, preventing their manipulation when door is closed.

SP 2058 1/2 M lock
for entrance doors



Govt. No. 86G

Latch bolt operated by knob from either side except when outside knob is locked by master key through inside cylinder, then by key outside, knob inside. When so specified, change key will operate inside cylinder.
Auxiliary latch deadlocks latch bolt preventing manipulation when door is closed.

SP 2024 lock *
for entrance doors and store rooms

Govt. No. 86FW

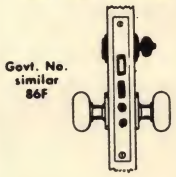
Latch bolt operated by knob either side.
Dead bolt operated by key outside and turn piece inside.

SP 2024 1/2 lock
for communicating doors

Govt. No. 86M

Latch bolt operated by knob either side.
Dead bolt by key either side.
Note — Operation similar 86M except deadbolt operated by key either side instead of turn pieces.

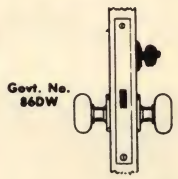
SP 2048 1/2 lock
for special purposes —all types buildings



Govt. No. similar 86F

Similar to 86F except that deadbolt operated by key inside.
Latch bolt operated by knob either side, except when outside knob is locked by stop in front; then by key outside and knob inside.
Dead bolt operated by key both sides.

SP 2036 lock
for public toilets



Govt. No. 86DW

Latch bolt operated by knob inside and by key outside.
Outside knob rigid

PAIRS

- with Removable Mullion — **- - with Vertical Rod — Inactive Leaf**

SED 811 x SRM
Inside and Outside Operation

Both Leaves Active
Inside by Bar
Outside by Pull Handle when Bar is dogged

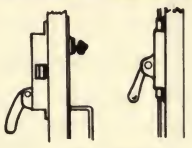
810H x 810H

SED 812 x SRM
Inside and Outside Operation

Both Leaves Active
Inside by Bar
Outside by Thumb Piece when not locked
Key locks Thumb piece

Govt. No. 810H x 421 (with Thumb Piece) x 810

SED 810 x 821
Active Leaf Inactive Leaf

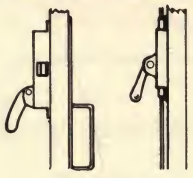


Active Leaf
Inside by Bar
Outside by Key and Pull Handle
Outside by Pull only when Bar is dogged

Inactive Leaf
Inside Operation Only by Bar

Govt. No. 810H x 421 x 821

SED 811 x 821
Active Leaf Inactive Leaf



Active Leaf
Inside by Bar
Outside by Pull Handle when Bar is dogged

Inactive Leaf
Inside Operation Only by Bar

Govt. No. 810H x 439 x 821

SED 812 x 821
Active Leat Inactive Leaf

Active Leaf
Inside by Bar
Outside by Thumb Piece when not locked
Key locks Thumb Piece

Inactive Leaf
Inside Operation Only by Bar

810H x 421 (Thumb Piece)x 821

CYLINDRICAL — CU

Russell & Erwin	400 Series
Corbin	400 Series
Schlage	C and D Series
Lockwood	H Series
Yale and Towne	5400 Series

MORTISE — MU

Russell & Erwin	2000 Series
Corbin	7300, 7500, 7700 and 7900 Series
Sargent	7700 Series
Yale & Towne	8000 Series (with a few exceptions)
Lockwood	5100 Series

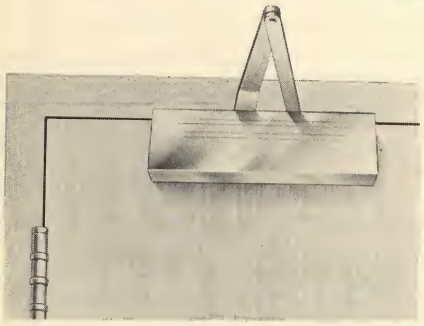
HARDWARE for Models "CU" and "MU"

Where Hardware is by others — Request Form HD 958 for proper application

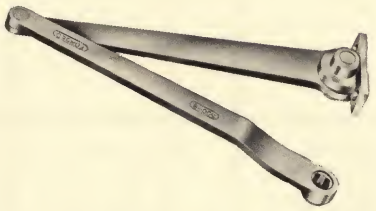
DOOR CLOSERS – several types and quality ranges

Dusing and Hunt offers the architect, engineer, builder or owner a wide selection of door closer types. All are of highest quality manufacture for many years of heavy duty service. These closers are furnished in several price ranges and in a variety of finishes on which your dealer can give you full information. Also a complete line of brackets and arms for various situations. See closer application chart.

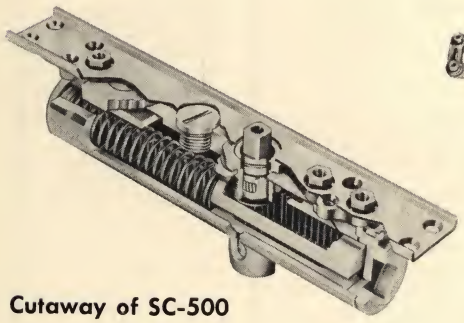
SC-500 Series



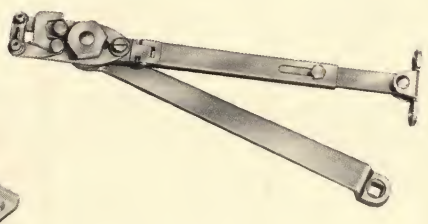
With Standard Arm



Hold Open Arm

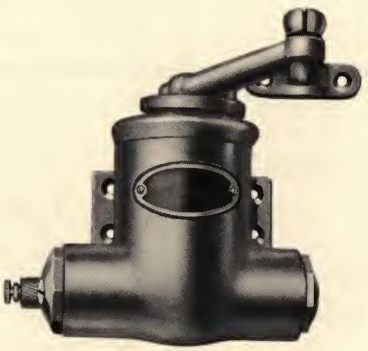


Cutaway of SC-500



Fusible Link Arm

SC-A Series



With Standard Arm

Closer Size 3 — For Doors to 3070
Closer Size 4 — For Doors to 3870
Closer Size 5 — For Doors to 4080
Standard Finish — Maroon Bronze — others on Special Order

DOOR CLOSER BRACKETS

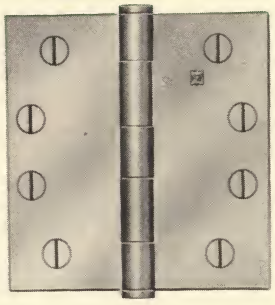
Door closers should be applied to door and indoors whenever possible. However, where conditions will not permit this, brackets should be specified.

SC-BS soffit bracket
To be used where bracket can only be applied to head of frame.

SC-BC corner bracket
To be used where conditions prevent application of closer to door — exterior outswinging doors, transverse wall situation that prevents door opening 90° or for appearance.

TEMPLATE HINGES

Full mortise, 4½" x 4½", are standard for pressed steel frames — 3 hinges are furnished per jamb.



full mortise
SH 500 SERIES

4½" half mortise is used where it is necessary to install doors in structural frames. Several types and finishes can be furnished.

half mortise
SH 600 SERIES

SH-500 Full Mortise Govt. No. T-2014½P
Non-rising loose pin, 5 knuckle, bonderized and primed for paint.

SH-501 Full Mortise Govt. No. T-2010½P
Non-rising pin, 5 knuckle, 2 ball bearings, wrought steel, bonderized and primed for paint. Recommended for exterior openings.

SH-502 Full Mortise Govt. No. T-2010½
Same as SH-501 but with US 10 dull bronze finish.

SH-600 Half Mortise
Non-rising pin, 5 knuckle, 2 ball bearings, primed for paint.

SH-601 Half Mortise
Same as SH-600 with US 10 Dull Bronze. finish

Other finishes available on special order.

MORTISE FLUSH BOLTS

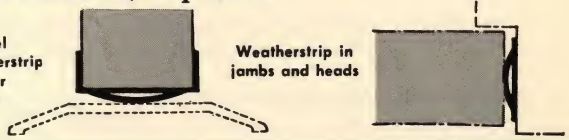
SFB Govt. No. 1045

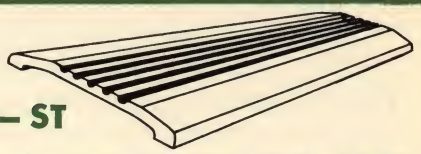
Lever Type — Cast Bronze 12" — Mortised in Edge of Door.

Standard Finish — Dull bronze — US 10. Other finishes available on special order.

WEATHERSTRIP — SW

Spring bronze, simple to install. Attaches to head and side jambs of frame with adhesive backing. For bottom of door, channel type weatherstripping is provided for use with threshold, if specified.





THRESHOLDS — ST

Extruded bronze or aluminum ½" high. 6" for PF-87, PF-77 and PF-67 frames, 4" for PF-55, PF-47 and PF-40 frames. *Be sure to indicate openings requiring thresholds so sill plates can be furnished.* Drilled, countersunk and provided with machine screws and rawl plugs.

KICK PLATES — SKP

Solid bronze, 8" high, 16 gauge. Furnished for hinge side only when specified. If required both sides, so indicate.

Standard finish — Dull Bronze, US 10. Other finishes available on special order.

PUSH AND PULLS
SP-1 and SP-2

Plates are 3½" x 14" wrought bronze. The pull handle is cast bronze.

Standard Finish — Dull bronze — US 10. Other finishes available on special order.

SP-1 SP-2

ALSO AVAILABLE

Door Stop and Holder — Cast Bronze	SSH
Push Bar — US 10	SB-1
Pull Bar — US 10	SB-2
Removable Mullion — Prime Coat	SR M
Coordinating Device — Cast Bronze, Polished	SC-4539

D&H

PyroDor

Specifications PROCEDURE

FOUR EASY STEPS

1. Select Type of Integral Door and Frame Unit desired.
2. Fill in Standard Specification Form below.
3. Select Door and Frame Types and Hardware items.
4. Fill in Door, Frame and Hardware Schedule as per facsimile shown. See Pages 14-17 for Hardware. Schedule and Standard Detail Sheets provided on request.

NOTE: In openings where wood doors are desired, so indicate on schedule, but specify frame type and hardware.

DOOR, FRAME AND HARDWARE SCHEDULE

ARCHITECT'S TYPE NUMBER	MARK NUMBER	FRAME SECTION	FRAME ELEVATION	WALL CONSTRUCTION	JAMB OPG. WIDTH "W"	JAMB OPG. HEIGHT "H"	LABELED	COLD ROLLED OR ZINC COATED	MODELS CU. IN. SA	SINGLE SWING	PAIR	S - 6 SILL PLATES	FS FLOOR EXT. ANGLES	HINGE NUMBER	LOCK OR LATCH NUMBER	CLOSER NUMBER	BRACKET NUMBER	PANIC DEVICE NUMBERS	FLUSH BOLTS FOR INACTIVE LEAF OF PAIRS	PUSH PLATE NUMBER	PULL NUMBER	OTHER HARDWARE OR REMARKS

DUSING & HUNT CONSTRUCTION STANDARDS

PyroDor For all Underwriter's hourly rating (¾, 1½, 3 hours) and Underwriter's letter classifications (A,B,C,D or E).

Core to be constructed of solid, hydrous, calcium silicate with fibrous reinforcing having sufficient density to provide satisfactory structural values and sound reduction characteristic is of 35 decibels at average frequencies from 125 to 2000. Adequate provisions are to be made for the application and mounting of all mortise hardware by means of steel reinforcements built in the door assembly, drilled and tapped for template hardware.

Surface sheets to be stretcher leveled steel, zinc coated and bonderized. Surface sheets to be completely welded to framing channel around the entire perimeter of the door with no seams visible on edges or surfaces of doors. Sheets to be bonded to core with a waterproof resorcinol adhesive by the hot plate process under hydraulic pressure to effect a smooth flat surface.

After assembly, thoroughly clean all surfaces, applying primer and filler coats sanded smooth. Thereafter apply final rust inhibitive primer coat. Finish painting in field by painting contractor.

†D&H PRESSED STEEL DOOR FRAMES for both Wood and Metal Doors

Frames to be pressed steel 16 gauge (cold-rolled furniture steel) or (zinc coated and bonderized steel). *The latter highly recommended for masonry walls.*

All Frames to be designed and constructed for quick field assembly, providing a rigid, true, and accurate unit when finally assembled.

Frames to be of types detailed and called for in door schedule. Frames are to be adequately reinforced, drilled, and tapped for 1½ pair of 4½" x 4½" mortise template hinges, unless frames are for cased openings. Furnished with each door frame, a Dusing & Hunt universal bronze strike (other finishes for strikes are available as required) for type of lock or latch as may be later selected by architect. All mortise hardware to be located in accordance with the manufacturer's standards. Provide metal plaster guards for the protection of all mortise type hardware cutouts. Frame manufacturer to furnish with each door frame two rubber door silencers.

All frames to be provided with a minimum of three anchors per jamb. Anchors to be manufacturer's standard design suitable for wall construction indicated.

Furnish with each door frame a temporary removable spreader for attachment to bottom of each door frame. Provide suitable floor clips or angles, each having two holes to permit secure fastening of jambs to floor construction. Where frames are required to extend below finished floor, provide necessary floor extension angles as required. For all openings where raised saddles are required, furnish necessary saddle filler plates for attachment to door jambs which must be attached prior to setting of door frames.

Frames in solid plaster partitions, in addition to being provided with standard wall anchors, are to be also supplied with the manufacturer's standard ceiling struts.

Frames are to be thoroughly degreased after fabrication and then given a coat of manufacturer's standard rust-inhibiting primer.

Frames having transom openings, side lights or multiple units of frames are to be shipped to the job as subassemblies for final field assembly in accordance with the manufacturers details and instructions furnished.

MODELS "CU" AND "MU"

¾ to 1 ½ Hr. Class B, C, D and E Labels
Single Doors up to 48" x 96", Pairs 90" x 96"

Furnish Dusing and Hunt ..... (Specify Model "CU" or "MU") PyroDor Integral Units, complete with doors, frames and hardware, as called for on drawings and in schedule, or approved equal.

DOORS

Doors to be of designs as indicated on schedule and are to bear Underwriters' Labels. For D&H PyroDor Construction Standards — See Page 18*.

Doors used in Class "B" and "D" situations shall be 1½ hour test with maximum temperature rise of 250° Fahrenheit. Doors in Class "C" and "E" situations, with large glass openings shall be 45 minute test.

FRAMES

Frames to be Dusing and Hunt pressed steel door frames of types and sizes indicated. Design and construction to be in accordance with Dusing and Hunt's standards for construction of metal door frames.
See page 18.†

HARDWARE when supplied by D&H

Furnish hardware as called for in schedule. All locks and latches to be heavy duty Russwin or equal. Finish as specified. (Specify if locks are to be masterkeyed.) Panic devices, closers, push and pulls, and other hardware items to be as specified in schedule. (Refer to Dusing and Hunt Catalog pages 14-17 for type numbers.)

NOTE TO ARCHITECTS: If hardware is furnished by others, Contractors for Hardware should be advised that all Hardware must conform to D and H Standards for application. This is fully described in the D and H Form HD-958, available from all distributors.

MODEL "SA"

3 Hr. Class "A" Underwriters' Labeled
Single Doors up to 48" x 84", Pairs 72" x 84"

Where shown on plans or called for on Door Schedule, furnish D & H Model "SA" PyroDor Integral Units bearing 3 hour Class "A" Fire Door Underwriters' Label. Temperature rise @ 250° F. max. in 30 minutes.

DOORS

Doors to be D & H Type 30 full flush design, 1¾" thick, and are to bear Class "A" Underwriters' Label. For D & H PyroDor Construction Standards — See Page 18.*.

FRAMES

Frames to be Dusing and Hunt pressed steel door frames of types and sizes indicated. Design and construction to be in accordance with Dusing and Hunt's standards for construction of metal door frames.
See Page 18.†

All frames to bear Underwriters label for an inspected metal door frame. When ½" high saddles are required, state type and width required.

(OPTIONAL — Structural Channel Frames may be substituted provided they are furnished by door manufacturer and bearing Underwriters' Label.)

HARDWARE

HINGES — 1½ pair of steel ball bearing, full mortised 4½" x 4½" for each door when doors are mounted in pressed steel door frames — SH-501 primed for paint or SH-502 dull bronze plated U.S. 10 finish. SH-600 or SH-601 half mortise 4½" hinges are furnished with channel frames. See Page 17.

LOCKS AND LATCHES — For single swinging doors or active doors of pairs, any Underwriters listed or approved cylindrical or mortise type may be used (all functions except those with dead lock only). Locks or latches having a ⅝" throw latch bolt are acceptable for single swing doors; however, for doors in pairs, the latch bolt must be ¾".

For available functions of locks see Pages 14-15.

FLUSH BOLTS — Inactive or stationary doors of pairs must be supplied with approved mortised top and bottom flush bolts. When both doors are active, then automatic self-latching mortised flush bolts are to be supplied in place of hand operated flush bolts.

DOOR CLOSERS — Underwriters Laboratories, Inc., including Insurance Rating Bureaus, as well as Building Code Authorities, require that all Class "A" 3-Hour (Model "SA") fire doors be automatic self-closing. Single swinging and active doors of pairs must be provided with approved fuse-link automatic self-closing door closers. When both doors of pairs are active, fuse-link automatic self-closing door closers are required for each door. In addition, a coordinating device of an approved type must then be provided to permit the one door to close ahead of the other door. Dusing and Hunt can furnish fuse-link automatic door closers. See Page 16. Coordinating devices can also be supplied (Dusing and Hunt Stock Number SC 4359 should be specified).

NOTE TO ARCHITECTS: If hardware is furnished by others, Contractors for Hardware should be advised that all Hardware must conform to D and H Standards for application. This is fully described in the D and H Form HD-958, available from all distributors.

MODEL "STP"

3 Hr. Class "A" Underwriters' Labeled
Single Swing Door up to 48" x 84"
Removable 2" Transom Bar and Stationary Transom Panel
Clear Opening Height 120"

Where indicated on plans or called for in Door Schedule, furnish D and H Model "STP" PyroDor Integral Unit complete with Door, Frame, Removable Transom Bar and Transom Panel, (Hardware to be same as Model "SA").

PyroDor FRANCHISED DISTRIBUTORS

Since additional distributors may be added, for city or territory not listed below consult "yellow pages" of your local telephone directory or write our Home Office at Leroy, N. Y.

ALABAMA

Birmingham
Metal Door & Supply Co.
112 South 21st St.
Phone Alpine 2-1931

ARKANSAS

Little Rock
John F. Brett & Co.
315 W. Markham Street
P.O. Box 1204
Phone Franklin 5-4928

CALIFORNIA (and ARIZONA)

Los Angeles
Durand Door Supply, Inc.
6445 Fleet Street
Phone Overbrook 5-8330

San Francisco
Durand Door Supply, Inc.
850 South Van Ness Avenue
Phone Atwater 8-2989

COLORADO (and WYOMING)

Denver
W. Ray Crabb, Inc.
3600 E. 40th Avenue
Phone Dutley 8-4123

CONNECTICUT

Darien
Hardware Sales Co., Inc.
390 Post Road
Phone Oliver 5-2521

West Hartford
Builders Hardware, Inc.
593 New Park Avenue
Phone Adams 6-1255

FLORIDA

Jacksonville
Bond-Howell Lumber Co.
515 East Ninth Street
P.O. Drawer 3067
Phone Elgin 6-2646

Pensacola
Standard Hardware Co.
100 South Pace Blvd.
P.O. Box 1047
Phone Hemlock 2-7881

Tampa
LaHayne Builders' Products
4701 N. Westshore Blvd.
P.O. Box 7006
Phone RE. 7-5761

GEORGIA

Atlanta
Gilsteel, Inc.
2730 Apple Valley Road
Phone Cedar 3-6779

Augusta
Slusky Builders Supplies, Inc.
1009 Broad Street
Phone Park 2-4477

HAWAII

Honolulu
Lewers & Cooke, Ltd.
404 Piikoi Parkway
P.O. Box 2930
Phone 5-1961

IDAHO

See Denver, Colorado

ILLINOIS

Villa Park
(Chicago Area)
The UniDor Co.
700 North Iowa Street
Phone Terrace 2-8380

INDIANA

Indianapolis
Stackhouse Bldg. Specialties, Inc.
1314 West Washington St.
P.O. Box 5507 - Haughville Sta.
Phone Melrose 2-8503

IOWA

Des Moines
Kennedy and Co.
110 S. E. 6th Street
Phone Cherry 3-1135

KANSAS

Wichita
Building Specialties & Equipment Co.
1727 East Second Street
Phone Amherst 5-2821

KENTUCKY

Louisville
Alfred L. Schiller
213 West Market Street
Phone Juniper 3-0612

LOUISIANA

New Orleans
Alumaglass Building Products, Inc.
739 S. Clark Street
P.O. Box 7037
Phone AUdubon 0844

MARYLAND

Baltimore
Albert Gunther, Inc.
36 West Biddle Street
Phone Vernon 7-7437

MASSACHUSETTS

West Newton
(Boston Area)
William Davies Co., Inc.
1463 Washington
Phone Decatur 2-2500

MICHIGAN

Detroit
Contractors Hardware Co.
603 E. Milwaukee
Phone Trinity 4-0330

Kalamazoo
Bond Supply Co.
524 North Rose Street
Phone Fireside 2-0184

MINNESOTA (and N. DAKOTA and S. DAKOTA)

Minneapolis
Crown Iron Works, Inc.
1229 Tyler Street, N. E.
Phone Sterling 9-3556

MISSISSIPPI

Jackson
John B. Howard Co.
600 Monument Street
P.O. Box 4505
Phone 4-2346

MISSOURI

Kansas City
(and E. Kansas)
Builders Specialty Co.
3234 Forest Street
Phone Logan 1-8108

St. Louis
Melcher-Schene Hdwe & Lumber Co.
4800 Natural Bridge
Phone Evergreen 3-6789

MONTANA

See Denver, Colorado

NEBRASKA

Omaha
Simpson-Goodwin Co.
4403 Florence Blvd.
Phone Pleasant 7500

NEW JERSEY

Jersey City
William H. Stevens Co.
188 Railroad Avenue
Phone Henderson 2-1400

NEW MEXICO

(See Denver, Colo.)

NEW YORK

Albany
Ramloc Stone Co.
1055 Broadway
Phone 3-2800

Buffalo
Dusing & Hunt, Inc.
1927 Elmwood Avenue
Phone Delaware 7070

New York City
Elmer T. Hebert, Inc.
219 East 44th Street
Phone Murray Hill 7-5917

Rochester
Vanguard Fabricated Products Corp.
1160 Scottsville Road
Phone Idlewood 6-3434

Syracuse
B. R. Johnson & Son
5900 S. Salina Street
Phone Howard 9-3244

Watertown
B. R. Johnson & Son
127 N. Indiana Avenue
P.O. Box 312
Phone SU. 2-1320

NORTH CAROLINA

Charlotte
General Specialties Co.
1012 Woodward Avenue
Phone Franklin 5-1429

Wilmington
General Specialties Co.
P.O. Box 532
Phone Roger 3-2157

OHIO

Akron
Metal Window Products, Inc.
883 Packard Drive
Phone University 4-8383

Ashtabula
The Mitchell Hardware Co.
4712 Main Avenue
Phone Wyman 3-7661

Cincinnati
Norwood Hardware & Supply Co.
2114 Bennett Avenue
Phone Redwood 1-1832

Cleveland
Hutchison Material & Supply Co.
15519 Edgewood Avenue
Phone Montrose 2-8529

Columbus
Architectural Hardware, Inc.
800 West 3rd Avenue
Phone Axminister 4-4788

Dayton
Carl D. Himes, Inc.
317 S. Main Street
Phone BA 3-2208

Youngstown
Stambaugh Supply Co.
102 East Commerce Street
Phone Riverside 4-3184

OKLAHOMA

Oklahoma City
Murray R. Womble Co.
121 Northeast 26th Street
P.O. Box 3323
Phone Jackson 5-7417

Tulsa
Murray R. Womble Co.
216 East 16th Street
Phone Luther 4-2414

OREGON

Eugene
Mercer Steel Co., Inc.
P.O. Box 3344
Phone Diamond 4-4238

Portland
Mercer Steel Co., Inc.
2636 N. W. 26th Avenue
Phone Capital 6-2511

PENNSYLVANIA

Erie
Builders Hardware & Specialty Co.
32nd and Hazel Streets
Phone UN. 4-3091

Philadelphia
MacKay and Walls, Inc.
60 Sherbrook Blvd.
Phone Clearbrook 9-5666

Pittsburgh
Tom Brown, Inc.
Library Rd. & Killarney Drive
Phone Tuxedo 4-2121

RHODE ISLAND

Providence
G. Fred Swanson, Inc.
618 Cranston Street
Phone Gaspee 1-0788

SOUTH CAROLINA

Columbia
General Specialties Co.
P.O. Box 1133
Phone Sunset 7-0402

TEXAS

Beaumont
Buie Building Material Co.
P.O. Box 5412
Phone Terminal 8-5636

Dallas
Samuel A. Ellsberry Co.
3136 Routh Street
Phone Riverside 7-0671

El Paso
Architectural Products Co., Inc.
506 E. Yandell Blvd.
Phone Keystone 3-9547

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Samuel A. Ellsberry Co.
2831 Crockett Street
Phone ED. 2-2107

Houston
Buie Building Material Co.
7400 Washington Avenue
P.O. Box 1315
Phone Underwood 4-7781

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Salt Lake City
Rio Grande Lumber Co.
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Phone Empire 4-7876

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Richmond
The Staley Co.
2205 Tazewell Street
Phone Milton 4-4539

WASHINGTON

Seattle (and Alaska)
Building Specialties, Inc.
North 36th St. & Greenwood Ave.
Phone Melrose 3-4000

Spokane
Hardware Wholesalers, Inc.
West 7 Sinto Avenue
P.O. Box 5033
Phone Fairfax 8-2121

WEST VIRGINIA

Charleston
West Virginia Steel Corp.
900 Brooks Street
P.O. Box 2511
Phone Dickinson 6-0601

WISCONSIN

Green Bay
La Force Builders Hardware Co.
347 So. Washington Street
Phone Hemlock 7-0541

Milwaukee
Biersach & Niedermeyer Co.
1937 No. Hubbard Street
Phone Franklin 4-4000

CANADA

Quebec
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D. D. Millar & Associates
Suite 216
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Over 50 years Manufacturing Fireproof Doors Metal Trim

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16b
Fe

hollow metal
complete door units
door + frame + hardware

Fenestra®

INCORPORATED

BUILDING PRODUCTS

1960

hollow metal doors

Fenestra again offers to the architectural profession and the general construction industry its improved and new full line of hollow metal door units.
They are designed in the widest selection of types and sizes for all structures from hotels to office buildings to industrial plants.

3 part package door units

The 3 part package door units come in many door designs and in a wide variety of leaf patterns. Door openings range from 1′-6″ x 6′-8″ to 4′-0″ x 8′-0″, with matching frames and a wide variety of hardware and accessories.

Fenestra offers the widest selection of standardized types and sizes for the 1¾″, 1⅜″ full flush and 1¾″ panel doors. Fenestra's quick delivery, low first cost, low installation and maintenance costs are all part of the package.

door + frame + hardware

a single source

In a single package you can get all the components for any door opening. Door, frame, hardware—all are co-ordinated to match perfectly. No shopping from source to source. A call to your local Fenestra Representative will handle it all.

quick delivery

With factories in six cities from Buffalo, New York, to Oakland, California; with 14 strategically located warehouses; and with company offices, distributors or agents in most localities; Fenestra is able to give prompt delivery and dependable service.

low-cost time saving installation

Fenestra Packaged Door Units are designed to go together faster, to save costly installation man-hours. Most machining, drilling and tapping is done at the factory.

No need to cut, fit and set jambs, stops or trim; countersink nails; putty holes; mortise frame and door for hinges, locks and strikes; or prime paint. All this is done before delivery.

assemble frame

install in wall

attach hinges, door

screw on hardware

1¾″ full flush

1¾″ ff

full flush

with glass

Fen-Air (air conditioned)

vision light

1⅜″ full flush

1⅜″ ff

full flush

with glass

Fen-Air (air conditioned)

vision light

Underwriters' B Label

These doors available with Underwriters' B and C Label. For door and frame construction details and suitable hardware, see page 21.

1¾″ panel

1¾″ p

panel

flush panel

entrance

Fen-Air (air conditioned)

Underwriters' Doors

These doors pass 1½ hour tests and carry Underwriters' Labels B, C, D and E. For door and frame construction details and suitable hardware, see pages 28 and 29.

1¾" full flush

The new distinctively styled 1¾" full flush door is of an integral design and construction using heavy 16-gauge skins invisibly welded in over 200 places to a rugged roll-formed inner frame of C. R. steel. Hinges and lock areas are reinforced with 14-gauge sub-frame reinforcements. Each door is fused into a single, strong unit with a high performance sound deadening material applied inside to insure quiet operation.

The new 1¾" door is built to precise standards. All mortising, drilling, tapping and prime-painting is completed at the factory. Every door is identical in appearance on both sides. They are carefully wrapped for shipment with heavy corrugated paper and secured by steel bands.

type M

This type full flush door is styled for use in schools, dormitories, hospitals, clinics, hotels, motels, office buildings, public buildings and commercial buildings.

type G

The full flush door with glass comes in four leaf patterns and 28 sizes both in single and double doors.

Fen-Air (air conditioned)

This door has fin-type louvers—at the bottom, top or both—provides a handsome appearance as well as flexibility in buildings with air-conditioning and forced warm-air heating systems.

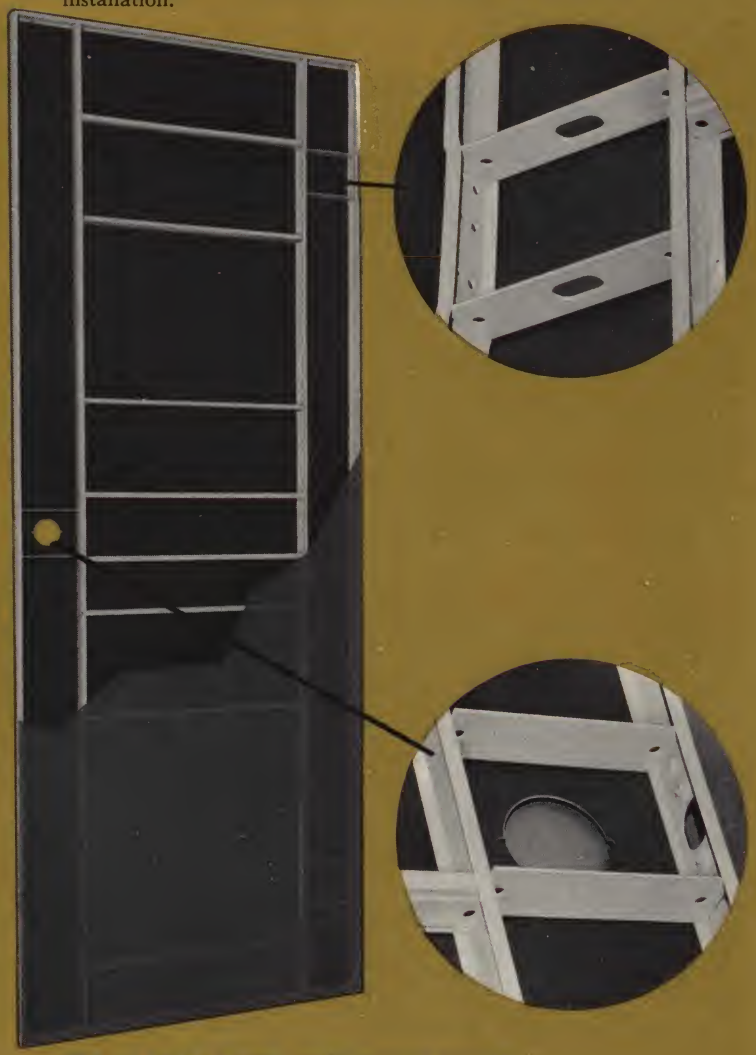
type V

The vision lite has a maximum of 100 square inches of light and are so constructed to permit easy installation of glass.

features

hinge reinforcement

Heavy-gauge mortised steel hinge reinforcement is welded to edge of door. Patented hinge filler allows hinge to be mounted for right or left swing, open in or open out. Eliminates handling problems on the job to speed up installation.

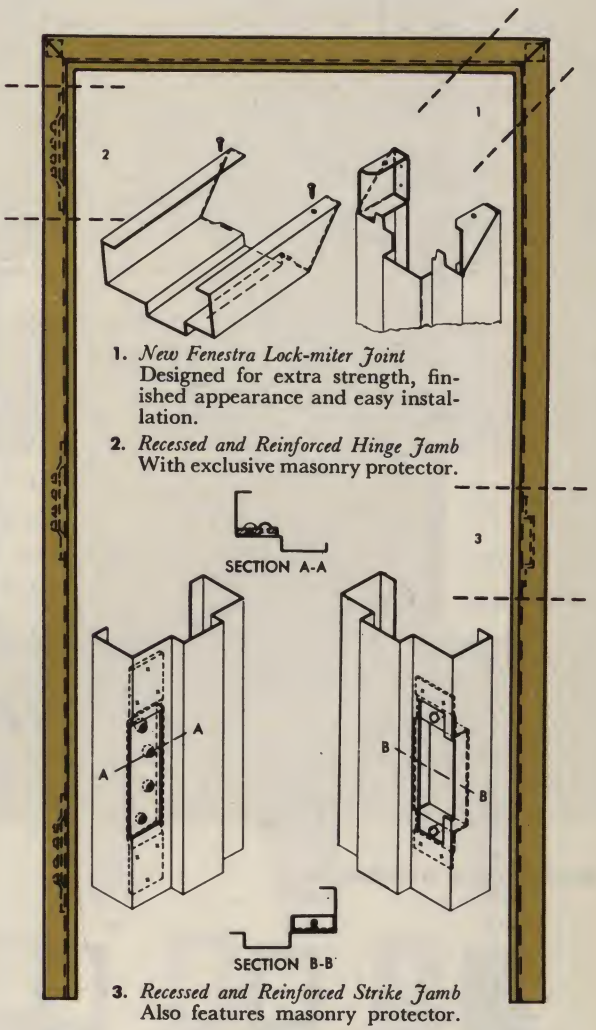


Fenestra lock reinforcement

Heavy-gauge steel reinforcement welded into door is drilled and tapped for installation of Fenestra hardware. No extra reinforcing material to buy or apply. Supplied extra strength for this important section of the door.

frames

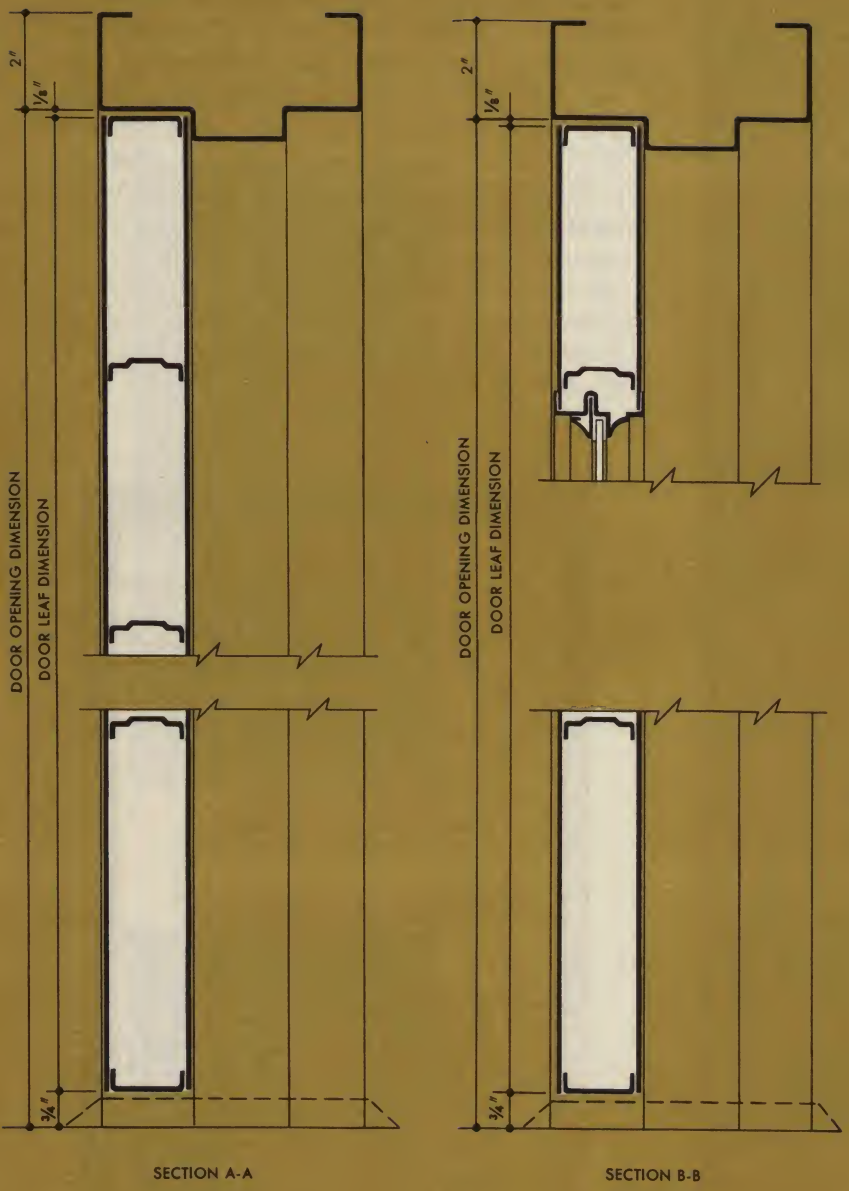
Stocked for single door openings for doors from 2′-0″ to 4′-0″ wide with 6′-8″ and 7′-0″ heights and double door openings for doors 5′-0″ to 8′-0″ wide with 6′-8″ and 7′-0″ heights (frames also available 8′-0″ high, for panel doors only), frame depth of 5½″, and 2″ on inside or outside face. 16-gauge rolled steel. Bonderized with a baked-on prime paint coat. Pre-fitted to door with standard clearances of ⅛″ at head and jambs, ¾″ at sill to permit ½″ threshold. Machined for hardware at factory rubber mutes to cushion closing. Jamb and sill anchors furnished for specified types of wall construction.



1. *New Fenestra Lock-miter Joint* Designed for extra strength, finished appearance and easy installation.
2. *Recessed and Reinforced Hinge Jamb* With exclusive masonry protector.
3. *Recessed and Reinforced Strike Jamb* Also features masonry protector.

1¾" full flush

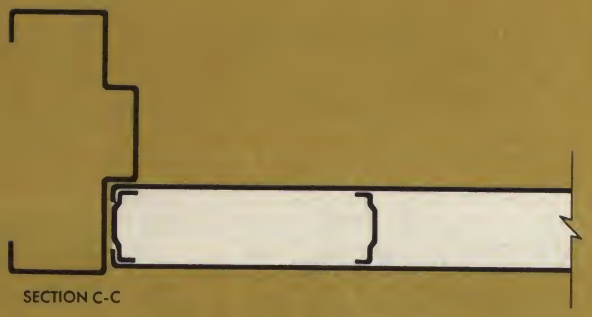
vertical sections



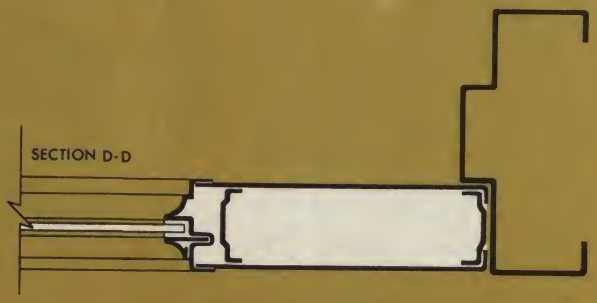
SECTION A-A

SECTION B-B

horizontal sections

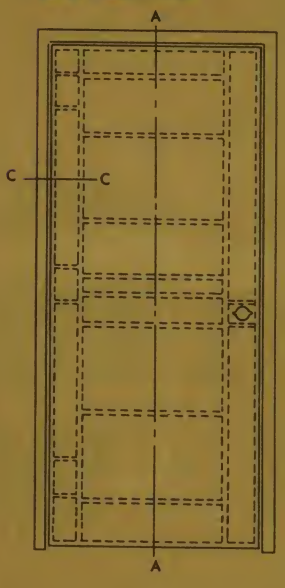


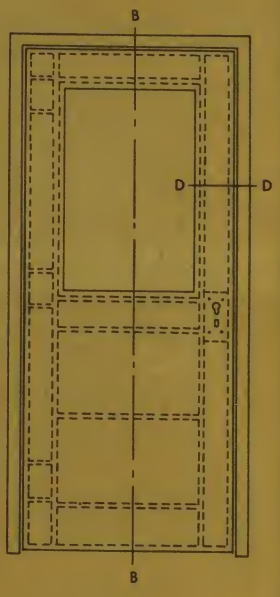
SECTION C-C



SECTION D-D

elevations





leaf types available

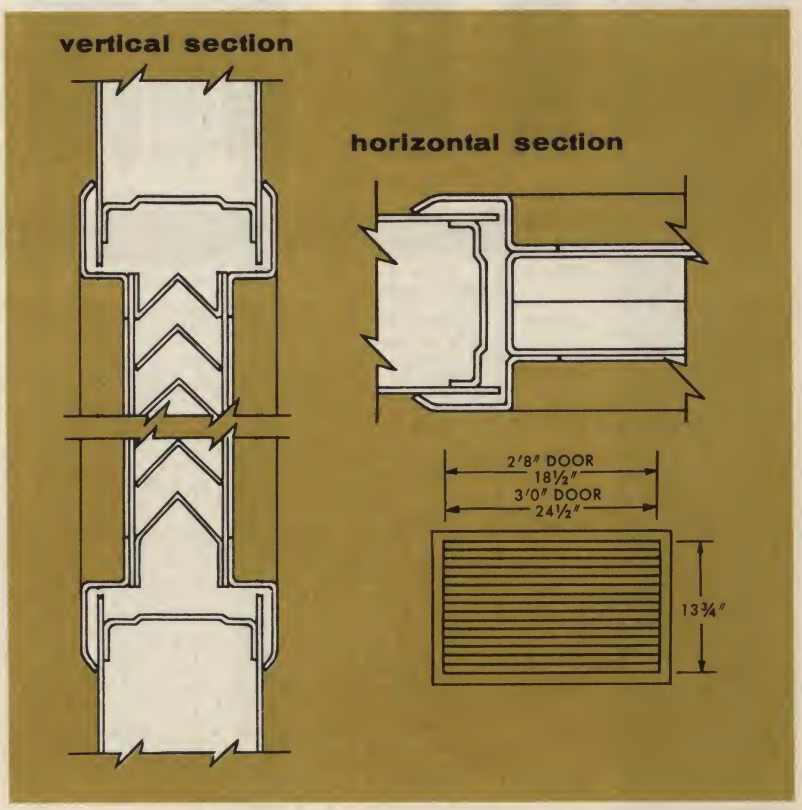
Fen-Air (air conditioned)

Fenestra Fen-Air doors are fitted with new fin-type louvers at the bottom, top or both. This allows complete flexibility to choose the right amount of free air circulation needed for the most efficient cooling and heating design. Glass lights may be used as needed. Louvers stocked for two widths of doors.

FL

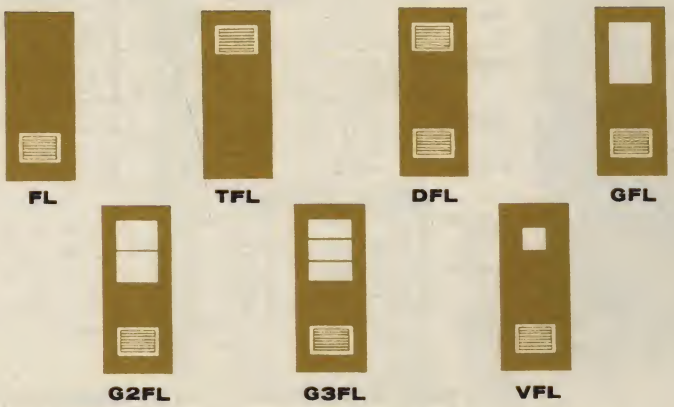
G2FL

VFL



door type	door size	free air space		
		upper panel louver	lower panel louver	upper & lower panel louvers
2868	2'-8" x 6'-8"	166 sq. in.	166 sq. in.	332 sq. in.
2870	2'-8" x 7'-0"			
3068	3'-0" x 6'-8"	220 sq. in.	220 sq. in.	440 sq. in.
3070	3'-0" x 7'-0"			

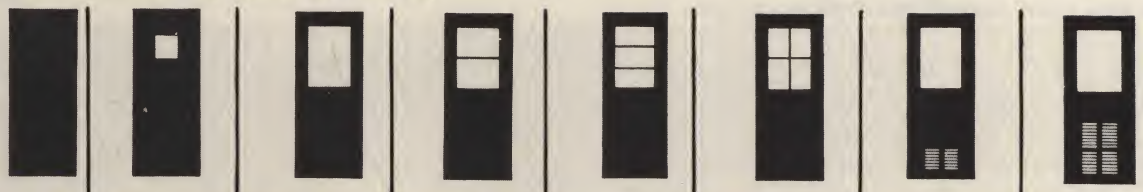
leaf types available



1¾" full flush

selection table

Upper number designates Door Type.
Lower numbers are Glass Size.



Door Opening Dimension		M	V	G	G-2	G-3	G-4	GL	GLL
Width	Height								
single doors									
2′-0″	6′-8″	2068-M	2068-V 10¾″ x 10¾″						
	7′-0″	2070-M	2070-V 10¾″ x 10¾″						
2′-4″	6′-8″	2468-M	2468-V 10¾″ x 10¾″	2468-G 15⅜″ x 30⅜″	2468-G2 15⅜″ x 15⅜″	2468-G3 15⅜″ x 10⅛″		*2468-GL 15⅜″ x 30⅜″	*2468-GLL 15⅜″ x 30⅜″
	7′-0″	2470-M	2470-V 10¾″ x 10¾″	2470-G 15⅜″ x 34⅜″	2470-G2 15⅜″ x 17⅜″	2470-G3 15⅜″ x 11⅜″		*2470-GL 15⅜″ x 34⅜″	*2470-GLL 15⅜″ x 34⅜″
2′-6″	6′-8″	2668-M	2668-V 10¾″ x 10¾″	2668-G 17⅜″ x 30⅜″	2668-G2 17⅜″ x 15⅜″	2668-G3 17⅜″ x 10⅛″		2668-GL 17⅜″ x 30⅜″	2668-GLL 17⅜″ x 30⅜″
	7′-0″	2670-M	2670-V 10¾″ x 10¾″	2670-G 17⅜″ x 34⅜″	2670-G2 17⅜″ x 17⅜″	2670-G3 17⅜″ x 11⅜″		2670-GL 17⅜″ x 34⅜″	2670-GLL 17⅜″ x 34⅜″
2′-8″	6′-8″	2868-M	2868-V 10¾″ x 10¾″	2868-G 19⅜″ x 30⅜″	2868-G2 19⅜″ x 15⅜″	2868-G3 19⅜″ x 10⅛″		2868-GL 19⅜″ x 30⅜″	2868-GLL 19⅜″ x 30⅜″
	7′-0″	2870-M	2870-V 10¾″ x 10¾″	2870-G 19⅜″ x 34⅜″	2870-G2 19⅜″ x 17⅜″	2870-G3 19⅜″ x 11⅜″		2870-GL 19⅜″ x 34⅜″	2870-GLL 19⅜″ x 34⅜″
3′-0″	6′-8″	3068-M	3068-V 10¾″ x 10¾″	3068-G 23⅜″ x 30⅜″	3068-G2 23⅜″ x 15⅜″	3068-G3 23⅜″ x 10⅛″		3068-GL 23⅜″ x 30⅜″	3068-GLL 23⅜″ x 30⅜″
	7′-0″	3070-M	3070-V 10¾″ x 10¾″	3070-G 23⅜″ x 34⅜″	3070-G2 23⅜″ x 17⅜″	3070-G3 23⅜″ x 11⅜″		3070-GL 23⅜″ x 34⅜″	3070-GLL 23⅜″ x 34⅜″
3′-4″	6′-8″	3468-M	3468-V 10¾″ x 10¾″	3468-G 27⅜″ x 30⅜″			†3468-G4 13¹¹⁄₁₆″ x 15⅜″	†3468-GL 27⅜″ x 30⅜″	†3468-GLL 27⅜″ x 30⅜″
	7′-0″	3470-M	3470-V 10¾″ x 10¾″	3470-G 27⅜″ x 34⅜″			†3470-G4 13¹¹⁄₁₆″ x 17⅜″	†3470-GL 27⅜″ x 34⅜″	†3470-GLL 27⅜″ x 34⅜″
3′-8″	6′-8″	3868-M	3868-V 10¾″ x 10¾″	3868-G 31⅜″ x 30⅜″			†3868-G4 15¹¹⁄₁₆″ x 15⅜″	†3868-GL 31⅜″ x 30⅜″	†3868-GLL 31⅜″ x 30⅜″
	7′-0″	3870-M	3870-V 10¾″ x 10¾″	3870-G 31⅜″ x 34⅜″			†3870-G4 15¹¹⁄₁₆″ x 17⅜″	†3870-GL 31⅜″ x 34⅜″	†3870-GLL 31⅜″ x 34⅜″
4′-0″	7′-0″	4070-M	4070-V 10¾″ x 10¾″	4070-G 35⅜″ x 34⅜″			†4070-G4 17¹¹⁄₁₆″ x 17⅜″	†4070-GL 35⅜″ x 34⅜″	†4070-GLL 35⅜″ x 34⅜″
double doors									
5′-0″	6′-8″	5068-M	5068-V 10¾″ x 10¾″	5068-G 17⅜″ x 30⅜″	5068-G2 17⅜″ x 15⅜″	5068-G3 17⅜″ x 10⅛″		5068-GL 17⅜″ x 30⅜″	5068-GLL 17⅜″ x 30⅜″
	7′-0″	5070-M	5070-V 10¾″ x 10¾″	5070-G 17⅜″ x 34⅜″	5070-G2 17⅜″ x 17⅜″	5070-G3 17⅜″ x 11⅜″		5070-GL 17⅜″ x 34⅜″	5070-GLL 17⅜″ x 34⅜″
5′-4″	6′-8″	5468-M	5468-V 10¾″ x 10¾″	5468-G 19⅜″ x 30⅜″	5468-G2 19⅜″ x 15⅜″	5468-G3 19⅜″ x 10⅛″		5468-GL 19⅜″ x 30⅜″	5468-GLL 19⅜″ x 30⅜″
	7′-0″	5470-M	5470-V 10¾″ x 10¾″	5470-G 19⅜″ x 34⅜″	5470-G2 19⅜″ x 17⅜″	5470-G3 19⅜″ x 11⅜″		5470-GL 19⅜″ x 34⅜″	5470-GLL 19⅜″ x 34⅜″
6′-0″	6′-8″	6068-M	6068-V 10¾″ x 10¾″	6068-G 23⅜″ x 30⅜″	6068-G2 23⅜″ x 15⅜″	6068-G3 23⅜″ x 10⅛″		6068-GL 23⅜″ x 30⅜″	6068-GLL 23⅜″ x 30⅜″
	7′-0″	6070-M	6070-V 10¾″ x 10¾″	6070-G 23⅜″ x 34⅜″	6070-G2 23⅜″ x 17⅜″	6070-G3 23⅜″ x 11⅜″		6070-GL 23⅜″ x 34⅜″	6070-GLL 23⅜″ x 34⅜″
6′-8″	6′-8″	6868-M	6868-V 10¾″ x 10¾″	6868-G 27⅜″ x 30⅜″			6868-G4 13¹¹⁄₁₆″ x 15⅜″	†6868-GL 27⅜″ x 30⅜″	†6868-GLL 27⅜″ x 30⅜″
	7′-0″	6870-M	6870-V 10¾″ x 10¾″	6870-G 27⅜″ x 34⅜″			6870-G4 13¹¹⁄₁₆″ x 17⅜″	†6870-GL 27⅜″ x 34⅜″	†6870-GLL 27⅜″ x 34⅜″
7′-4″	6′-8″	7468-M	7468-V 10¾″ x 10¾″	7468-G 31⅜″ x 30⅜″			7468-G4 15¹¹⁄₁₆″ x 15⅜″	†7468-GL 31⅜″ x 30⅜″	†7468-GLL 31⅜″ x 30⅜″
	7′-0″	7470-M	7470-V 10¾″ x 10¾″	7470-G 31⅜″ x 34⅜″			7470-G4 15¹¹⁄₁₆″ x 17⅜″	†7470-GL 31⅜″ x 34⅜″	†7470-GLL 31⅜″ x 34⅜″
8′-0″	7′-0″	8070-M	8070-V 10¾″ x 10¾″	8070-G 35⅜″ x 34⅜″			8070-G4 17¹¹⁄₁₆″ x 17⅜″	†8070-GL 35⅜″ x 34⅜″	†8070-GLL 35⅜″ x 34⅜″

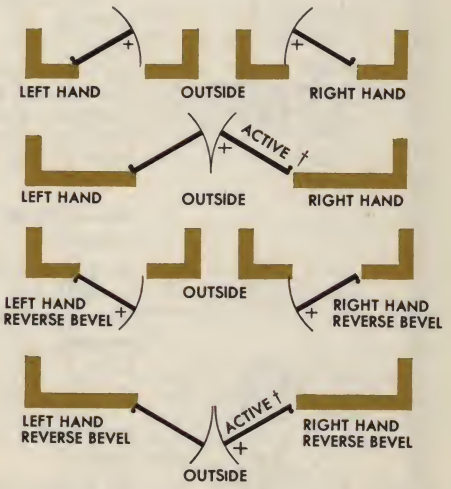
*These sizes in louvered doors have only one louver panel in width instead of two as shown.
†These sizes in louvered doors have three louver panels in width instead of two as shown.
See specifications, page 17, for free air flow of louvered types.

VL	VLL	TL	L	LL	DL	DLL
*2068-VL 10¾" x 10¾"	*2068-VLL 10¾" x 10¾"	*2068-TL	*2068-L	*2068-LL	*2068-DL	*2068-DLL
*2070-VL 10¾" x 10¾"	*2070-VLL 10¾" x 10¾"	*2070-TL	*2070-L	*2070-LL	*2070-DL	*2070-DLL
*2468-VL 10¾" x 10¾"	*2468-VLL 10¾" x 10¾"	*2468-TL	*2468-L	*2468-LL	*2468-DL	*2468-DLL
*2470-VL 10¾" x 10¾"	*2470-VLL 10¾" x 10¾"	*2470-TL	*2470-L	*2470-LL	*2470-DL	*2470-DLL
2668-VL 10¾" x 10¾"	2668-VLL 10¾" x 10¾"	2668-TL	2668-L	2668-LL	2668-DL	2668-DLL
2670-VL 10¾" x 10¾"	2670-VLL 10¾" x 10¾"	2670-TL	2670-L	2670-LL	2670-DL	2670-DLL
2868-VL 10¾" x 10¾"	2868-VLL 10¾" x 10¾"	2868-TL	2868-L	2868-LL	2868-DL	2868-DLL
2870-VL 10¾" x 10¾"	2870-VLL 10¾" x 10¾"	2870-TL	2870-L	2870-LL	2870-DL	2870-DLL
3068-VL 10¾" x 10¾"	3068-VLL 10¾" x 10¾"	3068-TL	3068-L	3068-LL	3068-DL	3068-DLL
3070-VL 10¾" x 10¾"	3070-VLL 10¾" x 10¾"	3070-TL	3070-L	3070-LL	3070-DL	3070-DLL
†3468-VL 10¾" x 10¾"	†3468-VLL 10¾" x 10¾"	†3468-TL	†3468-L	†3468-LL	†3468-DL	†3468-DLL
†3470-VL 10¾" x 10¾"	†3470-VLL 10¾" x 10¾"	†3470-TL	†3470-L	†3470-LL	†3470-DL	†3470-DLL
†3868-VL 10¾" x 10¾"	†3868-VLL 10¾" x 10¾"	†3868-TL	†3868-L	†3868-LL	†3868-DL	†3868-DLL
†3870-VL 10¾" x 10¾"	†3870-VLL 10¾" x 10¾"	†3870-TL	†3870-L	†3870-LL	†3870-DL	†3870-DLL
†4070-VL 10¾" x 10¾"	†4070-VLL 10¾" x 10¾"	†4070-TL	†4070-L	†4070-LL	†4070-DL	†4070-DLL
5068-VL 10¾" x 10¾"	5068-VLL 10¾" x 10¾"	5068-TL	5068-L	5068-LL	5068-DL	5068-DLL
5070-VL 10¾" x 10¾"	5070-VLL 10¾" x 10¾"	5070-TL	5070-L	5070-LL	5070-DL	5070-DLL
5468-VL 10¾" x 10¾"	5468-VLL 10¾" x 10¾"	5468-TL	5468-L	5468-LL	5468-DL	5468-DLL
5470-VL 10¾" x 10¾"	5470-VLL 10¾" x 10¾"	5470-TL	5470-L	5470-LL	5470-DL	5470-DLL
6068-VL 10¾" x 10¾"	6068-VLL 10¾" x 10¾"	6068-TL	6068-L	6068-LL	6068-DL	6068-DLL
6070-VL 10¾" x 10¾"	6070-VLL 10¾" x 10¾"	6070-TL	6070-L	6070-LL	6070-DL	6070-DLL
†6868-VL 10¾" x 10¾"	†6868-VLL 10¾" x 10¾"	†6868-TL	†6868-L	†6868-LL	†6868-DL	†6868-DLL
†6870-VL 10¾" x 10¾"	†6870-VLL 10¾" x 10¾"	†6870-TL	†6870-L	†6870-LL	†6870-DL	†6870-DLL
†7468-VL 10¾" x 10¾"	†7468-VLL 10¾" x 10¾"	†7468-TL	†7468-L	†7468-LL	†7468-DL	†7468-DLL
†7470-VL 10¾" x 10¾"	†7470-VLL 10¾" x 10¾"	†7470-TL	†7470-L	†7470-LL	†7470-DL	†7470-DLL
†8070-VL 10¾" x 10¾"	†8070-VLL 10¾" x 10¾"	†8070-TL	†8070-L	†8070-LL	†8070-DL	†8070-DLL

NOTE: Consult Fenestra representative for available SLENDER LIGHT doors.

how to determine hand and swing of doors

1. The hand of a door is determined from the outside.
2. The outside of an entrance door is the street side.
3. The outside of a room door is the corridor side.
4. The outside of a communicating door is the side from which hinges are not visible with door closed.
5. The outside of a closet door is the room side.
6. The key side will be the outside, unless otherwise specified.



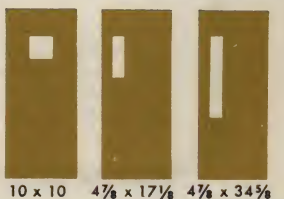
†ON PAIRS OF DOORS +KEY SIDE

Right hand leaf is always active except when panic bolts Pt. 2590 and 2591 are used at which time left hand reverse bevel leaf becomes active.

vision lights

Vision lite is 10" x 10" (also available—SLENDER LIGHT) and is constructed to permit easy installation of glass and provided with snap-in type glazing strips not requiring screws.

SLENDER LIGHT

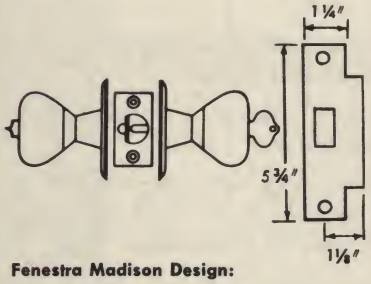


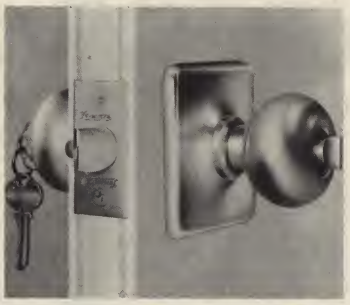
10 x 10 4⅞ x 17⅛ 4⅞ x 34⅝
4⅞ x 21⅛ 4⅞ x 38⅝

1¾" full flush

cylinder locks

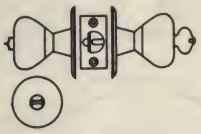
The 2400 series bored type locks are a modern series with all conventional functions that can be installed in one standard door-lock machining. US Govt. series 161. Finished US 10 or US 28. Additional functions and finishes available on special order. Fenestra master keying, if desired.





Fenestra Madison Design:

Smooth surfaces, square heavy-wrought escutcheons, with softly rounded beveled edges and graceful, cold-forged knobs. An attractive design, ideal where complete simplicity is desired.



office

2470

By both knobs. Outside locked by pushing inside button when door is closed (preventing accidental lock-out). Key or inside knob, releases outside knob and inside button, except when button is turned while depressed. Guarded latch bolt.

US Govt. No. 161E.

two cylinder lock

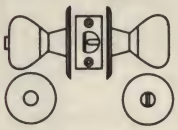
2470-C*

By both knobs except when outside knob locked by inside key, then outside knob by key. Guarded latch bolt. US Govt. No. 161C.

passage

2471

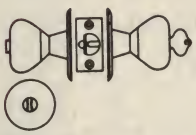
By both knobs. US Govt. No. 161N.



bathroom

2471-L*

By both knobs. Push button in inside knob locks outside knob. Turning inside knob or closing door releases button. Emergency outside button. US Govt. No. 161L.

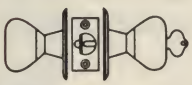


all purpose

2472

By both knobs. Outside locked by pushing inside button. Key or inside knob releases outside knob and inside button, except when coin slot in button is turned while depressed. Closing door does not release button. Guarded latch bolt.

US Govt. No. 161



classroom

2473

From outside by knob except when locked from outside by key. From inside by knob at all times. Guarded latch bolt. US Govt. No. 161R.

knob pulls

2475 *

Double pull. Knob both sides. No mechanical operation.

2475-LK

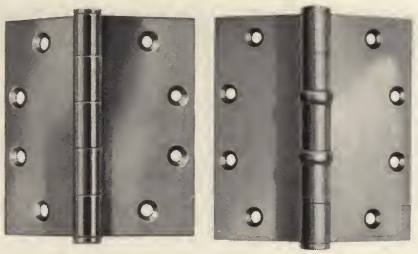
Dummy trim for inactive leaf of double door.

*available on special order

hinges

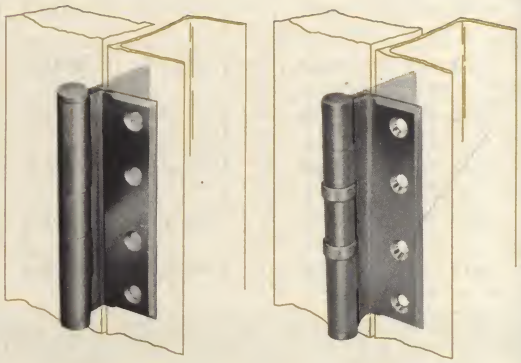
full mortise type

For Fenestra doors hung in rolled-metal Fenestra frames. Both frame and door leaves mortise applied. 5" x 4½"—regular weight—.146 gauge. Loose pin.



half mortise type

For Fenestra doors hung in structural frames. Door leaf mortise applied. Frame leaf surface. applied. 5"—regular weight—.146 gauge. Loose pin.



	part no.	ball bearing	material	finish	US Govt. No.
full mortise	1643	no	steel	prime-painted	T2127
	1643A	yes	steel	prime-painted	T2107
	1643B	yes	solid bronze	US 10, 26D†	T2106
half mortise	S1643	no	steel	prime-painted	T2145-Mod.
	S1643A	yes	steel	prime-painted	T2145
	S1643B	yes	solid bronze	US 10, 26D†	T2142

†US 10—dull bronze; US 26D—dull chromium

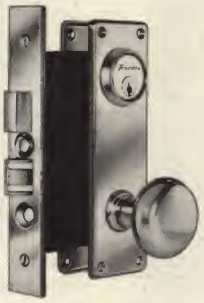
Above Fenestra hinges listed are made to US Govt. standard template.

Plain-bearing hinges 1643 and S1643 should generally be applied on doors having low-frequency usage. Ball-bearing hinges should be applied generally on doors with higher frequency usage, as well as doors with closers 1462, 1463 or 1464.

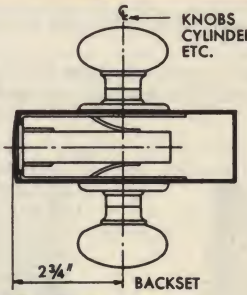
When hinges are required with non-removable pins, add NRP to part number (i.e. 1643A-NRP).

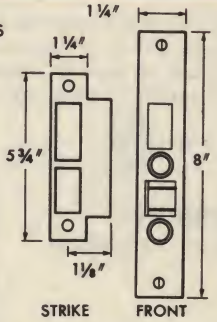
mortise locks

Available for Fenestra 1¾" full flush doors. All functions are made in one standard size lock case to permit mass production, standard mortising, machining and interchangeability of function. Addition functions available on special order. Fenestra master keying, if desired



Wrought Knobs and Escutcheons: bronze or aluminum. *Knobs:* 2¼" diameter. *Escutcheons:* 7⅜" x 2¼".



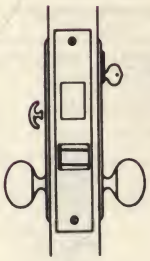


specifications

Bolts:	bronze, ½" throw
Front:	bronze
Strike:	bronze
Cylinders:	bronze
Springs:	Two compression-type. Each on latch bolt, firm on knob.

Turn Knobs: bronze or aluminum
Finishes: US 10, US 26D, US 28†. Additional finishes available on special order.

†US 10—dull bronze; US 26D—dull chromium; US 28—anodized aluminum

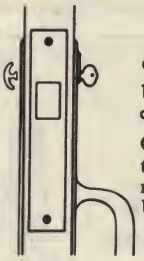


all-purpose
1979

Dead bolt from outside by key, from inside by turn knob. Latch bolt from both sides by knobs.
US Govt. No. 86B

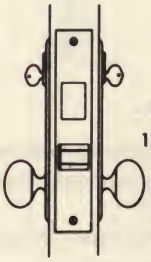
dead
1982-A

From outside and inside by key. Fixed knob as pull on hinge side.
US Govt. No. 86T



classroom dead
1982-S* (with pull plate 2250 and push plate 2251TK)

Outside by key. Inside by turn knob to retract, but not project, dead bolt.
US Govt. No. 86P-Mod.

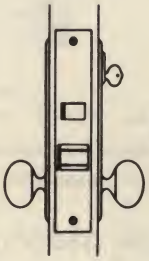


storeroom lock
1979-C*

Dead bolt from both sides by key. Latch bolt from both sides by knobs.
US Govt. No. 86C

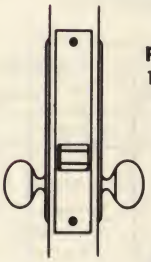
dead
1982-C

From both sides by key. Used with push-bars and push-and-pull plates.
US Govt. No. 86T



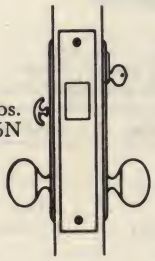
classroom
1993

Outside by knob except when locked from outside by key. Inside by knob at all times. Guarded latch bolt.
US Govt. No. 86J



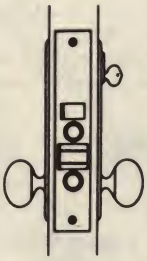
passage latch
1980

From both sides by knobs.
US Govt. No. 86N



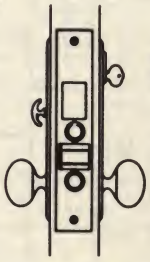
dead
1982-D

From outside by key. From inside by turn knob. Knob serves as pull.
US Govt. No. 86P



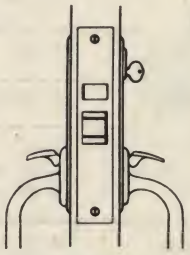
office
1983

Outside by key, both sides by knobs except when outside knob is locked by stop in front. Guarded latch bolt.
US Govt. No. 86E



entrance
1984

Both bolts from outside by key. Dead bolt from inside by turn knob. Latch bolt from both sides by knobs, except when outside knob is locked by stop in front.
US Govt. No. 86A



entrance door handle sets 1992

Guarded latch. No dead bolt. One cylinder. Latch bolt by thumbpiece from either side, unless outside thumbpiece locked by cylinder. US Govt. No. 123B-Mod.

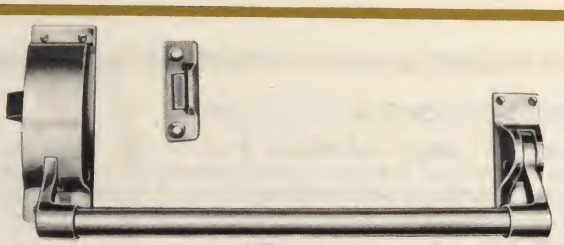
1992-B*

Thumbpiece both sides retracts latch bolt unless outside thumbpiece is locked by inside cylinder. Outside cylinder retracts latch bolt only. Guarded latch bolt.
US Govt. No. 123Bx26-Mod.

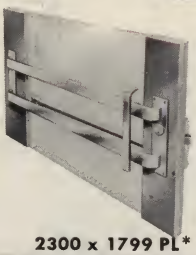
*available on special order

panic bolts - rim type - 2300 and 2301

Complete sets for single doors or for each leaf of a pair of doors with removable mullion 2304.
Inside: Latch bolt by push on crossbar except when bar is secured in depressed position leaving door free. Dogging device in both brackets.
Outside: See below.



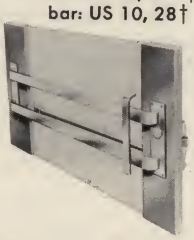
with outside cylinder function



part no.	2300	2300 x 1799 PL*	2300-T*	2300-K*
function	key retracts latch bolt	key retracts latch bolt	key locks thumbpiece	key locks knob
US Govt. No.	810-H x 410	810-H x 476	810 x 410 x T P (MOD.)	810-K
finishes	US 10, 26D†	bolt: US 10, 26D† bar: US 10, 28†	US 10, 26D†	US 10, 26D†

part no.	2301	2301 x 1799 PL*	2301 x 1491*	2301-K*
function	pull when bar is dogged	pull when bar is dogged	exit only	pull when bar is dogged
US Govt. No.	810 x 455	810 x 476	810 x 465R	810-K-MOD.
finishes	US 10, 26D†	bolt: US 10, 26D† bar: US 10, 28†	US 10, 26D†	US 10, 26D†

with no outside cylinder function

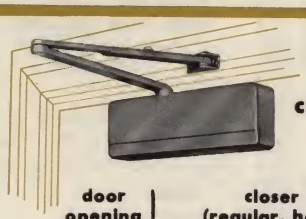


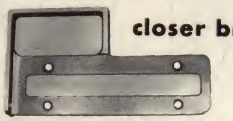
*Available on special order. †US 10—dull bronze; US 26D—dull chromium; US 28—anodized aluminum.

rectangular type closer

Engineered for compactness and beauty the rectangular type closer offers complete door control with absolutely no sacrifice in efficiency over standard surface applied closers of equal closer size.

1. 1⅝" projection from face of door (less than standard knob projections.)
2. Adjustment of valves by key only.
3. Minimum spring life of 1,000,000 cycles.
4. Complete line of functions available. Finishes—Aluminum color (EN) and Bronze color (EP).


closer


closer bracket

door opening width		closer (regular, hold-open and fusible link)		closer on corner brkt. (pts 2550 and 2570)		parallel arm closer	
		interior	exterior	interior	exterior	interior	exterior
1¾"	2'-0"	2552	2553	2552 (x 2550)	2553 (x 2550)	2553P	2574P
	2'-4"						
	2'-6"				2574 (x 2570)		2575P
	2'-8"		2574	2553 (x 2550)		2554P	
	3'-0"	2553			2575 (x 2570)		2576P
	3'-4"		2575	2554 (x 2550)		2575P	
	3'-8"	2554	2576		2576 (x 2570)		
	4'-0"			2575 (x 2570)		2576P	

NOTE: Closers are handed as viewed from the push side, either right or left, except when attached to corner bracket in which case the opposite hand applies.
STANDARD FUNCTIONS: 1. Regular arm without holder; 2. 90° holder arm; 3. 90° fusible link holder arm.
*Available on special order only.

removable mullion - 2304

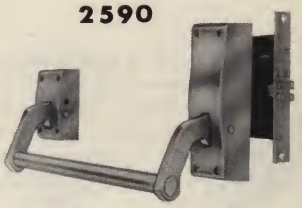
Used with rim type panic bolts—2300 and 2301. Double door openings become two single doors when using mullion 2304 and two rim bolts. Each leaf operates independently. Mullion assures orderly passage necessary for safety by directing traffic to right and left. Mullion also provides guard to prevent picking or forcing of latch bolts, giving maximum security. Structural steel section is 2" square with ⅛" thick wall; prime-painted. Cannot be deflected or sprung, gives weather protection; astragal not required. Mullion is packed in carton, complete with fittings and two exit bolt strikes.

panic bolts - mortise type - 2590

INSTANT RELEASE . . . even under extreme conditions . . . is afforded by Fenestra Standard Exit Devices because of a simplified mechanism of only two moving parts: a long actuating arm works directly on the latch bolt and gives a great mechanical advantage. Extra heavy cross bars are standard in all devices. A ¾" bolt projection provides positive latching.

All types shown below are complete sets for single doors or for each active leaf of a pair of doors (for inactive leaf use top-and-bottom locking bolt 2591).
Finishes: US 10 or 26D.
Inside: Latch bolt by push or cross bar except when bar is secured in depressed position leaving door free.
Outside: See below.

2590



top-and-bottom locking - 2591

Complete set for single doors or inactive leaf of pair of doors.

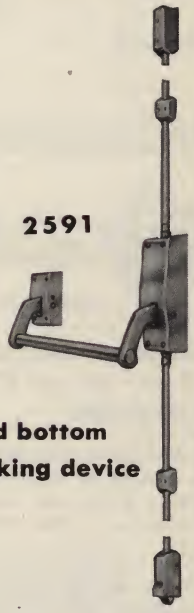
Finishes: US 10 and 26D.

Inside: By push on crossbar, after door is closed. Dogging device in both brackets to hold crossbar depressed with bolts withdrawn.

Outside: Blank cover plate, no operation from outside.

US Govt. No. 821.

2591



top and bottom locking device

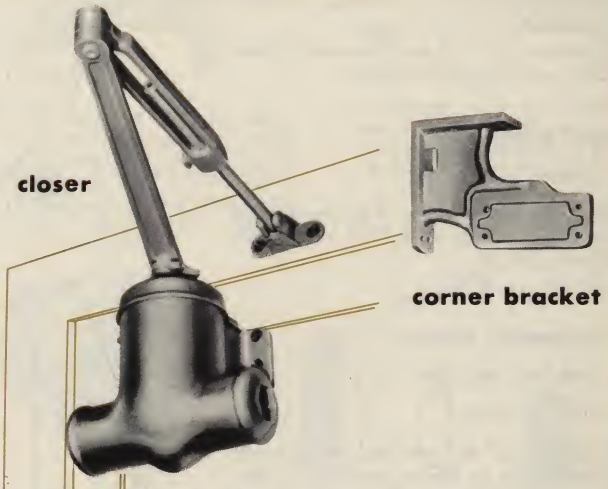
2590-NT	2590-T	2590-K*
key retracts latch bolt	key locks thumbpiece	key locks knob
US Govt. No. 820-H	US Govt. No. 820-H x 410	US Govt. No. 820-K
Lock 974	Lock 973	Lock 973

On pairs of doors—left-hand reverse bevel is active.

*Available on special order.

conventional type closers

Closers: Approved by Underwriters' Laboratories, Inc. Standard application allows door to open 140° (Specify if for 180°) Closer not handed. See table at right.
Soffit bracket: Used when door swings to outside of building. Allow door closer to be mounted to frame, thus preventing exposure to weather, US Govt. type S.
Corner bracket: For use in place of soffit bracket on out-swinging doors, US Govt. type R.
NOTE: With overhead door holder FR-1495 closer must be specified with inverted arm.
Hold-open arm: Holds door open in any position between 65° and 135°. Easily adjusted.
Fusible-link hold-open arm: Holds door open in any position from 65° to 135°. Fusible link melts when exposed to 160° F, thus causing door to close automatically. Can be used on "hinge side" of door or with bracket on other side. For either hand, by turning upside down.
Parallel arm: Allows closer to be fastened to door, eliminating soffit bracket.
Finishes: Bronze-sprayed lacquer standard; for aluminum sprayed lacquer, add suffix EN to part number.



closer

corner bracket

door opening width	closer part no.	closer US govt. type	soffit bracket	corner bracket	closer accessory part nos. hold-open arm	fusible-link hold-open-arm	parallel arm
2'-0" to 3'-0"	1462	3001-III	1466	1366	1462-H	1462-L	1462-P
3'-4" to 3'-8"	1463	3001-IV	1467	1367	1463-H	1463-L	1463-P
4'-0" to 5'-0"	1464	3001-V	1468	1368	1464-H	1464-L	1464-P

1¾" full flush hardware (cont'd)

push & pull bars - 2399

Complete set of solid, extruded rectangular bars for one door leaf, consists of one single bar for each side of door. Can also be furnished with single bar for push side of door and pull plates as 2250 and 2250EX on pull side of door. When lock is required specify 1982C. *Finishes:* US 10 (US Govt. No. 472 Mod.); US 28 (US Govt. No. 472-A Mod.).

push & pull plates

wrought type:

Solid cast grip; .050 wrought metal plate. *Size:* 15 x 3½". *Finishes:* US 10, 28.

1490 U. S. Govt. No. 455 (Mod.)

1491 U. S. Govt. No. 465R (Mod.)

2250 U. S. Govt. No. 455 (C.C. Mod.)

2251 U. S. Govt. No. 465R (C.C. Mod.)

thresholds

For doors hung on hinges. Cut to size and notched to fit frame. Stocked in extruded aluminum. Extruded bronze available on special order.

2325

US Govt. No. 833 x no stop.
fastening: No. 14 x 1¾" flat-head wood screws and lead shields.

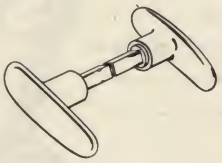
2333*

US Govt. No. 833.
Has integral stop providing weather protection.
fastening: ¼"–20 machine screw and Ackerman Johnson anchors.

tee handle

1989-B

Used in lieu of knobs. Furnished when specified on locks 1979, 1980, 1983, 1984. *Finish:* US 10.

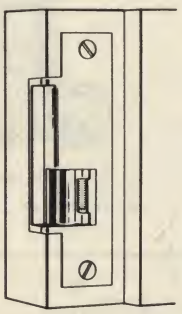


electric strike

1909* for 1983 locks

2229* for 2270

Adapted to fit standard government strike. Used in offices, apartment vestibules and as a safety release in minimum detention buildings.
Finish: Japan black, US 1B.



head and foot bolt

1893

Surface applied. Holds inactive leaf of a pair of doors in a secured position. US Govt. Type F1061 with ⅝" rod. Plated steel. *Finishes:* US 10, 26, 26D, 2C.

kick plates

2343

To give scuff protection at bottom rail. Square corners, edges not beveled. Oval head screws furnished. *Finishes:* US 10, US 28 stainless steel and plastic.

hospital pull arm

2258

US Govt. No. 458-A.
Combination hand and arm pull. Person holding tray can open door with arm. *Finishes:* US 10, 26D.

push & pull plate

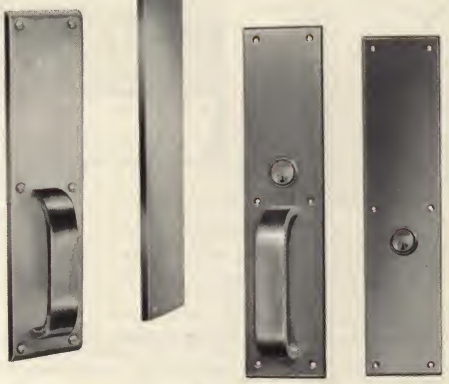
2245*

US Govt. No. 457.
Push plate with finger pull. Cut for cylinder or thumb turn. Used on doors with cylinder dead lock. Finger pull enables door to be closed tightly against rubber mutes when locking. *Finishes:* 10, 26D.

*Available on special order.

modern extruded type

⅜" x 1¼" solid extruded bar grip. $\frac{3}{16}$" thick solid extruded plate—15" x 3½". *Finishes:* US 10, 28.



1490-EX* U. S. Govt. No. 450 (Mod.)
1491-EX* U. S. Govt. No. 460 (Mod.)
2250-EX* U. S. Govt. No. 450 (C.C. Mod.)
2251-EX* U. S. Govt. No. 460 (C.C. Mod.)

cover plate

1985

US Govt. No. 315M Mod.
Used to cover standard lock machining in door when no hardware is used. *Size:* 7⅜" x 2¼". Pull Plate Pt. 1986 also available. *Finishes:* US 10, 26D, 28.

mortise flush bolts

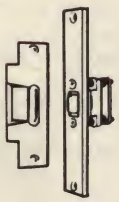
2109

US Govt. No. 1045.
Lever extends or retracts bolt head. For use on pairs of doors to lock inactive door at top or bottom, using two bolts. Bolts mortised in edge of door. *Finishes:* US 10, 26D.

mortise roller latch

1910*

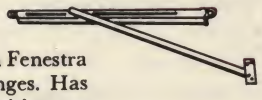
US Govt. No. 193.
For doors, such as hospitals and institutions, where quiet is essential and only positive latching is required. Operated by push and pull on door. *Finishes:* US 10, 26D.



door closer

FR 1495*

US Govt. No. 1161.
For single-acting doors hung on Fenestra full-mortise or half-mortise hinges. Has optional hold open at 90° position set by turn of control handle. Encased shock absorber cushions outward swing. Surface applied with six bolts. Bronze. *Finishes:* 10, 26D. Specify when ordering. Part No., finish, door width, hand (right or left).



doorstops

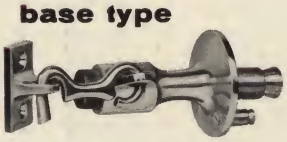
floor type

Stop with holder
1493
US Govt. No. 1329-E

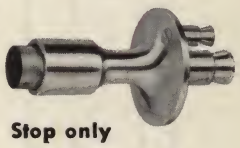
Stop only
1494*
US Govt. No. 1328-E

Stop only
1496
US Govt. No. 1330-A

base type



Stop with holder
1475*
US Govt. No. 1321-E



Stop only
1474*
US Govt. No. 1320-E

All doorstops, except 1496, furnished with lead screw anchors. *Finishes:* US 10, 26D. Doorstop 1496 furnished with wood screws and lead shields. *Finishes:* US 10, 28.

cylinders

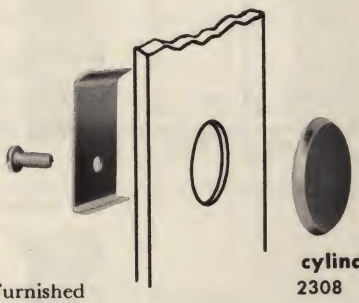
mortise
1200

Standard 1⅛" dia. Furnished with compression ring. Available lengths: 1⅛" for 2-cylinder locks, 1¼" for 2-cylinder locks with heavy trim, 1⅜" for 1-cylinder locks. *Finishes:* US 10, 26D, 28.

rim
2307

Furnished with compression ring. Supplied one size only. Used with rim exit bolts 2300. *Finishes:* US 10, 26D, 28.

mortise x T/K
1205*
Standard 1⅛" dia. Furnished with compression ring. *Stock length:* 1¼". Can be screwed into cylinder hole of lock to give thumb-turn operation. *Finishes:* US 10, 26D, 28.



cylinder plug
2308

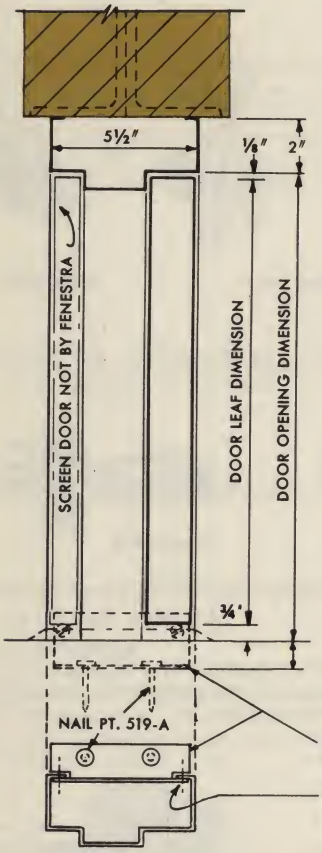
Closes cylinder hole in plates and escutcheon when cylinder is not required. *Finishes:* US 10, 26D, 28.

* Available on special order.

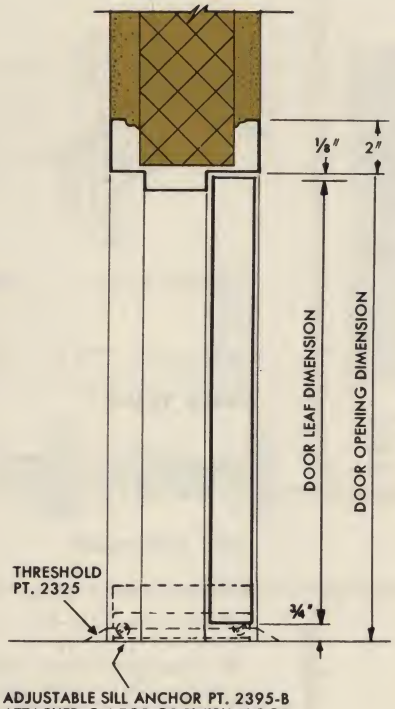
1¾" full flush

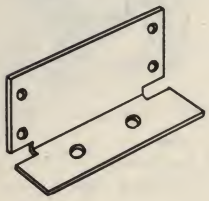
installation details

with Fenestra rolled steel frames
8" wall or partition



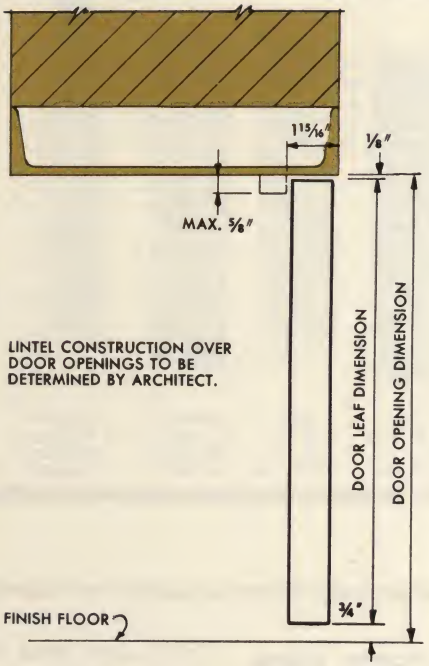
in 4" (tile) partition

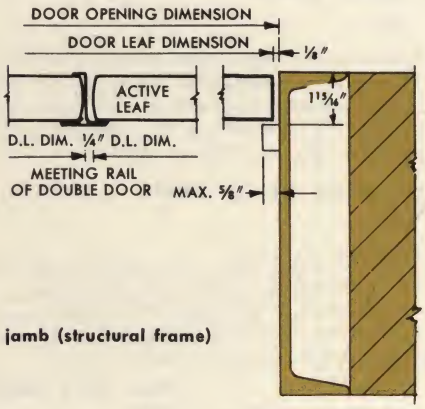




SILL ANCHOR PART 2395-B

with structural frame
in 12" masonry wall

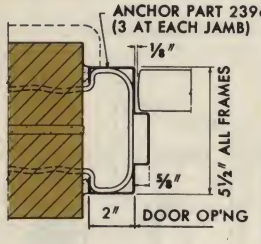




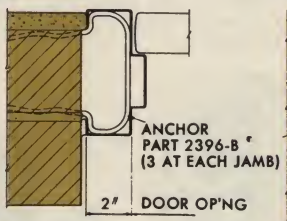
jamb (structural frame)

Jamb details

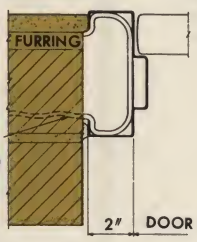
SOLID BRICK OR CONCRETE BLOCK



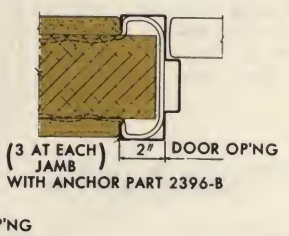
SOLID MASONRY WITH PLASTER



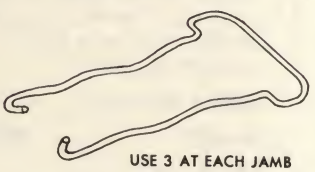
SOLID MASONRY WITH FURRING



4" GYPSUM OR HOLLOW TILE PARTITION

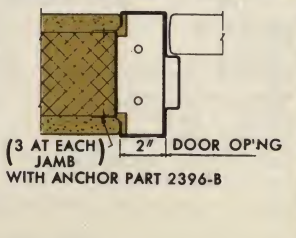


anchor part 2396-b

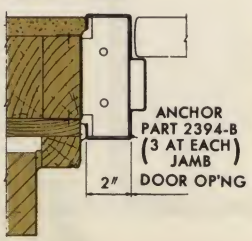


USE 3 AT EACH JAMB

4" GYPSUM OR HOLLOW TILE PARTITION

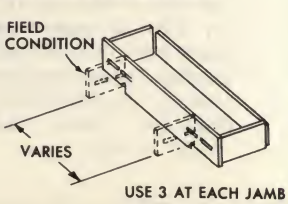


BRICK VENEER



WOOD STUD PARTITION

anchor part 2394-b



USE 3 AT EACH JAMB

specifications

GENERAL: All interior and exterior swinging doors shall be Fenestra 1¾" full flush, multi-grid construction as manufactured by Fenestra Incorporated.

CONSTRUCTION: Face panels shall be formed of No. 16 U.S. gauge cold-rolled, leveled sheet steel. Perimeter stiles will be formed of No. 18-gauge C R. steel. Faces of door will show smooth, seamless, unbroken surfaces. Perimeter stiles and inner frame members will all be double welded to each other at junctions. There will be no fewer than eight inner horizontal frame members per door (excepting half glass models). All frame members to be securely welded to face panels with vertical distance between welds averaging 6.5 inches and never exceeding 11.5 inches; and horizontal distances between welds averaging 6 inches and never exceeding 7 inches. The total number of welds holding the skins to the frame to vary between 140 and 280, depending upon width of door. Doors will be mortised and machined and reinforced for locks and hinges with no lighter than No. 14-gauge reinforcing braces securely welded to inside of vertical perimeter stiles and extending not less than 5 full inches into the interior of the door.

HARDWARE: For swing doors: All door hardware shall be furnished by door manufacturer.

Hinges shall be 5" x 4½" full mortise, template type. They shall be supplied 3 per leaf for doors up to and including 7'-0" high. Ball bearing hinges shall be furnished for doors having door closers or subject to frequent use. Where frames are channel iron or other structural type, half-mortise hinges shall be furnished. Machine screws shall be used to attach hinges to doors and frames.

Heavy duty cylindrical type lock shall have 2¾" backset with Government front, size 1⅛" x 2¼" and Government strike plate. Finishes shall be bronze US No. 10 and anodized aluminum US No. 28. US Government series 161 locks.

Mortise locks shall be escutcheon type with 1⅛" diameter cylinder and of standard Fenestra design and special heavy construction for steel doors. They shall have a 2¾" backset and heavy bronze fronts 8" x 1¼", Government standard strikes, bronze Government type 201 knobs (T-lever handle optional) and wrought-bronze escutcheons. Finish shall be bronze US No. 10 or anodized aluminum US No. 28. Cylinder locks shall have a protected front. Top and bottom bolts shall be supplied for inactive leaf of all double doors. Door checks, where required, shall be Government standard type 3001 in sizes as required.

FRAMES: Frames shall be No. 16-gauge rolled steel, formed with integral stops and rebates. Frames shall be 5½" wide, and 2" on inside and outside face. Jambs shall be constructed to set on finished floor. Sill anchors shall be furnished to set on finished floor or 1" below.

Frames shall be shipped knocked down and shall be machined for attachment of hardware, including mortising, reinforcing, drilling and tapping for hinges and strike plate. Jamb anchors shall be included.

LOUVERS: (if required) shall be integrally pierced in both face panels of door. One louver shall consist, in a 2'-0" door of 1 row of slots; in a 2'-6", 2'-8" or 3'-0" door of 2 rows of slots; and in a 3'-4", 3'-8" or 4'-0" door of 3 rows of slots. One row of slots consists of a vertical row of 11 horizontal slots each 8" long and providing approximately 3 square inches of free air flow per slot. Furthermore, a door may have a single or double louver at the bottom, and/or a single louver at the top. All pierced louvers are provided with internal insect screens.

Approximate free air flow (square inches)

Door Type	*One Louver*	*Two Louvers*	*Three Louvers*
2'-0"	33.5	67	100.5
2'-4"	33.5	67	100.5
2'-6"	67	134	201
2'-8"	67	134	201
3'-0"	67	134	201
3'-4"	100.5	201	301.5
3'-8"	100.5	201	301.5
4'-0"	100.5	201	301.5

Fen-Air louvered doors will be machined for louvers in (specify —top, bottom, or both) of door. Louvers will be inverted V-shape fin-type, 1" thick overall with pressed metal frames lapping the full panel openings of door.

Approximate free air flow (square inches)

Door Type	*One Louver*	*Two Louvers*
2'-8"	166	332
3'-0"	220	440

HALF PANEL AND VISION LITE DOORS: (vision lite to have maximum of 100 square inches of light) are to be constructed to permit easy installation of glass and are to be provided with snap-in type glazing strips not requiring screws. Plastic weathering to be provided to surround glass edge. (Glass and glazing by others.)

SHOP FINISH: Doors shall be protected inside and outside against corrosion, factory prime-painted and sound-deadened. Frames shall be Bonderized and receive one shop coat of baked-on metallic primer.

ERECTION: Doors and frames shall be erected plumb and true, with all hardware left in proper working order. Erection shall be done by a competent door erector and in accordance with door manufacturer's instructions.

GLASS AND GLAZING: (To be inserted in the general "Glazing" specifications.) Glass shall be ⅛" thick, and held in place by continuous glazing moldings furnished by the door contractor.

1⅜" full flush

The Fenestra 1⅜" hollow metal door is constructed of full-flush seamless face panels of 20-gauge leveled steel and beneath is a reinforcing grid of 18-gauge roll-formed steel sections. An exclusive Fenestra manufacturing process invisibly welds both faces to this multi-rib reinforcement at more than 100 points on each door. This Fenestra door is stronger and more rigid—without wasteful weight—than any other door of this type on the market.

type F

type G

Fen-Air (air conditioned)

Fenestra reinforcement for mounting door closer

Exclusive feature offered by Fenestra: two heavy-gauge strips fit in slots at top, for either right or left hand mounting. Anchor door closer securely.

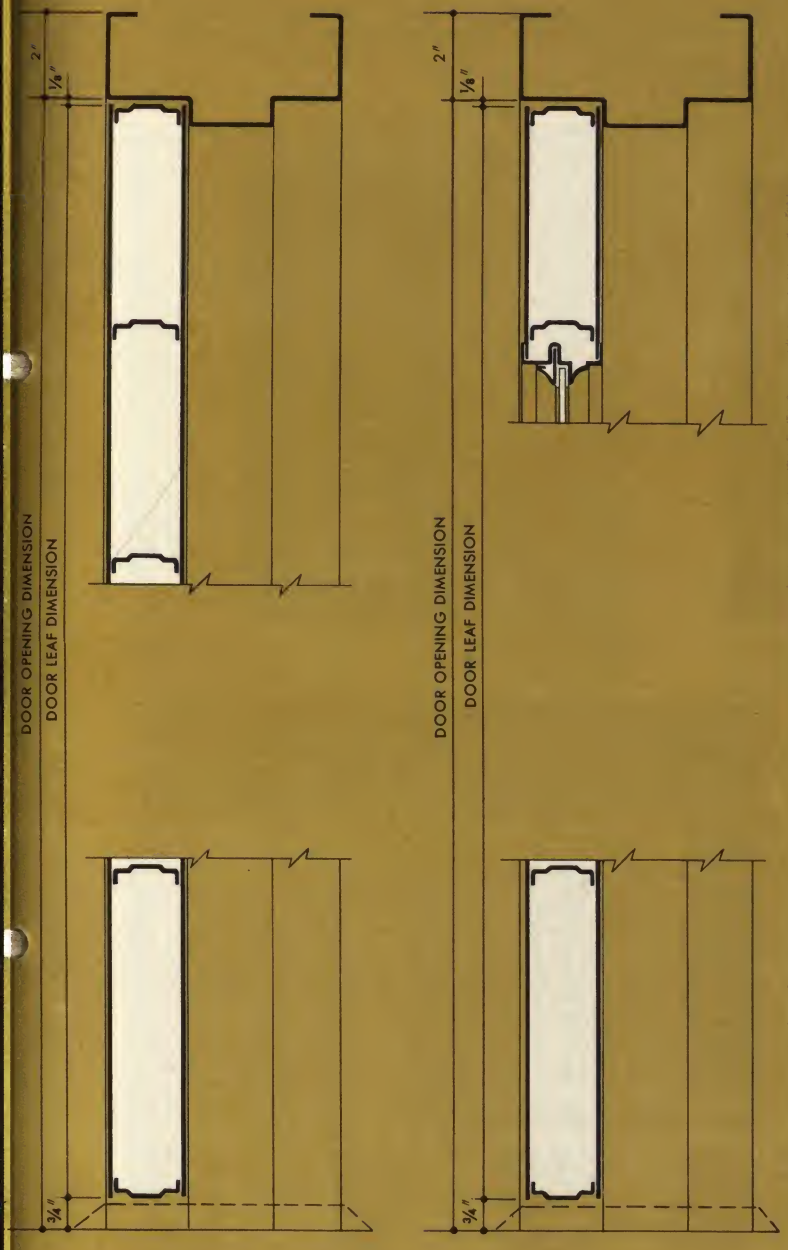
exclusive! Fenestra adjustable hinge reinforcement

Heavy-gauge mortised steel hinge reinforcement is welded to edge of door. "Sliding center nut" allows hinge to be mounted for right or left swing, open-in or open-out. Eliminates handing problems on the job to speed up installation.

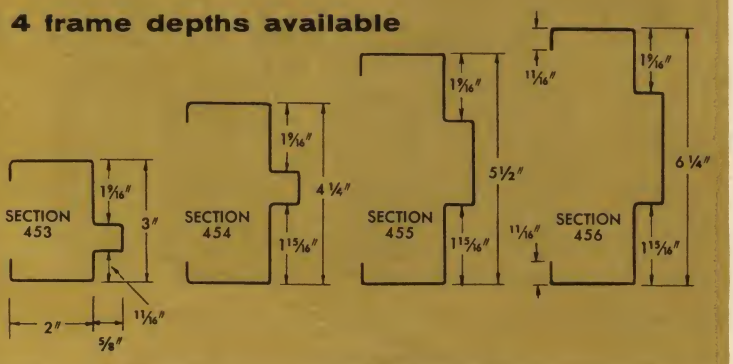
Fenestra lock reinforcement

Heavy-gauge steel reinforcement welded into door is drilled and tapped for installation of Fenestra hardware. No extra reinforcing material to buy or apply. Supplies extra strength for this important section of the door.

construction

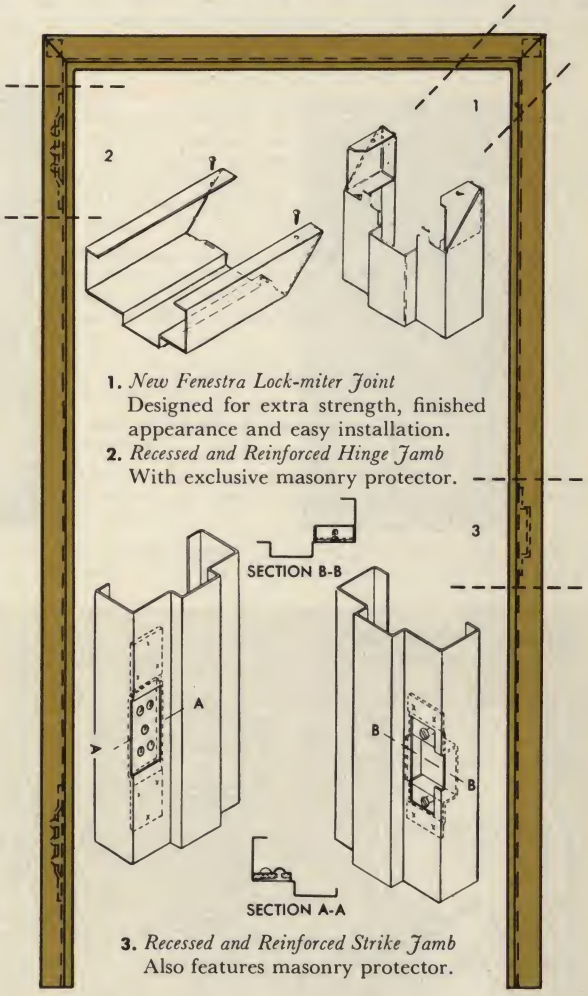


4 frame depths available



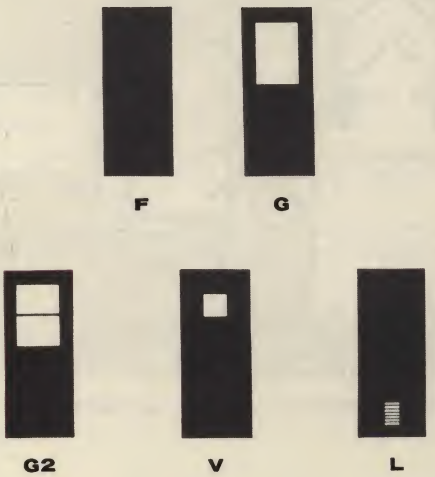
frames

Pre-fitted to Fenestra doors at the factory, these strong 18-gauge steel frames are quickly assembled and installed in all types of wall construction. The frames are reinforced and machined for hardware installation.



1. *New Fenestra Lock-miter Joint*
Designed for extra strength, finished appearance and easy installation.
2. *Recessed and Reinforced Hinge Jamb*
With exclusive masonry protector.
3. *Recessed and Reinforced Strike Jamb*
Also features masonry protector.

leaf types available

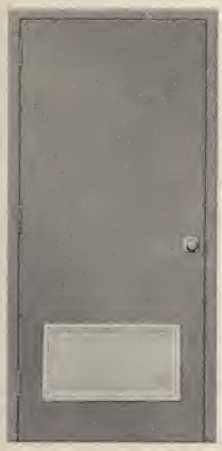


1⅜" full flush

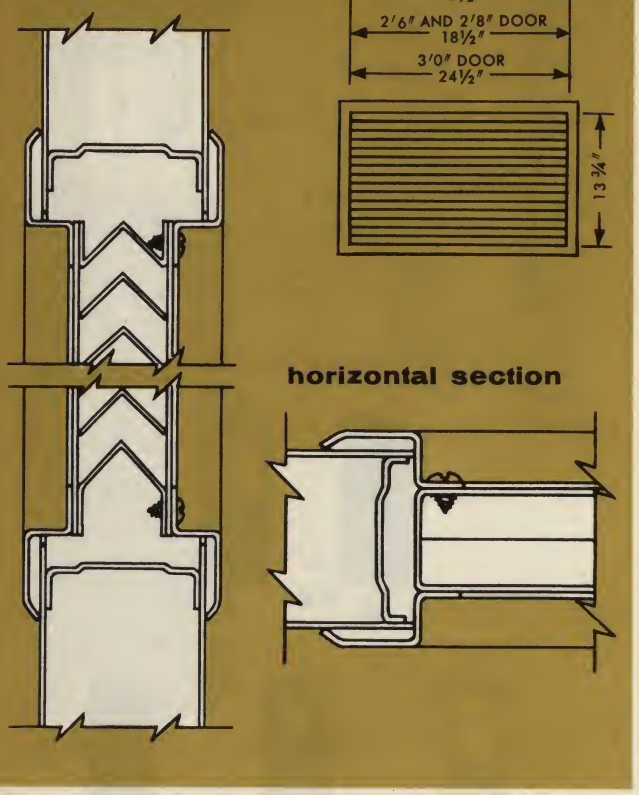
Fen-Air (air conditioned)

Fenestra Air-conditioning Doors are available in a variety of sizes and designs.

This new type louver allows complete flexibility to choose the right amount of free air circulation needed for the most efficient cooling and heating design.



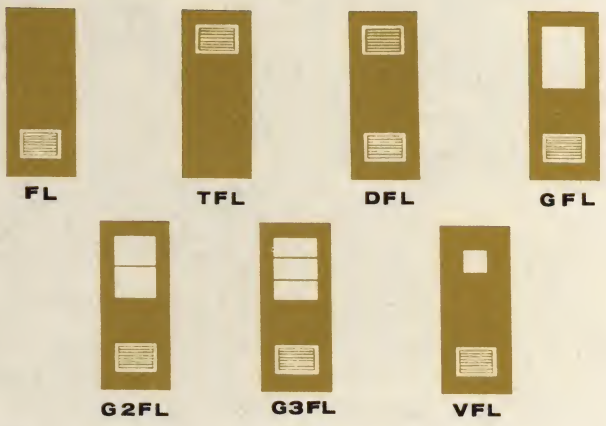
vertical section



horizontal section

door type	door size	free air space		
		upper panel louver	lower panel louver	upper & lower panel louvers
2068 2468 2070 2470	2'-0" x 6'-8" 2'-4" x 6'-8" 2'-0" x 7'-0" 2'-4" x 7'-0"	105 sq. in.	105 sq. in.	210 sq. in.
2668 2868 2670 2870	2'-6" x 6'-8" 2'-8" x 6'-8" 2'-6" x 7'-0" 2'-8" x 7'-0"	150 sq. in.	150 sq. in.	300 sq. in.
3068 3070	3'-0" x 6'-8" 3'-0" x 7'-0"	200 sq. in.	200 sq. in.	400 sq. in.

leaf types available



NOTE: For doors requiring pierced louvers—see specifications, page 25, for free air space.

Underwriters' Label

These sturdy doors pass 1½-hour and ¾-hour tests and carry Underwriters' B and C Label.

vertical section

specifications

GENERAL: All fire doors shall be 1⅜", full flush, multi-rib constructed fire doors as manufactured by Fenestra Incorporated. Doors shall bear Underwriters' Laboratories B or C labels in accordance with the opening protection required.

CONSTRUCTION: Face sheets shall be formed of No. 20 USS gauge, cold-rolled, leveled steel. Perimeter and interior reinforcing channel ribs shall be formed of No. 18 USS gauge, cold-rolled steel. Face sheets and perimeter reinforcing channel ribs shall be designed and constructed so that all seams or joints shall occur on the edges of the door to provide a full flush uninterrupted surface on both faces.

Perimeter and interior reinforcing channel ribs shall be securely assembled to provide a rigid interior structural frame for the face sheets to prevent racking or warping of the door. Face sheets shall be welded to the interior structural frame, with horizontal spacing of welds not to exceed 7". All horizontal members of the interior structural frame shall be provided with slots to allow adequate ventilation of the interior of the door.

Doors shall be machine mortised and reinforced for locks and hinges with heavy-gauge reinforcing braces securely welded to the inside of the vertical perimeter reinforcing channel ribs. Provisions for door closer reinforcement shall be made in all doors. Closers shall be furnished with reinforcement plates to be inserted in doors during installation.

All interior spaces of the door shall be insulated with a 1⅜" layer of 5 pound per cubic foot density felted mineral wool.

The inactive leaf of each pair of double doors shall be equipped with a "T" shaped astragal of ⅛" thick steel.

Door dimensions shall allow for clearances of ⅛" at head and jambs. ¼" at meeting edges of double doors and ¾" at sill, to allow for ½" threshold with a residual clearance not exceeding ¼".

When required, provisions shall be made for the installation of half-panels or vision light glass areas in accordance with the requirements of the label classification.

FRAMES: Frames shall be of 16 USS gauge steel, roll-formed with integral stops and rebates.

Frames shall be shipped knocked down and shall be machined for attachment of hardware, including mortising, reinforcement, drilling and tapping for hinges. Frames shall be equipped with adjustable anchors welded to jamb members.

SHOP FINISH: Doors shall be protected inside and outside with one shop coat of primer paint. Frames shall be Bonderized and painted with one coat of primer.

HARDWARE: Hardware shall be furnished by Fenestra Incorporated and shall be packed and shipped separately for attachment at the time of door installation. Hinges shall be 3½" x 3½" full mortise, template type, made of .122" thick steel, prime painted. Hinges shall be furnished 3 per door with machine screws for attachment to door and frame.

Locksets shall be single point, key-in-knob, cylinder type providing for all conventional functions in one standardized machining. Locksets shall be of the tubular type with a flat front 2¼" x 1⅛" and a back set of 2½". U. S. Government Type 160. (Note: U. S. Government Type No. 161 with 2¾" Backset also available.) Finishes shall be U. S. No. 10 or U. S. No. 28.

Locksets shall have bronze fronts and strikes and wrought bronze knobs and escutcheons. Cylinder locks shall have a protected front.

Top and bottom bolts for the inactive leaf of double doors shall be surface type. They shall be of plated steel, U. S. Government Type F1061. Finishes shall be U. S. No. 10 (U. S. No. 2C also available).

Door closers, where required, shall be standard U. S. Government Type 3001-II. Finishes shall be Bronze Sprayed Enamel (or Aluminum Sprayed Lacquer).

ERECTION: Doors and frames shall be erected plumb and true, with all hardware left in proper working order. Erection shall be done by a competent door erector in accordance with the manufacturer's instructions.

1⅜" full flush

selection table

Upper number designates Door Type.
Lower numbers are Glass Size.

Door Opening Dimensions											
Width	Height	F	TL	L	DL	V	VL	G	GL	G-2	G-2L
single doors											
1′-6″	6′-8″	1668-F	1668-TL*	1668-L*	1668-DL*						
	7′-0″	1670-F	1670-TL*	1670-L*	1670-DL*						
2′-0″	6′-8″	2068-F	2068-TL*	2068-L*	2068-DL*	2068-V 10¾″ x 10¾″	2068-VL* 10¾″ x 10¾″				
	7′-0″	2070-F	2070-TL*	2070-L*	2070-DL*	2070-V 10¾″ x 10¾″	2070-VL* 10¾″ x 10¾″				
2′-4″	6′-8″	2468-F	2468-TL	2468-L	2468-DL	2468-V 10¾″ x 10¾″	2468-VL 10¾″ x 10¾″	2468-G 15⅜″ x 30⅜″	2468-GL 15⅜″ x 30⅜″	2468-G2 15⅜″ x 15⅜″	2468-G2L 15⅜″ x 15⅜″
	7′-0″	2470-F	2470-TL	2470-L	2470-DL	2470-V 10¾″ x 10¾″	2470-VL 10¾″ x 10¾″	2470-G 15⅜″ x 34⅜″	2470-GL 15⅜″ x 34⅜″	2470-G2 15⅜″ x 17⅜″	2470-G2L 15⅜″ x 17⅜″
2′-6″	6′-8″	2668-F†	2668-TL	2668-L	2668-DL	2668-V† 10¾″ x 10¾″	2668-VL 10¾″ x 10¾″	2668-G 17⅜″ x 30⅜″	2668-GL 17⅜″ x 30⅜″	2668-G2† 17⅜″ x 15⅜″	2668-G2L 17⅜″ x 15⅜″
	7′-0″	2670-F†	2670-TL	2670-L	2670-DL	2670-V† 10¾″ x 10¾″	2670-VL 10¾″ x 10¾″	2670-G 17⅜″ x 34⅜″	2670-GL 17⅜″ x 34⅜″	2670-G2† 17⅜″ x 17⅜″	2670-G2L 17⅜″ x 17⅜″
2′-8″	6′-8″	2868-F†	2868-TL	2868-L	2868-DL	2868-V† 10¾″ x 10¾″	2868-VL 10¾″ x 10¾″	2868-G 19⅜″ x 30⅜″	2868-GL 19⅜″ x 30⅜″	2868-G2† 19⅜″ x 15⅜″	2868-G2L 19⅜″ x 15⅜″
	7′-0″	2870-F†	2870-TL	2870-L	2870-DL	2870-V† 10¾″ x 10¾″	2870-VL 10¾″ x 10¾″	2870-G 19⅜″ x 34⅜″	2870-GL 19⅜″ x 34⅜″	2870-G2 19⅜″ x 17⅜″	2870-G2L 19⅜″ x 17⅜″
3′-0″	6′-8″	3068-F†	3068-TL	3068-L	3068-DL	3068-V† 10¾″ x 10¾″	3068-VL 10¾″ x 10¾″	3068-G 23⅜″ x 30⅜″	3068-GL 23⅜″ x 30⅜″	3068-G2 23⅜″ x 15⅜″	3068-G2L 23⅜″ x 15⅜″
	7′-0″	3070-F†	3070-TL	3070-L	3070-DL	3070-V† 10¾″ x 10¾″	3070-VL 10¾″ x 10¾″	3070-G 23⅜″ x 34⅜″	3070-GL 23⅜″ x 34⅜″	3070-G2 23⅜″ x 17⅜″	3070-G2L 23⅜″ x 17⅜″
double doors											
4′-0″	6′-8″	4068-F	4068-TL*	4068-L*	4068-DL*	4068-V 10¾″ x 10¾″	4068-VL* 10¾″ x 10¾″				
	7′-0″	4070-F	4070-TL*	4070-L*	4070-DL*	4070-V 10¾″ x 10¾″	4070-VL* 10¾″ x 10¾″				
4′-8″	6′-8″	4868-F	4868-TL	4868-L	4868-DL	4868-V 10¾″ x 10¾″	4868-VL 10¾″ x 10¾″	4868-G 15⅜″ x 30⅜″	4868-GL 15⅜″ x 30⅜″	4868-G2 15⅜″ x 15⅜″	4868-G2L 15⅜″ x 15⅜″
	7′-0″	4870-F	4870-TL	4870-L	4870-DL	4870-V 10¾″ x 10¾″	4870-VL 10¾″ x 10¾″	4870-G 15⅜″ x 34⅜″	4870-GL 15⅜″ x 34⅜″	4870-G2 15⅜″ x 17⅜″	4870-G2L 15⅜″ x 17⅜″
5′-0″	6′-8″	5068-F†	5068-TL	5068-L	5068-DL	5068-V†† 10¾″ x 10¾″	5068-VL 10¾″ x 10¾″	5068-G 17⅜″ x 30⅜″	5068-GL 17⅜″ x 30⅜″	5068-G2† 17⅜″ x 15⅜″	5068-G2L 17⅜″ x 15⅜″
	7′-0″	5070-F†	5070-TL	5070-L	5070-DL	5070-V†† 10¾″ x 10¾″	5070-VL 10¾″ x 10¾″	5070-G 17⅜″ x 34⅜″	5070-GL 17⅜″ x 34⅜″	5070-G2† 17⅜″ x 17⅜″	5070-G2L 17⅜″ x 17⅜″
5′-4″	6′-8″	5468-F†	5468-TL	5468-L	5468-DL	5468-V†† 10¾″ x 10¾″	5468-VL 10¾″ x 10¾″	5468-G 19⅜″ x 30⅜″	5468-GL 19⅜″ x 30⅜″	5468-G2† 19⅜″ x 15⅜″	5468-G2L 19⅜″ x 15⅜″
	7′-0″	5470-F†	5470-TL	5470-L	5470-DL	5470-V†† 10¾″ x 10¾″	5470-VL 10¾″ x 10¾″	5470-G 19⅜″ x 34⅜″	5470-GL 19⅜″ x 34⅜″	5470-G2 19⅜″ x 17⅜″	5470-G2L 19⅜″ x 17⅜″
6′-0″	6′-8″	6068-F†	6068-TL	6068-L	6068-DL	6068-V†† 10¾″ x 10¾″	6068-VL 10¾″ x 10¾″	6068-G 23⅜″ x 30⅜″	6068-GL 23⅜″ x 30⅜″	6068-G2 23⅜″ x 15⅜″	6068-G2L 23⅜″ x 15⅜″
	7′-0″	6070-F†	6070-TL	6070-L	6070-DL	6070-V†† 10¾″ x 10¾″	6070-VL 10¾″ x 10¾″	6070-G 23⅜″ x 34⅜″	6070-GL 23⅜″ x 34⅜″	6070-G2 23⅜″ x 17⅜″	6070-G2L 23⅜″ x 17⅜″

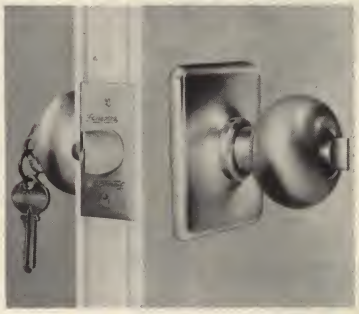
*These sizes in louvered doors are single panel as shown. All others are double panels in width.
†Available in Underwriters' doors. When ordering use suffix UW.
See specifications, page 25, for free air flow of louvered types.
NOTE: Consult Fenestra representative for available Slender Light doors. (See Vision Lights on page 9)
††Available in Underwriters' doors—in one leaf only for "B" lable.

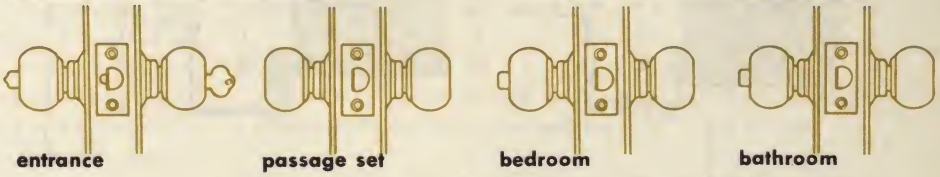
hardware

lock sets

standard duty—1800 series

Modern Fenestra key-in-knob design, tubular type with flat front 2¼" x 1⅛" and full 2½" backset US Govt. Series 160. Fenestra master keying, if desired. Dummy trim to match, for inactive leaf of double door.





entrance
1882

Guarded latch bolt. Outside operation by key or knob, except when set by turn button on inside knob. Inside knob always operative. *Finishes†:* US 10 or 28. US Govt. No. 160A.

passage set
1883

Plain latch bolt with both sides operated by knobs. Does not lock. *Finishes†:* US 10 or 28. US Govt. No. 160N.

bedroom
1884

Outside knob locked by auto-release button on inside knob. Turn of inside knob or closing against door strike releases lock—prevents accidental lockout. *Finishes†:* US 10 or 28. US Govt. No. 160P.

bathroom
1885

Same as 1884 with added emergency feature. Slotted button in outside knob may be turned with coin to unlock door. *Finishes†:* Inside knob polished chrome; outside knob US 10—both sides US 28. US Govt. No. 160L.

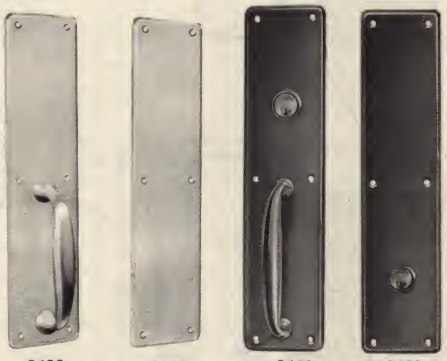
G-3	G-3L
2468-G3 15⅜" x 10⅛"	2468-G3L 15⅜" x 10⅛"
2470-G3 15⅜" x 11⅜"	2470-G3L 15⅜" x 11⅜"
2668-G3 17⅜" x 10⅛"	2668-G3L 17⅜" x 10⅛"
2670-G3 17⅜" x 11⅜"	2670-G3L 17⅜" x 11⅜"
2868-G3 19⅜" x 10⅛"	2868-G3L 19⅜" x 10⅛"
2870-G3† 19⅜" x 11⅜"	2870-G3L 19⅜" x 11⅜"
3068-G3† 23⅜" x 10⅛"	3068-G3L 23⅜" x 10⅛"
3070-G3† 23⅜" x 11⅜"	3070-G3L 23⅜" x 11⅜"
4868-G3 15⅜" x 10⅛"	4868-G3L 15⅜" x 10⅛"
4870-G3 15⅜" x 11⅜"	4870-G3L 15⅜" x 11⅜"
5068-G3 17⅜" x 10⅛"	5068-G3L 17⅜" x 10⅛"
5070-G3 17⅜" x 11⅜"	5070-G3L 17⅜" x 11⅜"
5468-G3 19⅜" x 10⅛"	5468-G3L 19⅜" x 10⅛"
5470-G3† 19⅜" x 11⅜"	5470-G3L 19⅜" x 11⅜"
6068-G3† 23⅜" x 10⅛"	6068-G3L 23⅜" x 10⅛"
6070-G3† 23⅜" x 11⅜"	6070-G3L 23⅜" x 11⅜"

light-duty locksets — 1200 series: US Govt. No. 150. Fits Fenestra machining. Available with round escutcheon only in same function as Standard-Duty Locksets above. Dummy trim to match for inactive leaf of double door.

heavy-duty locksets — 2400 series: US Govt. No. 161. Fits Fenestra machining, has 2¾" backset. Available with square heavy escutcheon only in same functions as Standard-Duty Locksets above. Dummy trim to match for inactive leaf of double door.

push & pull plates

Solid cast grip; .050 metal; wrought plate size 15" x 3½". *Finishes:* US 10 or 28.

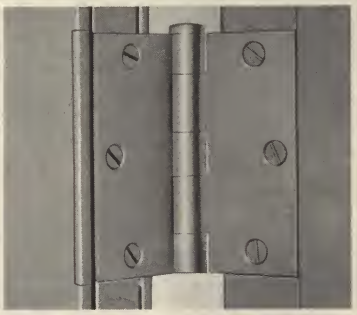


2490 U. S. Govt. No. 455 (Mod.)
2491 U. S. Govt. No. 465R (Mod.)
2450 U. S. Govt. No. 455 (C.C. Mod.)
2451 U. S. Govt. No. 465R (C.C. Mod.)

Cut for dead lock cylinder. Specify two-cylinder Part 1882C or cylinder-by-thumb turn function Part 1882D.

hinges-2389

Full mortise type, 3½" x 3½", made to Fenestra template. Prime-painted .122-gauge steel, plain bearing, loose pin. Furnished two per door 6'-8" high, 3 per door 7'-0" high, with machine screws for attachment. (Hinges shipped with frame). Ball Bearing type also available. US Govt. No. T2127-Mod.



door closer - 1461

Approved by Underwriters' Laboratories, Inc. Standard application allows door to open 140° (specify for 180°). Not handed. Consult Fenestra representative for information on mounting brackets and/or special arms, if required. *Finishes:* Bronze-sprayed lacquer or aluminum sprayed lacquer. Packed with 2 reinforcing plates. US Govt. No. 3001-II.

head or foot bolt - 1893

Surface applied. Holds inactive leaf of a pair of doors in a secured position. US Govt. No. F1061 with ⅝" rod. Plated steel. *Finishes:* † US 10, 26D or 2C.

1⅜" full flush

installation details

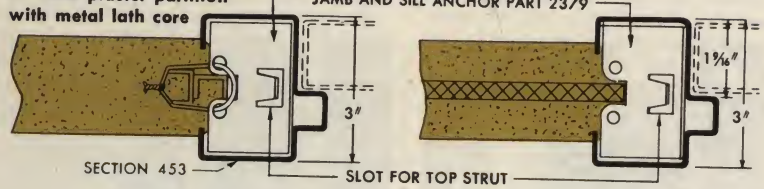
jamb details

3"

2" solid plaster partition with metal lath core

JAMB AND SILL ANCHOR PART 2379

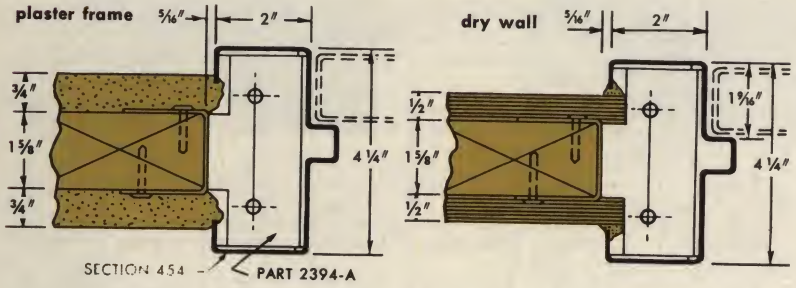
2" solid plaster partition with rock lath core



4¼"

plaster frame

dry wall



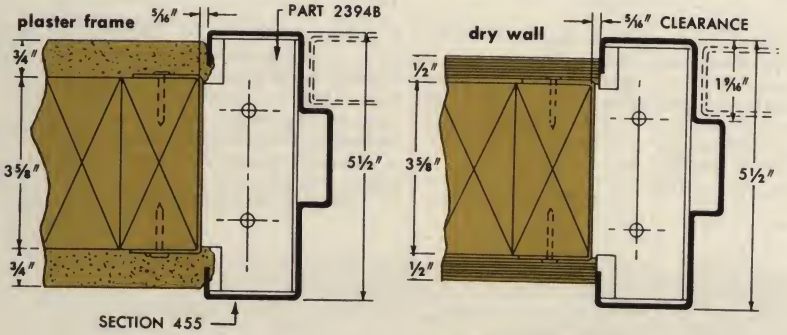
5½"

plaster frame

PART 2394B

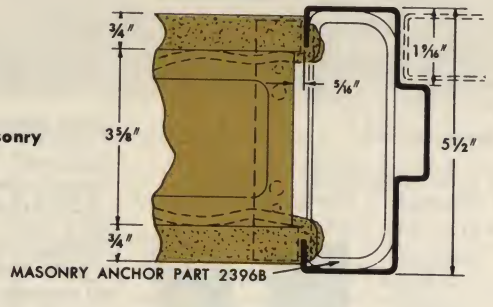
dry wall

⅝" CLEARANCE



5½"

masonry



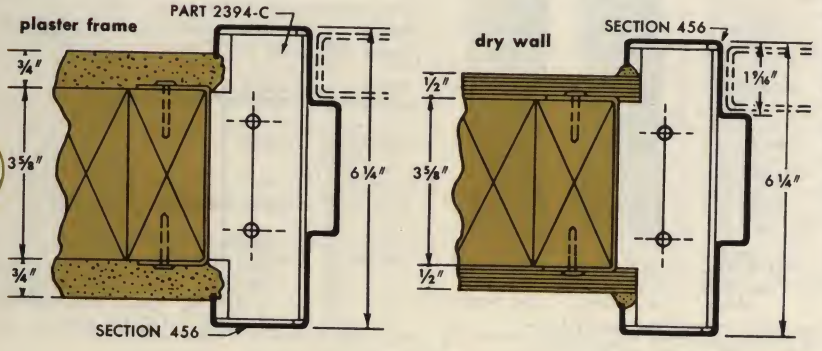
6¼"

plaster frame

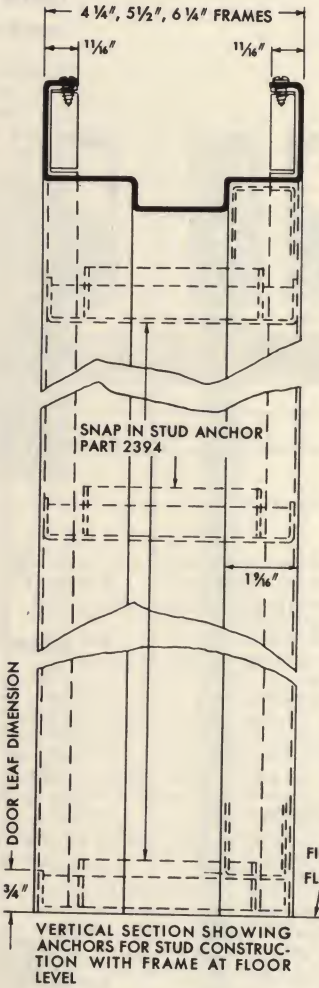
PART 2394-C

dry wall

SECTION 456

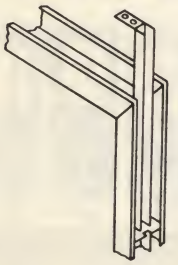


vertical section

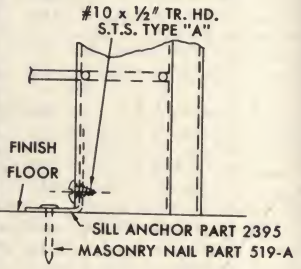


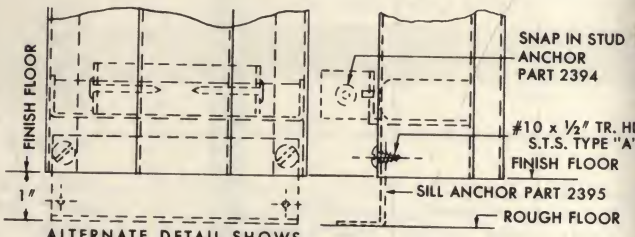
VERTICAL SECTION SHOWING ANCHORS FOR STUD CONSTRUCTION WITH FRAME AT FLOOR LEVEL

top strut part 2388 for 3" frames when specified



masonry construction

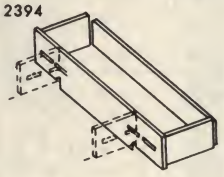




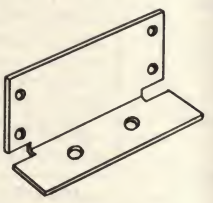
ALTERNATE DETAIL SHOWS ANCHORS FOR STUD CONSTRUCTION WITH FRAME 1" ABOVE SUB FLOOR

NOTE: Jamb stud anchors (3 per jamb) furnished with standard frames part 2394 A—4¼", B—5½", C—6¼". Adjustable sill anchors (1 per jamb) part 2395 A—4¼", B—5½", C—6¼", and masonry anchors (3 per jamb) part 2396 A—4¼", B—5½", C—6¼", furnished when specified. Removable sill spreader angles part 2377 furnished when specified.

2394



2395



2396

specifications

GENERAL: All interior swinging doors shall be Fenestra 1⅜" full flush, multi-rib construction as manufactured by Fenestra Incorporated. (Handing need not be specified—doors can be used either right or left hand swing in or out).

CONSTRUCTION: Face panels (both sides of door) shall be formed of No. 20 U. S. gauge cold-rolled, leveled steel. Perimeter closures (hinge and lock members and top and bottom members) and interior reinforcements shall be formed of No. 18 U. S. gauge cold-rolled steel. Doors to be designed and constructed so that all seams of joints shall be on edges of door, and faces of door will show smooth, unbroken surfaces.

Perimeter closures and interior reinforcements shall be securely assembled to produce a rigid interior structural support for face panels to prevent any racking or warping of door. (There shall be *not less than 7 horizontal* reinforcements per door). Perimeter closures and interior reinforcements shall be welded to both face panels of door, with horizontal spacing of welds not to exceed 7" center to center. All horizontal members shall be provided with slots to allow ventilation of the interior of door.

Doors shall be machine mortised and reinforced for locks and hinges with heavy-gauge reinforcing braces securely welded to inside of vertical perimeter closures and reinforcements. Provisions for door closer reinforcements shall be made in all doors over 2'-0" width. Closers shall be furnished with reinforcement insert plates to be applied to doors in the field.

Half-panel and vision light doors (*vision light to have maximum area of 100 square inches*) are to be constructed to permit easy installation of glass and are to be provided with snap-in-type glazing strips which do not require screws. (*Glass and glazing by others*).

Louvered doors (if required) shall have integrally pierced louvers in both face panels of doors (specify—top, bottom or both). 1'-6"- and 2'-0"-wide doors shall have a single row of louvers (in each location). 2'-4"-, 2'-6"-, 2'-8"- and 3'-0"-wide doors shall have a double row of louvers (in each location).

Approximate free air flow (square inches)

Door Type	*One Louver*	*Two Louver*
1'-6"	16	32
2'-0"	16	32
2'-4"	32	64
2'-6"	32	64
2'-8"	32	64
3'-0"	32	64

FRAMES: Frames shall be No. 18-gauge steel, roll-formed, mitered lock joint, with integral stops and rebates. Frames shall be 2" wide on inside and outside face and (specify: 3", 4¼", 5½" or 6¼") deep. Jambs shall be constructed to set on finished floor. Rubber mutes shall be shipped attached to lock jambs (single doors) or head members (double doors).

Frames shall be shipped knocked down and shall be mortised and reinforced with heavy-gauge reinforcements for hinges and lock strikes. Sill anchors shall be furnished for attaching frames to floor and jamb anchors (3 each jamb) for bonding frames to wall. (Steel spreaders to insure parallel alignment of jambs are supplied when specified).

SHOP FINISH: Doors shall be protected inside and outside against corrosion, factory prime-painted and sound-deadened. Frames shall be Bonderized and receive one shop coat of baked-on metallic primer.

HARDWARE: Hardware shall be Fenestra and shall be shipped separately for attachment in the field.

Hinges shall be 3½" x 3½", full mortise, made to Fenestra template, steel, .122 gauge, prime-painted, and shall be furnished 2 per leaf for 6'-8" doors and 3 per leaf for 7'-0" doors, with machine screws for attaching to doors and frames.

Locksets shall be key-in-knob type for cylinder functions and shall provide all conventional functions in one standardized machining. They shall be cylindrical or bored type with flat front 2¼" x 1⅛" and backset of 2½", U. S. Govt. Type 160. (Alternate: heavy duty cylindrical or bored type lock, U. S. Govt. Type 161, with 2¾" backset and front 2¼" x 1⅛").

Push and pull plates shall be 15" x 3½" (plate size) bronze, U. S. Govt. Type 465R and 455 respectively. Finishes shall be bronze US 10 or anodized aluminum US 28.

Tubular cylinder deadlocks for use with push and pull plates shall have front 2¼" x 1⅛" with backset of 2½". Functions to be: two-cylinder (U. S. Govt. Type 181-M) or cylinder-by-thumb turn (U. S. Govt. Type 181-K). Finishes shall be bronze US 10 or anodized aluminum US 28.

Surface bolts shall be supplied for top and bottom of inactive leaf of all double doors for attachment in the field. They shall be U. S. Govt. Type F 1061. Finishes: US 10, U. S. 2C and US 26D.

Door closers, where required, shall be U. S. Govt. Type 3001-size II, for attachment in the field. Finishes: sprayed bronze lacquer or sprayed aluminum lacquer.

ERECTION: Doors and frames shall be erected plumb and true, with all hardware left in proper working order. Erection shall be done by a competent door erector and in accordance with door manufacturer's instructions.

1¾" panel

The Fenestra 1¾" panel doors are built to precise standards. All mortising, drilling, tapping and prime-painting complete at factory. Every door identical in appearance on both sides. Carefully wrapped for shipment with heavy corrugated paper and secured by steel bands.

panel

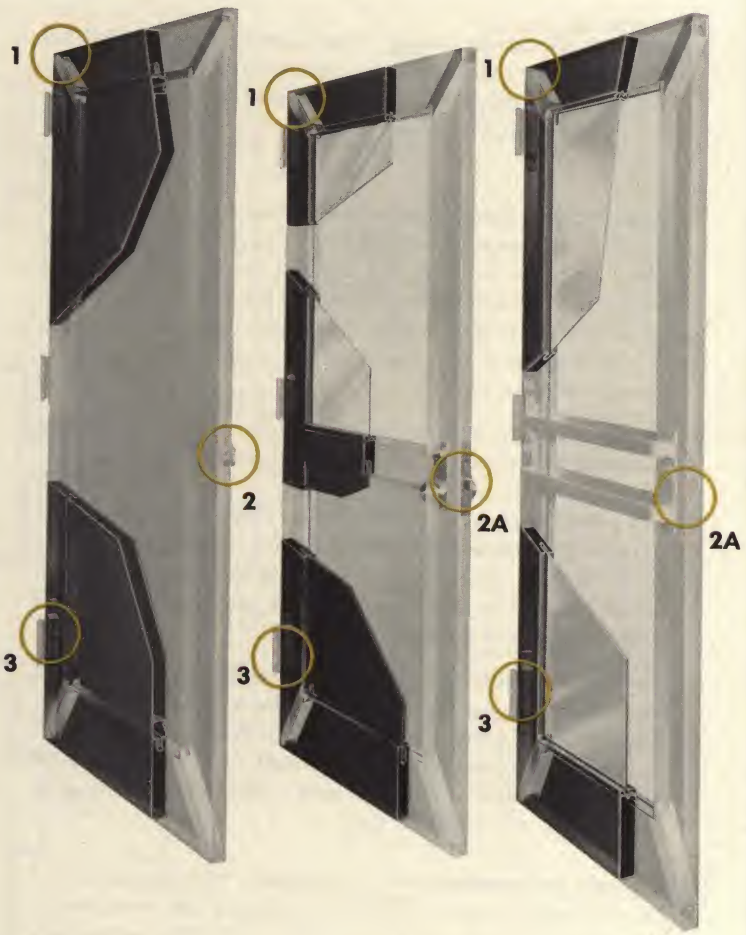
flush panel

entrance

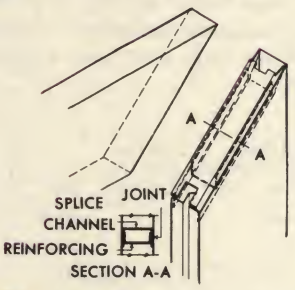
Fen-Air (air conditioned)

construction features

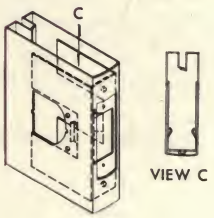
flush panel **panel** **entrance**



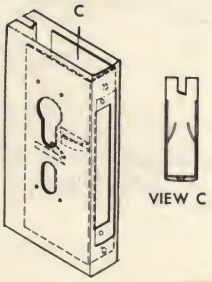
1 corner miter



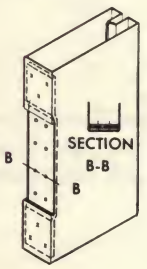
2 lock reinforcement



2A lock reinforcement



3 hinge reinforcement



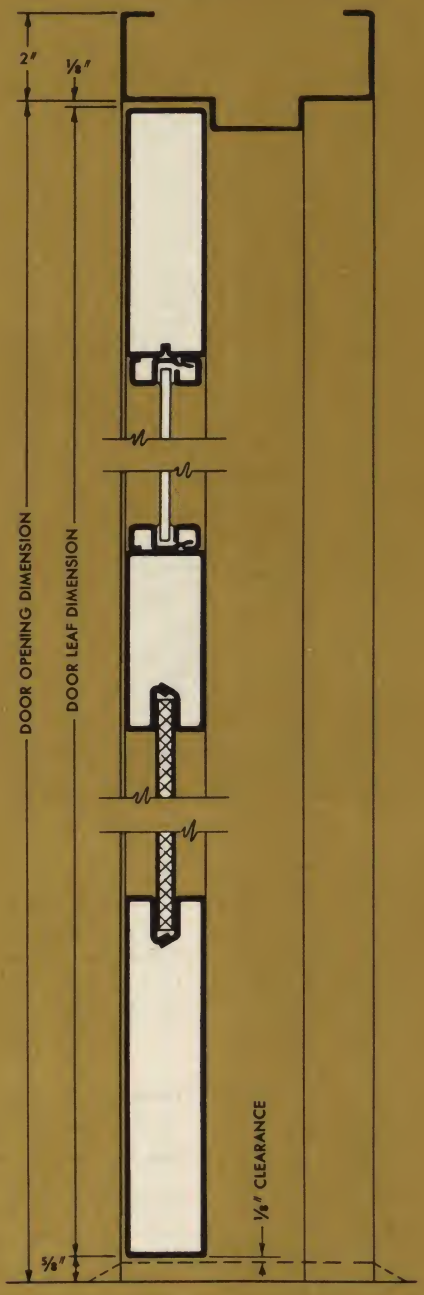
Hollow metal stiles and rails, heavy 16-gauge steel. Bottom rails 8″ x 1¾″; jamb stiles and top rails, 5½″ x 1¾″. Corners mitered, welded and ground smooth. Top and bottom door surfaces closed.

flush panel

Flush panels are of 18-gauge cold-rolled steel plate. These plates rigidly reinforced by horizontal Z bars on 14″ centers; tack welded to panels. Interior sides sprayed with sound-deadening material.

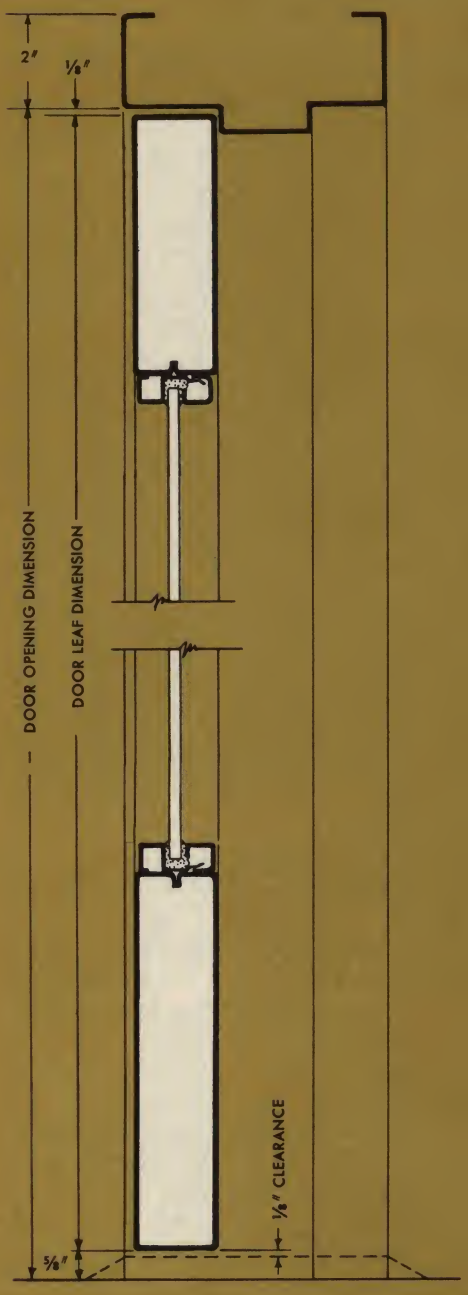
panel

Panels composed of two 18-gauge plates of cold-rolled, stretcher-leveled steel, joined by insulation for a total thickness of ⅜″. Muntins and snap-on moldings formed from 18-gauge steel and accommodates ¼″ glass (glass not supplied).



entrance

Snap-on moldings formed from 18-gauge steel and accommodate full-length ¼″ glass (glass not supplied).



1¾" panel

Underwriters' Label doors

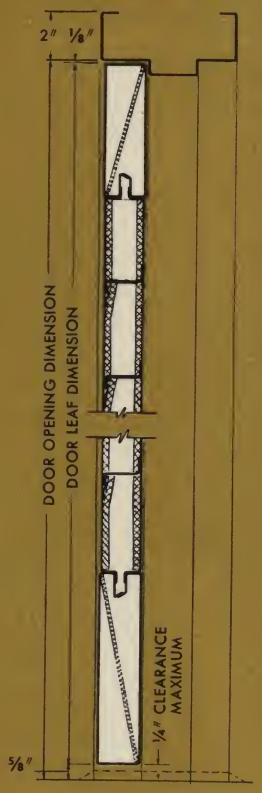
These sturdy doors pass 1½ or ¾ hour tests and carry Underwriters' B, C, D and E label. For door and frame construction details and suitable hardware, see specification below.

panel B label

1½-hour test

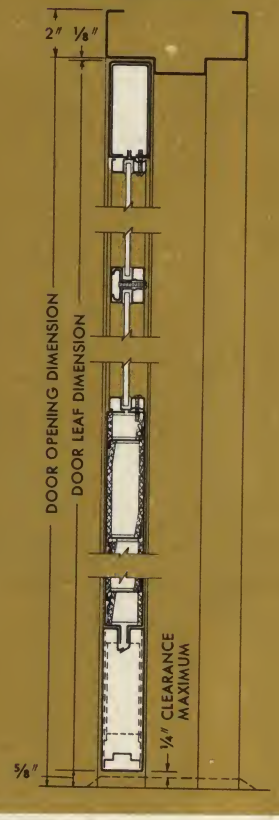
flush panel B label

1½-hour test



C and E label

¾-hour test



specifications (Underwriters' Label)

GENERAL: All doors for Underwriters' Class B, C, D or E openings, shall be Fenestra Underwriters' Label Hollow Metal (specify flush or panel) Type Doors manufactured by Fenestra Incorporated.

CONSTRUCTION: Stiles and rails shall be No. 16-gauge steel. Bottom rail shall be 8" x 1¾". Jamb stiles and top rail shall be 5½" x 1¾". Center rail (panel-type door) shall be 4" x 1¾". Stiles and rails shall be mitered at door corners, welded and ground smooth.

On the B & D Label Doors the stiles and rails shall be insulated with a layer of ⅛" asbestos millboard. Center rail of panel B & D opening doors shall have two layers of ¼" asbestos millboard insulation.

Flush Panel type: Door panel shall consist of two 18-gauge (.048) steel sheets separated by 18-gauge Z bar horizontal reinforcing. Z bars spaced approximately 14" o.c. The panel shall be insulated by two layers of ⅛" minimum asbestos millboard held in place by separators.

Panel type: Both upper and lower panels shall consist of two (three for B & D doors rated 250° F) No. 18-gauge (.048) metal sheets with ¼" asbestos insulation between them.

Door leaf shall be designed to present an identical appearance from both sides.

Vision lights allowed on "B", "C" and "E" label doors only. If required, not to exceed 100 sq. in. per door opening; one vision light, 10" 10", unglazed, shall be installed on single doors and on the active leaf of double doors.

If required, provision shall be made in the construction of doors for C and E class openings for the installation of half-panel glass

areas (glass and glazing by others). Individual glass lights shall not exceed 400 sq. in. exposed area.

Lock and hinge stiles shall be accurately mortised and reinforced to receive locks and hinges.

Inactive leaf of each pair of double doors shall be equipped with a pressed metal astragal formed of No. 16-gauge steel.

Swing door leaf dimensions shall allow for clearances of ⅛" at head and jambs, ¼" at meeting rail of double doors, and ⅝" at sill (to allow for ½" threshold with bottom clearance not exceeding ¼").

FRAMES: Frames shall be of No. 16-gauge rolled steel formed with integral stops and rebates.

Frames shall be shipped knocked down and shall be machined for attachment of hardware, including mortising, reinforcing, drilling and tapping for hinges. They shall be equipped with adjustable anchors welded to jamb members.

HARDWARE: Hardware shall be furnished by door manufacturer and shall be packed and shipped separately for attachment in the field.

Hinges shall be steel and shall be 5" x 4½" full mortised template type. Machine screws shall be used to attach hinges to doors and frames.

Flush panel doors shall have single point locks or latches of the key-in-knob type (2270, 2271, 2272 and 2273); having ½" throw, backset 2¾", U.S. Govt. Type 140.

Panel doors shall have single point locks or latches having ½" throw (1660 and 1660-C have ¾" throw), backset 2¾", U.S. Govt. Type 86.

All locks and latches shall have bronze fronts and strikes and wrought bronze knobs and escutcheons. Cylinder locks shall have a protected front.

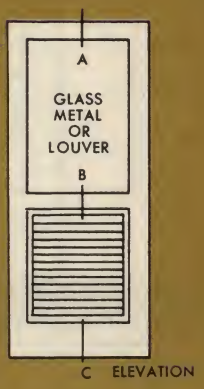
Top and bottom bolts shall be supplied for inactive leaf of double doors. Door checks, where required, shall be standard U.S. Govt. Type 3001.

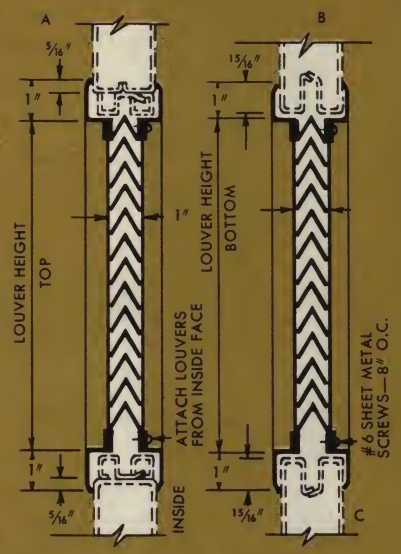
SHOP FINISH: Doors shall receive one shop coat of baked-on metallic primer before shipment. Frames shall be Bonderized and receive one shop coat of baked-on metallic primer before shipment.

ERECTION: Doors and frames shall be erected plumb and true, with all hardware left in proper working order. Erection shall be done by a competent door erector and in accordance with the door manufacturer's instructions.

Fen-Air (air conditioned)

Fenestra Fen-Air Doors are fitted with new fin-type full louvers at the bottom, top or in both panels. This allows complete flexibility to choose the right amount of free air circulation needed for the most efficient cooling and heating design. Glass lights or solid panels may be used as needed. Louvers stocked for four sizes of panel doors.





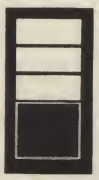
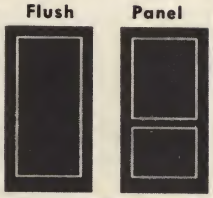
Fen-Air louvers are steel, fixed horizontal fin type, designed for appearance, maximum free air flow and privacy.

door type	door size	free air space: upper panel louver	free air space: lower panel louver	free air space: upper & lower panel louvers
2868	2'-8" x 6'-8"	420 sq. in.	375 sq. in.	795 sq. in.
2870	2'-8" x 7'-0"	480 sq. in.	375 sq. in.	855 sq. in.
3068	3'-0" x 6'-8"	500 sq. in.	450 sq. in.	950 sq. in.
3070	3'-0" x 7'-0"	570 sq. in.	450 sq. in.	1020 sq. in.

1¾" panel

selection table

Upper number designates Door Type. Lower numbers are Glass Size.

Door Opening Dimensions		both flush and panel doors					panel doors only	
						Flush Panel 		
Width	Height	G	G-2	G-3	G-4	M	G	G-6
single doors								
2'0"	6'8"					2068-M		
	7'0"					2070-M		
2'6"	6'8"	2668-G 19½" x 32¾"	2668-G2 19½" x 16"	2668-G3 19½" x 10⅜"		2668-M		
	7'0"	2670-G 19½" x 36¾"	2670-G2 19½" x 18"	2670-G3 19½" x 11¾"		2670-M		
2'8"	6'8"	2868-G 21½" x 32¾"	2868-G2 21½" x 16"	2868-G3 21½" x 10⅜"		2868-M		
	7'0"	2870-G 21½" x 36¾"	2870-G2 21½" x 18"	2870-G3 21½" x 11¾"		2870-M		
3'0"	6'8"	3068-G 25½" x 32¾"	3068-G2 25½" x 16"	3068-G3 25½" x 10⅜"		3068-M**		
	7'0"	3070-G 25½" x 36¾"	3070-G2 25½" x 18"	3070-G3 25½" x 11¾"		3070-M**		
3'4"	6'8"	3468-G 29½" x 32¾"			3468-G4 14⅜" x 16"	3468-M		
	7'0"	3470-G 29½" x 36¾"			3470-G4 14⅜" x 18"	3470-M**		
3'8"	6'8"	3868-G 33½" x 32¾"			3868-G4 16⅜" x 16"	3868-M		
	7'0"	3870-G 33½" x 36¾"			3870-G4 16⅜" x 18"	3870-M**		
4'0"	7'0"	4070-G 37½" x 36¾"			4070-G4 18⅜" x 18"	4070-M		
	8'0"						4080-G 37½" x 48¾"	4080-G6 18⅜" x 15¾"
5'0"	10'0"							
double doors								
5'0"	6'8"	5068-G 19½" x 32¾"	5068-G2 19½" x 16"	5068-G3 19½" x 10⅜"		5068-M		
	7'0"	5070-G 19½" x 36¾"	5070-G2 19½" x 18"	5070-G3 19½" x 11¾"		5070-M		
5'4"	6'8"	5468-G 21½" x 32¾"	5468-G2 21½" x 16"	5468-G3 21½" x 10⅜"		5468-M		
	7'0"	5470-G 21½" x 36¾"	5470-G2 21½" x 18"	5470-G3 21½" x 11¾"		5470-M		
6'0"	6'8"	6068-G 25½" x 32¾"	6068-G2 25½" x 16"	6068-G3 25½" x 10⅜"		6068-M**		
	7'0"	6070-G 25½" x 36¾"	6070-G2 25½" x 18"	6070-G3 25½" x 11¾"		6070-M**		
6'8"	6'8"	6868-G 29½" x 32¾"			6868-G4 14⅜" x 16"	6868-M		
	7'0"	6870-G 29½" x 36¾"			6870-G4 14⅜" x 18"	6870-M		
7'4"	6'8"	7468-G 33½" x 32¾"			7468-G4 16⅜" x 16"	7468-M		
	7'0"	7470-G 33½" x 36¾"			7470-G4 16⅜" x 18"	7470-M		
8'0"	7'0"	8070-G 37½" x 36¾"			8070-G4 18⅜" x 18"	8070-M		
	8'0"						8080-G 37½" x 48¾"	8080-G6 18⅜" x 15¾"
10'0"	10'0"							

**Available also in Underwriters' Doors.

When ordering doors, use prefix in nomenclatures as follows: For Flush Doors use prefix (e.g., F-3470-M); for Panel Doors use prefix P (e.g., P-2868-G2). For Underwriters' use suffix UW. Entrance Doors use suffix LG.

entrance doors

see page 9 for information on how to determine hand and swing of doors.

G-8	M	LG	Door Opening Dimensions Height	Width
			6'8"	2'0"
			7'0"	
			6'8"	2'6"
			7'0"	
			6'8"	2'8"
			7'0"	
			6'8"	3'0"
		3070-LG 25½" x 69¼"	7'0"	
			6'8"	3'4"
			7'0"	
			6'8"	3'8"
		3870-LG 33½" x 69¼"	7'0"	
			7'0"	4'0"
	4080-M		8'0"	
50100-G8 24⅜" x 15¾"			10'0"	5'0"
			6'8"	5'0"
			7'0"	
			6'8"	5'4"
			7'0"	
			6'8"	6'0"
		6070-LG 25½" x 69¼"	7'0"	
			6'8"	6'8"
			7'0"	
			6'8"	7'4"
		7470-LG 33½" x 69¼"	7'0"	
			7'0"	8'0"
	8080-M		8'0"	
100100-G8 24⅜" x 15¾"			10'0"	10'0"

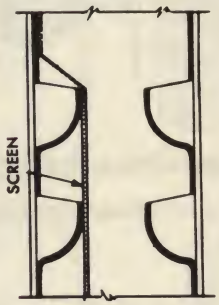
louvers

surface applied

for field or warehouse application.

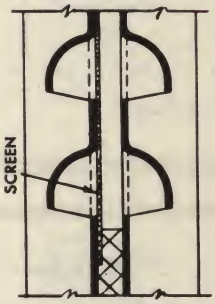
pierced

furnished from factory only.



Flush Type

vertical sections thru pierced type louvers.



Panel Type

door opening width	surface-applied		pierced type—free air space		
	part no.	free air space	A	B or C	D
2'0"	1917-12	34 sq. in.	27 sq. in.	54 sq. in.	108 sq. in.
2'6"	1917-12	34 sq. in.	34 sq. in.	68 sq. in.	136 sq. in.
2'8" & 3'0"	1917-19	55 sq. in.	55 sq. in.	110 sq. in.	220 sq. in.
3'4"	1917-27	82.5 sq. in.	69 sq. in.	138 sq. in.	276 sq. in.
3'8" & 4'0"	1917-27	82.5 sq. in.	82.5 sq. in.	165 sq. in.	330 sq. in.

PIERCED TYPE DESIGNATION

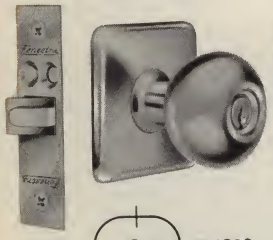
NOTE: "A" and "B" available on both Flush Panel and Panel doors. "C" and "D" available on Flush Panel doors only.

1¾" panel hardware

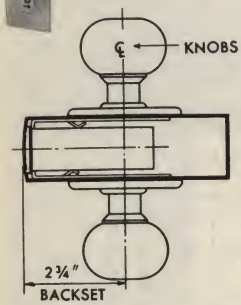
NOTE: The hardware shown on these pages and on pages 10 through 15, with the exception of the cylindrical locks on page 10 are applicable to 1¾" panel doors and 1¾" flush panel doors.

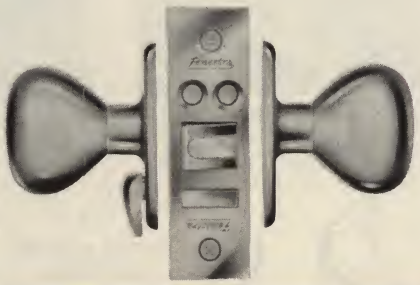
key-in-knob locks

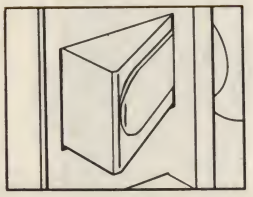
Standard for Fenestra flush panel doors. Also available for panel doors. A modern series with dead-bolt security, all conventional functions and ease of installation. 30% fewer parts than conventional mortise locks. Self-lubricating. Oilite bearings. All have Underwriters' B label approved. US Govt. Series 140. *Finishes:* US 10 or 28. Additional functions and finishes available on special order. Fenestra master keying, if desired.



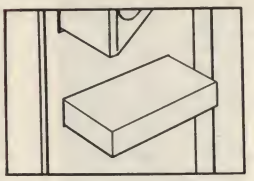
Fenestra Madison design: Smooth surfaces, square heavy-wrought escutcheons, with softly rounded beveled edges and graceful, cold-forged knobs. An attractive design, ideal where complete simplicity is desired.



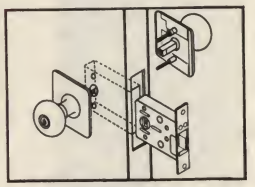




Latch with nylon insert: tough, self-lubricating nylon insert in the latch bolt lets the door latch within a fraction of the closing force required by conventional bolts. And nylon's superiority increases with use. Closer may be set for minimum speeds to provide silent closing with no sacrifice of latching efficiency. No metal-to-metal contact, no marring of bolt or strike—the nylon cosert projects beyond the bolt itself.



The Fenestra dead bolt: A secure dead bolt, placed horizontally to provide maximum protection. No other key-in-knob lock has this dead bolt.

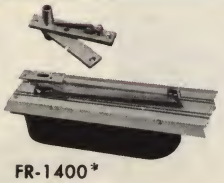


Fast 3-step installation: Factory assembled in three self-aligning parts. Nylon inserts in through bolt threads prevent loosening. Knobs are securely anchored to escutcheons by retaining rings. Avoids expense and inconvenience of constant adjustments.

checking floor type

Double acting: Center-pivoted. Closing and hydraulic checking mechanism for doors swinging both ways. Spring power and checking resistance have four separate adjusting controls. Typical use: on doors between kitchen and dining areas, in corridors, operating rooms. For interior doors not over 3'-4" wide. Eliminates use of hinges and surface door closers. US Govt. Type 3510-I. *Finishes:* US 10, 28* not handed. Specify when ordering: Part No., finish. For FR 1400*, give opening width and state if for pair of doors.

Single acting: Offset-pivoted. Closing and hydraulic checking mechanism for single swing doors. Spring power and checking resistance have two adjusting controls. Typical use: on doors in entrances and exits; vestibules; corridors of schools, hospitals and commercial buildings. For interior doors up to 4'-0" wide and exterior doors up to 3'-4" wide. Eliminates use of hinges and surface door closers. US Govt. Type 3520A-III. *Finishes:* US 10, 28*. Specify when ordering: Part No., finish, hand (right or left). For FR 1450*, give opening width, state if for pair of doors.



FR-1400*

FR-1401*

FR-1450*

FR-1451*

Spring pivot hinge FR1455 (double-acting) Spring-powered closing mechanism for doors swinging both ways on center pivots. Checking control by adjusting spring tension. For double-acting interior doors up to 3'-0" wide. Plated steel. *Finishes:* US 10, 26D†. Not handed. US Govt. No. 2334-Mod.

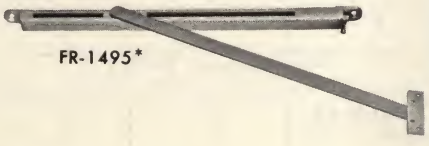
FR-1455*

Overhead door holder and shock absorber

FR 1495*—For single-acting doors hung on Fenestra full-mortise or half-mortise hinges. Has optional hold open at 90° position set by turn of control handle. Encased shock absorber cushions outward swing. Surface applied with six bolts. Bronze. *Finishes:* US 10, 26D. US Govt. Type 1161. Specify when ordering. Part No., finish, door width, hand (right or left).

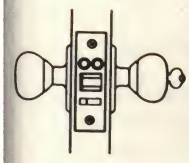
FR 1498*—Same as FR 1495*, except for door hung on Fenestra checking door-type door closers FR 1450* or FR 1451* (offset pivoted). US Govt. Type 1161A. Specify when ordering: Part No., finish, door width, hand (right or left).

NOTE: If holder FR 1495* is used on doors with closers 1462, 1463 or 1464 on brackets, specify closer with inverted arm and corner bracket.



FR-1495*

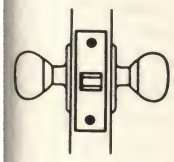
* Available on special order.



office

2270

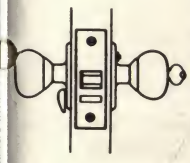
Outside by key, both sides by knobs except when outside knob is locked by stop in front. Guarded latch bolt.
US Govt. No. 140E.



passage latch

2271

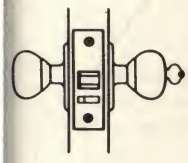
From both sides by knobs.
US Govt. No. 140N.



general-purpose

2272

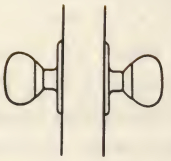
Dead bolt from outside by key, from inside by turn lever. Latch bolt from both sides by knobs.
US Govt. No. 140B



classroom

2273

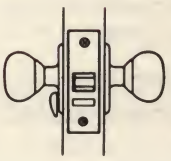
Outside by knob except when locked from outside by key. Inside by knob at all times. Guarded latch bolt.
US Govt. No. 140J.



dummy trim

2275 *

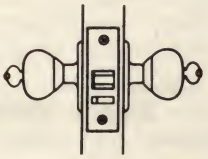
Matching trim for inactive leaf of pairs of doors. May be used as pulls. No mechanical operation.



bathroom

2271-L*

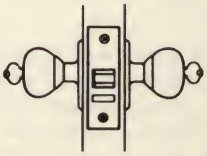
Latch bolt from both sides by knobs. Dead bolt from outside by emergency key; from inside by turn lever.
US Govt. No. 140L.



key-controlled access

2270-G*

From outside by key, from inside by knob. From outside by knob, except when locked from inside by key. Guarded latch bolt.
US Govt. No. 140G.



double-cylinder utility

2272-C*

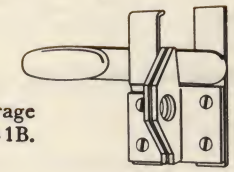
Dead bolt from both sides by key. Latch bolt from both sides by knobs.
US Govt. No. 140C.

*Available on special order

tee latch

1648

Simple latching device used generally on doors in storage sheds, industrial buildings, etc. *Finish:* Japan black, US 1B.



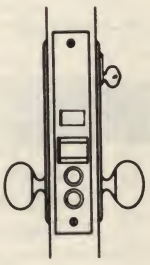
Underwriters' lock

1660

Antifriction latch bolts with ¾" throw. One cylinder. Guarded latch. Latch bolt both sides by knobs. Latch bolt by key when outside knob is locked by stops in face. US Govt. No. 87E.

1660-C

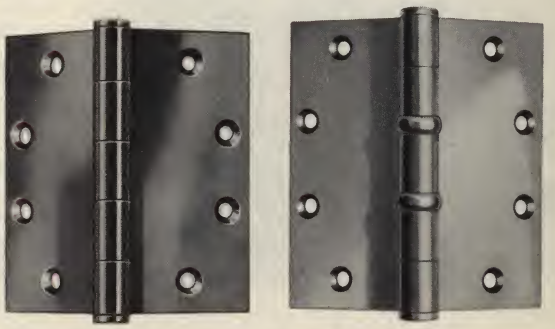
Same as 1660 except no cylinder or stop works. Latch by knobs both sides at all times. US Govt. No. 87N.



hinges

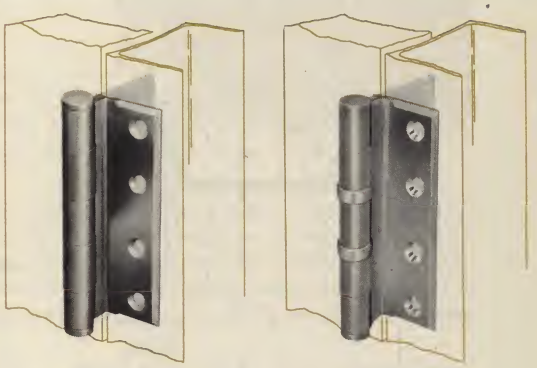
full mortise

For Fenestra doors hung in rolled or pressed metal Fenestra frames. Both frame and door leaves mortise applied. 5" x 4½"—regular weight—.146 ga. Loose pin.



half mortise

For Fenestra doors hung in structural frames. Door leaf mortise applied. Frame surface applied. 5"—regular weight—.146 ga. Loose pin.



	part no.	ball bearing	material	finish	US Govt. No.
full mortise	1643	no	steel	prime-painted	T2127
	1643A	yes	steel	prime-painted	T2107
	1643B	yes	solid bronze	US 10, 26D†	T2106
half mortise	S1643	no	steel	prime-painted	T2145-Mod.
	S1643A	yes	steel	prime-painted	T2145
	S1643B	yes	solid bronze	US 10, 26D†	T2142

†US 10—dull bronze; US 26D—dull chromium

All Fenestra hinges are made to US Govt. standard template.

Plain-bearing hinges 1643 and S1643 should generally be applied on doors having low-frequency usage. Ball-bearing hinges should be applied generally on doors with higher frequency usage, as well as doors with closers 1462, 1463 or 1464.

When hinges are required with non-removable pins, add NRP* to part number (i.e. 1643A-NRP*).

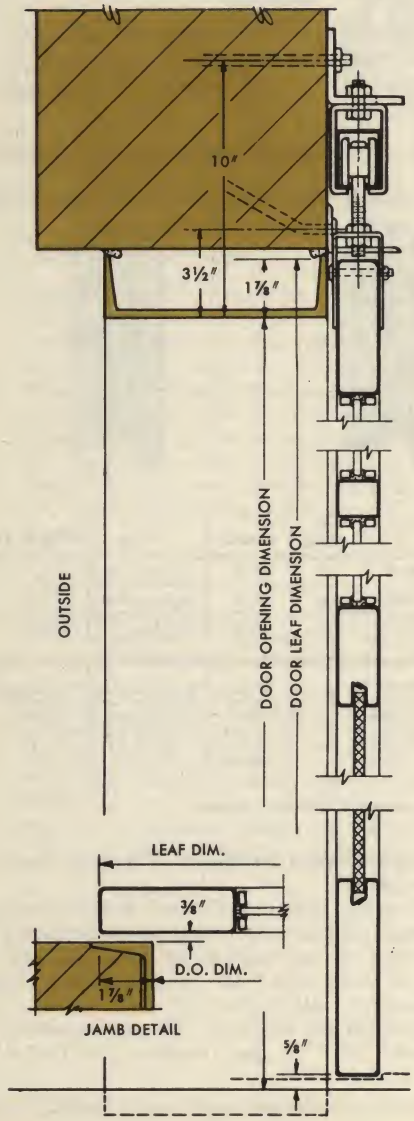
1¾" panel

panel slide doors

Hollow metal stiles and rails made from heavy 16-gauge steel. Bottom rails 8" x 1¾"; jamb stiles and top rails, 5½" x 1¾"; center rails, 4" x 1¾". Stiles and rails mitered at corners, welded and ground smooth. Muntins and snap-on moldings formed from 18-gauge steel and accommodate ¼" glass (glass not supplied). Bottom panels composed of two 18-gauge steel plates joined by insulation for a total thickness of ⅜".

Frames not supplied, but construction drawings available. Complete line of hardware as shown below. Astragal supplied on double doors.

handing information

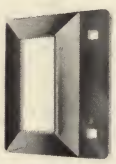


selection table

Single Doors				Double Doors		
Door Type	Opening Dim. Width	Height	Glass Size	Door Type	Opening Dim. Width	Height
3070-G2-SL	2'8"	6'10"	25½" x 18"	6070-G2-SL	5'8"	6'10"
4080-G6-SL	3'8"	7'10"	18⅜" x 15¾"	8080-G6-SL	7'8"	7'10"
50100-G8-SL	4'8"	9'10"	24⅜" x 15¾"	100100-G8-SL	9'8"	9'10"

hardware (solid steel, black finish)

door pull



1265

Flush type.

Furnished two per door leaf, attached both sides.

trolley

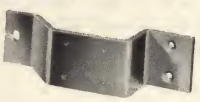
1617

Roller-bearing construction.

hasp and staple

1639 For both single and double doors. Padlock not supplied

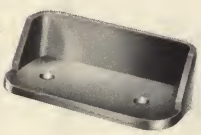
stop



1642

Machined to receive hasp and staple. For single doors only. Stop 1796 is used at center of double doors.

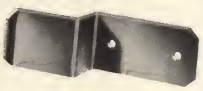
guide



1649

Attaches to floor at jamb of single door opening and at center of double doors (inside and outside).

binder



1267

Holds door close to wall in open position. For single and double doors.

specifications (swing and slide)

GENERAL: All swinging or sliding steel doors, single and double, shall be Fenestra Hollow Metal Swing or Slide Doors, as manufactured by Fenestra Incorporated.

CONSTRUCTION: Stiles and rails shall be No. 16-gauge steel. Bottom rail shall be 8″ x 1¾″. Jamb stiles and top rail shall be 5½″ x 1¾″. Center rail (panel doors only) shall be 4″ x 1¾″. Stiles and rails shall be mitered at door corners, welded and ground smooth. The design of the door leaf shall be such as to present an identical appearance from either side.

Panel type: Lower door panel shall be fitted with two No. 18-gauge steel plates, with a layer of insulation between them, to make a total thickness of ⅜″, and shall be locked to door stiles and rails at assembly. Upper metal door panel (where used) shall be fitted with tow 18-gauge steel plates, with a layer of insulation between them, to make a total thickness of ⅜″; it shall be held in place by continuous glazing moldings formed from No. 18-gauge steel.

Flush type: Metal door panel shall be fitted with two No. 18-gauge steel sheets separated by No. 18-gauge horizontal reinforcing Z bars spaced approximately 14″ o.c. The panel sheets shall be sprayed on the inside with an approved sound-deadening material to a thickness of approximately $\frac{1}{16}$″.

Panel and Flush type: Upper portion shall be arranged to receive: (a) one large light of ¼″ glass; or (b) a division into two or more glass lights (in accordance with door manufacturer's standard types) by the use of No. 18-gauge pressed steel muntins. Glass in upper door panel shall be held by continuous glazing moldings formed from No. 18-gauge steel.

Lock and hinge stiles shall be accurately mortised and reinforced to receive locks and hinges.

Inactive leaf of each pair of double doors shall be equipped with a pressed metal astragal formed from No. 16-gauge steel.

Swing door leaf dimensions shall allow for clearances of ⅛″ at head and jambs, ¼″ at meeting rail of double doors and ⅝″ at sill (to allow for ½″ threshold).

Slide door leaf dimensions shall allow for lapping the opening 1⅞″ at head and jambs, with clearance of ⅝″ at sill.

HARDWARE—For Swing Doors: All door hardware shall be furnished by door manufacturer.

Hinges shall be 5″ x 4½″ full mortise, template type. They shall be supplied 3 per leaf for doors up to and including 7′-0″ high and 4 per leaf for 8′ and 10′ high doors. Ball-bearing hinges shall be furnished for doors having door closers or subject to frequent use. Where frames are channel iron or other structural type, half-mortise hinges shall be furnished. Machine screws shall be used to attach hinges to doors and frames.

Mortise locks shall be escutcheon type with 1⅛″ diameter cylinder and of standard Fenestra design and special heavy construction for steel doors. They shall have a 2¾″ backset and heavy bronze fronts 8″ x 1¼″, Government standard strikes, bronze Government type 201 knobs (T-lever handle optional) and wrought-bronze escutcheons. Finish shall be bronze US No. 10 or anodized aluminum US No. 28. Cylinder locks shall have a protected front.

Key-in-knob type locks shall provide all conventional functions in one standardized machining and shall be self-lubricating with Oilite bearings, and shall carry Underwriters' B Label. Finishes shall be bronze US No. 10 or anodized aluminum US No. 28, U. S. Govt. Series 140.

Tee latches, where required, shall be of heavy steel construction with black finish.

Top and bottom bolts shall be supplied for inactive leaf of all double doors. Door checks, where required, shall be Government standard type 3001 in sizes as required.

For slide doors: All door hardware shall be furnished by door manufacturer, packaged and shipped separately for attachment in the field.

Hardware shall include all necessary track, track brackets, trolleys, hangers, hasp and staple, hand pulls, floor guides, door stops, etc. (General contractor shall provide for installation of ⅜″ bolts and nuts, as indicated on door manufacturer's diagrams, for attachment of track equipment.)

FRAMES: (For swing doors only, except 5′ x 10′ door leaves; not furnished for sliding doors.) Frames shall be No. 16-gauge rolled steel, formed with integral stops and rebates. Frames shall be 5½″ wide, and 2″ on inside and outside face. Jambs shall be constructed to set on finished floor. Sill anchors shall be furnished to set on finished floor or 1″ below.

Frames shall be shipped knocked down and shall be machined for attachment of hardware, including mortising, reinforcing, drilling and tapping for hinges and strike plate. Jamb anchors shall be included.

LOUVERS:(if required). Louvered panels (surface or pierced type—specify which) shall be provided. A 14-18 bronze mesh fly screen shall be included. Louvers shall supply free air space as follows: 2′-0″ door, 34 sq. in. (surface), or 27 sq. in. (pierced); 2′-6″ door, 34 sq. in.; 2′-8″ and 3′-0″ doors, 55 sq. in. (115 sq. in. also available on panel door only); 3′-4″ door, 82.5 sq. in. (surface) or 69 sq. in. (pierced); 3′-8″ and 4′-0″ doors, 82.5 sq. in.

FEN-AIR LOUVERED DOORS (Panel doors only)—Fen-Air Louvered Doors shall be equipped with full louvers in (lower, upper or both—specify) panel openings. Louvers shall be inverted-V-shape fin-type, 1″ thick overall with pressed metal frames lapping the full panel openings of door. Louver panels shall provide free air space as follows:

2′-8″ x 6′-8″ doors, 420 sq. in. (upper), 375 sq. in. (lower);
2′-8″ x 7′-0″ doors, 480 sq. in. (upper), 375 sq. in. (lower);
3′-0″ x 6′-8″ doors, 500 sq. in. (upper), 450 sq. in. (lower);
3′-0″ x 7′-0″ doors, 570 sq. in. (upper), 450 sq. in. (lower).

VISION LIGHTS: (if required). One vision light 10″ x 10″, unglazed shall be installed in upper metal panel.

SHOP FINISH: All doors shall receive one shop coat of baked-on metallic primer before shipment. Frames shall be bonderized and receive one shop coat of baked-on metallic primer before shipment.

ERECTION: Doors and frames shall be erected plumb and true, with all hardware left in proper working order. Erection shall be done by a competent door erector and in accordance with door manufacturer's instructions.

GLASS AND GLAZING: (To be inserted in the general "Glazing" specifications.) Glass shall be ¼″ thick, bed puttied and held in place by continuous glazing moldings furnished by the door contractor.

hollow metal door units

Fenestra
INCORPORATED
BUILDING PRODUCTS

Fenestra reserves the right to change design and/or details of its products without notice. All details, drawings and dimensions are accurate for estimating purposes at the time of publication. Specific information for job details and drawings should be obtained from Fenestra district offices.

For your further design needs, we suggest you refer to the following catalogs on other related Fenestra building products in Sweet's Architectural File:

Aluminum and Steel Windows	**Section 17a**
Curtain Wall Systems	**Section 3a**
Floor and Roof Panel Systems	**Section 2c**
Wall Panels	**Section 3b**

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*Chicago (Melrose Park)	2000 North Ruby Street
Charlotte, N. C.	314 West Trade Street
*Cincinnati (29)	1756 Tennessee Avenue
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*Dallas (35)	8300 Sovereign Row
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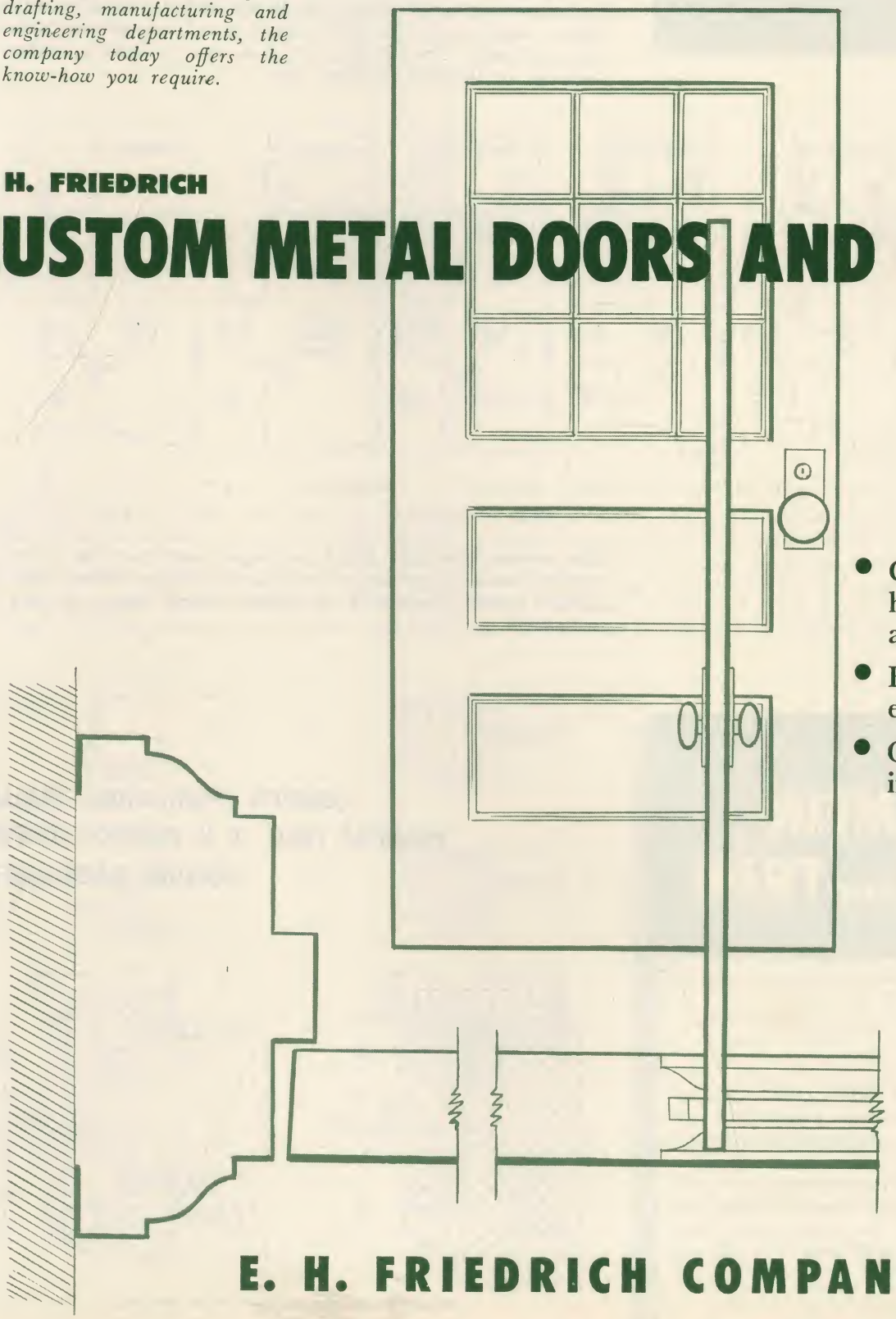
DO-1 10M 1-60

In an industry noted for its competitive nature, E. H. Friedrich Company has grown soundly and continually since 1890. Since 1916, we have engineered and manufactured custom metal doors, frames and other sheet metal products to the increasingly rigid specifications of architects. With complete drafting, manufacturing and engineering departments, the company today offers the know-how you require.

E. H. FRIEDRICH

CUSTOM METAL DOORS AND FRAMES



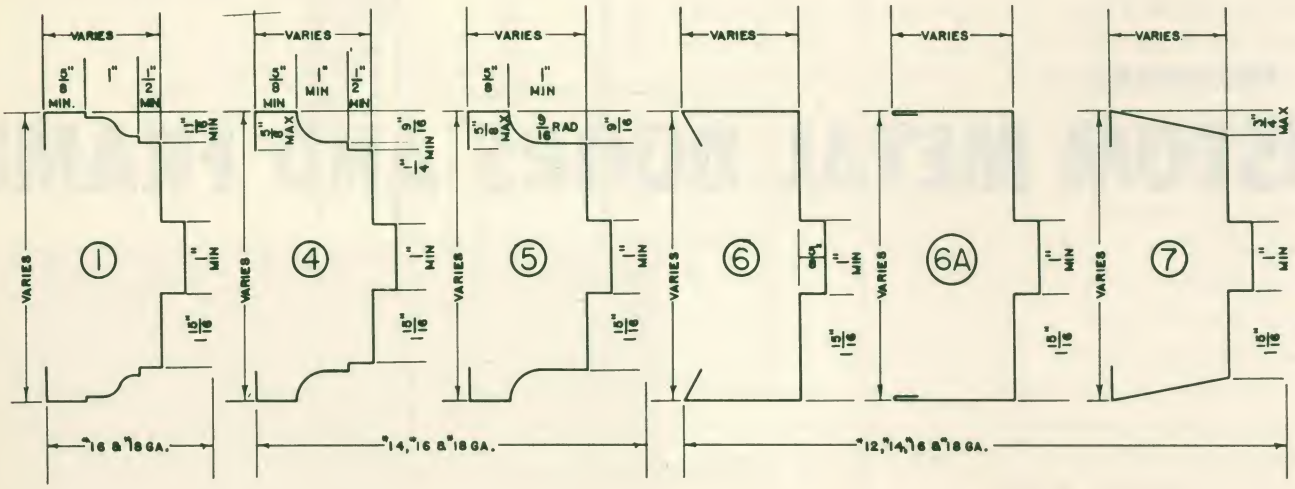
- Complete hollow-metal and Kalamein line
- Experienced engineering service
- Own-truck delivery in the northeast

E. H. FRIEDRICH COMPANY

HOLYOKE, MASSACHUSETTS

HOLLOW METAL FRAMES

Hollow metal frames are fabricated from prime quality cold rolled steel sheets in the gauges indicated below. All frames are made with *fully mitered and welded joints* between the jambs and head members. The surface of the joint is ground, filled and ground again to achieve an invisible joint between the members. As standard procedure, all frames are furnished with drilled and tapped reinforcings for mortised hardware, reinforcing plates for surface hardware, dust or plaster boxes behind all tapped reinforcings, three adjustable corrugated anchors per jamb, temporary steel angle spreaders at the bottom of the frame opening, and one shop coat of rust-inhibitive metal primer. Hollow metal frames can be furnished with Underwriters' labels when required. Types 6, 6A, and 7 are also available in either 16-gauge or 14-gauge stainless steel.

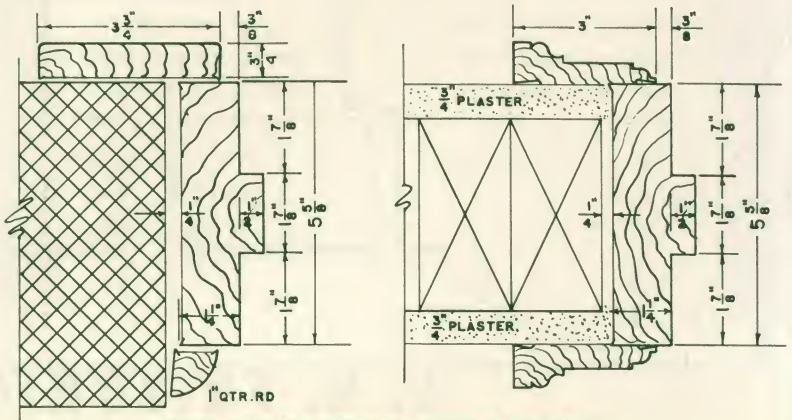


The sections illustrated above are representative of the more common forms of profiles currently in use. Other sections, that combine certain features of the profiles shown above, are also available.

KALAMEIN FRAMES AND TRIM

COMPLETE SPECIFICATIONS AVAILABLE PROMPTLY FROM E. H. FRIEDRICH COMPANY HOLYOKE, MASSACHUSETTS

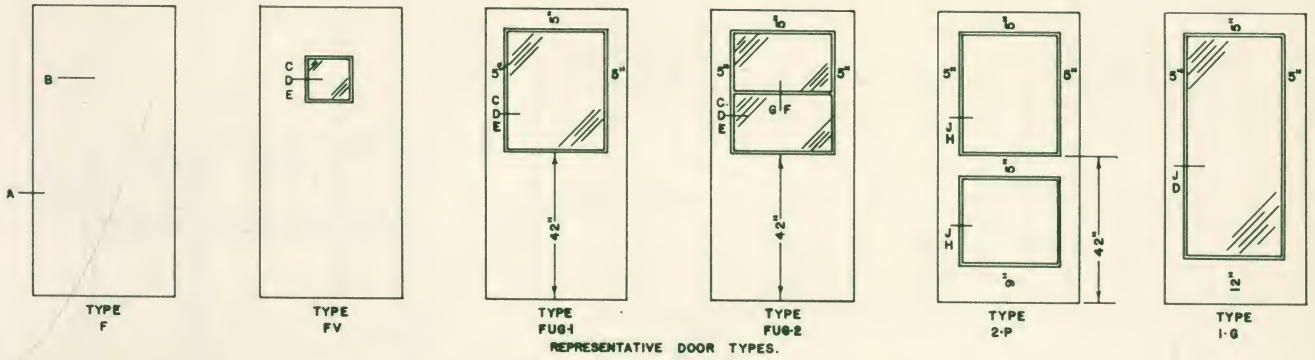
Kalamein frames and trim have cores of northeastern white pine covered with 26-gauge galvanized iron that has been treated to present a proper bond for paint. The steel covering is drawn on to the wood core through steel dies. We recommend the application of drilled and tapped steel plates on the back of the jamb behind the hinge mortises to insure a permanent job of hinge mounting.



STANDARD JAMBS, CASINGS, AND MOULDING AVAILABLE.

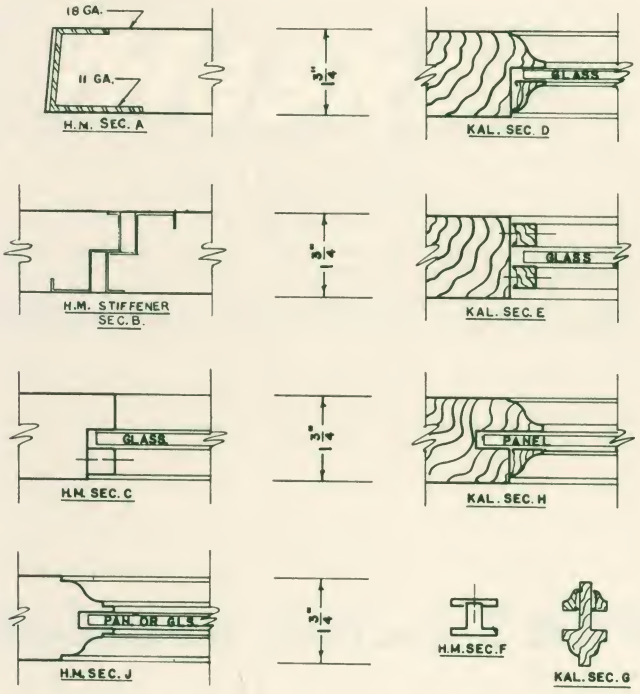
HOLLOW METAL AND KALAMEIN DOORS

As standard construction, each face of our flush hollow metal door consists of a *full sheet* of 18-gauge cold rolled prime steel, without seams or joints, and with continuous "hat" shaped stiffeners in the core spot-welded to both faces, thereby both reinforcing and interconnecting each face. The spaces between the stiffeners are filled with mineral wool felt batts. Continuous 11-gauge steel channel members are spot-welded to one face near each edge of the door to act as reinforcing for mortised hardware and to stiffen the edges of the door. These doors can also be furnished with their faces constructed of either 16-gauge or 14-gauge steel as an extra item.* The surfaces of all doors are filled with a mineral filler compound, sanded smooth and then given one coat of rust-inhibitive primer.



REPRESENTATIVE DOOR TYPES.

Cores of Kalamein doors are made of northeastern white pine, free from loose knots and pitch pockets. Flush Kalamein doors are covered with 24-gauge galvanized steel that has been treated to insure a good bond for painting. Each face is covered with a full sheet glued to the core under pressure and showing no seams or joints. Paneled Kalamein doors are covered with 26-gauge galvanized steel that has been treated to insure a proper bond for painting. This steel covering is drawn on over the cores of the stiles and rails through steel dies of the proper contour. All doors receive one coat of rust-inhibitive primer.*



**Both hollow metal and kalamein doors can be furnished with Underwriters' labels when required.*

REPRESENTATIVE INSTALLATIONS – 1959

Tri-County Osteopathic Hospital
Kittery, Maine
Maurice E. Witmer, *Architect*

Claremont General Hospital
Claremont, New Hampshire
James H. Ritchie Associates, *Architects*

Windsor High School
Windsor, Vermont
Helmer & Cole, *Architects*

East Longmeadow High School
East Longmeadow, Massachusetts
Alderman & MacNeish, *Architects*

Modern Language Center
Harvard University
The Architects Collaborative, *Architects*

St. Francis Hospital
Hartford, Connecticut
York & Sawyer, *Architects*

Junior High School
West Barrington, Rhode Island
Harkness & Geddes, *Architects*

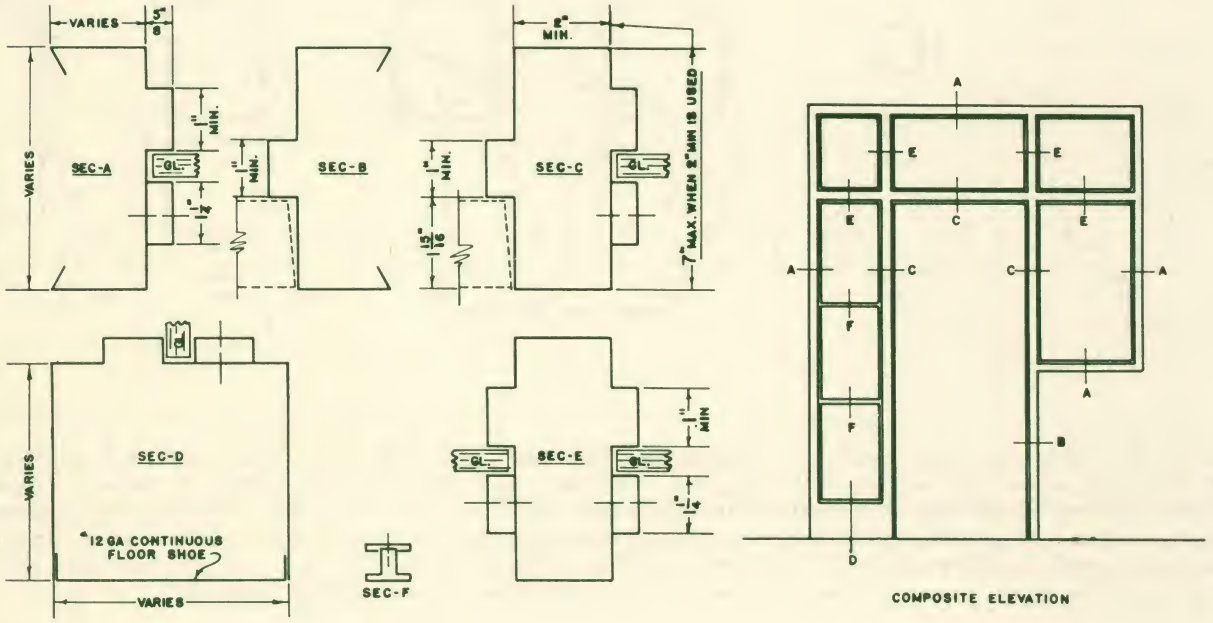
Catholic Central High School
Gloversville, New York
Ryder & Link, *Architects*

Longview State Hospital Addition
Cincinnati, Ohio
Glaser & Myers, *Architects*

Wisconsin State College Dormitory
Madison, Wisconsin
Schubert, Sorensen & Associates, *Architects*

SPECIAL FRAMES AND SMOKE SCREENS

The elevation below is hypothetical in an attempt to present a composite picture that embodies all of the possible sections to be encountered when using a basic jamb section similar to our type 6. Please note that the width of the jamb at section B is maintained on the mullion at section C. Variations in the number and arrangement of mullions and muntins can be used as desired. These frames are made of prime quality cold rolled steel and are available in either 16, 14, or 12-gauge. For exterior frames, we recommend using 12-gauge galvannealed steel, which is a regular weight galvanized sheet that has been processed to give a surface that insures a good, lasting paint bond.



TIN CLAD DOORS AND HARDWARE

Three-ply and two-ply tin clad doors of either the gravity slide, level slide, or swing type are available with Underwriters' labels. Complete hardware for sliding singles and pairs, or swinging singles and pairs are available in either labelled or non-labelled sets.

E. H. FRIEDRICH COMPANY **HOLYOKE, MASSACHUSETTS**

established
1879

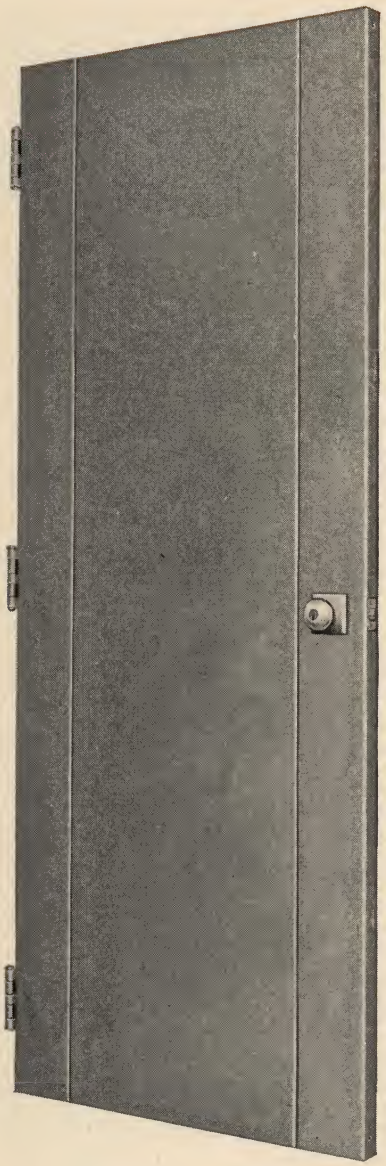
Mesker
BROTHERS

hollow metal doors

81st
anniversary

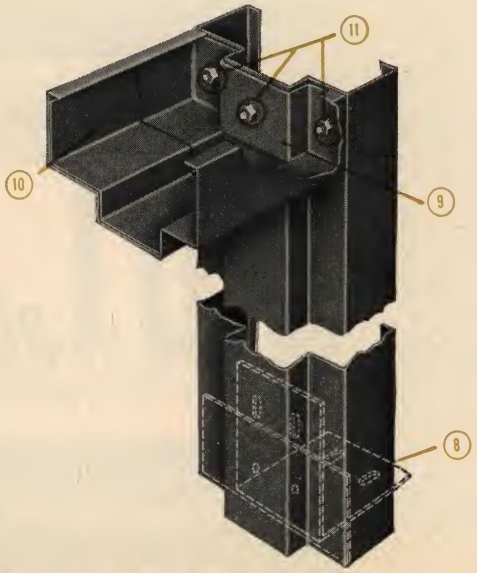
1960

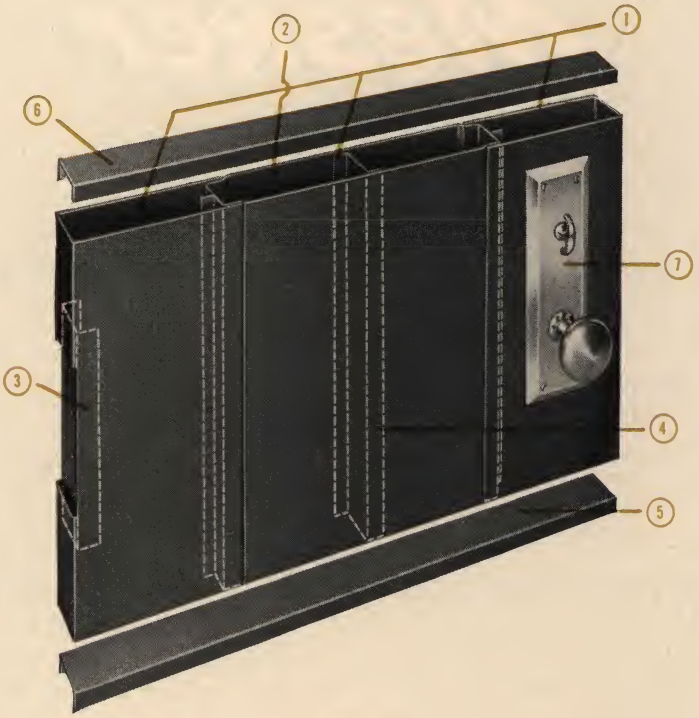
MESKER DOORS • 1¾" x 16 ga.



THESE 12 OUTSTANDING FEATURES MAKE EVERY MESKER DOOR AND FRAME OUTSTANDING!

1. **Tri-box-girder Construction!** The center box panel, running continuous from top to bottom is an integral part of the structural design. Welded every 2" to each box rail, it contributes extra stiffness to the whole door. Panels, stiles, and rails all 16 gauge.
2. **Full 2" Fiberglass Insulation!** Compressed into a 1⅝" space, it becomes non-settling and is vermin proof, rot proof, and fire proof.
3. **⅛" Thick Channel Shaped Hinge Reinforcement!** Solidly welded to the door, it keeps hinges from "tearing" at the "skin" of heavier doors. Designed for universal application, right or left, swing in or out.
4. **Vertical Z Stiffeners Spot Welded Every 4" O.C.** and spaced not over 8" O.C. running continuously from top to bottom.
5. **Heavy Bottom Channel,** spot welded every 2" O.C. on both sides and inverted to permit door to be trimmed at the bottom in an emergency.
6. **Heavy Top Channel,** spot welded every 2" and inverted to form a perfect rain shed for open out exterior doors.
7. **Extra Heavy Lock Reinforcing** built right into the door.
8. **Heavy Adjustable Floor Anchors,** with anti-rattle lock-nut feature, can be set at rough or finished floor levels. Will never work loose.
9. **⅛" Joiner Plate Welded to Frame Head** absolutely prevents twisting of the joint between head and jamb.
10. **Full Reinforcement at Head** for closer arm, or soffit bracket.
11. **Anti-vibration Lock-nuts and Bolts** will never work loose or rattle even after years of service.
12. **Fully Enclosed Dust Box** (not illustrated) to keep lock strike free from mortar.





Series 2000 FLUSH DESIGN 1¾" x 16 ga.

Available in 6 designs shown, and in the standard opening sizes shown opposite each design. Design G2 may be had with 4 lights of glass, and design M-FLB may be had with 2 louvers, or one top louver only. Standard vision panel in design MV is approximately 10"x10" to receive ¼" glass. (Refer to Home Office for Underwriters' Labeled Doors).

Standard Size Door Opening

FP-2068-M
FP-2668-M
FP-2868-M
FP-3068-M
FP-3468-M
FP-2070-M
FP-2670-M
FP-2870-M
FP-3070-M
FP-3470-M
FP-3870-M
FP-4070-M

Design M

Standard Size Door Opening

FP-2668-G
FP-2868-G
FP-3068-G
FP-3468-G
FP-2670-G
FP-2870-G
FP-3070-G
FP-3470-G
FP-3870-G
FP-4070-G

Design G

Standard Size Door Opening

FP-2668-G2
FP-2868-G2
FP-3068-G2
FP-2670-G2
FP-2870-G2
FP-3070-G2

Design G2

Standard Size Door Opening

FP-2668-M-FLB
FP-2868-M-FLB
FP-3068-M-FLB
FP-2670-M-FLB
FP-2870-M-FLB
FP-3070-M-FLB

Design M-FLB
(Fixed Louvre)

Standard Size Door Opening

FP-2068-MV
FP-2668-MV
FP-2868-MV
FP-3068-MV
FP-3468-MV
FP-2070-MV
FP-2670-MV
FP-2870-MV
FP-3070-MV
FP-3470-MV
FP-3870-MV
FP-4070-MV

Design MV

Standard Size Door Opening

FP-3070-LG
FP-3470-LG
FP-3870-LG

Design LG

Series 3000 SLAB DESIGN 1¾" x 16 ga.

Available in the 6 designs shown and in the standard opening sizes shown opposite each design. Design G2 may be had with 4 lights of glass, and design M-FLB may be had with 2 louvers, or one top louver only. Standard vision panel in design MV is approximately 10" x 10" to receive ¼" glass. (Refer to Home Office for Underwriters' Labeled Doors).

Standard Size Door Opening

F-2068-M
F-2668-M
F-2868-M
F-3068-M
F-3468-M
F-2070-M
F-2670-M
F-2870-M
F-3070-M
F-3470-M
F-3870-M
F-4070-M

Design M

Standard Size Door Opening

F-2668-G
F-2868-G
F-3068-G
F-3468-G
F-2670-G
F-2870-G
F-3070-G
F-3470-G
F-3870-G
F-4070-G

Design G

Standard Size Door Opening

F-2668-G2
F-2868-G2
F-3068-G2
F-2670-G2
F-2870-G2
F-3070-G2

Design G2

Standard Size Door Opening

F-2668-M-FLB
F-2868-M-FLB
F-3068-M-FLB
F-2670-M-FLB
F-2870-M-FLB
F-3070-M-FLB

Design M-FLB
(Fixed Louvre)

Standard Size Door Opening

F-2068-MV
F-2668-MV
F-2868-MV
F-3068-MV
F-3468-MV
F-2070-MV
F-2670-MV
F-2870-MV
F-3070-MV
F-3470-MV
F-3870-MV
F-4070-MV

Design MV

Standard Size Door Opening

F-3070-LG
F-3470-LG
F-3870-LG

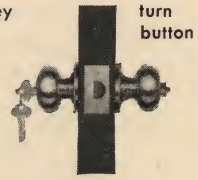
Design LG

CYLINDRICAL LOCKSETS

Standard Finish U.S. 10 Dull Bronze
2¾" Backset

MORTISED LOCKSETS

Standard Finish U.S. 10 Dull Bronze
1¼" x 8" Front • 2¾" Backset



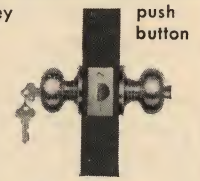
Exterior Lock
D101
U.S. 161-A

By key from outside when outer knob is locked by turn button in inner knob. Inner knob is always free.

*Standard Duty Lockset available in same function.
D165—U.S. 160-A

Exterior Lock
D801
U.S. 86-A

Latch operated by both knobs except when push buttons are set to lock outside knob. Dead bolt operated by outside key and inside thumb piece. When push buttons are set, key retracts latch.



Office Lock
D102
U.S. 161-B

By key from outside when outer knob is locked by push button in inner knob. Turning inner knob releases push button avoiding accidental lock-out.

*Standard Duty Lockset available in same function.
D151—U.S. 160-B

Office Lock
D802
U.S. 86-D

Latch operated by both knobs except when push buttons are set to lock outside knob, then by key from outside. Door always unlocked from inside for emergency exit. No anti-lock-out feature

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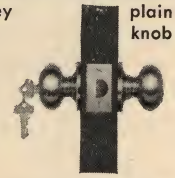


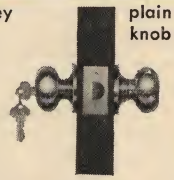
Classroom Lock
D103
U.S. 161-R

Locked or unlocked by key from outside. Cannot be locked except with key from outside. Inner knob always free for emergency exit.

*Standard Duty Lockset available in same function.
D156—U.S. 160-R

Classroom
D803
U.S. 86-J

Locked or unlocked by key from outside only. When unlocked either knob operates latch. Inner knob always free for emergency exit.



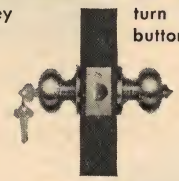
Storage Lock
D104
U.S. 161-D

Fixed outer knob unlocked by key. Inner knob always free. Door always locked when closed.

*Standard Duty Lockset available in same function.
D152—U.S. 160-D

Storage Lock
D804
U.S. 86-DW

Outer knob always rigid. Outside key retracts latch. Inner knob always free for exit. Door always locked when closed.



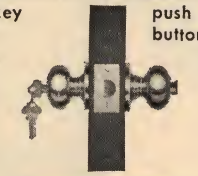
Public Toilets
D105
U.S. 161-E

By key from outside when knob is locked by universal button in inner knob. Closing door releases universal button. Outer knob may be kept fixed by rotating universal button.

*Standard Duty Lockset available in same function.
D159—U.S. 160-E

Public Toilets
D805
U.S. 86-G

Latch operated by either knob except when outside knob has been locked by key from inside. Then unlocked by outside key. Inner knob always free for exit.



Dormitory Lock
D108
U.S. 161-T

Locked or unlocked by key from outside, by push button from inside. Automatic latch prevents locking out.

Dead Bolt
D179Y
U.S. 86-T

Dead bolt operated by key from either side. No knobs. D180Y, U.S. 86-P, alternate, with dead bolt operated by key outside, thumb turn inside. Requires additional push and pull sets.

Special Finishes Available: U.S. 28—Satin finish on aluminum*; U.S. 26D—Dull chrome on brass; U.S. 26—Polished chrome on brass. (*Satin finish aluminum not furnished on mortise locks)

ANTI-PANIC DEVICES • Standard Finish U.S. 10 Dull Bronze

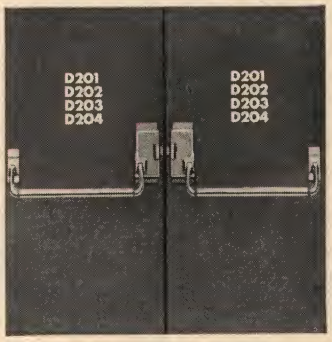
USE	END VIEW	OUTSIDE TRIM
FOR EXIT DOORS ONLY No outside pull handle. No cylinder lock. Always use door closer. Door always locked when closed, difficult to open even when inner latch is held in retracted position by dogging screw. Always free for exit.	 Single Latch D201 Double Latch D211	
FOR ENTRANCES AND EXITS Suggested for banks of two or more entrance doors. To reduce cost, use one D203 below, and the balance D202. When closed by closer, it is always locked at night by releasing latch bolt. During the day, it forces the custodian to hold the latch retracted to provide ingress, thus saving wear and tear on the mechanisms. Banks of doors are opened in the morning by ingress through the D203 with outside cylinder lock, then retracting the latches on the D202's. Always free for exit.	 Single Latch D202 Double Latch D212	
FOR ENTRANCES AND EXITS Used where doors must be unlocked from the outside. Forces the custodian to dog the latch retracted during the day, avoiding unnecessary use of the latching mechanism. Always use a closer. Always free for exit.	 Single Latch D203 Double Latch D213	
FOR ENTRANCES AND EXITS Used where doors must be unlocked from the outside, and where exceptional wind conditions require the door to always be latched to avoid vacuum slamming. Thumb piece acting on latch allows opening even when latch is not dog retracted, hence does not force the custodian to dog retract latch during the day.	 Single Latch D204 Double Latch D214	

VARIOUS COMBINATIONS

Single Door

Active

2 Single Doors with Mullion



Active Active

Removable Mullion

Pair of Doors

Active Inactive

Active Double Doors

Active Active

Special Finishes Available: U.S. 26—Polished chrome on brass; U.S. 26D—Dull chrome on brass.

HINGES (Steel or Bronze)

STANDARD HINGE D300

Full Mortise
Steel Painted
Button Tip

4½" x 4½"
.134" Thick
5 Knuckle
Non-rising Loose Pins

2-RACE BALL BEARING HINGE D300R2

Full Mortise
Steel Painted
Button Tip

4½" x 4½"
.134" Thick
5 Knuckle
Non-rising Loose Pins

PLAIN BEARING hinges should be used only on infrequent-use doors; closets, storage rooms, etc.

D300—Steel USP; removable pin
*D350—Steel USP; removable pin
*D352—Steel USP; non-removable pin

TWO RACE BALL BEARING hinges suggested for average frequency, classrooms, offices, corridors, etc.

D300R2—Steel USP; removable pin
*D350R2—Steel USP; removable pin
*D352R2—Steel USP; non-removable pin
D310R2—Bronze US10; removable pin
D312R2—Bronze US10; non-removable pin
*D360R2—Bronze US10; removable pin
*D362R2—Bronze US10; non-removable pin

FOUR RACE BALL BEARING hinges for entrances, toilets, locker-rooms, etc.

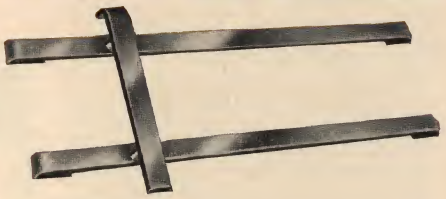
D300R4—Steel USP; removable pin
*D352R4—Steel USP; non-removable pin
D310R4—Bronze US10; removable pin
D312R4—Bronze US10; non-removable pi
*D362R4—Bronze US10; non-removable pin

*See page 9 for using these hinges with structural frames.

Finishes Available for Bronze Hinges: U.S. 10—Dull bronze; U.S. 26—Polished chrome; U.S. 26D—Dull chrome.

Finishes Available for Steel Hinges: Prime Painted "Lumasheen" (Aluminum).

PUSH AND PULLS
(Aluminum or Bronze)



D655 pull bars (illustrated) consisting of 2 horizontal bars with attached vertical pull bar.

D656 push bars (not illustrated) consisting of 2 separate horizontal bars, similar to illustration above, but no vertical pull bar.

Special Finishes Available: Aluminum or Bronze, U.S. 26, U.S. 26D, U.S. 28.

D655 and D655
Two pull bars, one on each side of door.

D655 and D656
Pull bar set on outside, and push bar set on inside.

D655 and D651
Pull bar set on outside with single push plate (D651) on inside.

CLOSERS (Painted Bronze)

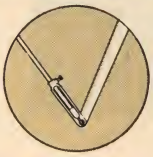
Regular Arm
D430, 440, 450

Parallel Arm
D433, 443, 453

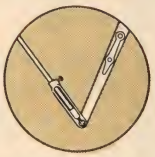
Corner Bracket
D434, 444, 454

Soffitt Bracket
D435, 445, 455

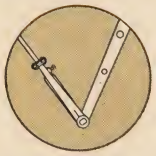
Closers are available for 90°, 135° and 180° openings



D430, 440, 450
Regular arm—Ball and Socket construction at Knuckle. No hold open device.



D431, 441, 451
Hold open arm—Friction type. Adjustable to hold door open at any angle from 0° to 100°.



D432, 442, 452
Fusible link arm—Hold open arm with fusible link release at 160°F, allowing door to close.

Choice of Soffit Brackets

These brackets must always be used on EXTERIOR doors that SWING OUT. Soffit bracket for doors 7 feet or more in height. Corner bracket for doors LESS THAN 7 feet high.

Special Finishes Available: Aluminum painted.

TABLE OF CLOSER LIMITS

Inside Door	Outside Door	Reg. Arm	Hold Open	Fusible	Parallel	Corner	Soffitt
Up to 3'	Up to 2'-8"	D430	D431	D432	D433	D434	D435
3'-1" to 4'	2'-9" to 3'-8"	D440	D441	D442	D443	D444	D445
4'-1" to 5'	3'-9" to 4'-0"	D450	D451	D452	D453	D454	D455

PUSH PLATE and PULL HANDLE

D651 (U.S. 10 finish)

D653

Push Plate D651

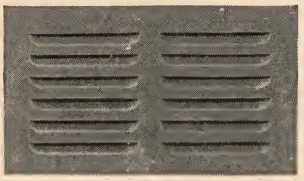
Standard finish U.S. 10 Dull Bronze. Aluminum, dull and bright chrome available.

Pull Handle D653

Standard finish U.S. 10 Dull Bronze. Aluminum, dull and bright chrome available.

LOUVRES

(Prime Painted Steel)



FPL (fixed pressed) Louvre

Not a separate louvre, but pressed integrally into both sides of the door.

FPL—Louvre (Mesker D715-22 shown)

Standard Sizes

D715-11 .....11"x12"

D715-22 .....22"x12"

(Other sizes available on special order.)

TOP and BOTTOM BOLTS

Standard Finish U.S. 10 Dull Bronze

D666H

D666B

Mortised Top Bolt D666H

Cast bronze concealed works, fully mortised.

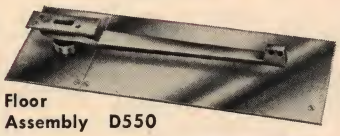
Mortised Bottom Bolt D666B

Cast bronze, concealed works, fully mortised.

FLOOR CLOSERS

Head Pivot

Double acting, center pivoted, recessed in floor. Closing and hydraulic checking mechanism for doors swinging both ways. Spring power and checking resistance have four separate adjusting controls. Also available in single acting, offset pivoted, recessed in floor. U.S. 10, Dull Bronze, or U.S. 28, Anodized Aluminum.



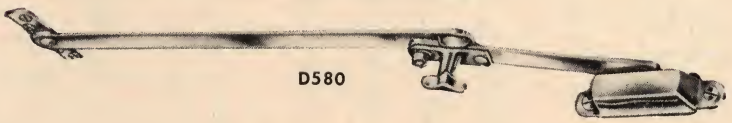
Floor Assembly D550

Shown without threshold. Available with threshold.

OVERHEAD DOOR HOLDERS

Standard Finish U.S. 10 Dull Bronze

D570



D580

D590

Door Holder—D570
Slide action economy overhead door holder with spring shock absorber. Stops door at maximum position of 90°. Hold-open action can be readily disengaged.

Door Holder—D580
Arm action overhead door holder. Spring shock absorber stops door at maximum opening of 90°. Quarter turn of control handle disengages hold-open action. Not reversible.

Door Holder—D590
Slide action overhead door holder. Spring shock absorber stops door at maximum position of 90°. Quarter turn of control handle disengages hold-open action. Not reversible.

DOOR STOPS

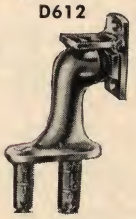
(Dull Bronze U.S. 10)

D624

D631-A

D602

D612



D603

Door Stop—D624
Solid bronze U.S. 10 dull bronze finish. Holds door open at any angle. Throw of bolt variable to 1¼". Rubber shoe grips floor firmly.

Door Bumper—D631-A
1" high floor bumper for doors without threshold.

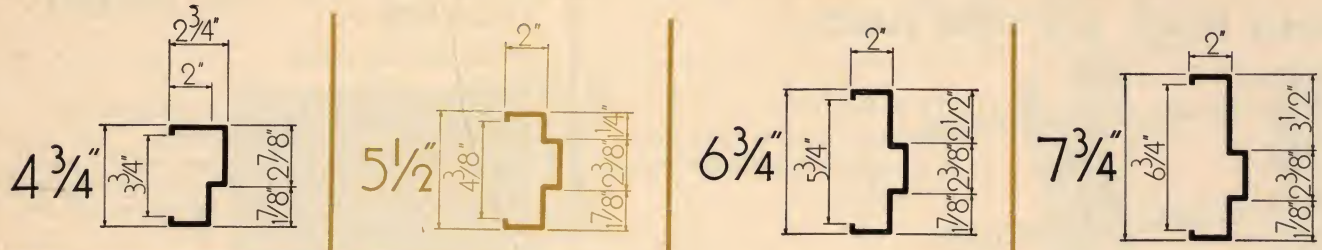
Door Stop—D602
Automatically engages and disengages when door is pushed against it or pulled away from it.

Door Stop—D612
Hinged hook plate on door acts as hold open device and also as bumper plate protecting door finish.

Door Stop—D603
Solid bronze U.S. 10 finish with round rubber bumper. Keeper is through bolted to door in the field after doors are hung. No shop preparation for keeper.

Special Finishes Available: Push and pulls—aluminum or bronze, U.S. 26, U.S. 26D, U.S. 28. Top and bottom bolts—bronze only, U.S.26, U.S. 26D. Holders and stops—bronze only, U.S. 26, U.S. 26D.

DOOR FRAMES for 1¾" Doors • 4¾" • 5½" • 6¾" • 7¾"



3¼" METAL STUD WITH LATH AND PLASTER

3¼" METAL STUD ½" SHEET ROCK PLASTERED

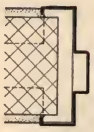
5⅝" CONCRETE BLOCK WALL PLASTER BOTH SIDES

6" STEEL STUD PLASTERED

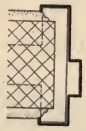
3" PYROBAR PLASTERED

4" METAL STUD LATH AND PLASTER

5⅝" HOLLOW TILE PLASTERED

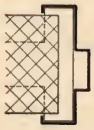


5⅝" CONCRETE BLOCK OR 5⅝" HOLLOW TILE PLASTERED

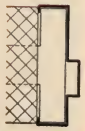


3⅝" HOLLOW TILE OR CONCRETE BLOCK

4" HOLLOW TILE OR PYROBAR PLASTERED



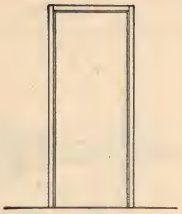
5¾" GLAZED TILE WALL



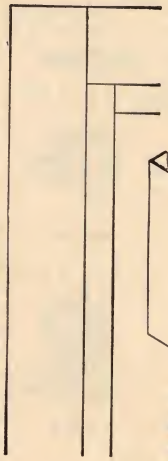
7⅝" CONCRETE BLOCK WALL

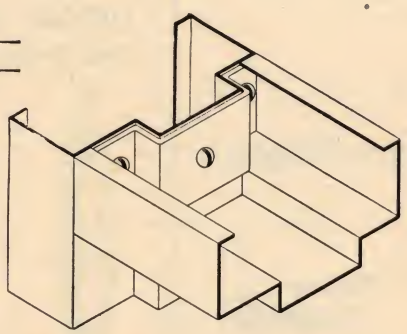
5½" Frames are standard and carried in stock. Other depths made only on special order.

KNOCKED-DOWN FRAME DETAILS



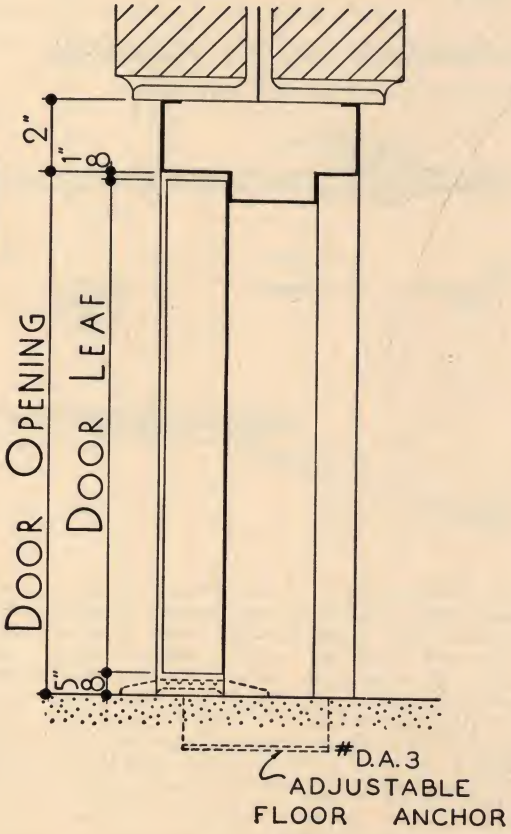
Frames are shipped knocked down. They are accurately coped as detailed and held together with a 12 gauge steel splice plate and six 3/16"x½" round head stove bolts. Notice that the jamb members run all the way to the top providing an uninterrupted bearing at the jambs.





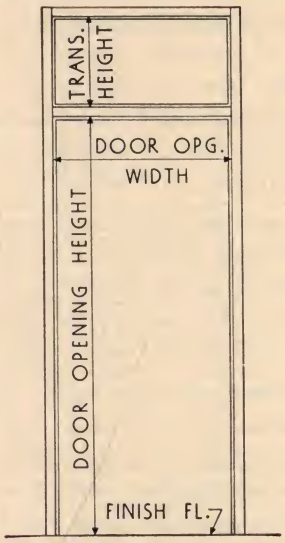
Three Anti-Vibration Lock Nuts and Bolts hold each corner joint tight and rigid even after years of service. (See Feature 11 on page 2.)

VERTICAL DIMENSIONS



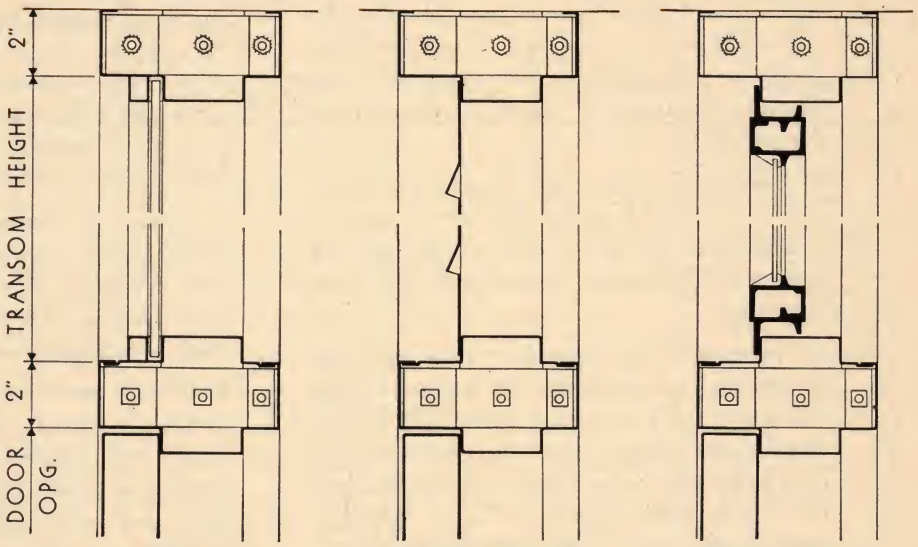
HORIZONTAL DIMENSIONS

TYPICAL TRANSOM OPENINGS



EXTERIOR ELEVATION

Transom frames are furnished for all standard size doors, manufactured only to order. They can be furnished with either a fixed or removable transom bar.



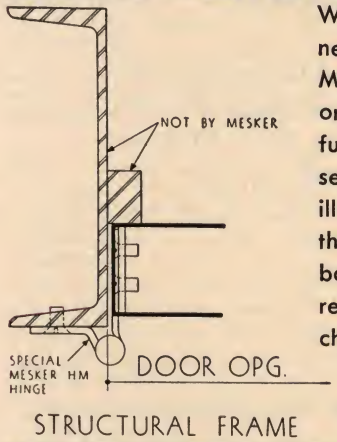
Fixed Glazed | **Louver Panel** | **Vented Sash**

FIXED GLAZED TRANSOMS are generally used with fixed transom bars for entrances. They are furnished with a continuous glazing bead set for ¼" glass.

LOUVER PANEL TRANSOMS are generally used with removable transom bars in boiler rooms and other like locations.

VENTED SASH TRANSOMS are generally used with fixed transom bars, where ventilation and light is desired.

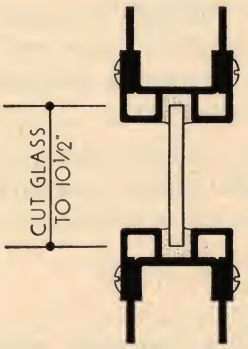
STRUCTURAL FRAMES with D350 series hinges



When structural channel frames (not by Mesker) are specified, on order, Mesker will furnish the special offset half mortise hinge illustrated, permitting the hinge leaf to be bolted or welded directly to the face of the channel.

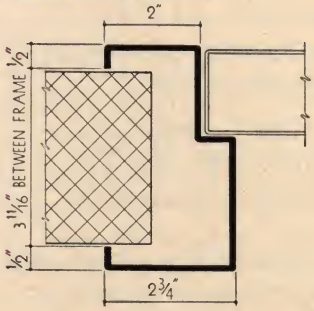
(See Page 6) For Hinge Numbers)

VISION LIGHTS



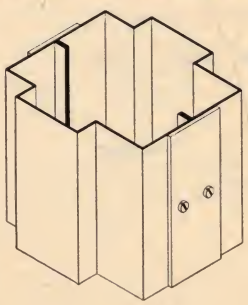
Constructed to receive ¼" glass. Glazing mouldings screwed on from both sides to give door same appearnce on either side.

NARROW FRAME



Designed for setting frames in narrow interior partitions.

MULLIONS FOR BANKS OF DOORS



When doors and frames are placed in horizontal banks, such as for entrances, an economical detail is shown here using a mullion between the frames.

DOOR SPECIFICATIONS for 1¾" Doors • Series 2000 and 3000

Hollow Metal doors, pressed metal frames, trim and other work of the type herein specified, shall be equal to that manufactured by Mesker Brothers, St. Louis, or equal as approved by the architect.

a. Doors shall be hollow metal flush doors 1¾" thick, of 16 gauge cold rolled stretcher leveled steel sheet in the sizes, dimensions, and types as indicated on the drawings and door schedules.

b. Doors shall be continuous triple box type construction consisting of 16 gauge vertical hinge stile, lock stile, and center box section running continuously from the bottom of the door to the top, or from the bottom of the door to the glass panel. There shall be no horizontal rails, except at the top when glass occurs. Center box section shall be reinforced with vertical "Z" stiffeners spaced not less than 8" on centers, securely welded to both sides. Side rails shall run continuous from the top to the bottom of the door and shall be securely spot welded every 2" to the center reinforced box section.

c. Fibreglass insulation and sound deadening material 2" thick shall be compressed within the door and held firmly in place to prevent any settling.

d. Lock-stiles shall be mortised and reinforced with special concealed lock box for 2¾" backset cylindrical or mortised locksets, as listed in the hardware schedule. Hinge-stiles shall be mortised for 4½" x 4½" template butts. Reinforcing shall be channel type, accurately drilled and tapped to match hinge hole spacings. Door leaves at top on both sides shall be reinforced internally for door closer application.

e. Frames for doors, transoms, side lights and similar frames shall be standard combination buck and trim unit-style frames of 16 gauge cold rolled stretcher leveled steel sheets, 5½" deep with integral rolled ¾" stop and 2" face.

f. Corners and intersections of frames shall be accurately coped and mechanically joined by means of concealed clips, bolts and nuts, and shall be shipped knocked down complete with adjustable wall anchors and knee-angle floor anchors.

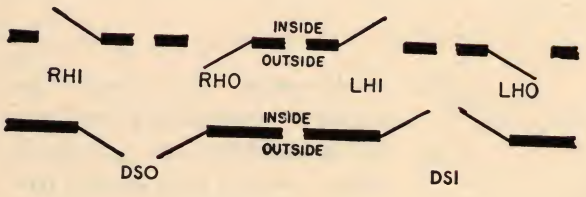
g. Door frames shall be mortised and reinforced for 4½" x 4½" template butts and for dust-box lock strikes. Door headers shall be reinforced for closers and soffit brackets.

h. All doors, pressed metal frames and trim shall be bonderized and shall receive one factory coat of grey phenolic resin paint oven dried to a smooth dirt-free mat finish.

j. Underwriters' Label.
Where indicated, doors shall be furnished with Underwriters' "B" class label, but each door leaf shall be no larger than 3'8" x 7'0" and shall be of solid metal or with one vision light 10" x 10".

HOW TO ORDER DOORS

HAND AND SWING DIAGRAMS



When ordering doors and frames always give complete information, including type, size, style and hand and swing. For example: F-3070 G2-RHO or F-6070-LG-DSI-BA.

When ordering double doors indicate swing of door leaves and hand of active leaf. For example:

DSI-RA—Double swing in right hand leaf active.
DSO-LA—Double swing out left hand leaf active.
DSO-BA—Double swing out both leaves active.

When both leaves are active, indicate if no astragal or split astragal is required. Split astragal used only on doors with both leaves active.

HARDWARE SCHEDULE

Suggested Hardware for Various Door Openings

Doors for	Hinges	Locks		Closers	Holders	Kickplates
		Cylindrical	Mortise			
Boiler to Exterior	D300R2 1	D204	2	D452 4		
Boiler to Interior	D300R2 1	D101	D801 3	D452 4		
Classrooms	D300R2 1	D103	D803	D441 9		
Closets	D300 6	D104 or 152	D804 5	optional		
Connecting Rooms	D300 6	D112 or 157	D812 5	optional		
Cafeterias to Ext.	D300R2 1	D203	7	D440	optional	Yes 11
Cafeterias to Corr.	D300R2 1	D180Y + D655 + 656	D180Y 8	D441 9	optional	Yes 11
Dining rooms			See Cafeterias above.			
Dormitory rooms	D300 6	D108 or 151	D808 5	optional		
Entrances, Main	D300R4 1	D203	7	D450	Yes 10	Yes 11
Exits	D300R2 1	D101	D801 3	D450	optional	
Gym to Exterior	D300R2 1	D204	2	D450	Yes 10	Yes 11
Gym to Corridor	D300R2 1	D180Y + D655 + 656	D180Y 8	D441 9	optional	Yes 11
Kitchen to Serving	D300R2 1	D180Y + D651	D180Y 12	D440		Yes 11
Toilets (Schools)	D300R4 1	D651 + D653	13	D440		Yes 11
Toilets (Others)	D300 6	D105 or D159	D805 5	D430		
Locker Rooms	D300R4 1	D180Y + 651 + 653	D180Y 8	D440		Yes 11
Offices, Private	D300 6	D102 or 151	D802 5	optional		
Stairwell to Ext.	D300R2 1	D203	14	D442 4		
Storage Rooms	D300 6	D104 or 152	D804 5	optional		
Utility	D300 6	D104 or 152	D804 5	optional		
Vestibules	D300R4 1	D655 + 656	15	D441 9	optional 10	Yes 11

NOTES:

1. 2 race or 4 race ball bearing hinges for large doors, exterior doors, or high frequency use.
2. Thumb piece and lock suggested here for maximum outside control.
3. Check to see if local code requires panic devices.
4. Fusible link closers suggested.
5. Standard duty locks may be substituted in low frequency locations but their design will not match heavy duty locks.
6. Plain non-ball bearing hinges for low frequency doors.
7. Outside trim with pull handle and cylinder lock suggested.
8. Dead bolt and push and pulls only. See if code requires panic devices.
9. Hold-open closer suggested.
10. Choose either overhead holder of floor type depending on outside floor conditions.
11. Kickplates usually on push side, but often found on both sides.
12. Dead bolt and push plate only.
13. Push plate and pull handle only.
14. Outside handle and cylinder lock only.
15. Push and pull bars only. No lock.

HARDWARE SPECIFICATIONS

(a) Hardware—All hardware for doors and frames shall be furnished (but not installed) under this section by the hollow metal door contractor. All surface applied hardware such as closers, push and pulls, door holders, panic devices, kick plates, etc., shall be applied on the job by drilling and tapping. This work to be done by the contractor who sets the doors and frames. All hardware shall be furnished in strict accordance with the hardware schedule herein, or as listed on the drawings.

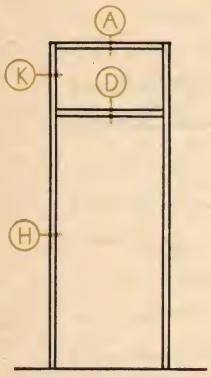
(b) Work not included—Hardware for the following has been specified under other divisions: (List here such items as wood doors, toilet partitions, windows, cabinets, cases, lockers, kalamein doors, etc.)

(c) Location of hinges, locks and panic bars—Door Butts on frames for 6'8" doors shall be centered at 7¼", 39¾", and 72¼" from top of rebate, and on 7'0" frames shall be 9¼", 41¾", and 74¼" from top of rebate.

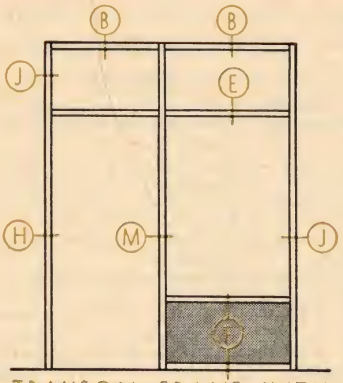
Locks, dead bolts, dead latches, and leaves shall be centered at 37⅜" from bottom of door, whether 6'8" or 7'0" high.

Panic bars shall be centered approximately 35" from bottom of doors of any height.

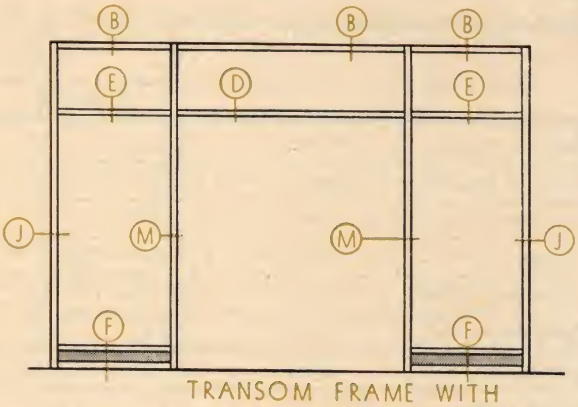
TRANSOM FRAMES • SIDE LIGHTS • BORROWED LIGHTS



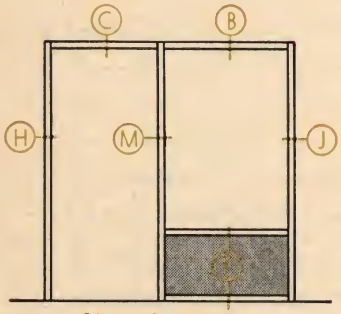
TRANSOM FRAME



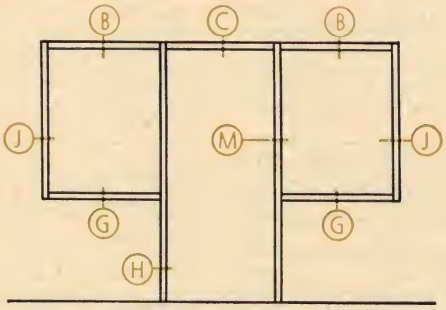
TRANSOM FRAME WITH ONE SIDELIGHT



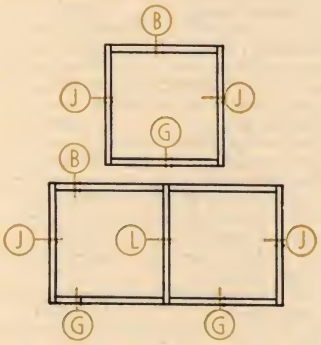
TRANSOM FRAME WITH TWO SIDELIGHTS



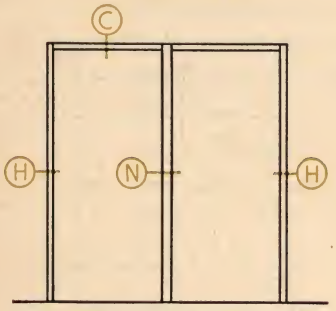
FRAME WITH ONE SIDELIGHT



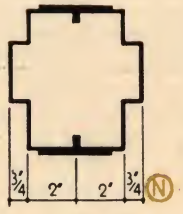
DOOR FRAME WITH TWO BORROWED LIGHTS

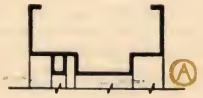


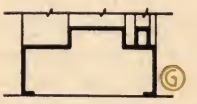
BORROWED LIGHTS SINGLE OR DOUBLE

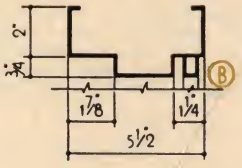


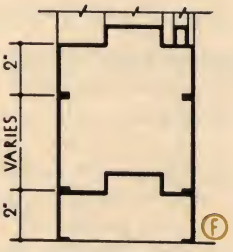
TWO DOOR FRAMES

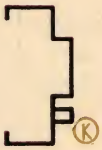












Transom Frames, Sidelights and Borrowed Lights are designed to furnish complete units, with all corners coped for field assembly, that can be easily and accurately installed adjacent to each other to obtain the best possible finished appearance and strength.

Rooms within rooms or partitions can be built using Transom Frames and Borrowed Lights to the ceiling with masonry wall below the Borrowed Lights.

TRANSOM DOOR FRAMES are fabricated on order for standard size doors to any height up to 14'-0", and any depth to meet job requirements. Standard 5½" depth is lower in cost than special depths. Can be furnished in fixed glazed, fixed or ventilated sash, metal panels, or louvres.

SIDELIGHTS are fabricated on order to fit adjacent to standard or transom frames to widths up to 8'-0" and only in 5½" depth. Can be furnished with muntins or horizontal impost (Section L) as required. Bottom panel furnished to match glass heights in Doors. Sidelights with panels to height of glass in G Doors furnished only up to 4'-0" in width. Multiple sidelights can be used adjacent to each other.

BORROWED LIGHTS are fabricated to order in any size and depth to meet job requirements. Standard 5½" depth to match standard frames are lower in cost than special depths. Borrowed Lights can be used in multiples for long runs and can be furnished with corner plates where required.

Borrowed Lights used in exterior walls or in exterior entrances, with masonry below (Short Sidelight) or clear to floor can be furnished with sill section as used in Sidelights (Section F).

COMMERCIAL DOORS • 1¾" x 16 ga. • Series 1000

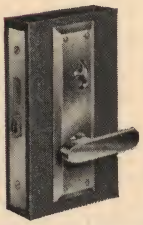
Design M

Design G

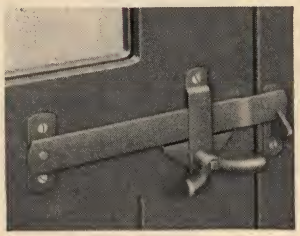
Design G2
Also G4, G6, G8

HARDWARE

Surface Type Top Bolt No. D662H and Bottom Bolt No. D662B



T-handle (D830) available for all mortise locks on page 5.



Steel Lever Latch D850

SWING DOOR STOCK TYPES AND SIZES

SINGLE DOORS				DOUBLE DOORS			
DESIGN	TYPE	DOOR OPG DIM WIDTH	DOOR OPG DIM HEIGHT	DESIGN	TYPE	DOOR OPG DIM WIDTH	DOOR OPG DIM HEIGHT
	C-2868-G C-2870-G C-3070-G C-3470-G C-3870-G	2'-8" 2'-8" 3'-0" 3'-4" 3'-8"	6'-8" 7'-0" 7'-0" 7'-0" 7'-0"		C-5468-G C-5470-G C-6070-G C-6870-G C-7470-G	5'-4" 5'-4" 6'-0" 6'-8" 7'-4"	6'-8" 7'-0" 7'-0" 7'-0" 7'-0"
	C-2868-G2 C-2870-G2 C-3070-G2 C-3470-G2	2'-8" 2'-8" 3'-0" 3'-4"	6'-8" 7'-0" 7'-0" 7'-0"		C-5468-G2 C-5470-G2 C-6070-G2 C-6870-G2	5'-4" 5'-4" 6'-0" 6'-8"	6'-8" 7'-0" 7'-0" 7'-0"
	C-3870-G4	3'-8"	7'-0"		C-7470-G4	7'-4"	7'-0"
	C-4080-G6	4'-0"	8'-0"		C-8080-G6	8'-0"	8'-0"
	C50100-G8	5'-0"	10'-0"		C100100-G8	10'-0"	10'-0"
	C-2868-M C-2870-M C-3070-M C-3470-M C-3870-M C-4080-M	2'-8" 2'-8" 3'-0" 3'-4" 3'-8" 4'-0"	6'-8" 7'-0" 7'-0" 7'-0" 7'-0" 8'-0"		C-5468-M C-5470-M C-6070-M C-6870-M C-7470-M C-8080-M	5'-4" 5'-4" 6'-0" 6'-8" 7'-4" 8'-0"	6'-8" 7'-0" 7'-0" 7'-0" 7'-0" 8'-0"

SPECIFICATIONS • Commercial Doors • Series 1000

a. Doors shall be Mesker Commercial Series 1000 hollow metal flush panel doors 1¾" thick, of 16 gauge cold rolled stretcher leveled steel sheet in the sizes, dimensions, and types as indicated on the drawings and door schedules.

b. Doors shall be continuous triple box type construction consisting of 16 gauge vertical hinge stile, lock stile, and center box section running continuously from the bottom of the door to the top, or from the bottom of the door to the glass panel. There shall be no horizontal rails showing, except at the top when glass occurs. Center box section shall be reinforced with vertical Z stiffeners spaced not less than 8" on centers, securely welded to both sides. Side rails shall run continuous from the top to the bottom of the door and shall be securely spot welded every 2" to the center reinforced box section.

c. Lock-stiles shall be mortised and reinforced with special concealed lock box for 2¾" backset mortise locksets, with 1¼" x 8" front, and universal spacing. Hinge-stiles shall be mortised for 4½" x 4½" template butts. Reinforcing shall be channel type, accurately drilled and tapped to match hinge hole spacings. Door leaves at top on both sides shall be reinforced internally for door closer application.

d. Frames for doors, transoms, side lights and similar frames shall be standard combination buck and trim unit-style frames of 16 gauge cold rolled stretcher leveled steel sheets, 5½" deep with integral rolled ¾" stop and 2" face.

e. Corners and intersections of frames shall be accurately coped and mechanically joined by means of concealed clips, bolts and nuts, and shall be shipped knocked down complete with adjustable wall anchors and knee-angle floor anchors.

f. Door frames shall be mortised and reinforced for 4½" x 4½" template butts and for dust-box lock strikes. Door headers shall be reinforced for closers and soffit brackets.

g. All doors, pressed metal frames and trim shall be bonderized and shall receive one factory coat of grey phenolic resin paint oven dried to a smooth dirt-free mat finish.

1 3/8" DOORS • Series 3800/18 and 3800/20

Series 3800
FLUSH DESIGN
3800/18—18 ga.
3800/20—20 ga.

Available in 6 designs shown, and in the standard opening sizes shown opposite each design. Design G2 may be had with 4 lights of glass, and design M-FLB may be had with 2 louvers, or one top louver only. Standard vision panel in design MV is approximately 10" x 10" to receive 1/4" glass. (Refer to Home Office for Underwriters' Labeled Doors).

Standard Size Door Opening

1 3/8-1668-M
1 3/8-2068-M
1 3/8-2468-M
1 3/8-2668-M
1 3/8-2868-M
1 3/8-3068-M

1 3/8-1670-M
1 3/8-2070-M
1 3/8-2470-M
1 3/8-2670-M
1 3/8-2870-M
1 3/8-3070-M

Design M

Standard Size Door Opening

1 3/8-2468-G
1 3/8-2668-G
1 3/8-2868-G
1 3/8-3068-G

1 3/8-2470-G
1 3/8-2670-G
1 3/8-2870-G
1 3/8-3070-G

Design G

Standard Size Door Opening

1 3/8-2468-G2
1 3/8-2668-G2
1 3/8-2868-G2
1 3/8-3068-G2

1 3/8-2470-G2
1 3/8-2670-G2
1 3/8-2870-G2
1 3/8-3070-G2

Design G2

Standard Size Door Opening

1 3/8-2468-M-FLB
1 3/8-2668-M-FLB
1 3/8-2868-M-FLB
1 3/8-3068-M-FLB

1 3/8-2470-M-FLB
1 3/8-2670-M-FLB
1 3/8-2870-M-FLB
1 3/8-3070-M-FLB

Design M-FLB
(Fixed Louver)

Standard Size Door Opening

1 3/8-2468-MV
1 3/8-2668-MV
1 3/8-2868-MV
1 3/8-3068-MV

1 3/8-2470-MV
1 3/8-2670-MV
1 3/8-2870-MV
1 3/8-3070-MV

Design MV

Standard Size Door Opening

1 3/8-2468-LG
1 3/8-2668-LG
1 3/8-2868-LG
1 3/8-3068-LG

1 3/8-2470-LG
1 3/8-2670-LG
1 3/8-2870-LG
1 3/8-3070-LG

Design LG

DOOR SPECIFICATIONS

Door stiles and and panels shall be formed from 20-gauge (18-gauge for Series 3800/18) cold rolled, prime quality steel. They shall be made in three sections—lock stile, hinge stile and center panel. The three sections shall be continuously interlocked and the vertical joints shall be tight and flush.

Door shall be mortised and machined for key-in-knob cylindrical locks. Heavy gauge concealed hinge and lock reinforcements shall be welded to inside of door.

The top and bottom of doors shall be closed and stiffened with heavy gauge channels spotwelded to panel and stiles. Doors shall be reinforced and sound-deadened with a honeycomb core in center panel.

Doors are bonderized and finished with a baked-on prime coat. On special order, they are available with wood graining or finish colors.

FRAME SPECIFICATIONS

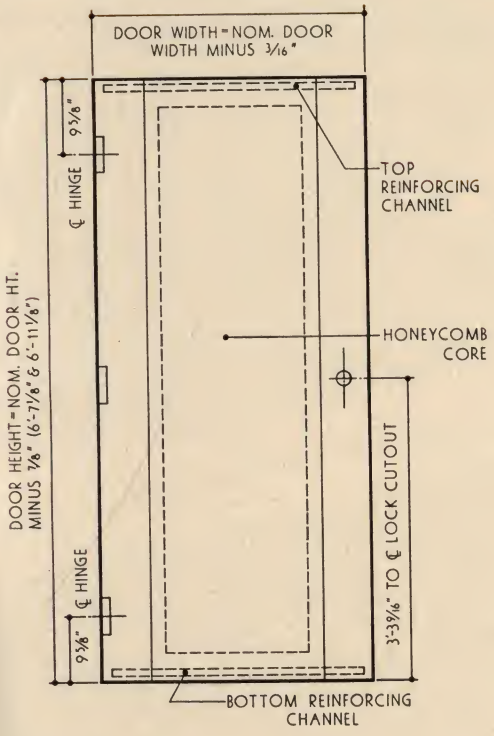
Frames shall be formed from 16 or 18-gauge cold rolled steel. Standard construction shall be KD—set up welded available on request. Mitered corners shall have heavy reinforcements with integral tabs for secure and easy interlocking of jambs to head.

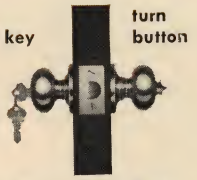
Frames for 1 3/8" doors shall be mortised, machined and reinforced for one pair of 3 1/2" x 3 1/2" hinges.

Each door strike and hinge back-up plate on door frame shall be protected by a plaster guard welded in place. Provisions shall be made in strike jamb for two factory applied rubber bumpers.

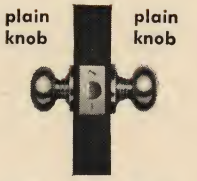
Frames up to and including 5 3/4" jamb depth shall have three stud anchors and one combination stud-base anchor per jamb, welded on. 6 3/4" and 8 3/4" jamb frames shall be furnished with loose T-anchors and welded on adjustable base anchors.

Frames shall be bonderized and finished with baked-on prime coat.

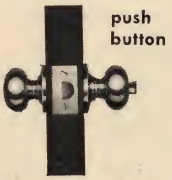

DOOR WIDTH = NOM. DOOR WIDTH MINUS 3/16"
DOOR HEIGHT = NOM. DOOR HT. MINUS 1/8" (6'-7 1/8" & 6'-11 1/8")
℄ HINGE
9 5/8"
℄ HINGE
9 5/8"
TOP REINFORCING CHANNEL
HONEYCOMB CORE
3'-3 7/8" TO ℄ LOCK CUTOUT
BOTTOM REINFORCING CHANNEL



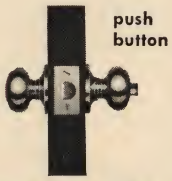
Entrance Set
D165½
U.S. 160-A
To lock, turn inside button. Unlock by outside key. Inner knob always free.



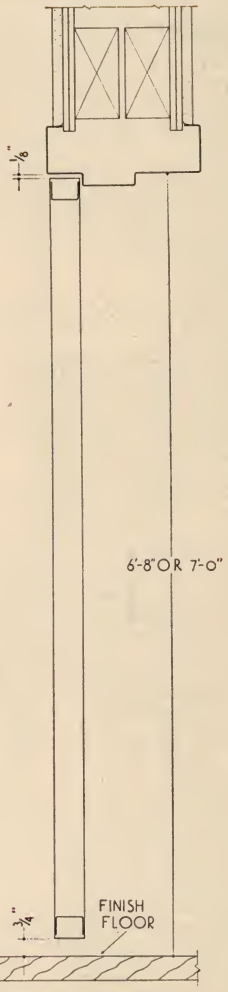
Passage Set
D155½
U.S. 160-N
No locking feature. Both knobs free to operate latch bolt.

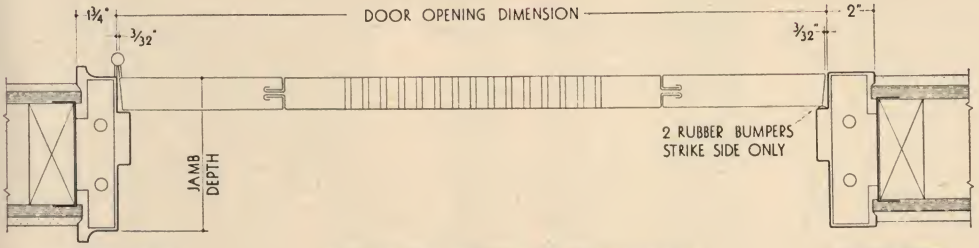


Bedroom Set
D153½
U.S. 160-P
To lock from bedroom side, push button. Unlocks when you leave bedroom preventing accidental lock-out.



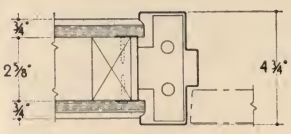
Bathroom Set
D166½
U.S. 160-L
Same as bedroom set except door can be unlocked from outside by emergency key.



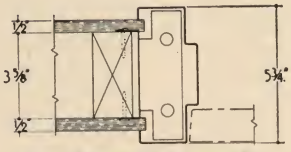


CONTOUR TRIM — HORIZONTAL SECTION THROUGH DOOR — FLUSH TRIM — VERTICAL SECTION

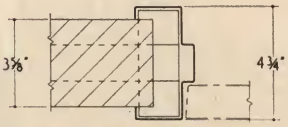
STEEL FRAMES—Typical Construction Details



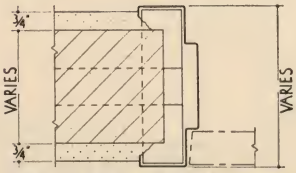
4¾" frame in plaster



5¾" frame in drywall



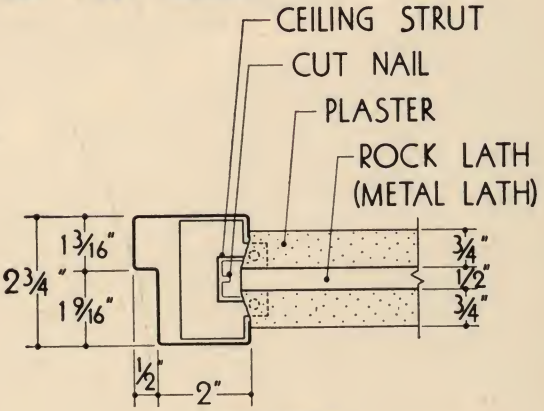
4¾" frame in block



5¾", 6¾" or 8¾" frame in block and plaster

Frames above also available in contour profile.

2" Solid Plaster Construction for 1⅜" doors



cross section

Frame above also available in 3¾" depth.

For More Information or Engineering Service

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overly

1960 EDITION

16b
Ov

Overline
HOLLOW METAL
DOORS, FRAMES
AND ENTRANCES

A.I.A. File Nos. 16-A; 16-B

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overly labeled

Overly pioneers major advances in Underwriters' labeled products

Our comprehensive testing program at Underwriters' Laboratories, which now includes five major tests, began in 1958 and will continue indefinitely. The Underwriters' Laboratory tests combined with factory inspection service assures that doors "labeled" are constructed identically to the models tested.

Our program has three general aims: (1) to reduce the cost of labeled products, yet maintain required performance; (2) to expand the scope of protection from the passage of fire, smoke and fumes through openings; (3) to eliminate obstacles to the use of labeled products.

the need for change

Testing standards were set for the industry about a half-century ago and still persist. Hollow metal doors, frames, and hardware used in early tests were over-designed, regardless of cost, to insure successful testing. Exploration of further uses for labeled pressed steel frames was neglected and three distinct types of uneconomical construction were required for A, B and non-labeled doors.

Overly develops practical standards

By a series of successful tests, Overly upset the old standards and received authorization from Underwriters' Laboratories for labeling of realistically constructed Overly hollow metal doors and frames. Overly is the first manufacturer of hollow metal products to receive this approval. All other manufacturers who have not successfully made these tests must still follow the older Underwriters' standards. As a result, their products are usually more costly than Overly's.

One of the major achievements of our testing program has been to reduce the cost of Class A installations by proving that special constructions and hardware were unnecessary to achieve required UL performance. As a result of our tests, we have now been authorized to apply the 3 Hr (A) label to our 18 gage doors. Single doors not over 3'0" x 7'0" or pairs up to 6'0" x 7'0" may use standard listed key-in-knob or mortise locks having a ¾" throw, standard weight butts, and top and bottom bolts on inactive leaf of pairs. This hardware replaces costly 3- and 2-point locks and extra heavy butts. Overly has received approval for the use of single astragals instead of double astragals.

Our next research step in the 3 Hr (A) label area was to successfully test a 16 gage frame with ⅝" high stops. As a result, 14 gage frames with ¾" stops need not be specified, except for single doors over 3'6" x 7'6" and for pairs over 6'0" x 7'6". The tests have further reduced design inconsistencies and costs.

Overly also has pioneered in proving that 20 gage hollow metal doors are adequate for fire protection. Our standard non-labeled door, packed with insulation,

was tested successfully and we are now permitted to apply 1½ Hr (B), 1½ Hr (D), ¾ Hr (C) and ¾ Hr (E) labels to these doors.

Our tests have resulted in identical design and internal reinforcement for non-labeled, A-labeled and B-labeled doors except that 3 Hr (A) label doors require heavier 18 gage steel. A single set of specifications now covers both labeled and non-labeled doors, except for 3 Hr (A) label. These products are available in all gages from standard 18 and 20 gage for conventional use, down to 10 and 12 gage for prison and security type doors.

design advantages in frames

Overly has also had a program to increase the design possibilities of labeled pressed steel frames, previously limited to the three-sided type. The new Overly Fire Barrier designs have met with the requirements of municipal building codes and fire insurance rating regulations.

Our labeled service has been expanded to permit use of frames with side lights and glazed transoms in situations where 45 minutes of fire resistance is required. (Statistics indicate that any type of building can be evacuated in much less than 45 minutes.) These frames may contain an opening for a door or pair of doors up to 3′6″ x 7′0″ for single doors and 7′0″ x 7′0″ for a pair of doors. Sidelights up to 30″ wide may be used on one or both sides with or without transoms up to 4′0″ in height. Labeled doors complete the installation.

These Overly Fire Barriers are specifically designed for dividing long corridors in hospitals, schools, institutions and other public buildings. Labeled Fire Barriers are highly desirable because they divide long corridors and provide isolated refuge areas. Their maximum opening size permits the passage of a hospital bed and two attendants, a special advantage where non-ambulatory patients are confined. These labeled dividers act as panic deterrents and may be used as stairwell enclosures where the fire resistance required is 45 minutes.

Overly frames with removable mullions have been approved for label service involving 1½ hours of fire resistance. Their use will permit exit devices where they would not be approved in pairs. The removable mullions also permit the passage of large equipment.

Complete data on labeled doors, frames, and hardware for labeled doors and frames, is given in the Overly "Fire Doorater" on page 11.

Overly sets future standards

Overly has worked with the American Society for Testing Materials and the National Fire Protection Association in the more realistic development of label requirements and regulations. The latter organization adopted a complete revision of Regulations for Installation (Pamphlet 80) in 1959. Our specifications in this catalog incorporate these innovations and we recommend them to architects as a guide for future hollow metal door and frame specifications.

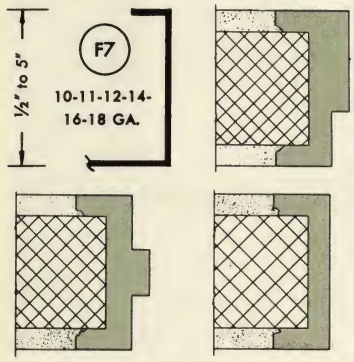
Pair of Overly Type 50 doors can bear A, B, C, D or E labels—3 pt. lock not required for A labeled doors up to 6′0″ x 7′0″. Overly non-labeled doors are identical in construction except that they are filled with fiberboard instead of insulation.

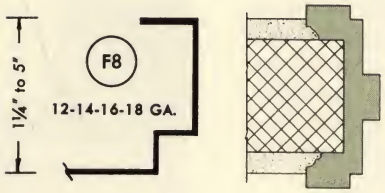
Corridor smoke screen with ¾ HR (C) label; suitable for use in hospitals, schools, institutional and public buildings. Individual glass lights limited to 1296 sq. inches exposed area. Total assembly may have transoms up to 48″ high, side lights up to 30″ wide and doors up to 7′0″ x 7′0″.

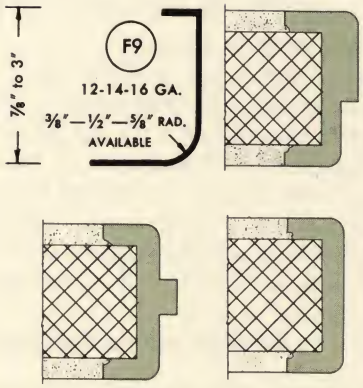
Frame assembly with removable mullion. Purpose of this mullion is to permit installation of pairs of doors with panic devices. Present UL procedures require that every labeled door be mortised for a locking device. Removable mullion permits installation of two mortised panic devices in a UL approved assembly. The removable feature allows unrestricted passage of large equipment.

profiles

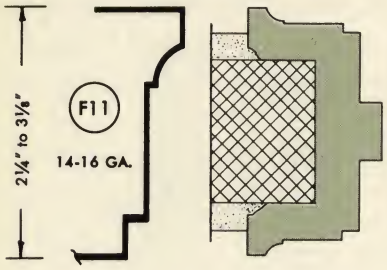
plain trim DO NOT SCALE

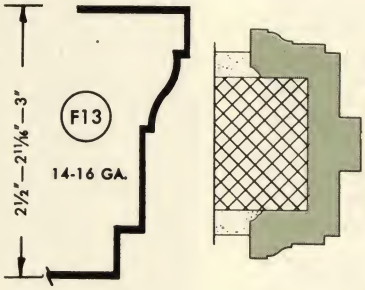


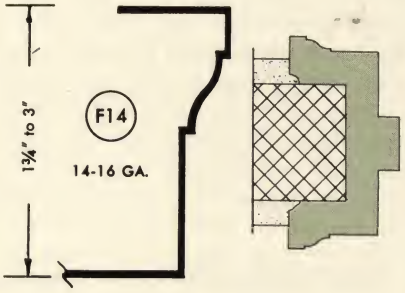


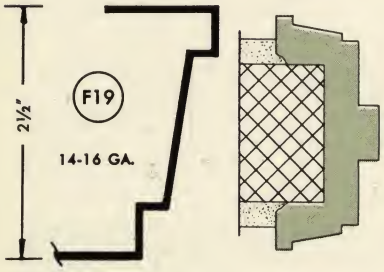


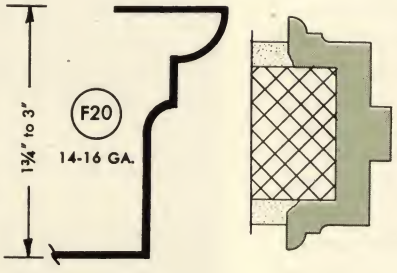
molded trim DO NOT SCALE

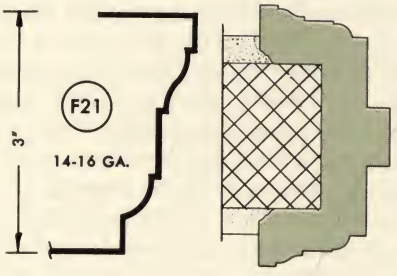


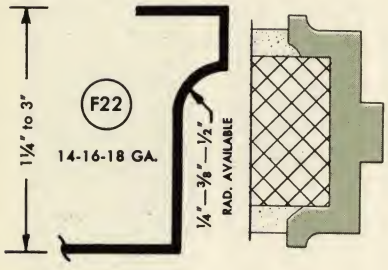


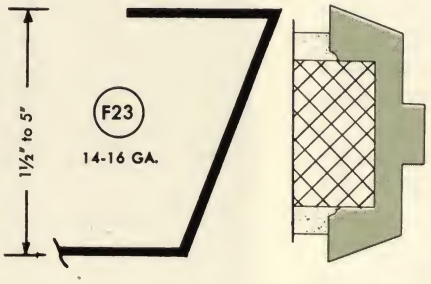


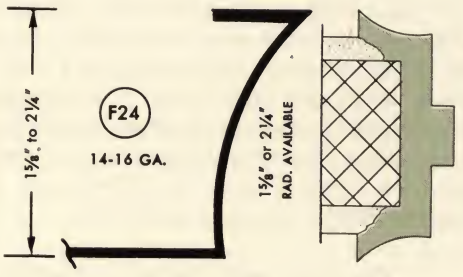


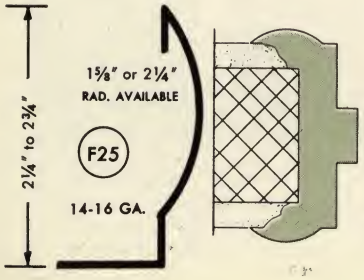


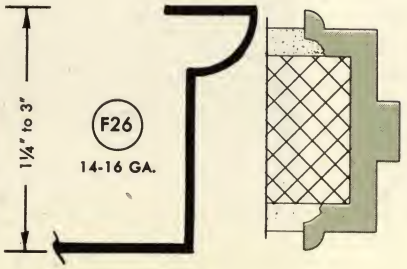




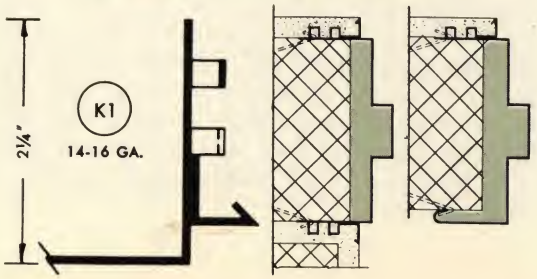






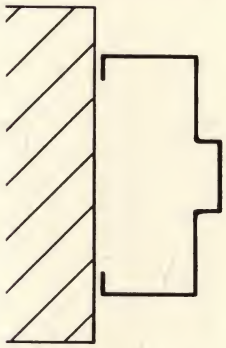


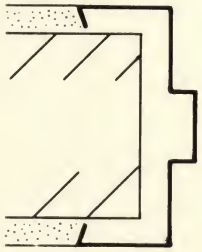
kalman trim DO NOT SCALE



door frames

plaster keys available only with plain trim DO NOT SCALE


style no. 1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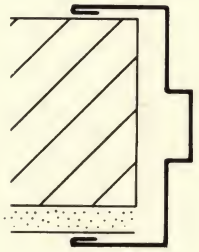
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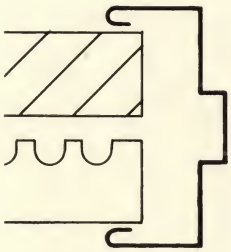
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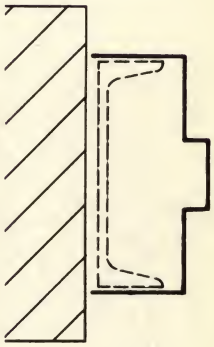
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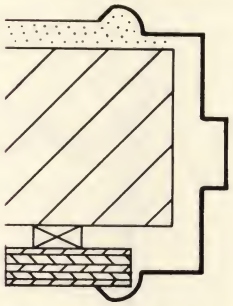
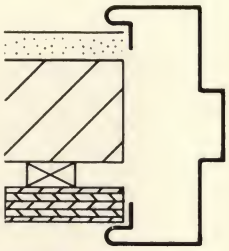

style no. 6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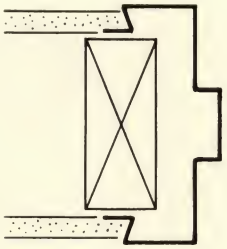
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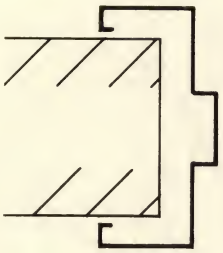
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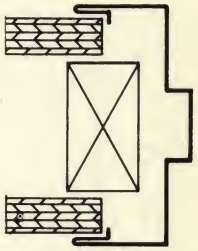
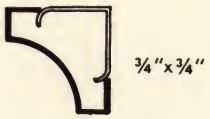

10

hollow metal molding and trim DO NOT SCALE


3/4"x3/4"

3000

3/4"x5/8"

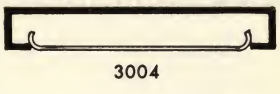
3001 (Snap-on clip not available)

7/8"x1 5/8"

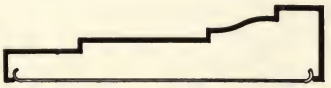
3002

3/4"x2 1/16"

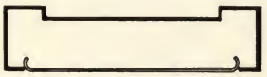
3003


5/16" x 2"

3004


7/8"x3 3/4"

3005

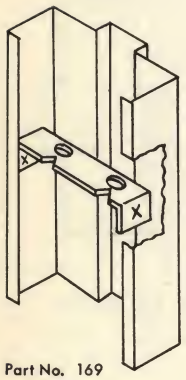

3/4"x3"

3006

Note: Molding can be furnished snap-on or screw on as desired—specify which.

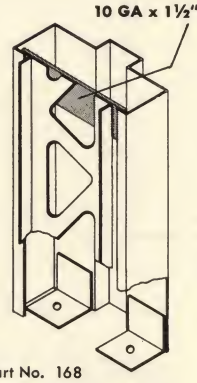
special construction details

methods of anchoring frames



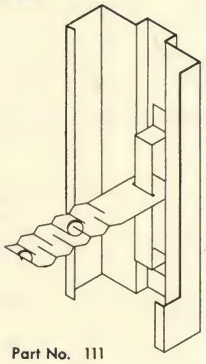
Part No. 169

STEEL STUD ANCHOR



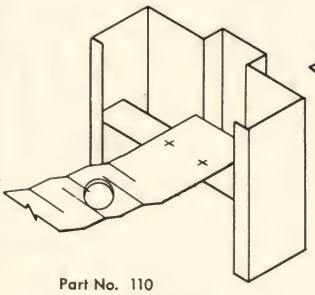
Part No. 168

STEEL STUD ANCHOR DESIGNED FOR TACK WELDING TO STEEL STUD



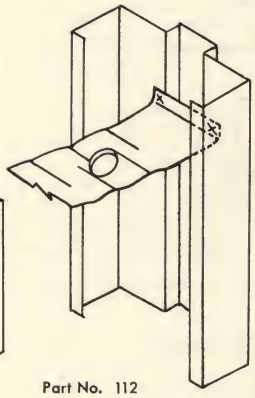
Part No. 111

ADJUSTABLE YOKE ANCHOR (approved by Underwriters' Laboratories)



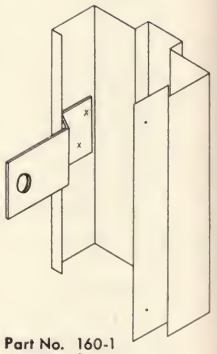
Part No. 110

ADJUSTABLE LOOSE T ANCHOR



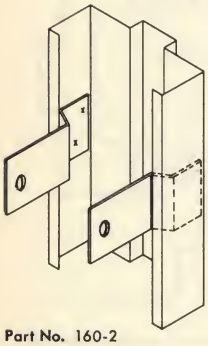
Part No. 112

POURED CONCRETE WALL FIXED ANCHOR



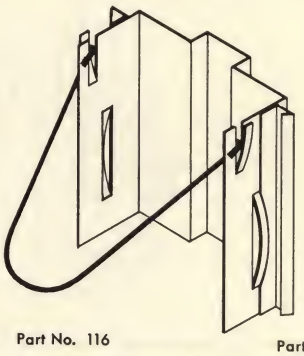
Part No. 160-1

NAILING CLIPS FOR METAL FRAMES IN WOOD PARTITIONS WHERE HOLLOW METAL DOORS ARE REQUIRED. NAILING CLIP STRIP IS CONTINUOUS ON HINGE SIDE.



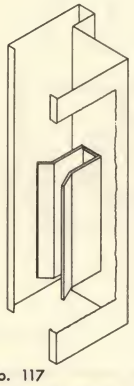
Part No. 160-2

NAILING CLIPS FOR METAL FRAMES IN WOOD STUD PARTITIONS WITH WOOD DOORS



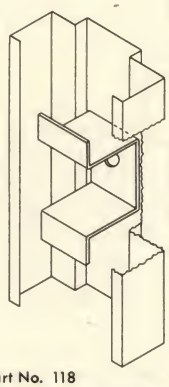
Part No. 116

WIRE ANCHOR FOR KALMAN FRAMES



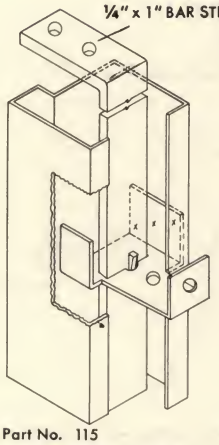
Part No. 117

ROCK LATH RECEIVING CLIP FOR MEMBRANE WALLS (Struts to ceiling not required)



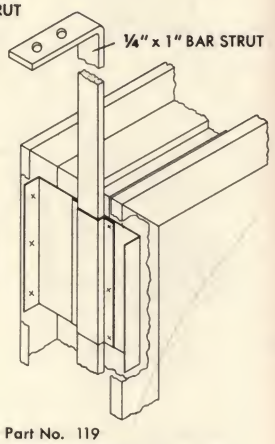
Part No. 118

SPACER YOKE TO RECEIVE EXPANSION SHELLS—WHEN INSTALLATION IS REQUIRED IN EXISTING WALLS



Part No. 115

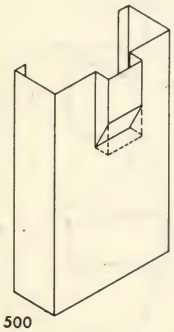
ADJUSTABLE CEILING STRUTS AND ANCHOR FOR 2" PLASTER PARTITIONS AND FRAMES



Part No. 119

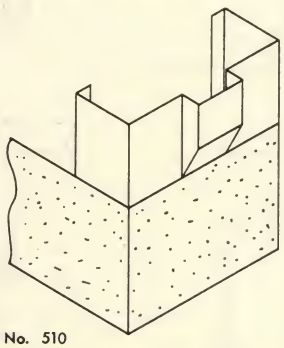
ADJUSTABLE CEILING STRUTS AND HOLDER FOR WALLS AND FRAMES OVER 2"

jamb base construction details



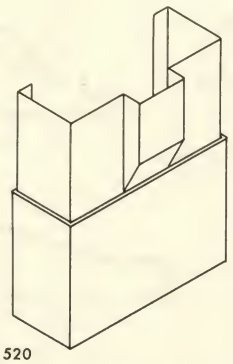
Part No. 500

CUT OFF STOP—HOSPITAL TYPE



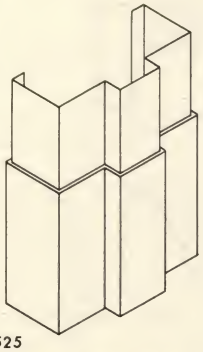
Part No. 510

CUT OFF JAMB AND STOP FOR SANITARY BASE



Part No. 520

STAINLESS STEEL SPAT—HOSPITAL TYPE STOP CUT OFF

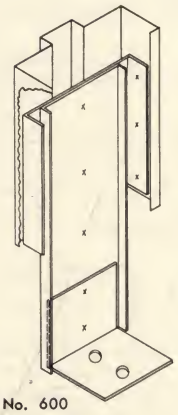


Part No. 525

STAINLESS STEEL SPAT—WRAP AROUND OR INTEGRALLY WELDED

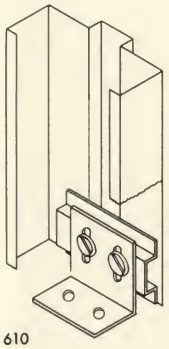
details – isometric views

jamb base construction details (cont'd)



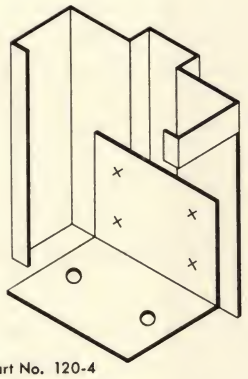
Part No. 600

STILTS



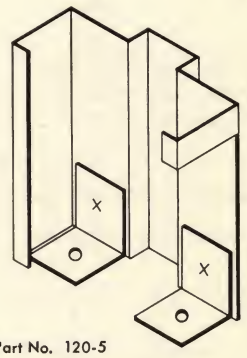
Part No. 610

ADJUSTABLE FLOOR CLIPS
(approved by
Underwriters' Laboratories)



Part No. 120-4

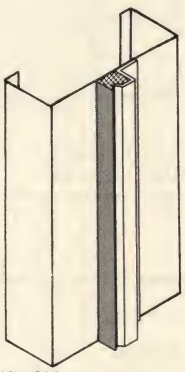
STANDARD FLOOR CLIP
(approved by
Underwriters' Laboratories)



Part No. 120-5

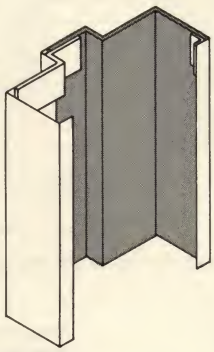
STANDARD NON-LABELED
FLOOR CLIP

typical general construction details



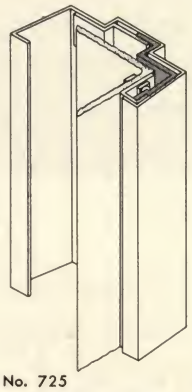
Part No. 190

RUBBER GASKET



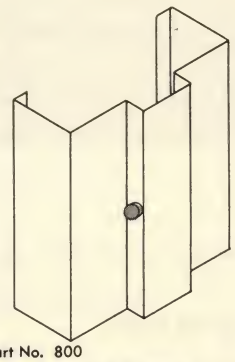
Part No. 700

LEAD LINING



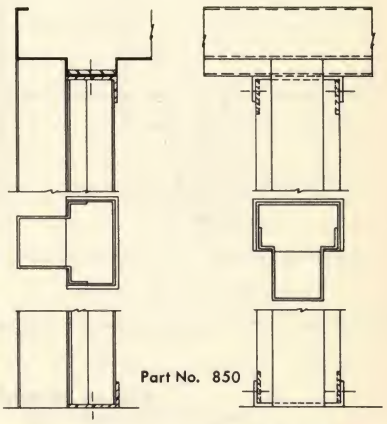
Part No. 725

LEAD LINED FRAME
WITH FLOOR TO CEILING
ANGLE REINFORCING STRUTS
TO CARRY EXTRA HEAVY
LEAD LINED DOOR



Part No. 800

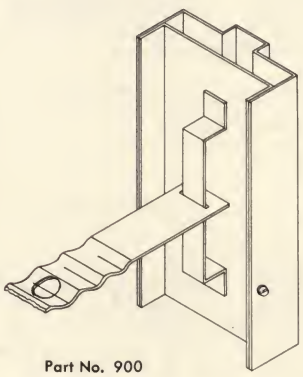
RUBBER BUMPER
(approved by
Underwriters' Laboratories)



Part No. 850

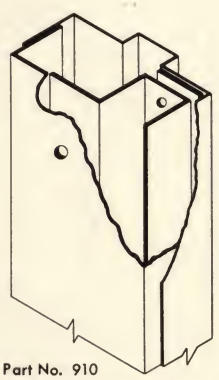
SIDE VIEW FRONT VIEW

REMOVABLE MULLION
(approved by
Underwriters' Laboratories)



Part No. 900

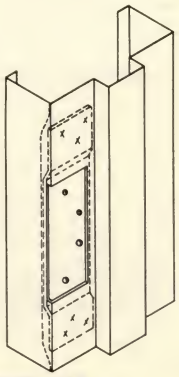
ROUGH BUCK AND CABINET
JAMB FOR
NEW CONSTRUCTION
(approved by
Underwriters' Laboratories)



Part No. 910

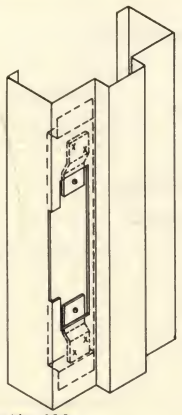
ROUGH BUCK FOR EXISTING
MASONRY OPENING
(approved by
Underwriters' Laboratories)

typical reinforcements



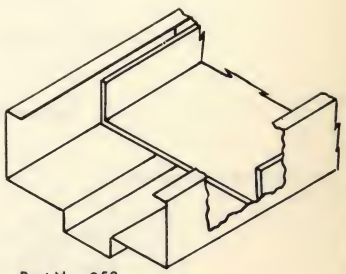
Part No. 101-5

HINGE
REINFORCEMENT
3/16" min.



Part No. 130

LOCK STRIKE
REINFORCEMENT
1/8"

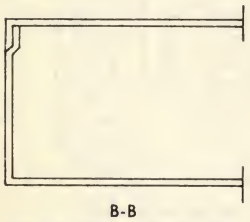


Part No. 950

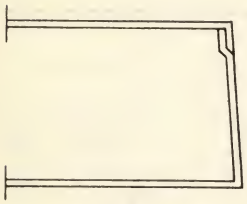
12 GAUGE HEAD REINFORCING—
FURNISHED ONLY WHEN SPECIFIED

overly Overline hollow metal and

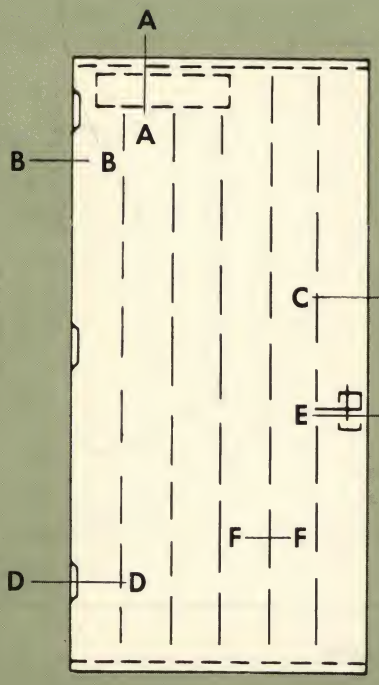
A-A
TOP EDGE CHANNEL (INVERTED) AND 12 GA. BOX CLOSER REINFORCEMENT
NOTE: Top closing channel only furnished on exterior doors.



B-B
HINGE EDGE OF DOOR WELDED AND GROUND SMOOTH

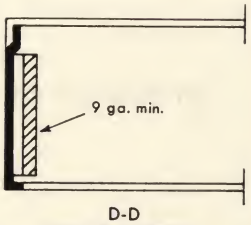


C-C
LOCK EDGE OF DOOR WELDED AND GROUND SMOOTH

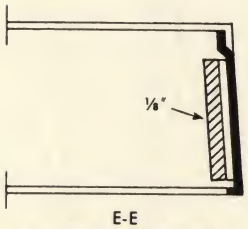


new Overly labeled and non-labeled door construction

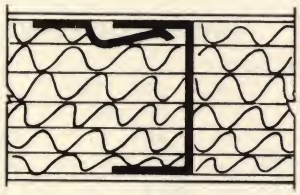
NOTE: Labeled and non-labeled doors are insulated with mineral wool.



D-D
HINGE MORTISE AND REINFORCEMENT

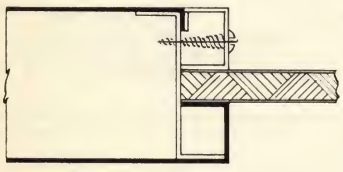


E-E
LOCK MORTISE AND REINFORCEMENT
NOTE: For key-in-knob type locks, hardware contractor should furnish lock manufacturer's standard reinforcing box.

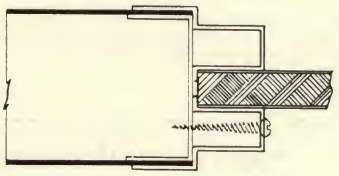


F-F
TYPICAL CHANNEL STIFFENER AND CLIP

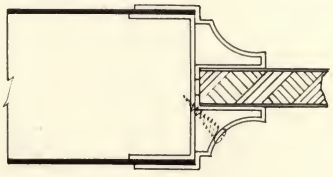
glass molding details



1000



1001



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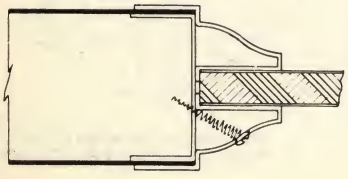
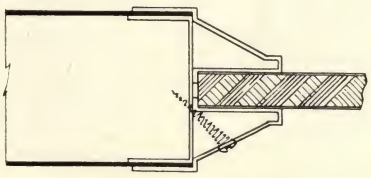
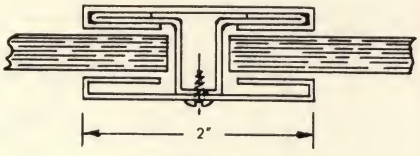


1003

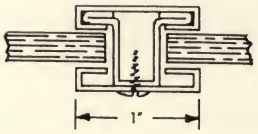


1004

muntin bars



1005 (LABELED)



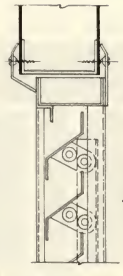
1006

kalamein door construction details

louvers

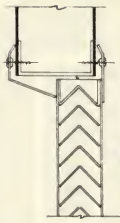
2,000
20%
free air

STANDARD PIERCED LOUVER



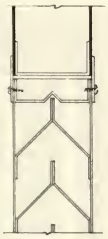
2,001
37%
free air

ADJUSTABLE LOUVER



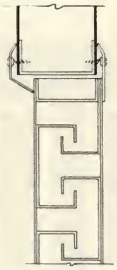
2,002
65%
free air

STATIONARY LOUVER



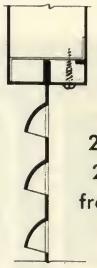
2,003
30%
free air

STATIONARY LOUVER



2,004
20%
free air

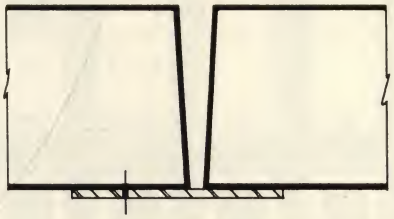
LIGHT PROOF LOUVER



2,005
20%
free air

PLATE LOUVER

astragals



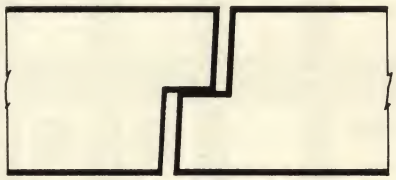
STANDARD ASTRAGAL

(Approved for A, B, C, D, or E labeled pairs. Astragal not furnished for non-labeled pairs unless specified.)

"T" ASTRAGAL

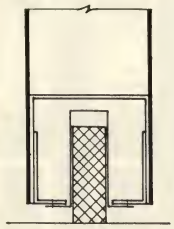
special stile constructions

RADIUS MEETING STILES—
DOUBLE ACTING

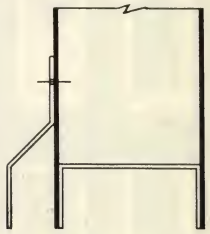


RABBETTED MEETING STILES

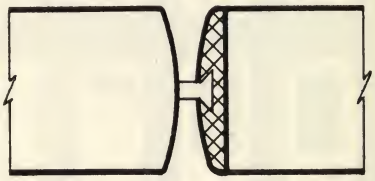
special details



AUTOMATIC
DOOR BOTTOM



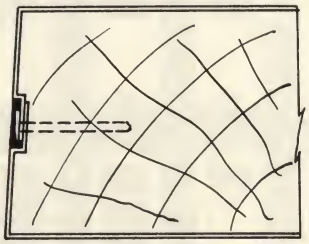
DRIP MOLD
(Ends Closed)



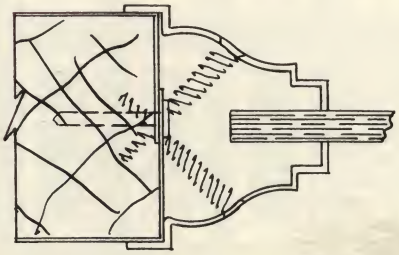
FELT PILE WEATHERSTRIPPING

kalamein door construction

non-labeled flush



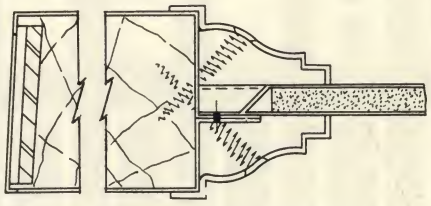
EDGE CONSTRUCTION



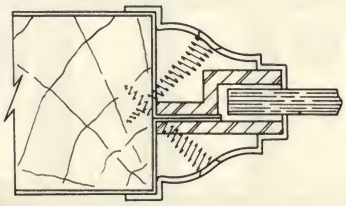
GLASS LIGHT CONSTRUCTION

labeled panel

(approved by Underwriters' Laboratories)

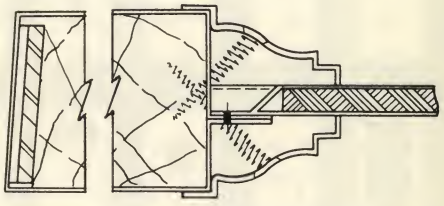


STILE AND PANEL CONSTRUCTION

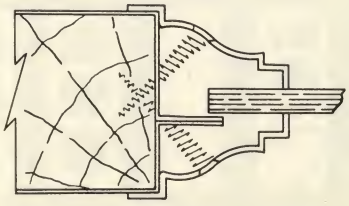


GLASS LIGHT CONSTRUCTION

non-labeled panel



STILE AND PANEL CONSTRUCTION



GLASS LIGHT CONSTRUCTION

overly standard door designs

Overline hollow metal, kalamein and entrance doors

Overline narrow stile entrance door designs—steel or stainless steel

Note: Doors that may be labeled are listed on page 11 opposite the appropriate label classifications.

swinging hollow metal fire doors

maximum size: single doors 4′0″x8′0″, pairs 8′0″x8′0″

minimum gage: A labeled 18 ga.; B, C, D, E label 20 ga.

Opening location and rating	Overly door type and maximum glass area
Firewalls or division walls between buildings or sections of buildings **3 Hr. (A) label** Note: Mount two doors; required—mount one each face of wall to avoid insurance rate charge.	Type 50 *no glass permitted.*
Vertical shaft enclosures for stairs, elevators, piping or wiring **1½ Hr. (B) label**	Types 23, 24, 25, 31, 32, 34, 43, 45, 49, 50, 51, 57, 79, 81. *Maximum area of exposed glass 100 sq. in. per opening (not per leaf).* Glass may be divided between leaves of pairs. Min. width 3″, Max. width 10″, Max. height 35″.
Corridor and room partitions **¾ Hr. (C) label**	Types 1 through 66 and 79 through 84. Maximum area of exposed wire glass 1296 sq. in. per light (any number per leaf).
Exterior walls subject to severe hazard exposure **1½ Hr. (D) label**	Types 23, 24, 25, 31, 32, 34, 43, 45, 49, 50, 79 and 81. *No glass permitted.*
Exterior walls subject to light hazard exposure **¾ Hr. (E) label**	Types 2 through 66 and 79 through 84. *Maximum area of exposed wire glass 720 sq. in. per light (any number per leaf).*

hollow metal frames

Labeled frames must be used with all labeled doors. Frames are not classified by location of opening. The following applies to all class A, B, C, D or E situations.

Minimum jamb depth—4″
Minimum stop height—⅝″
Maximum door opening size and minimum gauge:

Single—	3′6″ x 7′6″	16 ga.
	4′0″ x 10′0″	14 ga.
Pairs —	6′0″ x 7′6″	16 ga.
	8′0″ x 10′0″	14 ga.

FIRE BARRIERS WITH TRANSOMS AND SIDELIGHTS

Overly may label for 45 minutes of fire resistance within the size limitations charted below:

	Width	Height
Overall Size	12′8″	11′4″
Door Openings		
Singles	3′6″	7′0″
Pair	7′0″	7′0″
Transom—Wire Glass		
Height	*	4′6″
Sidelights—Wire Glass		
Height	2′6″	*
Sidelight Base Panels		
Minimum	*	6″
Maximum	*	3′6″

*Dimension varies—limited by overall unit sizes.

LABELED FRAME ACCESSORIES

Preparation of both doors and frames for floor checks, and top and intermediate pivots.

Labeled rough bucks and cabinet jambs for use in existing openings or where job progress demands that wall construction proceed before frames can be delivered.

Labeled frames prepared for GJ # 64 rubber bumpers.

Labeled frames with adjustable floor clips.

Removable mullion frames.

CHANNEL FRAMES:

Minimum width rolled steel channels—4″.

ANGLE IRON FRAMES:

Cannot be labeled.

hardware for labeled doors and frames

All labeled fire doors must be provided with latching devices or locks, hinges, and closers listed by Underwriters' Laboratories. Latches and hinges for Class A doors must be applied at the factory.

LATCHING DEVICES:

Single Class A doors up to 3′0″ x 7′0″ and pairs up to 6′0″ x 7′0″ and all other labeled free doors must be provided with listed mortise or key-in-knob type latches or locks. For larger Class A doors listed 3 point locks are required for single doors and the active leaf of pairs; listed 2 point locks for the inactive leaf of pairs.

Latches for single A label doors and for all pairs shall have a minimum throw of ¾″; for all other single doors, the throw must be ½″.

Listed top and bottom flush bolts having a minimum throw of ¾″ may be used on the inactive leaf of pairs.

HINGES:

One required for each 30″ of door height or fraction thereof, as follows:

Label	Door Size	Weight	Min. Height	Min. Thickness
A	Up to 7′0″ in height	Standard	4½″	0.134″
B, C, D, & E	Up to 8′0″ in height	Standard	4½″	0.134″
A	Over 7′0″ in height	Extra Heavy	4½″	0.180″
B, C, D, & E	Over 8′0″ in height	Extra Heavy	4½″	0.180″
B, C, D, & E	Up to 3′0″ x 5′0″	Standard	4″	0.130″
B, C, D, & E	Up to 2′0″ x 3′0″	Standard	3½″	0.092″

Olive knuckle hinges having a minimum height of 6″ and a minimum thickness of 0.225″ and top, bottom and intermediate pivots having a minimum height of 4″ and a minimum thickness of 0.255″ may also be used on B, C, D, and E labeled doors.

Surface hinges must be applied with thru bolts.

overly fire doorater

tin clad fire doors

approved door constructions	number of doors per opening	labels authorized hours 3	1½	¾	1½	¾	maximum opening size width	height	area	door thickness
		A	B	C	D	E				
Tin Clad, 3 Ply—Horizontally Sliding	Single	√	√	√	√	√	12′	12′	120 sq. ft.	2½″
	Pair	√	√	√	√	√	12′	12′	120 sq. ft.	
Tin Clad, 3 Ply—Vertically Sliding	Single	√	*	√	√	√	10′	10′	80 sq. ft.	
	Pair	NL	NL	NL	NL	NL	——	——	———	
Tin Clad, 3 Ply—Swinging	Single	√	√	√	√	√	6′	12′	72 sq. ft.	
	Pair	√	√	√	√	√	10′	12′	120 sq. ft.	
Tin Clad, 2 Ply—Horizontally Sliding	Single	NL	√	√	√	√	10′	10′	80 sq. ft.	1¾″
	Pair	NL	NL	NL	NL	NL	——	——	———	
Tin Clad, 2 Ply—Swinging	Single	NL	√	√	√	√	6′	10′	60 sq. ft.	
	Pair	NL	√	√	√	√	10′	10′	100 sq. ft.	

√ = Approved NL = Not Labeled * May be labeled except in required means of exit.

channel iron frames

Required for flush mounted swing doors only.

Rolled steel channels minimum width—4″.

Frames not required for lap mounted swing or sliding doors.

Angle iron frames cannot be labeled.

tinclad fire door hardware

For Swinging Doors labels are applied to each hinge strap, hinge bracket, connecting bar, latch catch, top and bottom bolt and keeper.

For Horizontally Sliding Doors one label is applied to each hanger, binder, bumper, flush pull, stay roll, and two to each track section.

For Vertically Sliding Doors labels are applied to each track section, track guide, cable bracket and cable pulley. Other accessory items of hardware are not labeled.

general information

labeled doors and frames

- Fire doors are either self-closing or automatic closing. Self-closing fire doors are normally provided with standard door closers or an arrangement of weights which return the door to a closed position after each use. Automatic closing doors are equipped in a similar fashion and have in addition a hold-open device with a fuseable metal link which will automatically close the door in case of fire. Self-closing is preferred, and is mandatory in a required means of exit. Automatic doors are approved for all openings except for the above.
- Latches or locks are required on labeled doors (push-and-pull bars are not acceptable); factory mortising and reinforcing are required.
- Anti-panic devices may be mandatory in a required means of exit. Such devices must bear both U/L Fire Protection equipment and casualty and accident division labels.
- Double-acting doors or louvered doors cannot bear labels.
- Astragals—all pairs of labeled doors must be provided with a single astragal.

Requirements for hardware, doors and frames are subject to modification by local rating bureau and building code regulations.

oversize doors

Underwriters' Laboratories, Inc., will issue certificates of inspection for doors exceeding sizes listed as evidence that they comply with requirements for design material and construction; "Oversized Labels" are no longer furnished.

how to determine hand of doors

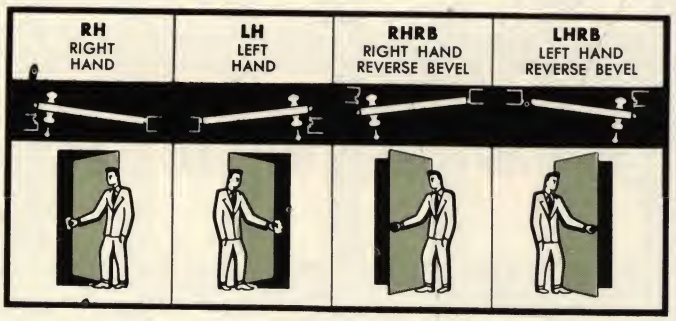
To ascertain door swing, it is important to first determine the key or locking side. Key side for doors into rooms is usually corridor side. Key side for stairwells is usually corridor side of main exit floors. For interior rooms, main room is usually key side for entrances to adjoining rooms. To determine key side for special locations it is suggested that you consult your hardware supplier or contractor.

Once key side is known, it is a simple matter to determine the swing of the door:

Facing door from key side, when door swings away from you to the right, it is a right hand swing; when it swings away from you to left, it is a left hand swing.

When door swings toward you to your right, it is a right hand reverse bevel swing; when it swings to your left, it is a left hand reverse bevel swing.

To ascertain swing of pairs of doors, simply determine swing of active leaf (door with key).



hardware location dimensions

(These dimensions are a general guide in the absence of other specifications.)

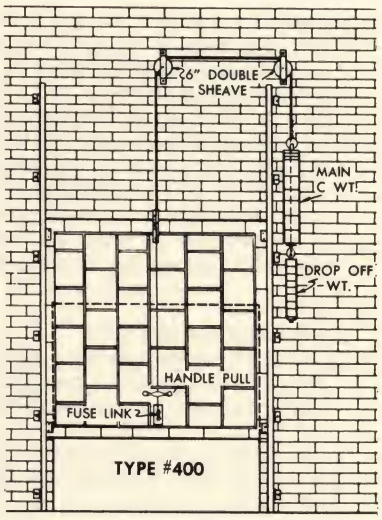
Distance from Floor to Center Line of . . .

- ☐ Store Door Thumb Piece—39″
- ☐ Door Pull Grip—42″
- ☐ Center of Push Plate—50″
- ☐ Door Knob—38″
- ☐ Cylinder Dead Lock—52″
- ☐ Push and Pull Bars (1)—45″
- ☐ Push and Pull Bars (2)—42″
- ☐ Push and Pull Bars (3)—45″
- ☐ Hospital Roller Latch—38″
- ☐ Vertical Letter Box Plate—30″
- ☐ Exit Bolt Cross Bar—38″
- ☐ Hospital Arm Pull:
  Double Base Type Lower Base —47″
  Single Base Type—47″

location of hinges

Bottom Hinge: Finished Floor to Bottom of Hinge—10″
Top Hinge: Head Rabbet to Top of Hinge—5″
Center Hinge: Equal Distance between Top and Bottom Hinges

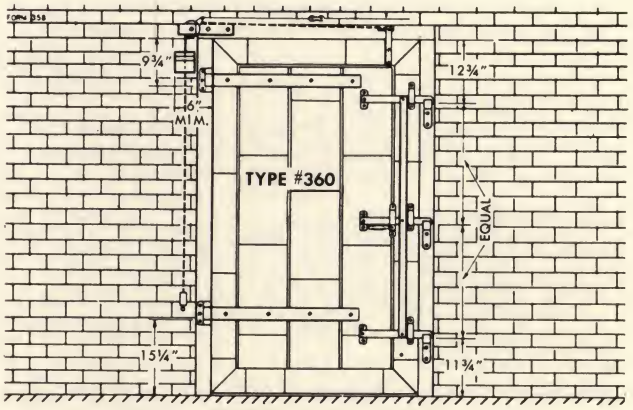
vertical sliding



NO. 400—Vertical slide Tin Clad Doors with automatic closing device for doors weighing less than 200 lbs. Minimum operating space—twice opening height plus 21".

NO. 401—Vertical slide Tin Clad Doors with automatic closing device for doors weighing 200 lbs. or more. Weights are divided and suspended on each side of door. Minimum operating space—twice opening height plus 21".

swinging



NO. 355—Single lap swing Tin Clad Doors with self-closing device with wall plate. Minimum Headroom 8". Minimum operating space—width of opening plus 13".

NO. 350—Same as No. 355 without wall plate.

NO. 358—Single flush swing Tin Clad door with self-closing device for use with angle frame. Minimum Headroom 4". Minimum operating space—opening width plus 8".

NO. 360—Same as No. 358 except for use with channel iron frame.

NO. 365—Single flush swing Tin Clad Door with self-closing device for use in rabbetted wall with inverted angle frame. Minimum Headroom 4". Minimum operating space—opening width plus 8".

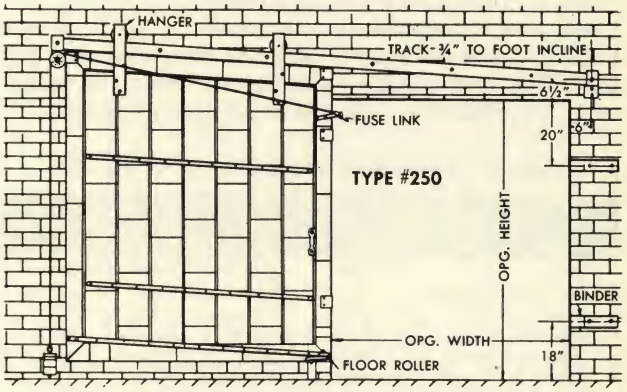
NO. 370—Pairs flush swing Tin Clad Doors with self-closing devices for use with angle frame. Minimum Headroom 4". Minimum operating space—one-half opening width plus 8" each side, per leaf.

NO. 380—Same as No. 370 except for use with channel frame.

NO. 375—Pairs lap swing Tin Clad Doors with self-closing devices with wall plate. Minimum Headroom 8". Minimum operating space—one-half opening width plus 13" each side, per leaf.

NO. 366—Same as No. 375 without wall plate.

inclined sliding



NO. 250—Single incline slide Tin Clad Door with automatic closing device having one fusible link in the opening. Minimum Headroom—see table on page 17. Minimum operating space—twice opening width plus 17".

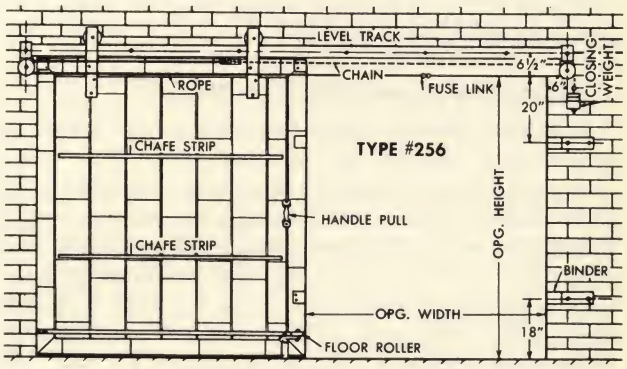
NO. 250A—Same as number 250 with weights compounded by means of pulley arrangement.

NO. 252—Single incline slide Tin Clad Door with automatic closing device having two fusible links and trigger (Indiana code). Minimum Headroom—see table on page 17. Minimum operating space—twice opening width plus 19".

NO. 254—Single incline slide Tin Clad Door with automatic closing device having two fusible links. Minimum Headroom—see table on page 17. Minimum operating space—twice opening width plus 19".

NO. 258—Pairs incline slide Tin Clad Doors with automatic closing device having one fusible link (each leaf) in the opening. Minimum Headroom—see table on page 17. Minimum operating space—one-half opening width plus 17" each side, per leaf.

level sliding



NO. 256—Single level slide Tin Clad Doors with automatic closing device having one fusible link in the opening. Minimum Headroom 14". Minimum operating space—twice opening width plus 14".

NO. 255—Same as No. 256 except that a second fusible link and trigger device is provided at ceiling.

NO. 262—Single level slide Tin Clad Doors with automatic closing device having one fusible link in the opening for use when headroom is limited—underslung type. Minimum Headroom 7¾". Minimum operating space—twice opening width plus 14".

NO. 264—Single level slide Tin Clad Doors with automatic closing device having one fusible link in the opening for use when headroom is limited—angle track type. Minimum Headroom 11½". Minimum operating space—twice opening width plus 14".

NO. 260—Pairs level slide Tin Clad Doors with automatic closing device having one fusible link in the opening. Minimum Headroom 14". Minimum operating space—one-half opening width plus 14" each side of opening, per leaf.

tin clad fire door headroom schedules

Headroom Schedules

Since the track is inclined, the required headroom increases as width of opening increases. The clear wall spaces above lintel must be 13½" at low point of track. The pitch of track should be ¾" per foot. The table below shows the minimum headroom required for different width openings.

sliding fire doors with incline track: single slide

Width of Opening	Required headroom	Width of Opening	Required headroom	Width of Opening	Required headroom
2'0"	17"	6'0"	23"	10'0"	29"
2'4"	17½"	6'4"	23½"	10'4"	29½"
2'8"	18"	6'8"	24"	10'8"	30"
3'0"	18½"	7'0"	24½"	11'0"	30½"
3'4"	19"	7'4"	25"	11'4"	31"
3'8"	19½"	7'8"	25½"	11'8"	31½"
4'0"	20"	8'0"	26"	12'0"	32"
4'4"	20½"	8'4"	26½"	12'4"	32½"
4'8"	21"	8'8"	27"	12'8"	33"
5'0"	21½"	9'0"	27½"	13'0"	33½"
5'4"	22"	9'4"	28"	13'4"	34"
5'8"	22½"	9'8"	28½"	13'8"	34½"

sliding fire doors with incline track: double slide

Width of Opening	Required headroom	Width of Opening	Required headroom	Width of Opening	Required headroom
4'0"	16½"	8'0"	19½"	12'0"	22½"
4'4"	16¾"	8'4"	19¾"	12'4"	22¾"
4'8"	17"	8'8"	20"	12'8"	23"
5'0"	17¼"	9'0"	20¼"	13'0"	23¼"
5'4"	17½"	9'4"	20½"	13'4"	23½"
5'8"	17¾"	9'8"	20¾"	13'8"	23¾"
6'0"	18"	10'0"	21"	14'0"	24"
6'4"	18¼"	10'4"	21¼"	14'4"	24¼"
6'8"	18½"	10'8"	21½"	14'8"	24½"
7'0"	18¾"	11'0"	21¾"	15'0"	24¾"
7'4"	19"	11'4"	22"	15'4"	25"
7'8"	19¼"	11'8"	22¼"	15'8"	25¼"

sliding fire doors with level track

Single or double slide fire doors with standard level track require 14" headroom for any width opening. Special angle track single or double level slide doors require 11½" headroom for any width opening. Reverse hanger sliding type number 262 requires 7¾" headroom with track extending 4¾" below lintel. Swinging fire doors lap type numbers 350, 355, 366 and 375 require 8" headroom; flush type numbers 358, 360, 365, 370 and 380 require 4" headroom.

Operating Space Required

VERTICAL SLIDE—Height, Type Nos. 400 and 401 opening height doubled plus 21". Width, Type No. 400 (doors under 200 lbs.) 14" counterweight side, 7" other side; Type No. 401 (doors over 200 lbs.) 14" each side.

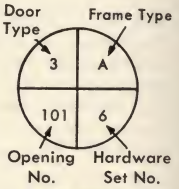
INCLINED SLIDE—One fuse link type numbers 250 and 258—opening width doubled plus 17". Two fuse link type numbers 252 and 254—opening width doubled, plus 19".

LEVEL SLIDE—Type numbers 255, 256, 260, 262 and 264—opening width doubled, plus 14".

specifications

HOLLOW METAL WORK

1. **SCOPE**
   a. Provide hollow metal work required to complete work indicated on drawings in strict accordance with these specifications.
   b. See Door Schedule for sizes, location of openings and paragraphs below for required profiles, styles. Openings shown on plans: identified with the following Circular Code Symbol —
   c. Templates for all required hardware: furnished to the door manufacturer.



Code Symbol
(example only)

2. **STANDARD OF QUALITY**
   a. All work herein specified: equivalent to the standard details and quality of manufacture of Overly Manufacturing Company, Greensburg, Pa., Los Angeles 39, Calif.
   b. For profiles, details for door frames, door designs see Overly Sweet's Catalog, Section 16b/Ov, 1960 Edition, and drawings.

3. **WORK INCLUDED**
   a. **Hollow Metal Frames**
      (1) Provide hollow metal door frames with (transoms) (side lights) (borrowed light frames) for door openings indicated, complete with plaster key, Style No. ( ); profile, Style No. ( ); constructed of 18 (16) (14) (12) (10) gage steel.
      (2) Where indicated on drawings, provide rough bucks with (adjustable) (expansion shield) anchors constructed per Overly detail ( ), of 16 (14) (12) gage steel.
      (3) Where indicated on drawing, provide door frames with (insert here special construction features, indicated in Overly Catalog).
   b. **Hollow Metal Doors**
      (1) Provide (flush) (panel) design doors of 20 (18) (16) (14) (12) gage steel, with (panel inserts) (louvers) (lights) (designs) and sizes as indicated.
      (2) Provide narrow stile doors of 18 gage (cold rolled steel) (#302 stainless steel) in designs, sizes indicated.
   c. Labeled Doors, Frames—Provide Underwriter's Laboratories labels with fire resistant ratings of 3 hrs. for A label (1½ hrs. for B, D labels) (¾ hrs. for C, E labels) for openings indicated on Door Schedule.
   d. Kalamein doors (frames) (Tin Clad doors), labeled (non-labeled) construction provided per OVERLY standard details in sizes indicated for openings designated by drawings.

4. **WORK NOT INCLUDED**
   a. Unless otherwise specified, painting contractor shall touch-up prime shop coat, do finish painting.
   b. Glass, glazing: provided under section, Glass and Glazing.
   c. All hardware, thresholds, weatherstripping, channel or structural steel frames: provided, installed under other sections of these specifications.
   d. Door manufacturer shall not do drilling, tapping for surface applied hardware on doors and frames (such as door checks, brackets, transom hardware closers, push plates, etc.) or for floor type closers on hollow metal doors.
   e. Head Reinforcing: as provided by others under Miscellaneous Iron Section these specifications.

metal door, frame specifications

hollow metal specifications (cont'd)

5. **MATERIALS**
   a. Steel, in U.S. Standard gages herein specified: prime quality cold rolled, pickled, annealed stretcher leveled steel; free from scale, pitting, surface defects.
   b. Stainless steel (in U. S. Standard gages specified below): ASTM Designation A167, Grade 2 (Type 302).
   c. Soundproofing and fireproofing material for labeled and non-labeled doors: mineral wool to reduce metallic ring, act as insulator.

6. **SAMPLES**
   a. When required submit 6″ fabricated corner section of doors, frames herein specified.

7. **SHOP DRAWINGS**
   a. Submit for approval shop drawings for work herein specified before fabrication.

8. **FINISH**
   a. Cleaning—After assembly, clean thoroughly, removing all rust, scale, grease, oil, rough spots. Grind welds, joints smooth; fill flush with mineral filler to conceal seams.
   b. Pressed Steel Frames—Apply shop coat of approved rust inhibitive primer.
   c. Hollow Metal Doors—Apply two coats baked-on rust inhibitive primer. (Alternate—Apply baked-on mineral filler, one coat baked-on primer surfacer, two coats baked enamel finish in colors as selected by architect from Overly Color Chart.)
   d. Stainless Steel Doors, Frames: Overly OV-400 satin finish.

9. **WORKMANSHIP**
   a. All work: shop fabricated to required profiles by forming, welding; with arises, edges straight, sharp, unless coved or bull-nosed, etc. Fit, fabricate accurately with corners, hairline joints, surfaces free from warp, wave, buckle, other defects.
   b. Welding—Conform to applicable standards of American Welding Society for high grade hollow metal work, with exposed beads ground smooth.
   c. Filling—Mineral filler: used sparingly to conceal seams, not for hiding defects in fabrication.
   d. Hardware Reinforcement—Provide concealed reinforcement of sheet or bar steel to receive mortise type hardware; drill, tap to template requirements for field installation. Manufacturer shall not be required to drill or tap for surface applied hardware, closures, push plates, etc. Reinforcement shall include—
      3/16″ hinge plates—frames; 9 gage min.—doors.
      12 gage lock strike reinforcement.
      12 gage reinforcement for surface applied hardware.
      24 gage galvanized steel plaster guards at mortise hardware locations.
   e. Anchors—Provide framing with 16 gage anchors as required by wall conditions per Overly Part No. ( ).

10. **HOLLOW METAL FRAMES**
    a. Welded Unit Construction—Assemble frames in shop, weld corners, molds, returns, as required by shop drawings.
    b. Combination Frames—Furnish shop assembled and welded units for door frames with (transoms), (sidelights), (borrowed lights), complete with muntins, mullions, impost sections, fabricated to requirements of drawings, these specifications. Provide glazing stops, moldings for field assembly with countersunk oval head machine screws, not over 16″ on centers.
    c. Door Silencers—Prepare jamb rebates for rubber door silencers (provided by Hardware Supplier); locate, three for single doors, two for pairs of doors.
    d. Special Features—(Specify additional features such as, adjustable anchors, rock lath receiving clips, stainless steel spats, cut-off stop—hospital type, gaskets for lightproof or sound-retardent doors, extra reinforcement and lead lining for X-ray areas, adjustable ceiling struts, etc.)

11. **HOLLOW METAL DOORS**
    a. Doors constructed from two steel sheets (gages specified above) formed, welded for flush pan assembly; with internal reinforcement, consisting of 20 gage vertical channels, spaced not over 8″ on centers, extending vertically through full door height, uniformly spot welded to mated pans. Make doors free from metallic ring by providing filler materials specified above. Provide filler channels to close top of exterior doors flush for weatherproofing.
    b. Cut Outs—As required by door details provide openings for (panels) (glazing) (louvers) uniformly located. (Form panels of two 24 gage sheets cemented to composition board under pressure, with moldings welded into complete assembly; make moldings on one side removable.)
    c. Moldings—For open lights or panels, muntins, drawn from 20 gage galvannealed steel to stock design; miter corners, weld into integral frame; make one frame on inside of door removable, outside welded in place; attach removable frame with countersunk oval head machine screws, not over 16″ on centers.
    d. Louvers—per Overly Design, No. ( ); (stamped), (formed) construction. Location and size as indicated on drawings.
    e. Astragals—per Overly details, extending full door height, on active leaf of all exterior doors, consisting of (1¾″ by 12 gage strip for standard type) (14 gage sheet formed in "T" shape) (extruded weather seal with siliconized pile wipers).
    f. Special Features—(Enumerate special stile construction, automatic door bottoms, drip mold, other features indicated in Overly catalog.)

12. **(KALAMEIN) (TIN CLAD) DOORS (AND FRAMES)**
    a. Provide (flush) (panel) (non-label) (labeled) Kalamein doors (frames), constructed in accordance with established shop practice, in designs, sizes indicated on drawings.
    b. Provide Overly UL Labeled tin clad fire doors for openings indicated on Door Schedule, constructed per UL requirements for (Class A labeled fire doors—3-ply 2½″ thick) (Class B, C, D, or E labeled fire doors—2-ply 1¾″ thick or 3-ply 2½″ thick as required by size of opening). Equip doors with UL labeled hardware, Overly Set No. ( ), as enumerated in Overly Door & Frame Catalog, Section 16b/Ov, Sweet's 1960 Edition.

13. **STORAGE**
    a. Carefully store hollow metal work at site, in upright position, protected from elements on wood blocking, in a manner to prevent damage, marring of finish.

14. **ERECTION**
    a. General Contractor shall erect units in openings per architects plans, set to established lines, plumb and true, apply finish hardware.

● Overline Color Charts for Standard Baked Enamel Interior and Exterior (Colorclad) Finishes are available on request.

● NOTE: UL means Underwriters' Laboratories.
Use of colon (:) substitutes for words "shall be."

overly Overline TILT-A-FRONT

Showroom—Dixie Furniture Co., Lexington, N. C. Architects: Louis F. Voorhees and Eccles D. Everhart, High Point, N. C.

Factory office building—Overmeyer Mould Company, Greensburg, Pa. Architects: Sorber and Hoone, Greensburg, Pa.

Country club entrance and exterior—Bonnie View Country Club, Baltimore County, Md. Architect and Engineer: Bonnett and Brandt, Baltimore, Md.

Tilt-A-Front is a product of our unique background in both curtain wall building techniques and hollow metal production methods. The result is a new concept in window wall framing that eliminates costly trial-and-error field work, cuts erection time by 60% over conventional methods of wall framing.

what is Tilt-A-Front?

Tilt-A-Front is a factory assembled unit welded wall framing system that is shipped in as large sections as can be accommodated by job site conditions and available transport. As its name implies, Tilt-A-Front tilts into place as simply, as quickly as a ladder. Because it's entirely pre-engineered, it fits like a glove.

Unit welding makes Tilt-A-Front an exceptionally rigid, structurally sound construction that does away with leakage and settling problems. And its clean, thin line appearance is contemporary in every sense of the word; requires none of the usual exposed plate reinforcements, angles or stiffeners found in conventional store front construction. Nor does it depend, in any way, on plate glass for its rigidity—glass is never under stress or tension.

An excellent example of Tilt-A-Front construction is the showroom office of Dixie Furniture Company, Lexington, North Carolina. Units for this building, enclosing an opening 50′ wide x 30′ high, were shipped in full height sections. The intermediate horizontal members in four of the sections were shipped knocked down. Erector simply tilted and hoisted the welded units into place, secured them, then finished up by bolting in the horizontal members at a very low installed cost per square foot.

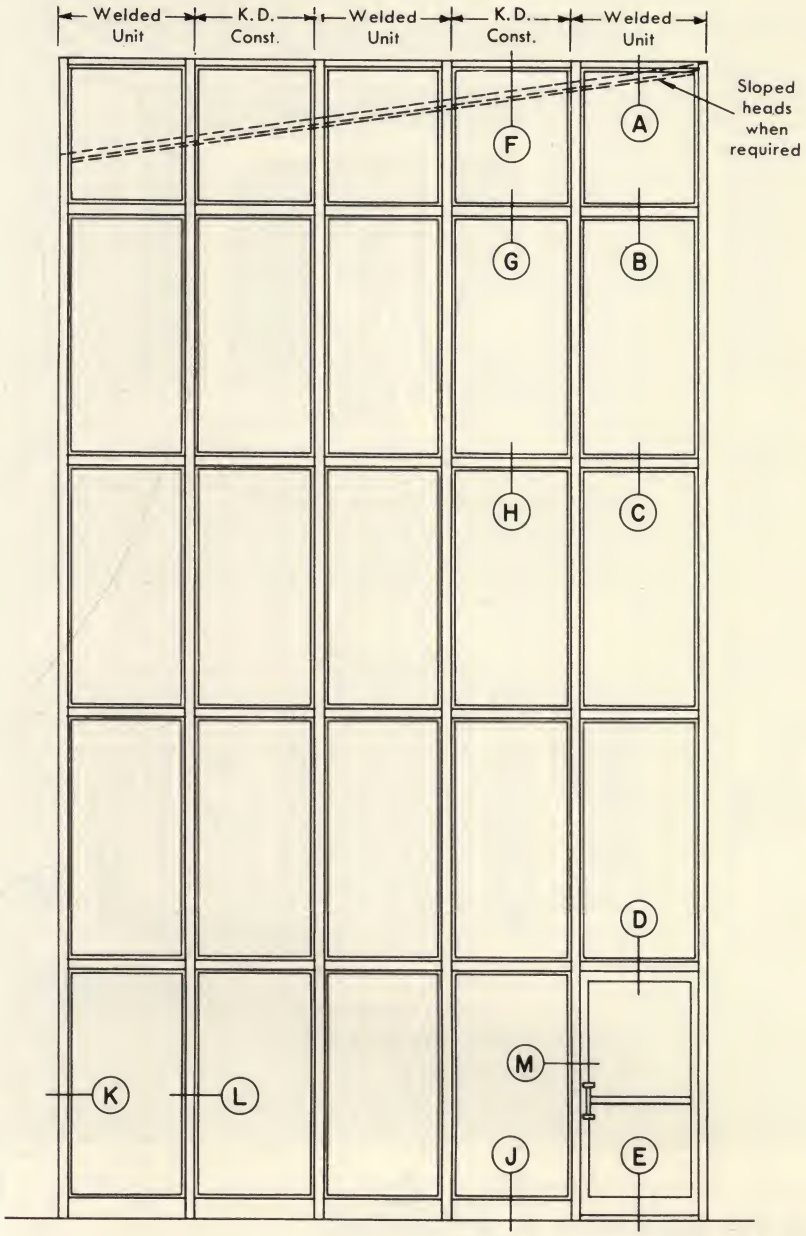
typical Tilt-A-Front applications

The Tilt-A-Front system is applicable to either interior or exterior use for schools, contemporary churches, small office buildings, small hospitals and clinics, drug stores and supermarkets, pre-engineered buildings, showrooms, laboratory and research buildings, etc., or for any one to three story building.

how to utilize and specify the Tilt-A-Front system

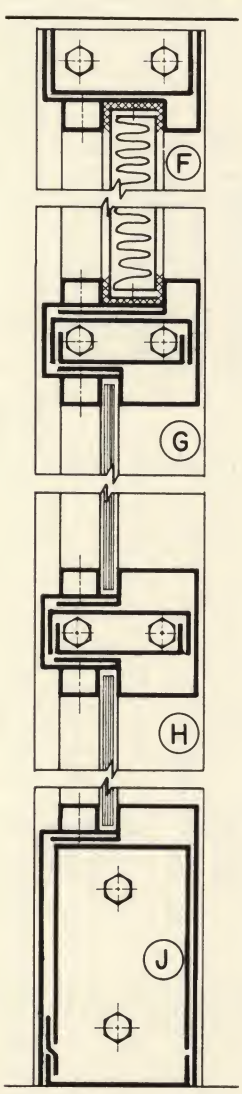
Tilt-A-Front is a system, rather than a standard product. Each installation should be considered custom. Overly will take your particular wall framing design and convert it into detailed sections and elevations that conform to the Tilt-A-Front system.

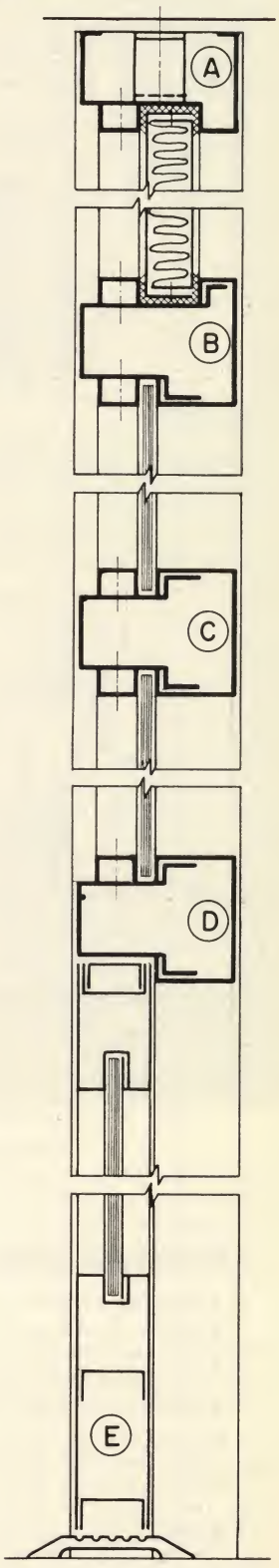
Tilt-A-Front may be specified with Overline entrances in carbon or galvanized bonderized steel, with prime or baked enamel (Colorclad) steel, stainless steel. Material should be specified to be shipped in prefabricated erection units; sections to be tilted and secured together at job site. Sash or panels may be furnished if required, and Tilt-A-Front units can be designed to receive any conventional window, porcelain or aluminum panel. Glass and glazing should be specified separately.

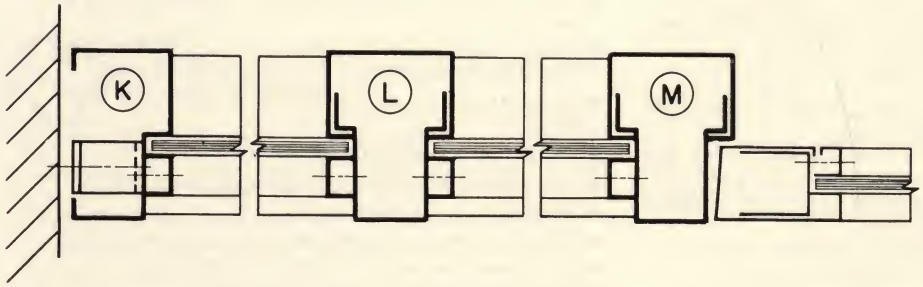


key elevation

DO NOT SCALE







NOTE: Tilt-A-Front units are manufactured in welded unit sizes not exceeding 8′ in width and 30′ in height and are made up of combinations of assembled units and knocked down intermediate sections.

Applicable gages are 12,14,16 gage carbon or galvanized bonderized steel, finished prime or with Colorclad enamel finishes, or in stainless steel.

Overly normally furnishes necessary anchor bolts, screws and necessary fittings and fastenings.

Sloped heads (indicated by broken line on elevation above) are available to fit buildings having pitched roofs.

Entrance door shown on elevation is an Overline entrance.

Overline Stainless Steel Entrances

Crucible Steel Warehouse Office, Solon, Ohio

Architects: Fulmer & Bowers, Princeton, N. J.

Co-Op Supermarket, Greenbelt, Md.

Architect: William T. Bateman, Greenbelt, Md.

Overline Colorclad Steel Entrances

Meadowlawn Junior High, St. Petersburg, Fla.

Architect: Glenn Quincy Johnson, St. Petersburg, Fla.

Davis Supermarket, Greensburg, Pa.

Architects: Moyer & Walfish, Greensburg, Pa.

why it pays to specify Overline

stainless steel

- Economical to own—remains maintenance-free.
- Double the strength of softer metal doors.
- Exclusive OV-400 finish retains its satin luster indefinitely; harmonizes with any building exterior.
- Withstands roughest, high-traffic abuse.
- Premium Type 302 (18-8) stainless used throughout—no wood nor carbon steel internal construction.
- Unit welded, tubular construction with internal girder type reinforcing. All external welds ground smooth and polished.
- Double-ply top and bottom rails provide strength to withstand whip action of automatic door operators.
- Integrally formed glass stop eliminates exposed screws.
- Matching stainless steel hardware, furnished installed.
- Custom entrances fabricated to any special design.
- Available with Fing-R-Gard.
- Backed by a written 10-YEAR WARRANTY.

colorclad*

- Budget priced.
- Wide choice of compatible colors** harmonize with any building material.
- Factory baked-on enamel finishes, comparable to finest appliance finishes, stay bright . . . new looking for years.
- Engineered for endurance—withstands years of heavy traffic abuse.
- Tubular construction of furniture grade steel.
- Unit welded, with girder type internal reinforcing.
- Double-ply top and bottom rails.
- Continuous channel reinforcement full length of door.
- All exposed welds ground smooth and finished.
- Greater strength than softer metal doors.
- Custom entrances fabricated to any special design.
- Available with Fing-R-Gard.

*Color charts are available upon request.

**Any non-standard color will be matched upon submission of sample. This entails an additional charge and may occasion a slight delay in delivery.

specifications
Overline® entrances

1. scope

(a) Provide narrow stile entrance doors, frames, transoms, sidelights, related items to complete work indicated on drawings and/or specified herein.

(b) See DRAWINGS, DOOR SCHEDULE for sizes, locations of openings; see paragraphs below for required profiles, styles.

2. standard of quality

(a) Work herein specified: manufactured to quality standards of Overly Manufacturing Company, Greensburg, Pa.; Los Angeles, Calif.

3. work included

(a) Provide Overline stainless steel entrance assemblies conforming to following basic unit designs—

Door Designation *Overly Unit No.*

(List Requirements)

(b) Provide Overline Colorclad steel entrance assemblies conforming to following basic unit design—

Door Designation *Overly Unit No.*

(List Requirements)

(c) Provide entrances with following matched finish hardware sets—(See Overline Hardware List, 16a/Ov, Sweet's Catalog, 1959).

Door Designation *Overly Hardware Set No.*

(List Requirements)

(d) Provide (doors on center pivoted closers) (Door Designation No.) with Overly Fing-R-Gard (Vinyl guard and weather seal which gives positive protection against finger crushing) installed on pairs of doors at factory.

(e) Provide all other meeting stiles on pairs of doors with integral pile edge weatherstripping.

4. work not included

(a) Glass, glazing: these items provided under Glass and Glazing Section of these specifications.

(b) Automatic Door Operators: furnished by others.

5. materials

(a) Steel (in U. S. Standard gages specified below): high quality, cold rolled, pickled, annealed stretcher leveled furniture grade prime steel; free from scale, pitting, surface defects.

(b) Stainless steel (in U. S. Standard gages specified below) shall conform to ASTM Designation A167, Grade 2 (Type 302).

(c) Screws, nuts, washers, other miscellaneous fastening devices on stainless steel assemblies: Type 302 stainless steel; otherwise steel fastenings may be used.

6. samples

(a) Submit (when required) 6 inch corner section of doors, frame, trim herein specified.

7. shop drawings

(a) Before executing any of work specified, submit complete shop drawings for approval.

8. finish

(a) Overline Colorclad Finish (required for Colorclad steel entrances)—After assembly clean thoroughly, grind welds, joints smooth; apply full-bodied coat of baked-on mineral filler, one coat baked-on primer surfacer, followed by two coats baked enamel Colorclad finish selected from Overly Colorclad Color Chart.

(b) Overline Stainless Steel Finish (required for all-stainless steel entrances)—Overly OV400 satin finish: provided for exposed surfaces.

9. workmanship

(a) General—Shapes: formed with clearly defined profiles, free from twists or warping; corners: accurately joined, fitted to flush hairline; joints, welded along concealed lines of contact. Welding shall conform to best practice, thoroughly penetrating material.

(b) Frames—Door, transom, sidelight frames: factory fabricated, head corners mitered, of 16 gage material and shall conform to sections detailed on drawings.

(c) Doors—Fabricate from tubular sections or form to sections, as detailed on drawings, from 18 gage material. Fit door stiles, rails to a flush welded joint.

(d) Glazing Stops—Assemble stops, mouldings of 20 gage steel on room side, with welded corners; fasten with countersunk oval screws, 16" maximum spacing. Integrally form exterior-side stop as part of top, bottom rails.

(e) Mullions, Transom Bars—Fabricate from tubular sections with integrally formed rebates for glass stop, doors, transom sash. Fasten at crossings to jambs by welding or concealed clip angles of 11 gage formed steel.

(f) Hardware Fitting—Provide all necessary cutouts, recesses, mortising required for finish hardware, formed accurately to template, reinforced with $\frac{3}{16}$ inch reinforcement plates to insure adequate strength in connection.

(g) Internal Reinforcement—Wood or carbon steel internal reinforcement shall not be acceptable with all-stainless steel entrances.

(h) Weatherstripping—Centrally pivoted type doors: fully weatherstripped at jamb stiles, mullion, or meeting stiles with a metal extrusion, nylon pile wiping insert.

Pairs of offset pivoted, or butt hinged doors shall have metal extrusion and nylon pile weatherstripping insert only at meeting stiles.

10. hardware

(a) Finish hardware for entrances: furnished by Overly; installed at site by General Contractor.

(b) Finish of hardware: (dull bronze) (aluminum) (dull chrome) (stainless steel).

(c) Hardware items: Set Nos. enumerated in Overline Hardware List, Sect. 16a/Ov, Sweet's Catalog, 1959.

11. warranty (Stainless Steel Entrances)

(a) Each Overline stainless steel door, frame: guaranteed to original purchaser to be free from defects in material, workmanship under normal use, service for a period of ten (10) years from time of installation; this in accordance with terms stated in Overly Manufacturing Company's 10-year Warranty.

12. erection

(a) General Contractor shall install entrances at indicated elevation and plane in prepared openings, set plumb, square, level, securely anchored to adjoining construction.

(b) Caulk joints between metal, masonry with approved type caulking compound; neatly point, remove excess material.

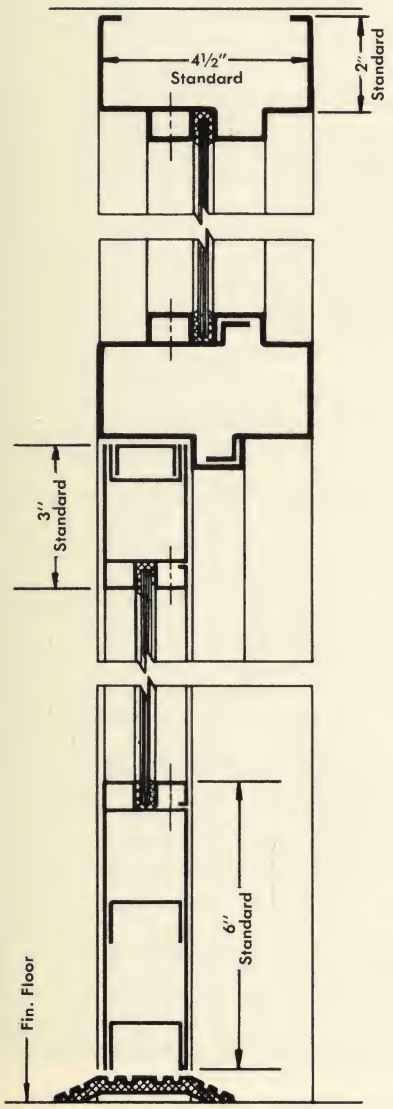
(c) After erection, glazing, General Contractor shall check, readjust (as required) items of operating hardware.

(d) Adequately protect exposed portions of doors, frames, other members from damage. Before completion of project, General Contractor shall touch-up abrasions to Colorclad Entrances from matching Colorclad finish supplied by Overly.

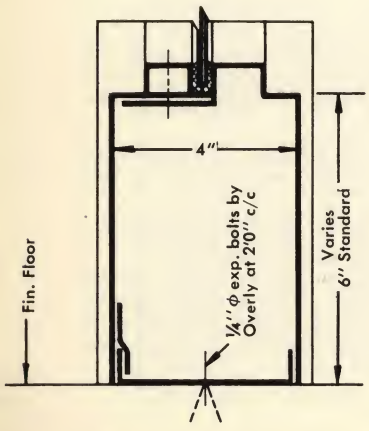
NOTE: Use of colon (:) substitutes for words "shall be."

• We reserve the right to change the above specifications without notice.

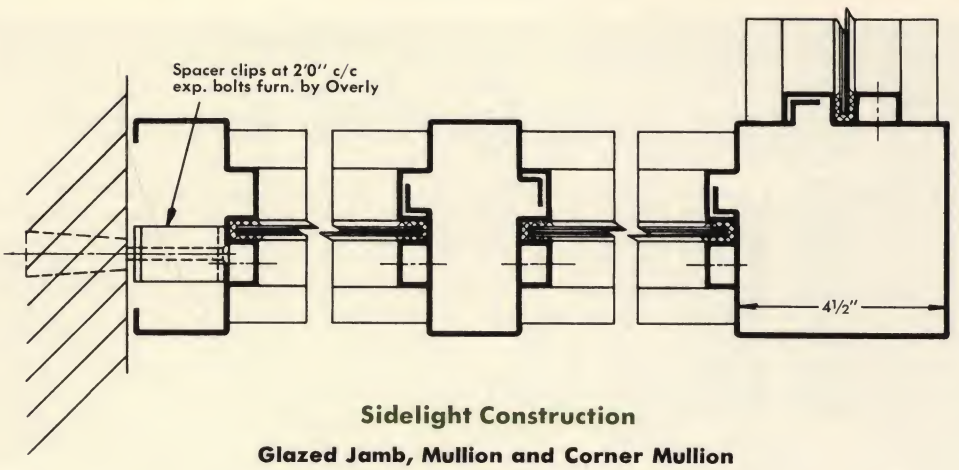
SCALE: 3" = 1'-0"



Head, Transom Bar, Top and Bottom Rails

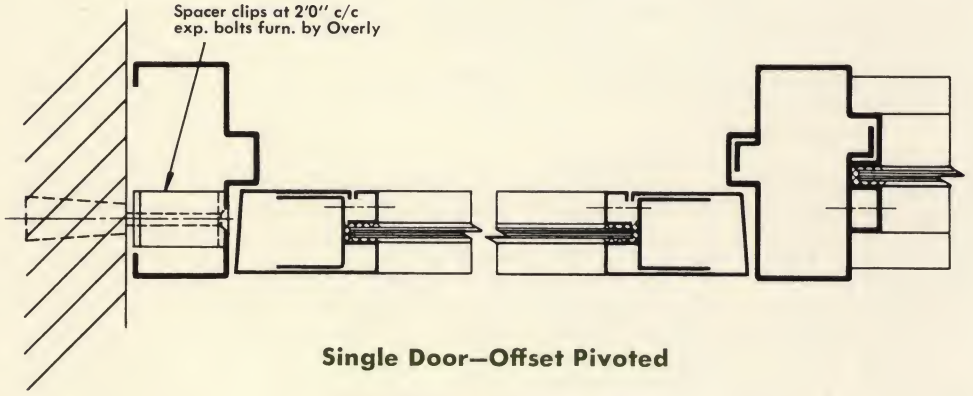


Glazed Sill



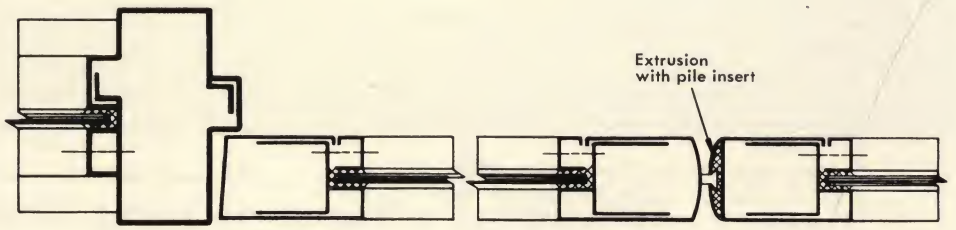
Sidelight Construction

Glazed Jamb, Mullion and Corner Mullion



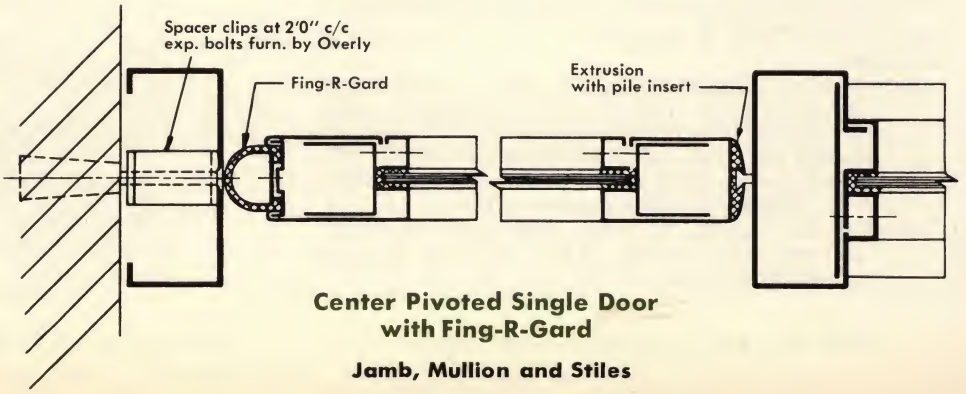
Single Door—Offset Pivoted

Jamb, Mullion and Stiles



Pair Doors—Offset Pivoted or Butt Hung

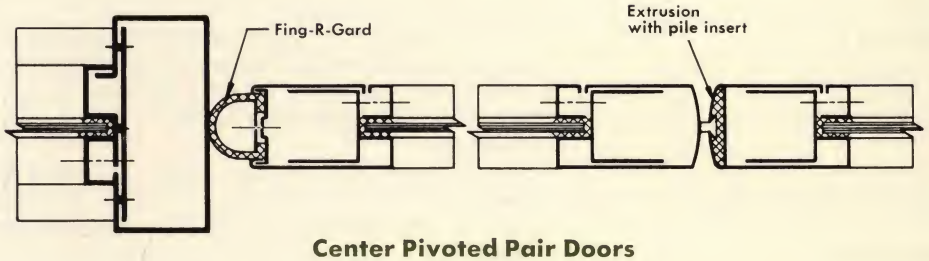
Mullion, Hinge Stiles and Meeting Stiles



Center Pivoted Single Door with Fing-R-Gard

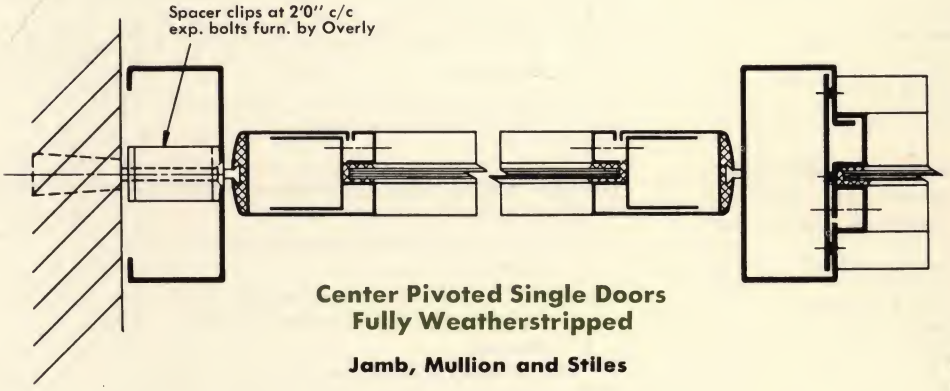
Jamb, Mullion and Stiles

SCALE: 3" = 1'-0"



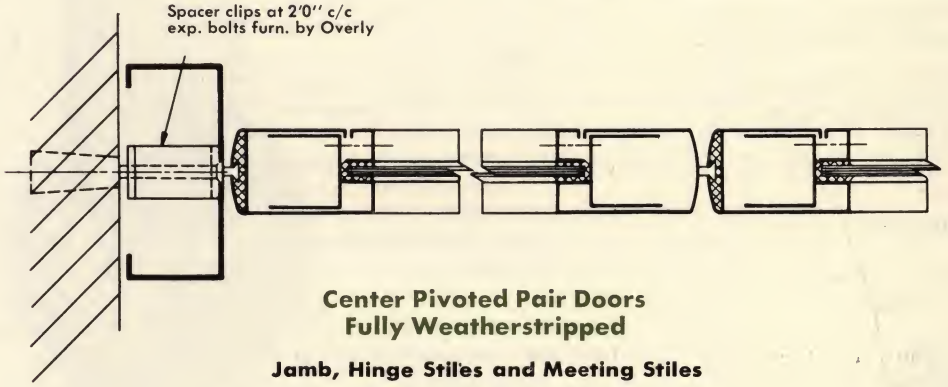
Center Pivoted Pair Doors with Fing-R-Gard

Mullion, Hinge Stiles and Meeting Stiles



Center Pivoted Single Doors Fully Weatherstripped

Jamb, Mullion and Stiles

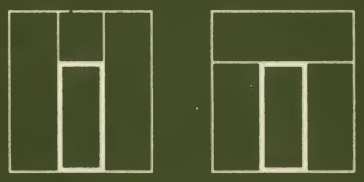


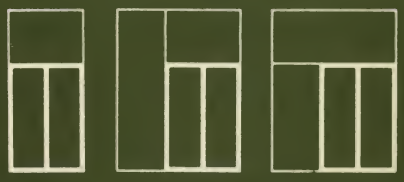
Center Pivoted Pair Doors Fully Weatherstripped

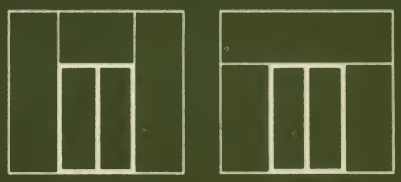
Jamb, Hinge Stiles and Meeting Stiles

NOTE: Where knockdown construction is required, suitable anchoring, fastening and reinforcements are provided.

typical units







type AS*†† (single swing on hinges—surface closer)
- 1 Deadlock 120-562-¾ x US26D x bev. front
- 1½ Pair butts 120-TB2314-½—CD 4½" x 4½"
- 1 Closer
  (120-23 x SB for doors up to 3'0" wide)
  (120-24 x SB for doors over 3'0" wide)
- 1 Bracket (req. for reverse bevel doors only)
  (120-B893 x SB for use with closer 120-23)
  (120-C894 x SB for use with closer 120-24)
- 2 Bars (1 push—1 pull) Stainless Steel
- 1 Threshold 120-37-4 x Alum.

type AP*††† RHRB ACTIVE (pair swing on hinges—surface closers)
- 1 Deadlock 120-562-¾ x US26D x rad. front
- 3 Pair butts 120-TB2314-½—CD 4½" x 4½"
- 2 Flush Bolts 120-257-12" x US26D x rad. front
- 2 Closers
  [120-23 x SB (for doors up to 3'0" wide—each leaf)]
  [120-24 x SB (for doors over 3'0" wide—each leaf)]
- 2 Brackets (req. for reverse bevel doors only)
  (120-B893 x SB for use with closer 120-23)
  (120-C894 x SB for use with closer 120-24)
- 4 Bars (2 push—2 pull) Stainless Steel
- 1 Threshold 120-478 x Alum. with stop strip

type BS*† (single swing on offset pivoted floor check)
- 1 Deadlock 120-562-¾ x US26D x bev. front
- 1 Floor check
  (120-20 x US26D for interior doors not over 3'6" wide, reverse bevel entrance and vestibule doors not over 2'10" wide and regular hand entrance and vestibule doors not over 2'6" wide)
  (120-25 x US26D for interior doors not over 4'0" wide and entrance and vestibule doors not over 3'6" wide)
- 1 Intermediate pivot 120-M19 x US26D
- 2 Bars (1 push—1 pull) Stainless Steel
- 1 Threshold 120-5 x 400 x Alum.

type BP†** (pair swing on offset pivoted floor checks)
- 1 Deadlock 120-562-¾ x US26D x rad. front
- 2 Floor Checks
  (120-20 x US26D for interior doors not over 3'6" wide, reverse bevel entrance and vestibule doors not over 2'10" wide and regular hand entrance and vestibule doors not over 2'6" wide)
  (120-25 x US26D for interior doors not over 4'0" wide and and entrance and vestibule doors not over 3'6" wide)
- 2 Intermediate pivots 120-M19 x US26D
- 2 Flush Bolts 120-257-12" x US26D x rad. front
- 4 Bars (2 push—2 pull) Stainless Steel
- 1 Threshold 120-5 x 400 x 200 stop strip x Alum.

type BCS*† (single swing on center pivoted floor checks)
- 1 Deadlock 120-562-¾ x US26D x rad. front
- 1 Floor check
  (120-21 x US26D for reverse bevel entrance and vestibule doors not over 2'10" wide and regular hand entrance doors not over 2'6" wide)
  (120-26 x US26D for interior doors not over 4'0" wide and entrance and vestibule doors not over 3'6" wide)
- 2 Bars (1 push—1 pull) Stainless Steel
- 1 Threshold
  (120-1 x 600 x Alum. for 120-21 floor check)
  (120-1 x 700 x Alum. for 120-26 floor check)

type BCP†** (pair swing on center pivoted floor checks)
- 1 Deadlock 120-562-¾ x US26D x rad. front
- 2 Floor Checks
  (120-21 x US26D for reverse bevel entrance and vestibule doors not over 2'10" wide and regular hand entrance doors not over 2'6" wide)
  (120-26 x US26D for interior doors not over 4'0" wide and entrance and vestibule doors not over 3'6" wide)
- 2 Flush bolts 120-257-12" x US26D x rad. front
- 4 Bars (2 push—2 pull) Stainless Steel
- 1 Threshold
  (120-1 x 600 x 200 stop strip x Alum. for 120-21 floor check)
  (120-1 x 700 x 200 stop strip x Alum. for 120-26 floor check)

type BCS* automatic (single swing with automatic floor operator)
- 1 Deadlock 120-562-¾ x US26D x rad. front
- 1 Automatic floor operator (by others) less top pivot
- 1 Top pivot 120-40 x US26D
- 1 Push bar Stainless Steel

type BCP automatic** (pair swing with automatic floor operator)
- 1 Deadlock 120-562-¾ x US26D x rad. front
- 2 Automatic floor operators (by others) less top pivots
- 2 Top pivots 120-40 x US26D
- 2 Flush bolts 120-257-12" x US26D x rad. front
- 2 Push bars Stainless Steel

type ASE (single swing on hinges and surface closer—reverse bevel with concealed exit device)
- 1½ Pair butts 120-TB2314-½—CD 4½" x 4½"
- 1 Closer
  (120-23 x SB for doors up to 3'0" wide)
  (120-24 x SB for doors over 3'0" wide)
- 1 Bracket
  (120-B893 x SB for use with closer 120-23)
  (120-C894 x SB for use with closer 120-24)
- 1 Threshold 120-37-4 x Alum.
- 1 Concealed exit device 120-61C x AR258 x US26D

type APE (pair swing on hinges and surface closers—reverse bevel with concealed exit device)
- 3 Pair butts 120-TB2314-½—CD 4½" x 4½"
- 2 Closers
  (120-23 x SB for doors up to 3'0" wide)
  (120-24 x SB for doors over 3'0" wide)
- 2 Brackets
  (120-B893 x SB for use with closer 120-23)
  (120-C894 x SB for use with closer 120-24)
- 1 Threshold 120-478 x Alum.
- 1 Concealed exit device 120-60CDT x 61C x AR258 x US26D

type BSE (single swing on offset pivoted floor check—reverse bevel with concealed exit device)
- 1 Floor check
  (120-20 x US26D for reverse bevel entrance and vestibule doors not over 2'10" wide)
  (120-25 x US26D for interior doors not over 4'0" wide and entrance and vestibule doors not over 3'6" wide)
- 1 Intermediate Pivot 120-M19 x US26D
- 1 Threshold 120-5 x 400 x Alum.
- 1 Concealed exit device 120-61C x AR258 x US26D

type BPE (pair swing on offset pivoted floor checks—reverse bevel with concealed exit device)

- 2 Floor checks
  (120-20 x US26D for reverse bevel entrance and vestibule doors not over 2'10" wide)
  (120-25 x US26D for interior doors not over 4'0" wide and entrance and vestibule doors not over 3'6" wide)
- 2 Intermediate pivots 120-M19 x US26D
- 1 Threshold 120-5 x 400 x 200 stop strip x Alum.
- 1 Concealed exit device 120-60CDT x 61C x AR258 x US26D

type BCSE (single swing on center pivoted floor check—reverse bevel with concealed exit device)

- 1 Floor check
  (120-21 x US26D for reverse bevel entrance and vestibule doors not over 2'10" wide)
  (120-25 x US26D for interior doors not over 4'0" wide and entrance and vestibule doors not over 3'6" wide)
- 1 Threshold
  (120-1 x 600 x Alum. for 120-21 floor check)
  (120-1 x 700 x Alum. for 120-26 floor check)
- 1 Concealed exit device 120-61C x AR258 x US26D

type BCPE (pair swing on center pivoted floor checks—reverse bevel with concealed exit device)

- 2 Floor checks
  (120-21 x US26D for reverse bevel entrance and vestibule doors not over 2'10" wide)
  (120-26 x US26D for interior doors not over 4'0" wide and entrance and vestibule doors not over 3'6" wide)
- 1 Threshold
  (120-1 x 600 x Alum. for 120-21 floor check)
  (120-1 x 700 x Alum. for 120-26 floor check)
- 1 Concealed exit device 120-60CDT x 61C x AR258 x US26D

type DAS**† (double acting on center pivoted floor check)

- 1 Deadlock 120-562-¾ x US26D x rad. front
- 1 Floor check
  (120-30 x US26D for interior doors not over 3'6" wide and entrance and vestibule doors not over 2'10" wide)
  120-40 x US26D for all doors over 2'10" wide
- 2 Push bars x Stainless Steel
- 1 Threshold
  (120-1 x 600 x Alum. for 120-30 floor check)
  (120-1 x 700 x Alum. for 120-40 floor check)

type DAP***† (double acting pair on center pivoted floor checks)

- 1 Deadlock 120-562-¾ x US26D x rad. front
- 2 Floor checks
  (120-30 x US26D for interior doors not over 3'6" wide and entrance and vestibule doors not over 2'10" wide)
  (120-40 x US26D for all doors over 2'10" wide)
- 2 Flush bolt 120-257-12" x US26D x rad. front
- 4 Push bars x Stainless Steel
- 1 Threshold
  (120-1 x 600 x Alum. for 120-30 floor check)
  (120-1 x 700 x Alum. for 120-40 floor check)

NOTE—Add the following when doors are installed in supermarkets where food carts are used:
*2 Cart bars 120-206P x stainless steel.
**4 Cart bars 120-206P x stainless steel.
***8 Cart bars 120-206P x stainless steel.

†NOTE: Floor closer available with hold open feature.

††NOTE: Surface closer available with hold open feature.

CODE TO OVERLINE ENTRANCE HARDWARE SETS

A —Any single swing door hung on butts with surface closers
B —Any single swing door with offset pivoted floor checks
C —Any single swing door with center pivoted floor checks
DA—Double acting
S —Single doors
P —Pairs of doors
E —Any door also equipped with concealed panic exit devices

new Fing-R-Gard®* . . . positive protection against finger-crushing

Finger-maiming accidents are increasing at an alarming rate wherever center pivoted automatic doors are installed—doors that create a hand sized opening between stile and jamb each time they are operated.

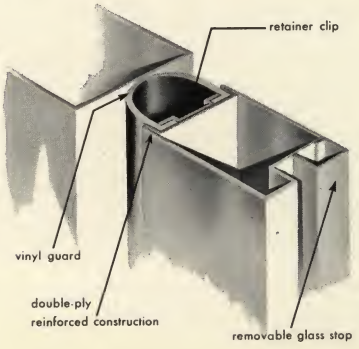
Overline's new Fing-R-Gard now offers a positive solution to this common problem. Its continuous, all-vinyl edge cushions the crushing pincers action of door stile against frame, while providing an efficient compensating weather seal.

Fing-R-Gard** has been Overly engineered as an integral part of the door—no exposed screws, moving parts or moldings mar the door's trim appearance. And its unique construction prevents it from being loosened or torn off in normal usage.

The guard's wear-resistant vinyl edge remains flexible at all normal temperatures, and is impervious to soaps and acids.

Fing-R-Gard—an exclusive Overline feature—is now available on Overline all stainless, and Colorclad doors.

x-section through Overline jamb stile.



*Applicable to doors on center pivots only. **Fing-R-Gard: patent pending.

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Kalamein smoke screens • doors • frames trim and moldings

Underwriters' labeled doors and bucks

hollow metal doors

tin clad doors and hardware

CATALOG
1959

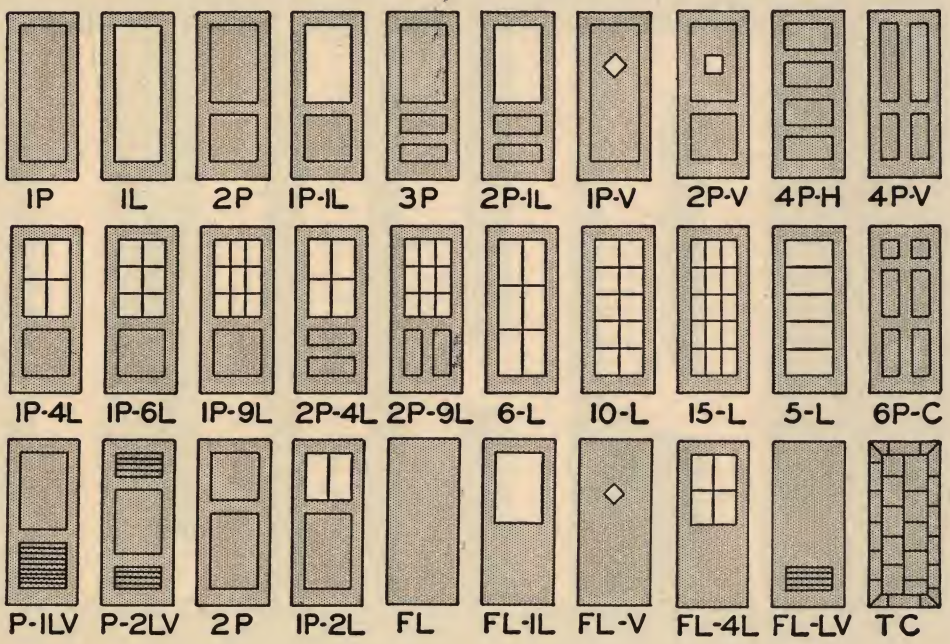
The Philipp Manufacturing Company
Easthampton, Mass. • *established 1922*

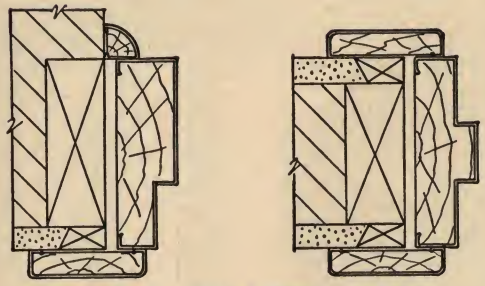
PHILIPP

illustrated on this page are typical door designs, smoke screens, also construction details

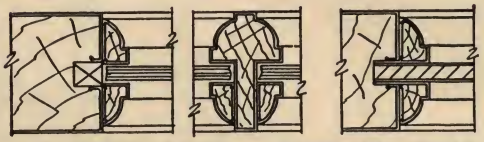
service estimates and drawings

Estimates will be furnished from the architects plans and specifications. Suggestions and shop drawings will be furnished whenever desired. We solicit your inquiries.

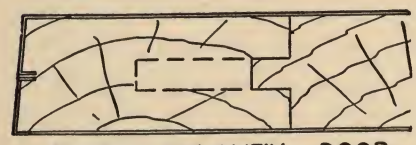




TYPICAL KALAMEIN JAMBS



GLAZED DOOR STANDARD KALAMEIN — PANELED DOOR CONSTRUCTION



FLUSH KALAMEIN DOOR

EXTRUDED BRONZE AND ALUMINUM DOORS

specifications

non labeled type kalamein doors

Wood cores shall be No. 1 sound kiln dried white pine, free from knots, shakes and other defects, machined all over to accurate dimensions.

Stiles and rails shall be mortised and tenoned and doweled and glued with waterproof glue. Stiles shall extend unbroken full height of doors.

All stiles shall be drawn through dies to insure a tight contact of metal to the wood cores.

Metal covering for the stiles, rails and panels shall be not less than 26 gauge patent leveled galvanized or long terne sheets, 16 or 20 oz. copper, 20 gauge bronze or aluminum.

Panels shall be 1/4" composition board with metal glued to surfaces with waterproof glue under pressure.

Flush type kalamein doors shall have 1/16" asbestos paper glued to wood cores and metal covering under pressure.

Special care shall be taken in assembling to avoid bench marks.

All joints between rails and stiles shall be filled with a good grade solder and scraped smooth.

All materials shall have a shop coat of special "Philipp" rust resisting metallic primer.

paneled type Underwriters' labeled kalamein doors

Wood cores shall be No. 1 sound kiln dried white pine, free from knots, shakes and other defects, machined all over to accurate dimensions.

Stiles and rails shall be mortised and tenoned and doweled and glued with waterproof glue. Stiles shall extend unbroken full height of doors.

Metal covering for stiles, rails and panels shall be not less than No. 26 gauge patent leveled galvanized or long terne sheets. All joints between rails and stiles shall be interlocked and filled with good grade solder and scraped smooth.

Panels shall be 1/4" asbestos board with metal glued to surfaces with waterproof glue under pressure.

Upturned flanges on inside of stiles and rails shall lap panels and be secured to same with 3/16" stove bolts not exceeding 10" on centers.

All material shall have shop coat of special "Philipp" rust resisting metallic primer.

Doors and frames will be mortised and reinforced for hardware when specified.

Class B—For openings in vertical shaft, solid panel or vision light with 100 sq. ins. maximum glass area permitted.

Class C—For openings in corridor or room partitions, 1296 sq. ins. glass maximum per light exposed area permitted.

Class D & E—For openings in exterior walls, 720 sq. ins. glass maximum per light exposed area permitted.

Maximum size permitted by Underwriters' in all cases is 4-0 wide x 8-0 high for single door, and 8-0 wide x 8-0 high for pair of doors.

(Classes B, C, D and E openings) are tested according to the standard specifications for fire tests of door assemblies (adopted 1942), furnish resistance to spread of severe fire (reaching 1790° F.) through such openings for at least 1½ hour, moderate resistance to transmission of heat, and will resist fire streams well.

flush type Underwriters' labeled kalamein doors

specifications

CORES: Shall be 2-ply T & G clear wood boards clinch-nailed and covered with 1/16" asbestos both sides glued on. Edges of stiles shall be reinforced full height with #24 gauge channels.

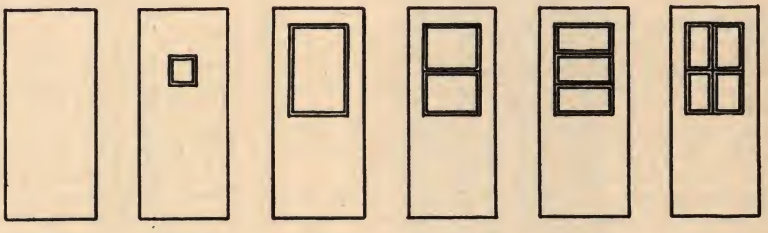
COVERING: Shall be #24 ga. galvanized metal glued on under pressure. Lock joints at edges of stiles shall be flushed with solder and ground smooth. Face sheets shall be provided with vents soldered and ground smooth.

GLASS LIGHTS: Mouldings shall be formed of 14 ga. Z frames welded into a complete removable unit and attached to steel reinforcing under metal covering with machine screws.

HARDWARE REINFORCING: Shall be provided for all mortise hardware and fitted for same at the factory.

PAINTING: Doors shall be primed at the factory with coat of "Philipp" rust resisting metal primer.

Specify Underwriters' labeled hollow metal door frames with labeled kalamein doors. See page 4.



Maximum sizes permitted: singles—3'-8" x 7'-6"; pairs—7'-4" x 7'-6".

DETAIL OF FLUSH TYPE LABELED KALAMEIN DOORS

Note the special reinforcing, channel and asbestos both sides under the galvanized metal.

hollow metal doors

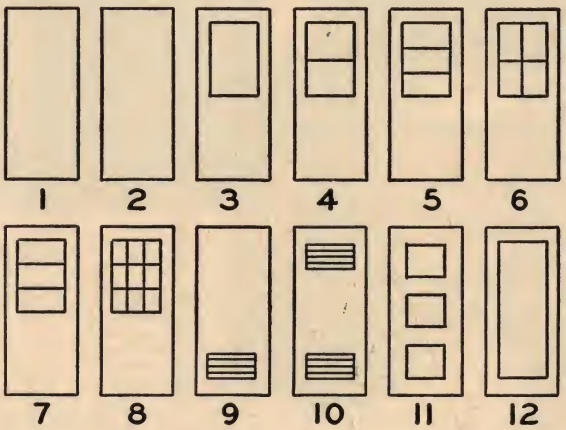
specifications

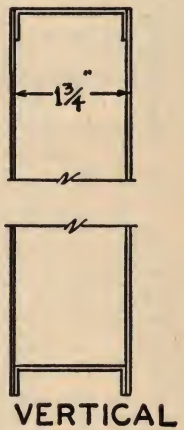
Doors are constructed of No. 18 gauge cold rolled sheets and assembled with channel stiffeners not more than 6 in. apart, electrically welded 6 in. on centers.

Cellufoam strips are placed between channel stiffeners to deaden metallic sound.

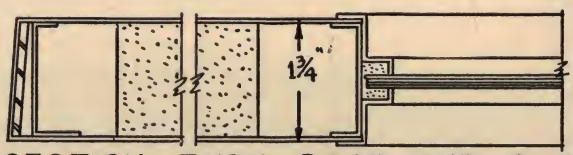
Cutouts and reinforcements are provided for all types of hardware.

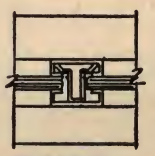
Doors are thoroughly cleaned, bonderized, and filled to insure a smooth finish and given one sprayed prime coat of best rust-inhibiting metal primer.





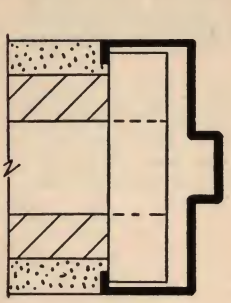
VERTICAL SECTION





SECTION THRU. DOOR AND GLASS MOULDINGS.

PHILIPP Underwriters' labeled and non labeled metal door frames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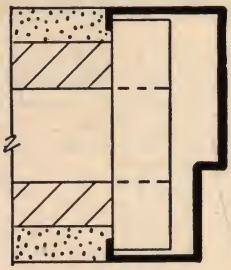
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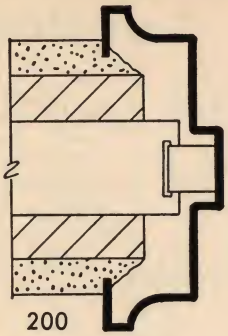
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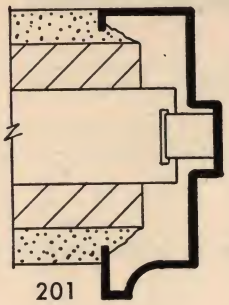
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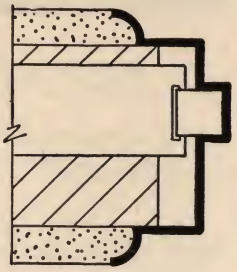

400

suggested specifications:

Hollow metal door frames shall be constructed of #16 gauge or #14 gauge steel with integral moulded or flat trim.

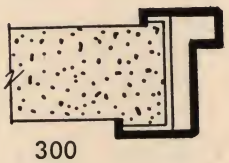
Head and jamb sections shall be accurately mitred, continuously electric welded on backs and ground smooth to produce a completely rigid assembly.

Accurate cutouts for all mortise hardware and steel reinforcements shall be provided. Furnish metal dust covers over all hardware cutouts to prevent contact with mortar and plaster.

For each jamb provide at least three corrugated adjustable anchors for building into masonry walls, or anchor clips for fastening to wood studs.

Bottom of frames shall be provided with floor clips and angle steel spreaders.

After fabrication, complete frame to be thoroughly cleaned and given shop coat of air dried primer.


300

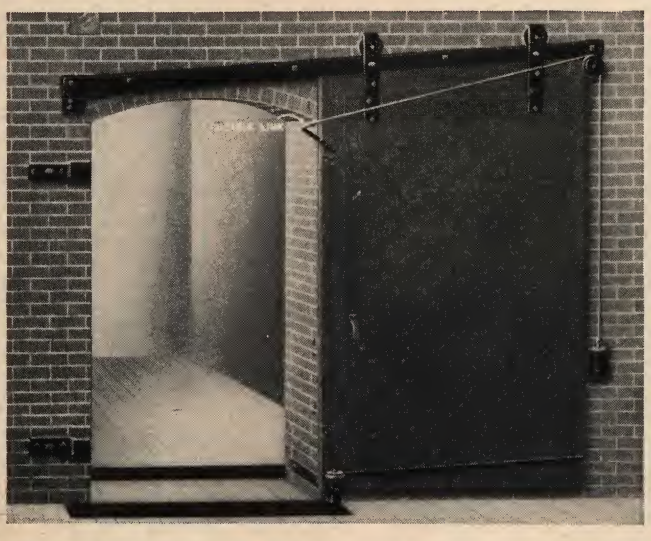
limitations of Underwriters' labeled hollow metal door frames

Labeled frames of #16 gauge steel are limited to 3-6 x 7-6 opening for single door and 5-0 x 7-6 opening for double doors.

Labeled frames of #14 gauge steel are limited to 4-0 x 10-0 opening for single door and 8-0 x 10-0 for double doors.

Minimum width of jambs is 4".

PHILIPP tin clad doors and hardware



National Style "A"—the Underwriters' favorite incline slide

description

Style A—Has one fusible link which projects into opening where it is exposed to fire on either side of wall. When fusible link melts, weight drops to floor and closes door.

Style B—Doors operate independently. Both fusible links must melt before entire opening is closed.

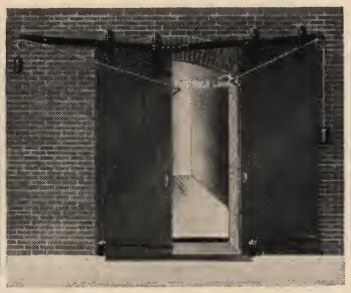
Style C—Used when headroom is not sufficient to permit incline-slide type. When fire melts fusible link, counterweight at right drops to floor and the closing weight at left pulls door closed.

Styles N and NN—Illustrations shown are not labeled fixtures. On labeled sets for masonry openings the underwriters require the use of pintles F-101, F-102, and F-103. With angle or channel frames, pintle F-108L is used.

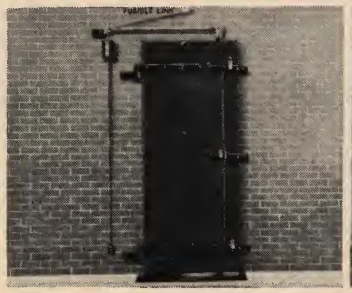
3-ply doors equivalent to 3 hour test doors.

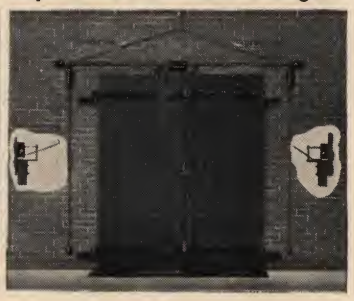
2-ply doors equivalent to 1½ hour test doors.

Style "C"—level slide
Style "N"—single swing



Style "B"—double incline slide
Style "NN"—double swing





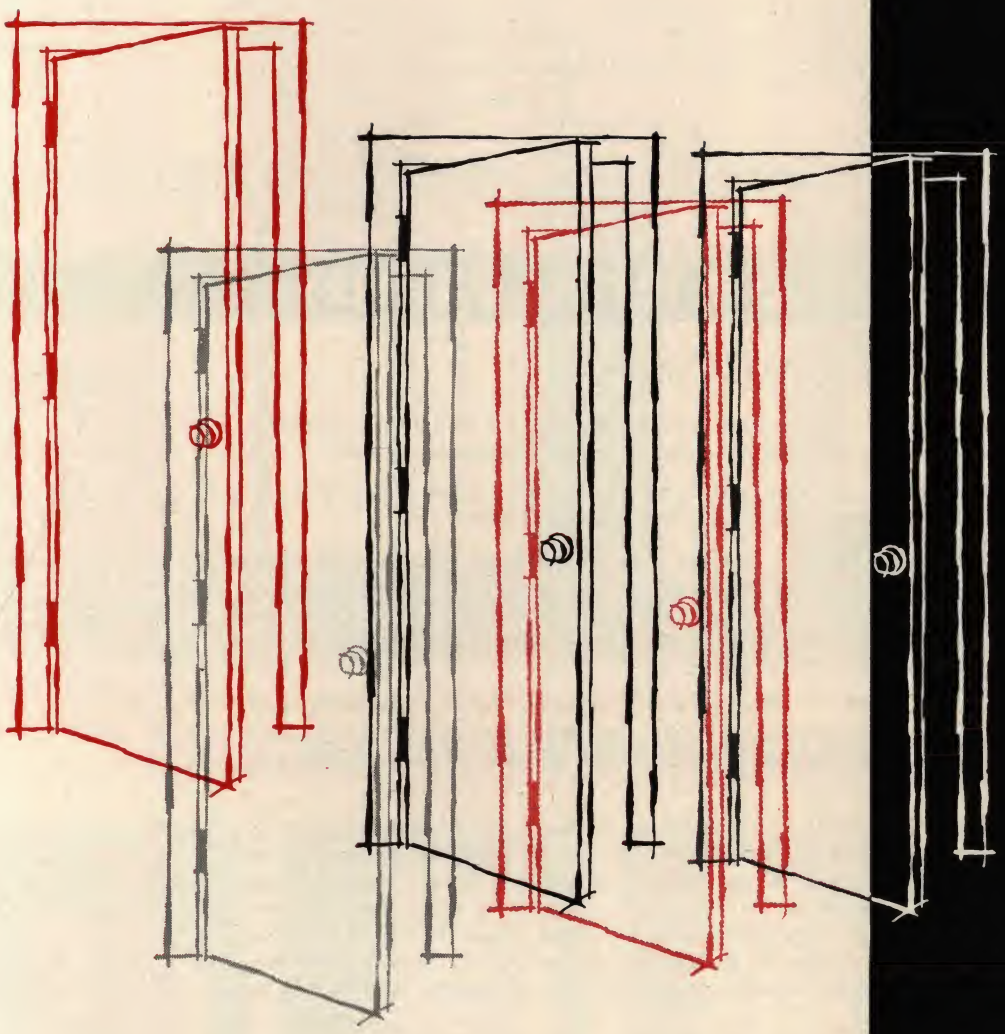
type of door	area sq. ft.	max. size opening ht.	w.	type of label
3-ply single slide	120	12′	12′	opening in fire wall class A
3-ply single swing		12′	6′	
3-ply swing in pairs		12′	10′	
2-ply single slide	80	10′	10′	opening in vertical shaft corridor or room partition, or exterior wall classes B, C, D, E
2-ply single swing		10′	6′	
2-ply swing in pairs	80	10′	10′	
2-ply single swing		10′	4′	opening to exterior fire escape. Classes D and E
2-ply swing in pairs		10′	6′	
2-ply single swing		10′	6′	shutter for opening in exterior wall classes D and E
2-ply swing in pairs	80	10′	10′	

All doors and hardware approved by National Board of Fire Underwriters.

PHILIPP MANUFACTURING COMPANY

Telephone 755 • **Easthampton, Mass.**

Agents in all principal cities

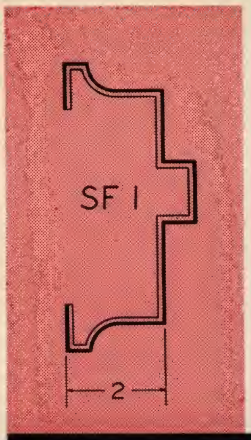


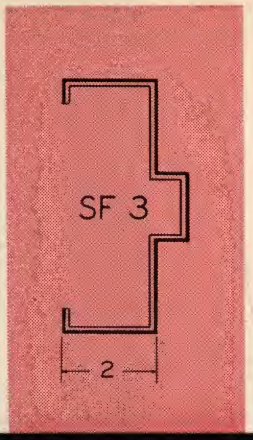
PIONEER

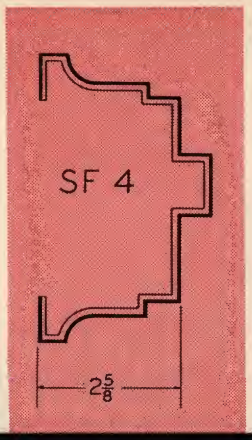
FIREPROOF DOOR CORP. MOUNT VERNON, NEW YORK

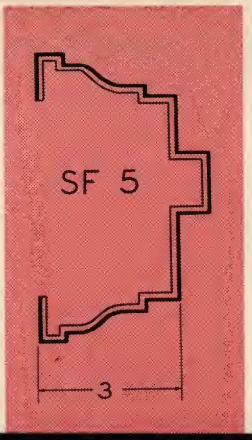
hollow metal frames
hollow metal doors
special hollow metal openings
industrial steel doors
kalamein & tin clad fire doors
soundproof doors

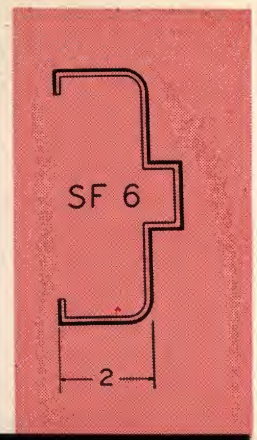
UNDERWRITER'S
Underwriters Laboratories Inc.
INSPECTED
FIRE DOOR
RATING 1½ HR. (B) NO.
LABEL SERVICE



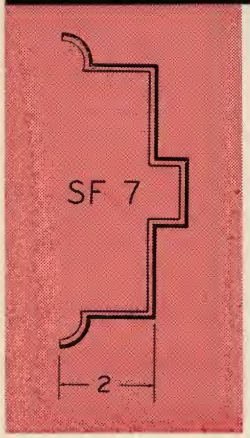








HOLLOW METAL FRAMES



SPECIFICATIONS

DESIGN All standard profiles detailed above may vary in dimension and may be combined to conform to desired architectural designs.

MATERIAL Combination hollow metal frames are formed of 12, 14, 16 or 18 gauge prime quality cold rolled sheet steel.

CONSTRUCTION Profiles to be press brake formed, true and sharp. Head and jambs to be assembled with tongue and slot arrangements: mitres accurately fitted, fully welded, and ground smooth. Angle spreaders to be welded to the bottom of the jambs to assure safe shipment, and perfect alignment in field setting.

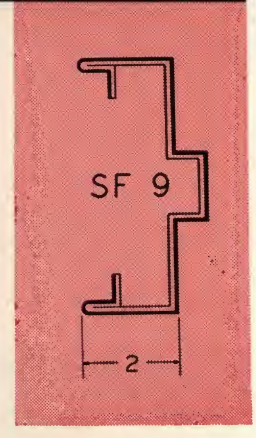
ANCHORAGE A minimum of three anchors is to be provided for each jamb. Anchors are to suit the wall conditions and the requirements of the job. Floor anchor clips are to be welded to each jamb and provided with holes for securing to the floor.

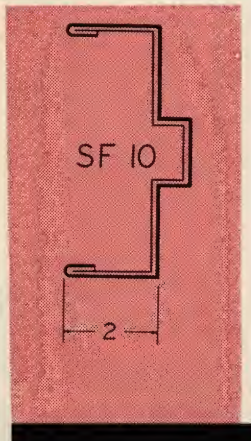
REINFORCEMENT Frames are to be accurately mortised for strike plates and hinges. Adequate reinforcements to be provided with steel plates welded to the frame and precisely drilled and tapped to accommodate template hardware. Galvanized dust covers to be welded over all reinforcements to prevent clogging, of the tapped holes, from mortar or plaster. Reinforcements also to be provided for door check, brackets and other surface applied hardware for which drilling and tapping is to be done in the field.

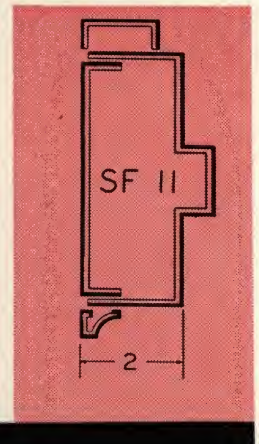
FINISH All frames to be given a prime coat of special "Pioneer" rust resistant metallic primer.

ALL HOLLOW METAL FRAMES AS INDICATED ON PLANS OR DOOR SCHEDULE SHALL BE AS MANUFACTURED BY THE PIONEER FIREPROOF DOOR CORP., MOUNT VERNON, NEW YORK.

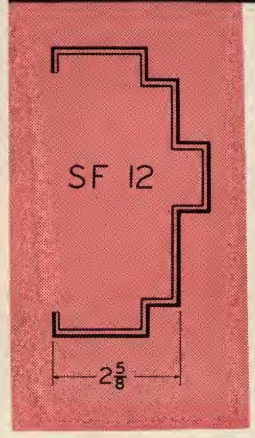
See the Pioneer Soundproof Door Insert 16m/Pi, in Sweet's, for specifications and details of certified sound rated doors and frames.

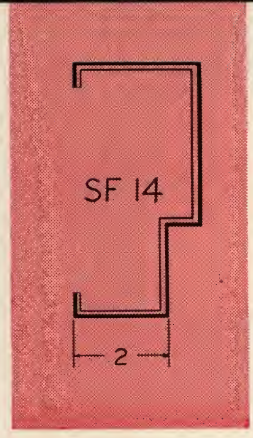


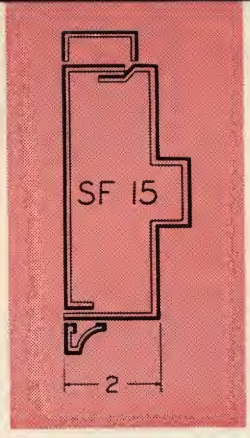


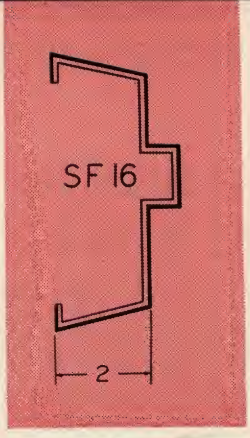


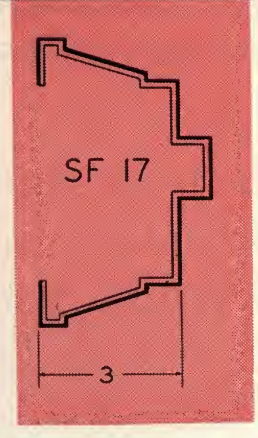
MANUFACTURED BY PIONEER









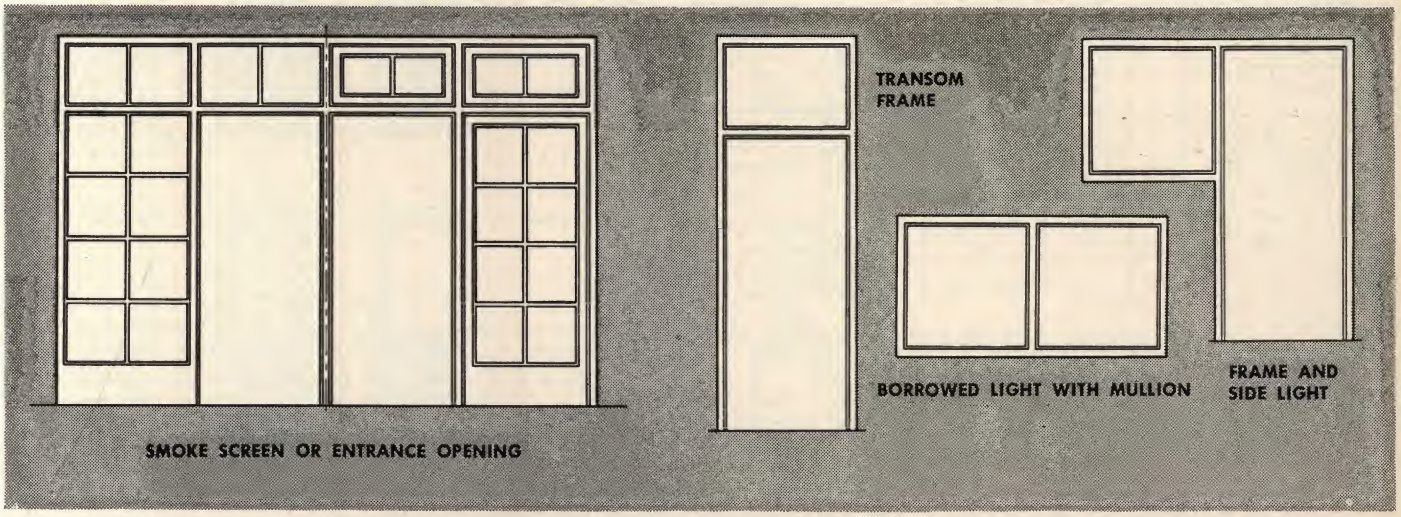


For UNDERWRITERS' REQUIREMENTS, see page 4.

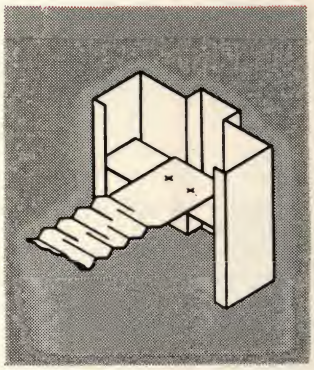
COPYRIGHT 1956, PIONEER FIREPROOF DOOR CORP.

SPECIAL HOLLOW METAL OPENINGS

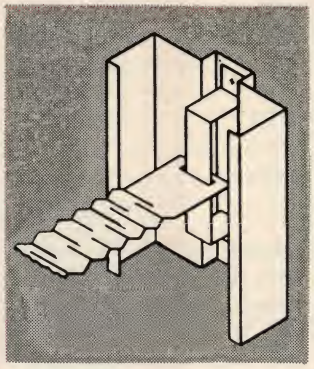
Special hollow metal units are fabricated for smoke screens; entrances; and any combination of door frames, borrowed lights, side lights, and fixed and operating transoms. Typified are various elevations of this special hollow metal work. Similar openings can be fabricated in kalamein.



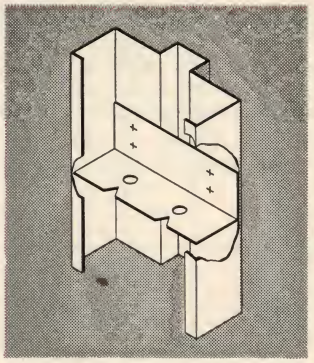
FRAME ANCHOR DETAILS



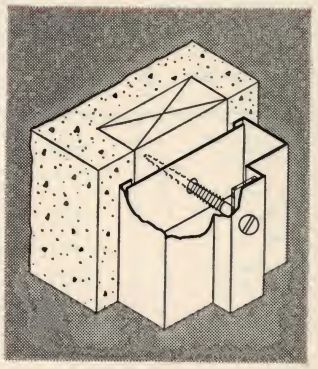
Corrugated adjustable loose "T" anchor



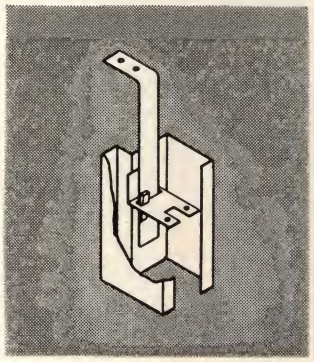
Corrugated adjustable Underwriters' approved anchor



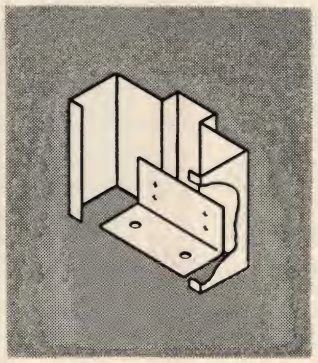
Steel stud anchor



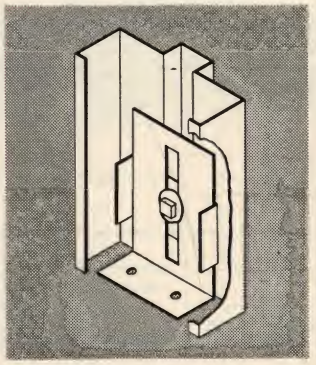
Special anchor for concrete or existing masonry walls



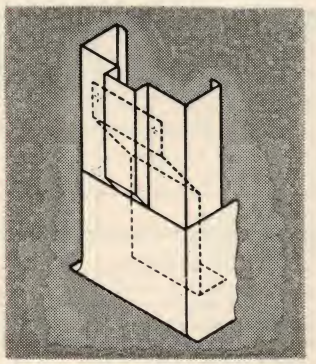
2" plaster partition anchor for metal stud with ceiling struts



Welded-on floor clip



Special adjustable floor clip



Offset floor struts— for frames setting on top of base stops cut off 45° and capped

UNDERWRITERS' REQUIREMENTS

for HOLLOW METAL & KALAMEIN DOORS, pages 5-6-7

class	swing	max. size width	max. size height	type	maximum glass area (wire glass)
class A—openings in fire walls (hollow metal only)	single pair	4-0 8-0	8-0 8-0	flush	none permitted
class B—openings in vertical shaft	single pair	4-0 8-0	8-0 8-0	flush or paneled	100 sq. in. combined area for pairs 12" max. width or height
class C—openings in corridor and room partitions	single pair	4-0 8-0	8-0 8-0	flush or paneled	1296 sq. in. each light 54" max. height
class D—openings in exterior walls	single pair	4-0 8-0	8-0 8-0	flush or paneled	none permitted
class E—openings in exterior fire escapes	single pair	4-0 8-0	8-0 8-0	flush or paneled	720 sq. in. each light 54" max. height

NOTE: CLASS A DOOR AVAILABLE FOR USE WITH SINGLE POINT LATCH — ¾" THROW

ONE HOUR AND ONE AND ONE-HALF HOUR TEST DOORS MAY BE LABELED TO COMPLY WITH THE NEW YORK CITY BOARD OF STANDARDS AND APPEALS SPECIFICATIONS.

Factory Mutual FM **label service is available for all fireproof doors.**

for HOLLOW METAL FRAMES, page 2

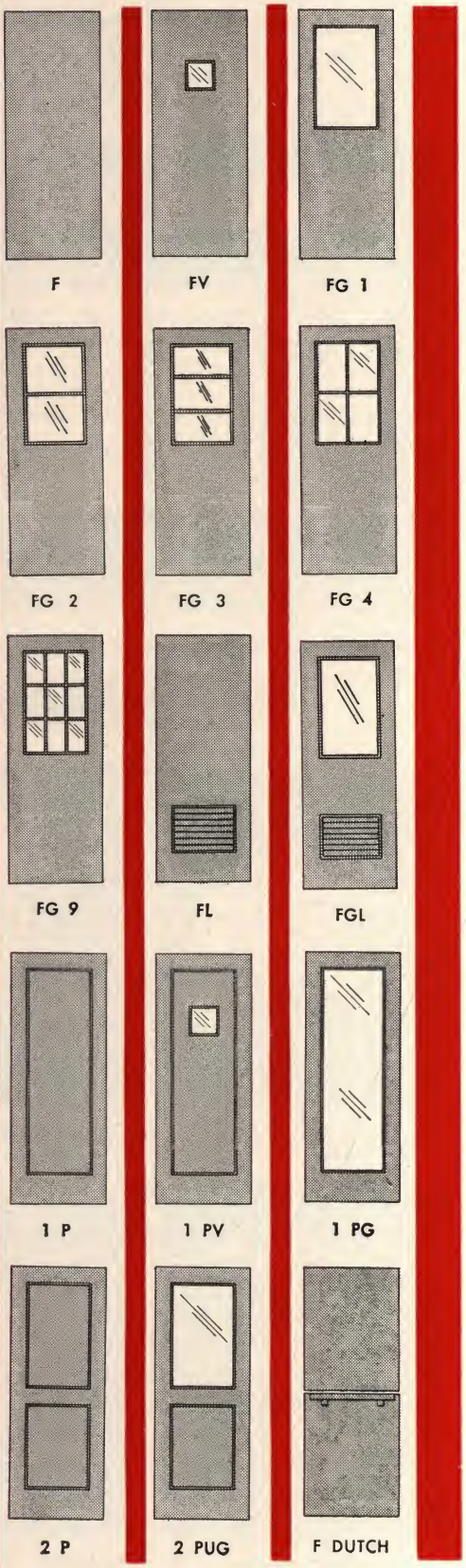
class	swing	max. size width	max. size height	minimum sizes gauge	minimum sizes stop height	minimum sizes wall thick.	minimum sizes trim width
class A—openings in fire walls	single pair	4-0 8-0	8-0 8-0	14 14	¾ ¾	4" 4"	1¼ 1¼
class B—openings in vertical shafts class C—openings in corridor or room partitions	single	3-6	7-6	16	⅝	4"	1¼
	pair	5-0	7-0	16	⅝	4"	1¼
class D—openings in exterior walls	single	4-0	8-0	14	⅝	4"	1¼
class E—openings in exterior fire escapes	pair	8-0	8-0	14	⅝	4"	1¼

for TIN CLAD FIRE DOORS, page 6

type of door	max. area square feet	maximum size of opening height ft.	maximum size of opening width ft.	type of label
3-ply single slide	120	12	12	opening in fire wall class A
3-ply single swing		12	6	
3-ply swing in pairs		12	10	
2-ply single slide	80	10	10	opening in vertical shaft corridor or room partition, or exterior wall; classes B, C, D, E
2-ply single swing		10	6	
2-ply swing in pairs	80	10	10	
2-ply single swing		10	4	opening to exterior fire escape; classes D and E
2-ply swing in pairs		10	6	
2-ply single swing		10	6	shutter for opening in exterior wall; classes D and E
2-ply swing in pairs	80	10	10	

NOTE: Doors for openings exceeding the sizes specified in the above table are not eligible to bear regular labels, but may bear oversize door labels, if found to comply with the requirements of this standard, except for size.

TYPICAL ELEVATIONS FOR HOLLOW METAL & KALAMEIN DOORS



In addition to Pioneer typical door designs illustrated, doors can be fabricated in any combination of solid, glazed or flush panels to meet all requirements or to match existing job conditions.

pioneer
HOLLOW METAL DOORS

Specifications and Sections

FLUSH TYPE DOORS shall be constructed of two sheets of finest grade 18 gauge cold rolled steel. Vertical stiffeners shall be truss type steel channels, spot welded to each inside face of the door full height, and not more than 6" apart. Top and bottom of door to be reinforced horizontally by steel channels full width, spot welded to each face at least 3" o.c. Joints at the edges of door to be **continuously welded** automatically by the gas shielded metal arc ("Heliwelding") process; arc welding and filling of seams not acceptable. Doors to be completely sound & fire insulated with Underwriters Approved mineral wool bats.

Pioneer method of construction assures no warping and assures rigidity beyond anything obtainable in standard hollow metal construction.

PANEL DOORS shall be constructed of 18 gauge stiles and rails, and 20 gauge panels, cold rolled stretcher leveled sheet steel. The joints at stiles and rails to be arc welded, ground and filled smooth. The door to be internally reinforced with channels full width at top and bottom and full height at each edge. Standard profile 20 gauge hollow metal moulding to be accurately mitred, welded into a unit, and securely arc welded to the stiles and rails. Intersection of hollow metal moulding with the stiles and rails to be reinforced with channels around the entire perimeter of panels and glass lights. Adequate insulation to be provided for stiles, rails and panels.

All hollow metal doors are to be accurately mortised for locks and hinges. Adequate reinforcements are to be provided with steel plates welded to the interior reinforcing channels, and drilled and tapped. Reinforcements are provided for door checks and other surface applied hardware for which drilling, and tapping is to be done in the field.

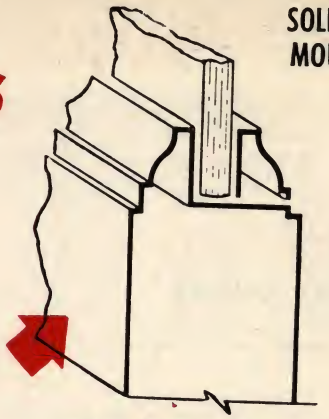
NOTE: Extreme care and precision is used in hardware layout and mortising so as to assure an accurate fit to the steel frames, keeping to a minimum the installation cost in the field.

All doors are thoroughly cleaned of grease, oil and other impurities, filled flush so as to completely conceal all seams and welds, and given two coats of baked-on rust-resisting metallic primer. Where specified, hollow metal doors may be given a baked enamel or grained finish consisting of two coats of primer and three coats of enamel, each coat baked and sanded smooth. Final coat to be rubbed to an egg shell finish.

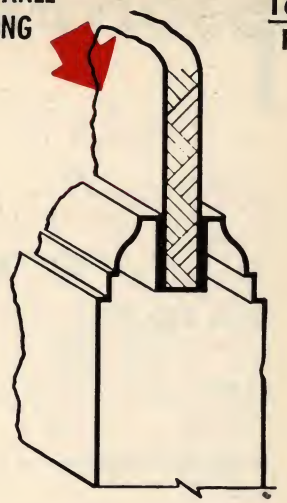
See the Pioneer Soundproof Door Insert 16m/Pi, in Sweet's, for specifications and details of certified sound rated doors and frames.

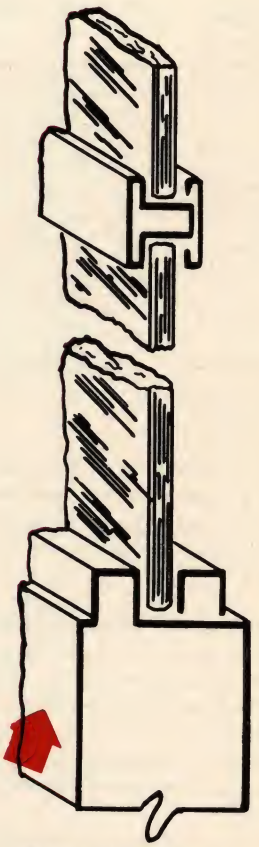
ALL HOLLOW METAL DOORS AS INDICATED ON PLANS OR DOOR SCHEDULE SHALL BE AS MANUFACTURED BY THE PIONEER FIREPROOF DOOR CORP., MOUNT VERNON, NEW YORK.

For UNDERWRITERS' REQUIREMENTS FOR HOLLOW METAL DOORS, see page 4.

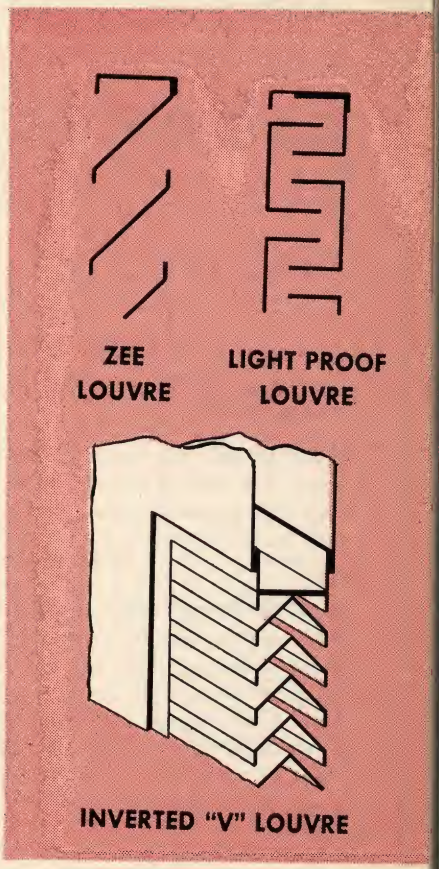


GLASS MOULDING PANEL DOOR



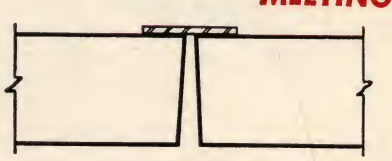


GLASS MOULDING AND MUNTIN BAR FLUSH DOOR

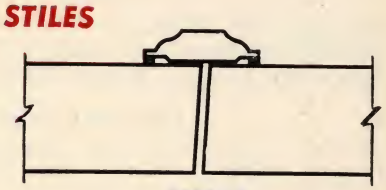


These Louvres also available in KALAMEIN DOORS. See page 6.

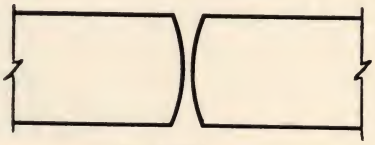
MEETING STILES



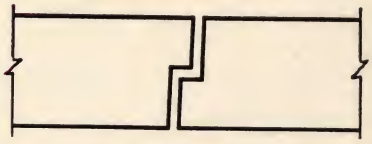
VEE BEVEL
With Flat Astragal



PARALLEL
With Molded Astragal



ROUNDED



RABBETTED

pioneer INDUSTRIAL STEEL DOORS

The PIONEER FIREPROOF DOOR CORPORATION manufactures a complete line of custom built industrial doors. These doors are particularly suited for installations where strength and durability are the prime factors. Industrial doors can be furnished in all sizes and designs to suit any job requirement.

SPECIFICATIONS

"SP" SERIES DOORS

STILES AND RAILS are of 16 gauge steel formed into 1¾" x 5" tubular sections.

PANELS are of 14 gauge steel welded to flanges of the stiles and rails.

GLASS RETAINERS are 14 gauge steel angles screwed to stiles and rails.

LOUVRES are stamped into 18 gauge panels.

"AP" SERIES DOORS

STILES AND RAILS are of 16 gauge steel formed into 1¾" x 5" tubular sections.

PANELS are constructed of ⅜" sheet rock insulation covered on both sides with #20 gauge steel.

GLASS RETAINERS are 14 gauge steel angles screwed to stiles and rails.

LOUVRES are stamped into 18 gauge panels.

pioneer KALAMEIN DOORS

See page 4 for typical elevations

specifications

Wood cores shall be fabricated of kiln dry, clear white pine, free from knots, shakes and other defects, machined all over and mortised and tenoned.

FLUSH DOORS shall consist of wood cores covered with 24 gauge Electro Zinc Bond steel glued to the cores under pressure. Covering shall be single sheet with no seams on the face of the door. Edges shall be lockseamed and soldered full length of door and ground smooth.

PANEL DOOR stiles shall extend unbroken the full height of doors. Steel covering shall be of 26 gauge Electro Zinc Bond steel. Seams at intersection of stiles and rails shall be soldered and ground smooth. Panels shall be fabricated of ⅜" asbestos board for labeled doors, composition or plywood for nonlabeled doors, covered with 24 gauge Electro Zinc Bond steel. Metal shall be glued to the core under pressure. Panel or glass moulding shall be either 20 gauge rolled steel or die drawn kalamein.

All exposed surfaces of the door shall be thoroughly cleaned and given a coat of special "Pioneer" rust-resistant primer.

Where specified, kalamein doors can be factory reinforced and mortised for hardware.

ALL KALAMEIN WORK AS INDICATED ON PLANS OR DOOR SCHEDULE SHALL BE AS MANUFACTURED BY PIONEER FIREPROOF DOOR CORP., MOUNT VERNON, NEW YORK.

pioneer TIN CLAD FIRE DOORS AND HARDWARE

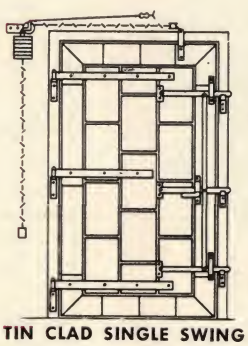
specifications

The cores of the doors shall be made of either two or three plies, and thoroughly seasoned, tongue and grooved, non-resinous, properly kiln dried and dressed white pine or spruce, as the class of the label requires, with each ply finishing of not less than 25/32" in thickness. The outer plies shall be vertical and the inner or center ply horizontal, and the plies shall be nailed together with cut nails driven in and clinched slightly below the surface. Two-ply doors shall have a finished thickness of 1¾" and three-ply doors shall have a finished thickness of 2½".

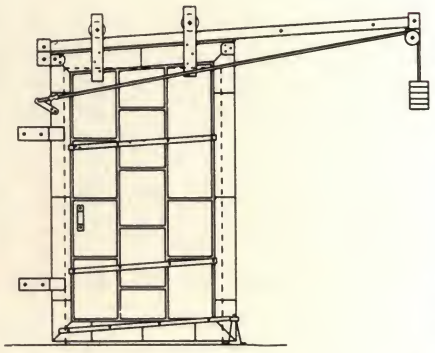
The core shall be covered on all sides with 1D-20 pound fire door standard terne plate, not larger than 14 x 20 inch size. Plates shall fit the core as flatly and tightly as practicable. and shall be locked together with ½" seams.

THREE-HOUR TEST DOORS In New York City, three-hour test doors are made to comply with the New York City Board of Standards and Appeals specifications.

WHERE SHOWN ON DRAWINGS, FURNISH "PIONEER" UNDERWRITER LABELED FIRE DOORS COMPLETE WITH UNDERWRITER LABELED HARDWARE, IN ACCORDANCE WITH REQUIREMENTS FOR THE PARTICULAR LOCATION.



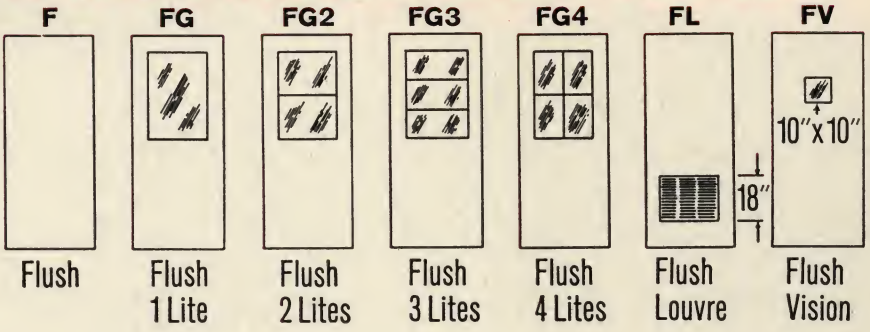
TIN CLAD SINGLE SWING



(SEE PAGE 4 FOR UNDERWRITERS REQUIREMENTS)

pioneer

CUSTOM ENGINEERED
HOLLOW METAL DOORS & FRAMES



specifications

doors

SPECIFICATIONS

1¾" thick — #18 gauge.

Edges continuously heliwelded. (no seams on either face or edge)

Baked prime gray finish.

Underwriters' approved insulation.

Mortised and reinforced for 1½ pair of 4½ x 4½ full mortise template hinges.

All doors cut for cylindrical (key in knob) lock with 2¾" backset as manufactured by:

Schlage — Corbin
Russwin — Lockwood
Yale and Towne

AVAILABLE IN MOST WIDELY USED SIZES

Size	Types available						
2-6 x 6-8	F	FG	FG2	FG3	FG4	FL	
2-6 x 7-0	F	FG	FG2	FG3	FG4	FL	
2-8 x 6-8	F	FG	FG2	FG3	FG4	FL	
2-8 x 7-0	F	FG	FG2	FG3	FG4	FL	
3-0 x 6-8	F	FG	FG2	FG3	FG4	FL	FV
3-0 x 7-0	F	FG	FG2	FG3	FG4	FL	FV
3-8 x 6-8	F	FG	FG2	FG3	FG4		
3-8 x 7-0	F	FG	FG2	FG3	FG4		
5-0 x 6-8	F	FG	FG2	FG3	FG4		PAIRS
5-0 x 7-0	F	FG	FG2	FG3	FG4		
6-0 x 6-8	F	FG	FG2	FG3	FG4		
6-0 x 7-0	F	FG	FG2	FG3	FG4		

All doors are available in either Left Hand or Right Hand swing.

Doors for 7-0 jamb opening height are made 6-11¼" high.

Doors for 6-8 jamb opening height are made 6-7¼" high.

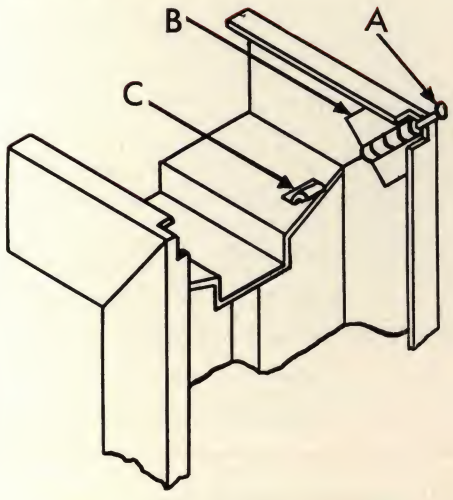
⅛" clearance at top and sides of all doors.

Pairs of doors available with left hand leaf active only.

Label service available.

All doors reinforced for surface closers.

Lok-Tite hinge



A—Connecting pin for locking hinge member.

B—Pioneer Lok-Tite hinge connecting members—1 leaf spotwelded to head, 1 to jamb.

C—Tongue and slot engagement.

FRAME SPECIFICATIONS

#16 gauge pressed steel.

Mortised and reinforced for 1½ pair 4½" template hinges (full mortise or half surface).

Mortised, reinforced, and furnished with a universal brass plated cylindrical or mortise lock strike.

Every frame head reinforced for application of surface closer either side.

Every frame head reinforced for soffit bracket and overhead surface holder.

Punched for and furnished with (3) door silencers per jamb.

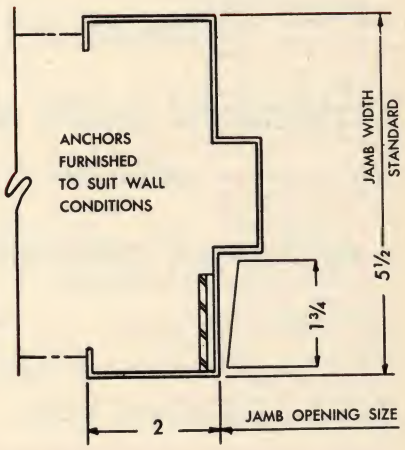
Plaster guards welded behind each hardware cutout.

Shop coat Pioneer rust resistant primer.

Available with the Underwriter's label.

PIONEER'S PATENTED LOK-TITE MITRE GUARANTEES QUICK ASSEMBLY—TIGHT JOINT—NEAT APPEARANCE.

Frame section



available head sizes

singles		pairs
2-0	3-0	4-0
2-4	3-4	5-0
2-6	3-6	5-4
2-8	3-8	6-0
2-10	4-0	
trimmed openings		
2-6	3-0	5-0
2-8	4-0	6-0

Jambs are available in both 6-8 and 7-0 heights.

U. S. AIR FORCE ACADEMY, COLORADO SPRINGS, COLORADO • ARCH: SKIDMORE, OWINGS AND MERRILL • CONTR: ROBERT E. McKEE

INSTALLATIONS

Executive Mansion, White House
Washington, D.C.
Arch: Lorenzo S. Winslow
Contr: John McShain, Inc.

Habana Hilton Hotel
Habana, Cuba
Arch: Welton Becket & Assoc. Arroyo & Menendel
Contr: Frederick Snare Corp.

Western Electric Co.
Columbus, Ohio
Arch: Western Electric Co.
Contr: Turner Construction Co.

Library and Museum
Montgomery, Alabama
Arch: Sherlock, Smith and Adams
Contr: The Bear Brothers

Public School No. 28
Manhattan, New York
Arch: Maurice Courland and Son
Contr: Wilaka Construction Co.

State Hospital for Mental Diseases
Geriatrics Department
Howard, Rhode Island
Arch: Oresto Disaia
Contr: Dimeo Construction Company

Eugene Talmadge Memorial Hospital
Augusta, Georgia
Arch: Gregson & Ellis
Contr: George A. Fuller Company

West High School
Davenport, Iowa
Arch: L. C. Kingscott and Assoc.
Contr: Miller-Davis Co.

Old Age & Survivors Insurance Building
Baltimore, Maryland
Arch: Meyer & Ayers, Fisher, Nes, Campbell & Assoc.
Contr: McCloskey & Company

State Office Building
Albany, New York
Arch: Cornelius J. White, State Architect
Contr: James Stewart and Company

Lawrence Memorial Hospital
New London, Conn.
Arch: York and Sawyer
Contr: W. J. Megin, Inc.

Sedgwick County Court House
Wichita, Kansas
Arch: Thomas, Harris and Calvin
Contr: Martin K. Eby Construction Co.

Lackawanna Office Building
Hamburg, New York
Arch: McKim, Mead and White
Contr: J. W. Cowper Company

Medical Center University Hospital
Morgantown, W. Va.
Arch: C. E. Sillings and Assoc.
Contr: John McShain, Inc.

U.S. Air Force Hospital
Lackland Air Force Base, Texas
Arch: Wirtz, Calhoun, Tungate and Jackson
Contr: McKenzie Construction Company

Smithtown Jr. Sr. High School
Smithtown, New York
Arch: Ketchum, Gina, Sharp
Contr: Edward Corning Company

Carbide & Carbon Chemicals Co.
South Charleston, W. Va.
Arch: Alfred Fellheimer & Steward Wagner
Contr: Southeastern Construction Co.

Kingston Steam Plant
Tennessee Valley Authority
Kingston, Tennessee
Arch: Tennessee Valley Authority
Contr: Tennessee Valley Authority

East High School
Aurora, Illinois
Arch: Perkins and Will
Contr: Arnold Lies Co.

Longview State Hospital
Cincinnati, Ohio
Arch: Potter, Tyler, Martin & Roth
Contr: H. W. Miller Construction Co.

Ford Motor Company
Sandusky, Ohio
Arch: Roseti-Giffels & Vallet
Contr: The H. K. Ferguson Co.

Metropolitan Life Insurance Company
New York City, New York
Arch: Lloyd Morgan
Contr: Starrett Bros. & Eken, Inc.

Cathedral High School
Springfield, Mass.
Arch: Eggers and Higgins
Contr: Daniel O'Connells' Sons, Inc.

Monmouth Shopping Center
Eatontown, N. J.
Arch: Kahn and Jacobs
Contr: Joseph L. Muscarelle, Ltd.

Pioneer manufactures a completely integrated line of fireproof door products, allowing for placement of all door requirements with one manufacturer, and assuring centralized responsibility, not only for quality, but for job progress. Pioneer products are distributed nationally through competent, qualified representatives in most principal cities.

Our thoroughly experienced Engineering Department is always at the disposal of contractors and architects to offer every possible assistance.

PIONEER

FIREPROOF DOOR CORP. MOUNT VERNON, NEW YORK

M. REUTER & SONS

Central Fire Station
Portland, Oregon

METAL PRODUCTS COMPANY

Since 1906

Hollow Metal Doors,
Frames and Trim

Pressed Steel Frames

Kalamein Products

Tin Clad Fire Doors
and Hardware

Hollow Metal Windows
and Trim

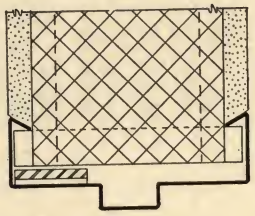
Metal Building Specialties

Complete Underwriter
Label Service

2230 S. E. HOLGATE BOULEVARD ★ PORTLAND 2, OREGON

SCALE 3" = 1' 0"

Hollow Metal Frames



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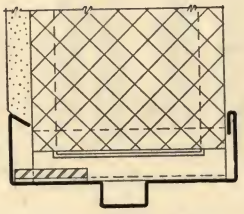

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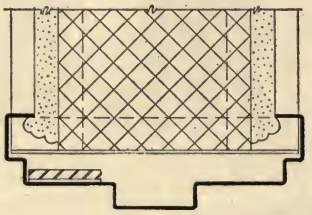

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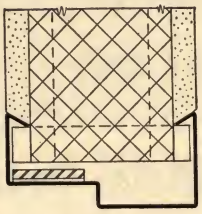

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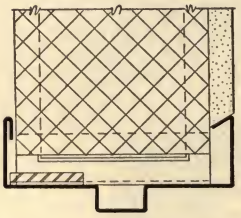

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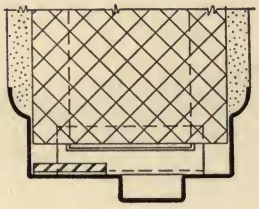

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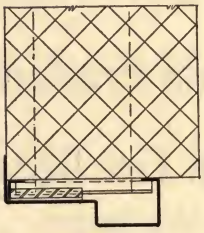

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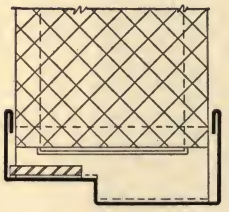

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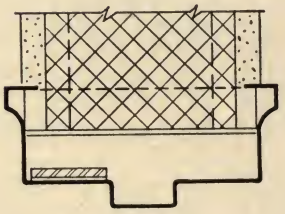
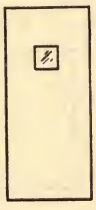


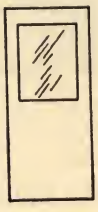
No. F-17

Underwriters' Classifications

UL 3 hr. Rating
UL 1½ hr. Rating
UL ¾ hr. Rating
No Glass



UL 1½ hr. Rating
UL ¾ hr. Rating
Glass 100 sq. in. Max.



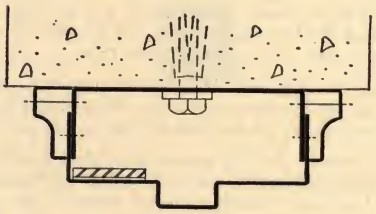
UL ¾ hr. Rating
Glass 1,296 sq. in. Max.

Underwriters' Label can be furnished on Frame Types —
F-3, F-4, F-6, F-7, F-8, F-9, F-11, F-12, F-13, F-14, F-16, F-17.
Also on Channel Frames of 4" Minimum Width.

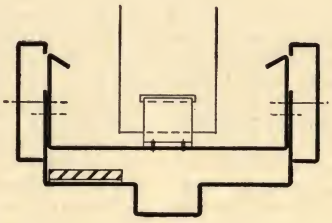
U. L. CLASS "A" (3-HOUR) RATED HOLLOW METAL DOORS WITH CONVENTIONAL SINGLE POINT LOCK OR LATCH

With the above classification, it is no longer necessary to use expensive and complicated 3-point locksets, resulting in a saving of $100.00 or more. Any good grade of single point latch or lock-set with a ¾" throw will suffice. Single doors not to exceed 3'-6" x 7'-0", pairs not to exceed 7'-0" x 7'-0" opening. This is a true hollow metal door pioneered and tested by M. Reuter & Sons, no through bolting necessary.

hollow metal doors and frames



No. F-9 No. F-13



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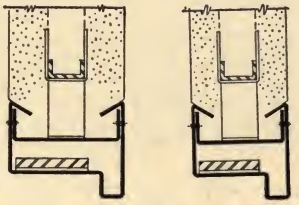
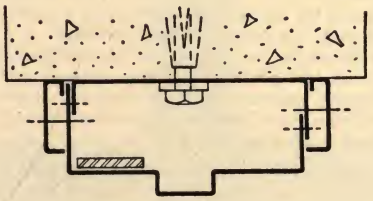


No. F-1
for 1¾" door for 1⅜" door



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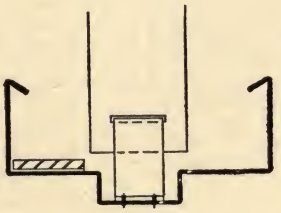

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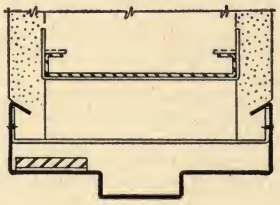

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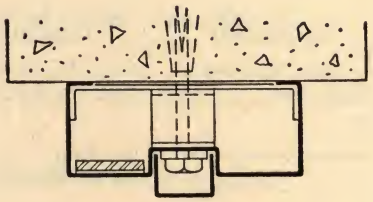

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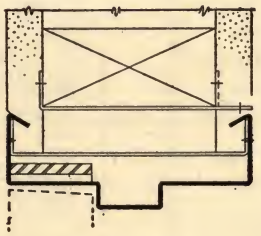

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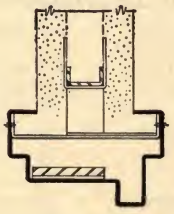
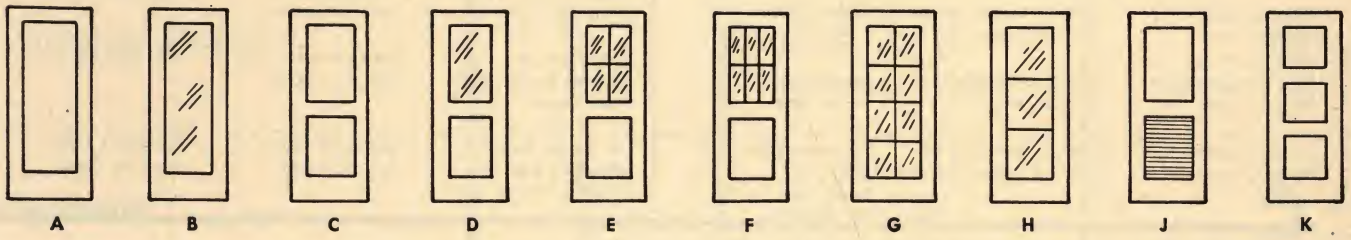
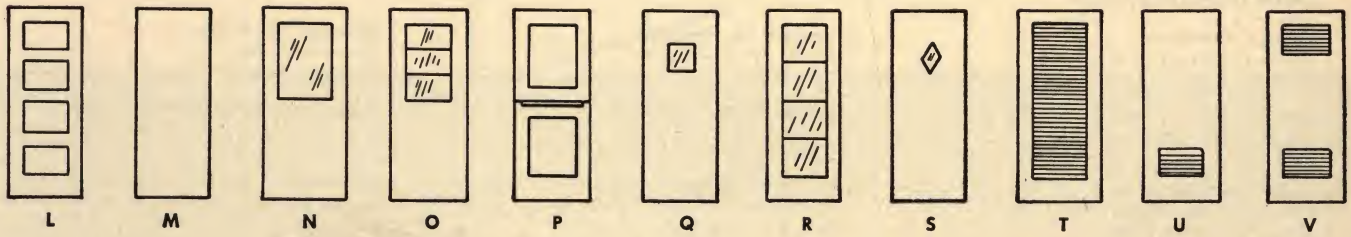


No. F-15

Typical Door Types—hollow metal and kalamein





specifications—HOLLOW METAL DOORS AND FRAMES

GENERAL: All doors scheduled or indicated as "Hollow Metal" shall be of the sizes and designs shown on plans, and of an approved hollow metal type conforming to the following specifications.

MATERIALS: All materials used shall be the best of their respective kinds. Steel shall be stretcher-leveled, full pickled and soft annealed. All gauges shall be United States standard gauges.

FLUSH DOORS: Flush doors shall be 1¾" thick, constructed of two 18 gauge steel plates, edges to be formed to the correct thickness of the door. The doors shall have internal bracing channels of not lighter than 18 gauge steel, placed not over six inches on centers, extending the full height of the door. Channel ribs shall be spot welded every four inches to one sheet vertically—the other sheet to be projection welded from the outside surface so as to form a rigid construction. Both door edges to be welded full length and ground smooth. Compressed insulating material of suitable size shall be inserted between the vertical channels extending full length.

PANEL DOORS: Panel doors shall be 1¾" thick. Stiles and rails to be formed of 18 gauge steel and to be continuously locked to panel mouldings. Stiles are to be fitted to rails, reinforced and welded full length at joints, and ground smooth. Stiffener channels shall be provided inside the doors top and bottom, extending full length of door width. Bottom rails to have interior cross bracing. Compressed insulating material shall be inserted in stiles and rails to eliminate metallic sound.

Panels to be constructed of two 18 gauge steel plates separated by a heat-retardant filler. Panel mouldings to be 18 or 19 gauge cold drawn steel drawn to profile, fitted to panels and mitered and welded at corners forming a continuous frame around panels. Steel panels to be glued and kept under pressure for 24 hours.

FRAMES: Frames as indicated shall be of cabinet type, or combination type of the design and size shown on the plans, and shall be of not less than 16 gauge. Cabinet frame bucks to be not lighter than 14 gauge.

All breaks, arrises, angles and curves shall be uniform, straight, sharply defined and true. The corners shall be mitered, accurately fitted, electrically welded, and ground smooth to produce an invisible joint.

Frames over 3' 0' in width shall have a channel reinforcement in the head of the frame.

Each door jamb shall have not less than three anchors each side. For anchorage at the bottom of the jamb, a bent plate clip of material as specified for the jamb, and the full width of the frame shall be welded to the bottom of the frame and shall extend on the floor.

TRIM: Scribe moulds and casings shall be furnished as indicated, and shall be made from 18 gauge furniture stock steel, mitered and welded at the corners, and be secured to frames with self-threading screws.

HARDWARE: Suitable sinkages shall be provided in doors and frames for all mortised or countersunk hardware, with steel reinforcements inserted for attaching hardware. Reinforcements shall be of ample thickness and length to stiffen the sheet metal against the strain of service required. Provide reinforcements for door checks and brackets. Where surface hardware occurs the door and frame shall have interior reinforcing as required.

FINISH: All metal surfaces of the doors, frames and trim shall be properly cleaned and free from oil or other foreign matter, and shall be given two protective coats of the proper undercoating as a prime finish. This finish shall be applied at the factory before shipment.

Finish painting will be done by the painter at the building site (or)

Finish painting shall consist of not less than three coats of approved baking enamel, or synthetic enamel, color as selected. Each coat properly applied in accordance with the manufacturer's instructions—the final coat to be rubbed to an egg-shell gloss.

WEATHERSTRIPPING: Doors indicated as weatherstripped shall be Accurate series 700, or Chamberlin series 800CS, or equal, interlocking weatherstrips on jambs and head, and shall have Out-Dor seals, or equal, applied to door and frame in the field after erection.

Doors shown on plan as (Sound Resistant) shall have all interstices solidly packed with an approved sound-absorbent material.

typical installations

PROJECT	CONTRACTOR	ARCHITECT
University of Alaska College, Alaska	Burgess Construction Co. Fairbanks, Alaska	Manley & Mayer Anchorage, Alaska
Pacific Telephone Bldg. Seattle, Wash.	Henrik Valle Co. Seattle, Wash.	James & Bindon Seattle, Wash.
Women's Residence Bldg. State College of Wash. Pullman, Wash.	Halvorsen Inc. Seattle, Wash.	Paul Thiry Seattle, Wash.
Admission & Security Bldg. Washington State Penitentiary	Johnson-Bushboom & Rauh Spokane, Wash.	John W. Maloney Seattle, Wash.
Ice Harbor Dam Power House Pasco, Wash.	Guy F. Atkinson Co. San Francisco, Calif.	Corp of Engineers U.S. Army
Memorial Coliseum Portland, Oregon	Hoffman Construction Co. Portland, Oregon	Skidmore-Owings & Merrill
Lloyd Shopping Center Portland, Oregon	Donald M. Drake Co. Portland, Oregon	John Graham Seattle, Wash.
Portland-Sheraton Hotel Portland, Oregon	Hoffman Construction Co. Portland, Oregon	Perry-Shaw-Hepburn & Dean Boston, Mass.

PROJECT	CONTRACTOR	ARCHITECT
National Reactor Testing Station Idaho Falls, Idaho	Arrington Construction Co. Boise, Idaho	Atomic Energy Comm. Idaho Falls, Idaho
Lehi High School Lehi, Utah	Rosenloff Construction Co.	W. R. Smith Salt Lake City, Utah
Holy Cross Hospital Salt Lake City, Utah	Olson Construction Co. Salt Lake City, Utah	John W. Maloney Seattle, Wash.
Campos Verdes Jr. High School Sacramento, California	Campbell Construction & Erickson Construction Co. Sacramento, California	Stark-Jozens & Nacht Sacramento, Calif.
Del Norte High School Crescent City, California	B. & R. Construction Co. San Francisco, Calif.	Hayslip-Tuft & Hewlett Portland, Oregon
U.S. Navy Facilities Cubic Pt. Subic Bay Area Philippine Islands	Pomroy-Hawaiian Dredging-Bechtel San Francisco, Calif.	Bureau of Yards & Docks U.S. Navy Dept.
Officer Quarters Hickman Air Force Base Oahu, Hawaii	Nakakura Const. Co. Honolulu, Hawaii	U.S. Army Engineers
St. Francis Hospital Outpatient Bldg. Honolulu, Hawaii	South Pacific Contrs. Honolulu, Hawaii	Rothwell & Lester Honolulu, Hawaii

representatives:

Billings, Montana
Madden Construction Supply Co.
P. O. Box 1522

Boise, Idaho
Hal Brown Construction Service
P. O. Box 966

Detroit, Michigan
General Consolidated Products Co.
2102 David Stott Bldg.

Honolulu 16, Hawaii
Malcolm W. Rasmussen
1245 Ainakoa Ave.

Salt Lake City 10, Utah
J. L. Parsons Co.
P. O. Box 303

Seattle 99, Wash.
F. T. Crowe & Co
329 Second Ave. W.

Spokane 10, Wash.
Mansur Materials Co.
Post Office Box 14

San Francisco 10, Calif.
Price Bldg. Specialties Co.
2652 Harrison Street

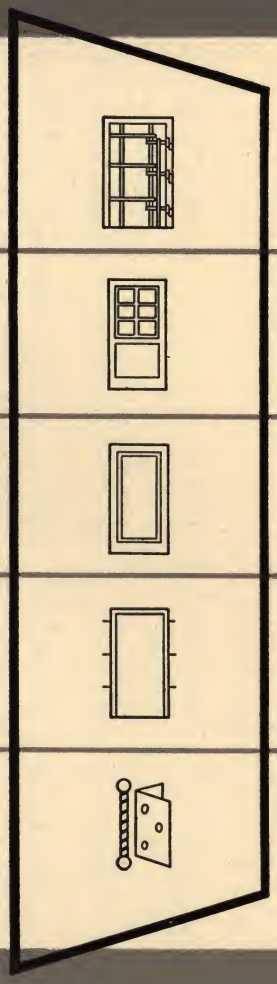
Sacramento, Calif.
Openings
P. O. Box 2705

M. REUTER & SONS • **2230 S.E. Holgate** • **Portland 2, Oregon**

Richmond

custom services for

schools, churches, office buildings, warehouses, hospitals, terminals, garages and factories



metal clad fire doors	swing slide single or double	section **1**	pages 3-7
hollow metal doors	swing slide single or double	section **2**	pages 8-13
kalamein doors and frames	flush-paneled single or double	section **3**	pages 14-16
unit steel frames	for plaster, brick, tile or masonry walls	section **4**	pages 17-21
hardware	for kalamein and hollow metal doors	section **5**	pages 22-23

THE RICHMOND FIREPROOF DOOR CO.

Underwriters' requirements

for: metal clad doors pages 3-7
hollow metal doors pages 8-13
kalamein doors pages 14-16

normal applications:

class A in division walls separating buildings; in division walls within a single building separating same into fire sections

B opening into vertical communications through buildings, stairs or elevator hatchway

C corridor or room partitions openings

D-E exterior openings severe or moderate exposure

label class	hourly rating maximum temperature rise	type of door	operation	maximum size			remarks	glass area		
				width	height	area		width	height	area
A	3 hr. 650°	flush hollow metal ("FA" series)	single swing	4′-0″	10′-0″	40 sq. ft.		—	—	—
			pair swing	8′-0″	10′-0″	80 sq. ft.		—	—	—
	3 hr. 250°	3 ply Tin Clad or 3 ply "Fyrgard"	single swing	6′-0″	12′-0″	72 sq. ft.	underwriter's oversize certificate will be furnished in lieu of labels for doors exceeding maximum dimensions shown	—	—	—
			pair swing	10′-0″	12′-0″	120 sq. ft.		—	—	—
			single slide	12′-0″	12′-0″	120 sq. ft.		—	—	—
			pair slide	12′-0″	12′-0″	120 sq. ft.		—	—	—
B	1½ hr. 650°	flush hollow metal ("FD" series)	single swing	4′-0″	8′-0″	32 sq. ft.	glass area is maximum for entire opening not each door in case of pairs	12″	12″	100 sq. in.
			pair swing	8′-0″	8′-0″	64 sq. ft.				
	1½ hr. 250°	2 ply Tin Clad or 2 ply "Fyrgard"	single slide	10′-0″	10′-0″	80 sq. ft.	underwriters' oversize certificate will be furnished in lieu of labels for doors exceeding maximum dimensions shown glass area is maximum for entire opening not each door in case of pairs	12″	12″	100 sq. in.
		2 ply Tin Clad or 2 ply "Fyrgard"	single swing	6′-0″	10′-0″	60 sq. ft.				
			pair swing	10′-0″	10′-0″	80 sq. ft.				
		flush Kalamein or panel hollow metal	single swing	4′-0″	8′-0″	32 sq. ft.				
			pair swing	8′-0″	8′-0″	64 sq. ft.				
	1½ hr. not rated	paneled hollow metal ("MD" series)	single swing	4′-0″	8′-0″	32 sq. ft.	one panel design Kalamein cannot exceed 3′-6″ in width. glass area is maximum for entire opening not each door in case of pairs	12″	12″	100 sq. in.
			pair swing	8′-0″	8′-0″	64 sq. ft.				
		paneled Kalamein	single swing	3′-10″	7′-8″	29 sq. ft.				
			pair swing	7′-0″	7′-8″	53 sq. ft.				
C	¾ hr. not rated	2 ply Tin Clad or 2 ply "Fyrgard"	single slide	10′-0″	10′-0″	80 sq. ft.	underwriters' oversize certificate will be furnished in lieu of labels for doors exceeding maximum dimensions shown	—	54″	1296 sq. in. per lite
			single swing	6′-0″	10′-0″	60 sq. ft.				
			pair swing	10′-0″	10′-0″	80 sq. ft.				
		flush Kalamein	pair swing	8′-0″	8′-0″	64 sq. ft.				
		flush hollow metal or panel hollow metal	single swing	4′-0″	8′-0″	32 sq. ft.	oversize certificate not available			
			pair swing	8′-0″	8′-0″	64 sq. ft.				
		paneled Kalamein	single swing	3′-10″	7′-8″	29 sq. ft.	one panel design Kalamein door cannot exceed 3′-6″ in width			
			pair swing	7′-0″	7′-8″	53 sq. ft.				
D	1½ hr. 650°	flush hollow metal ("FD" series)	single swing	4′-0″	8′-0″	32 sq. ft.	underwriters' oversize certificate will be furnished in lieu of labels for doors exceeding maximum dimensions shown.	—	—	—
			pair swing	8′-0″	8′-0″	64 sq. ft.				
		2 ply Tin Clad or 2 ply "Fyrgard"	single slide	10′-0″	10′-0″	80 sq. ft.				
			single swing	6′-0″	10′-0″	60 sq. ft.				
			pair swing	10′-0″	10′-0″	80 sq. ft.				
	1½ hr. 250°	flush Kalamein	single swing	4′-0″	8′-0″	32 sq. ft.				
			pair swing	8′-0″	8′-0″	64 sq. ft.				
	1½ hr. not rated	paneled Kalamein	single swing	3′-10″	7′-8″	29 sq. ft.	one panel design Kalamein doors cannot exceed 3′-6″ in width	—	—	—
			pair swing	7′-0″	7′-8″	53 sq. ft.				
		paneled hollow metal ("MD" series)	single swing	4′-0″	8′-0″	32 sq. ft.				
			pair swing	8′-0″	8′-0″	64 sq. ft.				
E	¾ hr. not rated	2 ply Tin Clad or 2 ply "Fyrgard"	single slide	10′-0″	10′-0″	80 sq. ft.	underwriters' oversize certificate will be furnished in lieu of labels on doors exceeding maximum sizes shown.	—	—	720 sq. in. per lite
			single swing	6′-0″	10′-0″	60 sq. ft.				
			pair slide	10′-0″	10′-0″	80 sq. ft.				
		flush Kalamein	single swing	4′-0″	8′-0″	32 sq. ft.				
			pair swing	8′-0″	8′-0″	64 sq. ft.				
		flush hollow metal ("FD" series)	single swing	4′-0″	8′-0″	32 sq. ft.				
			pair swing	8′-0″	8′-0″	64 sq. ft.				
		panel hollow metal ("MD" series)	single swing	4′-0″	8′-0″	32 sq. ft.				
			pair swing	8′-0″	8′-0″	64 sq. ft.				
		panel Kalamein	single swing	3′-10″	7′-8″	29 sq. ft.	one panel design Kalamein doors cannot exceed 3′-6″ in width			
			pair swing	7′-0″	7′-8″	53 sq. ft.				

Richmond
metal clad fire doors

Richmond "Fyrgard" and Tin Clad automatic fire doors are especially designed for fire protection purposes. They are constructed and intended for proper installation in a suitable wall so as to resist the passage of heat, flame and smoke for not less than a specified period of time. Generally fire doors are of limited size but larger Richmond "Fyrgard" and Tin Clad doors are available for certificate of oversize construction.

As shown on this page under "types of doors," Richmond manufactures the following standard types: single or double swing, frame type; single or double swing, lap type; single or double slide, inclined track; single or double slide, level track.

All doors are available in the metal clad (500 series) and tin clad (100 and 200 series), types of constructions.

application

Because of the diversity of type and construction, Richmond "Fyrgard" and Tin Clad doors find wide application in hospitals, office buildings, factories, garages, warehouses, hotels, apartments, public and multiple dwellings, theatres, schools, etc.

design procedure

Door selection generally depends on the desired appearance and the amount of fire protection.

Since the local inspection or rating bureau is given considerable latitude, the architect will find it to his advantage to consult this bureau during planning and specifying. The Richmond Fireproof Door Company representative (see back cover) will also be of great service. He has intimate knowledge of local Underwriters' interpretations as well as a familiarity with costs and manufacture.

complete assemblies

We recommend the purchase of complete assemblies of Richmond labeled automatic fire doors, labeled hardware, and labeled structural frames where swinging doors are required.

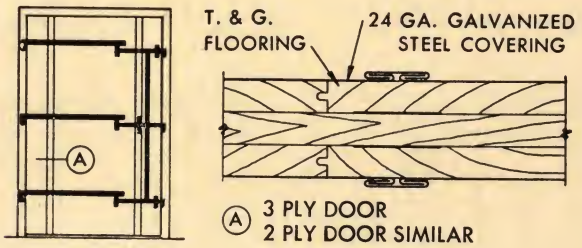
services

Richmond "Fyrgard" doors meet all requirements of the Underwriters' Laboratories and New York City Building Code.

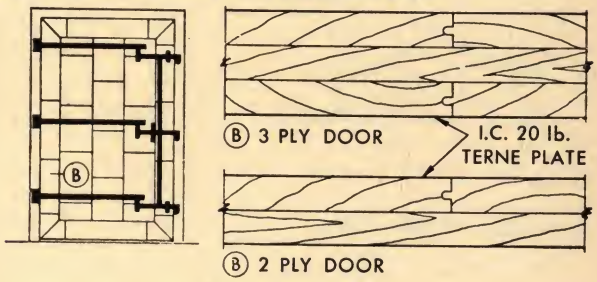
In order to conform with Underwriters' exacting requirements, we offer the services of our credited agents who are capable of proper installation of complete assemblies as well as of all our other products.

types of construction

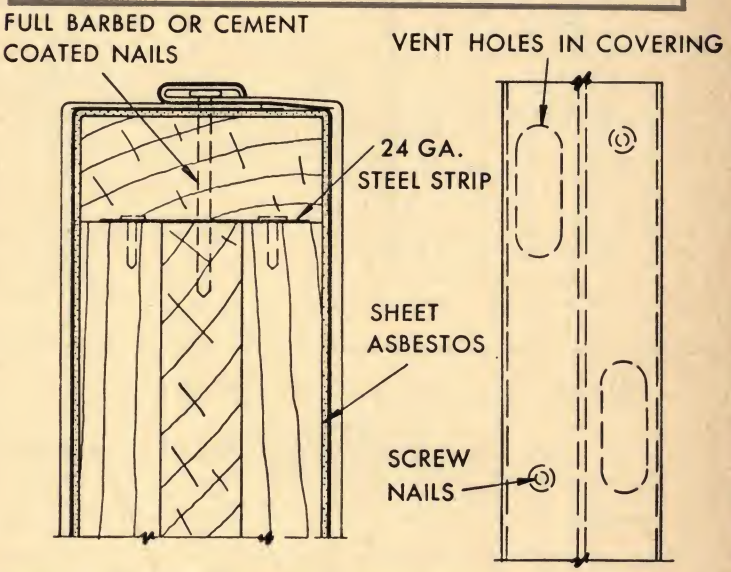
Fyrgard metal clad—series 500 (2 or 3 ply)



tin clad—series 100 and 200 (2 ply or 3 ply)



"Fyrgard" construction features



Richmond "Fyrgard" door wood cores are built up with three-ply white pine, fir, or spruce, internally reinforced with 2" x 24-gauge steel strips and covered with 24-gauge galvanized paint grip steel sheets to withstand rough usage.

In case of fire, the special patented venting construction permits the escape of gas and prevents the bulging of sheets. The patented internal steel reinforcements maintain the door structure and prevent distortion due to heat.

for details, and specifications, see pages 4 through 7 inclusive

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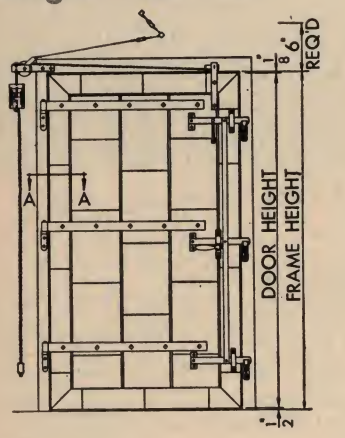
swing type

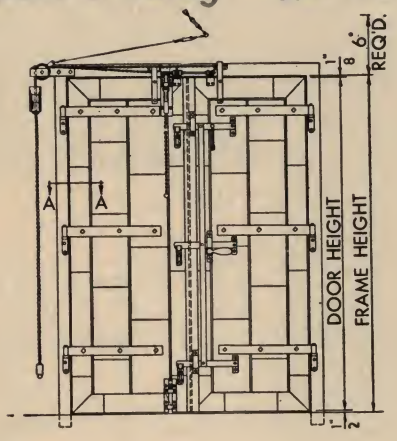
class A doors scale 1/4″=1′-0″

frame

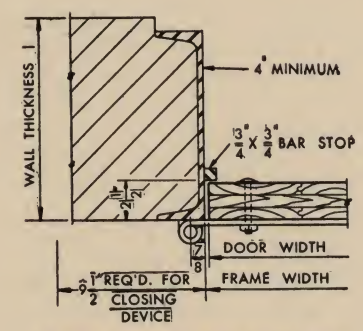
single —type 125



pairs of swing —type 135



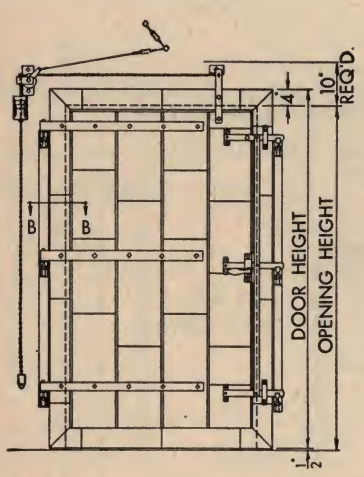
sections scale 3/8″=1′-0″



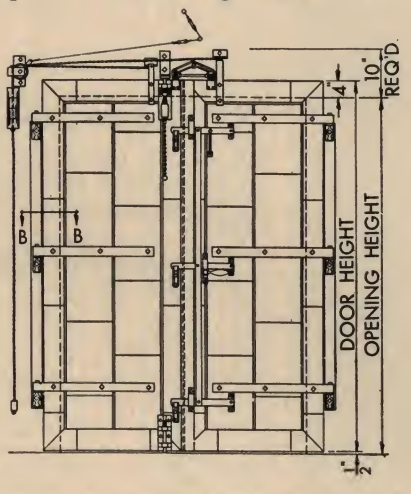
Section A-A thru door and frame

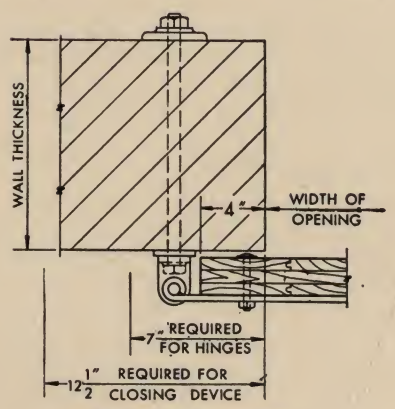
lap

single —type 126



pairs of swing—type 136





Section B-B thru door

returns required for swing doors

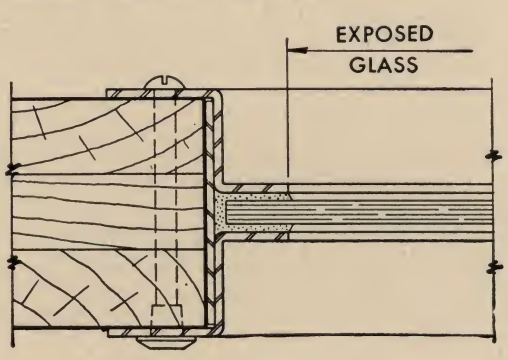
	door design	closing device side	other side	headroom
singles	125	9½″	2″	6″
	126	12½″	6½″	10″
pairs	135	9½″	2″	6″
	136	12″	7″	10″

vision panel exposed glass—maximum size limits

door class	glass area	glass height	glass width
B	100 sq. in.	12″	12″
C	1296 sq. in.	54″	48″
E	720 sq. in.	54″	48″

glass not permitted in tin clad shutters

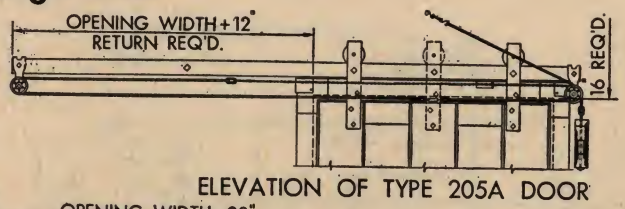
scale: one half full size



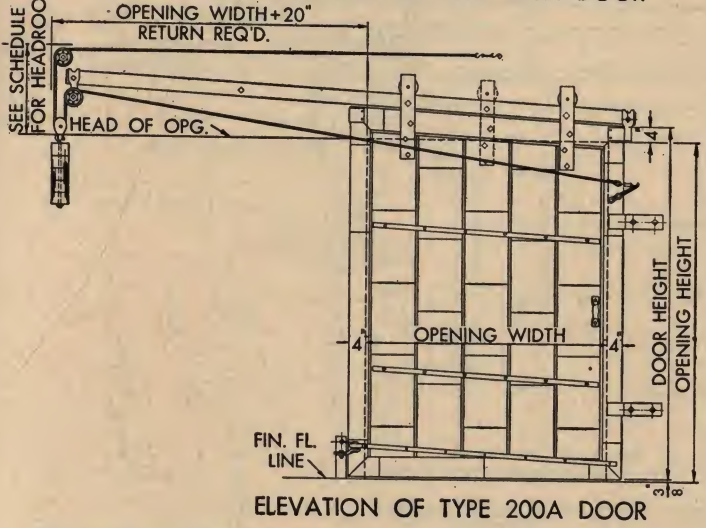
slide type — inclined and level track

class A doors scale ¼"=1'-0"

single slide



ELEVATION OF TYPE 205A DOOR

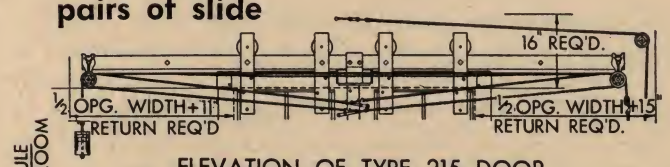


ELEVATION OF TYPE 200A DOOR

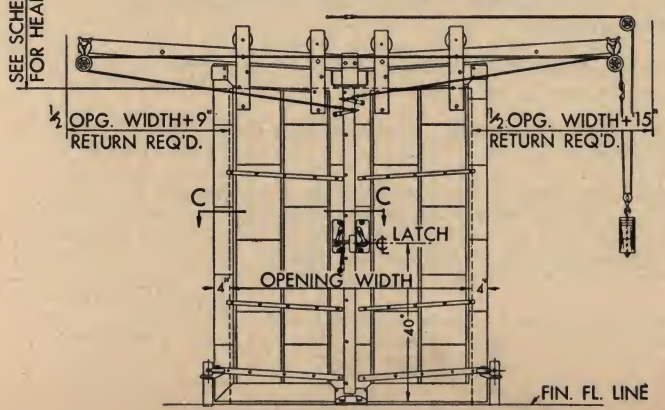
headroom req'd for #200A door

width of op'g	req'd head-room	width of op'g	req'd head-room	width of op'g	req'd head-room
3'-0"	19¼"	6'-4"	24¼"	9'-8"	29¼"
3'-4"	19¾"	6'-8"	24¾"	10'-0"	29¾"
3'-8"	20¼"	7'-0"	25¼"	10'-4"	30¼"
4'-0"	20¾"	7'-4"	25¾"	10'-8"	30¾"
4'-4"	21¼"	7'-8"	26¼"	11'-0"	31¼"
4'-8"	21¾"	8'-0"	26¾"	11'-4"	31¾"
5'-0"	22¼"	8'-4"	27¼"	11'-8"	32¼"
5'-4"	22¾"	8'-8"	27¾"	12'-0"	32¾"
5'-8"	23¼"	9'-0"	28¼"		
6'-0"	23¾"	9'-4"	28¾"		

pairs of slide

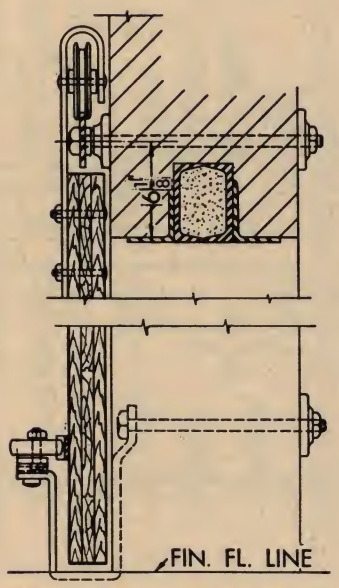


ELEVATION OF TYPE 215 DOOR

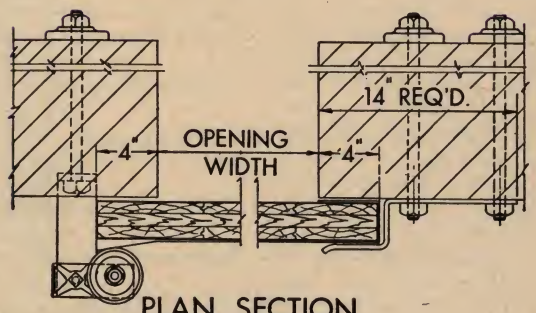


ELEVATION OF TYPE 218 DOOR

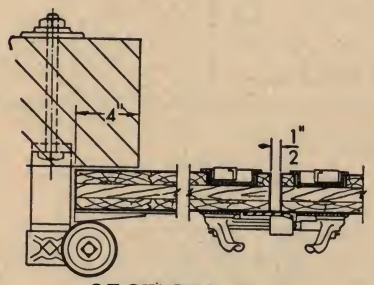
sections no scale



VERTICAL SECTION



PLAN SECTION



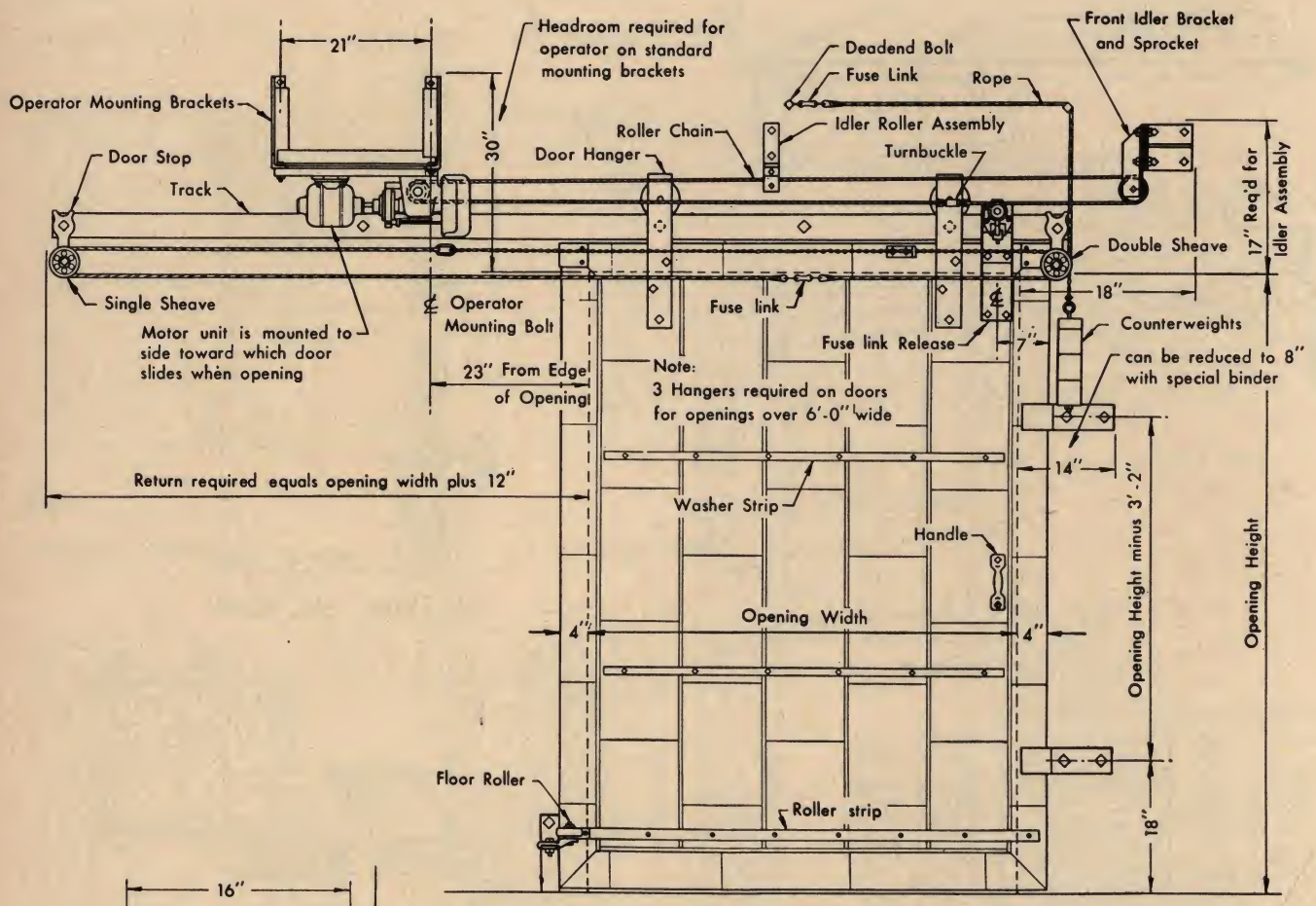
SECTION C-C

headroom req'd for #218 door

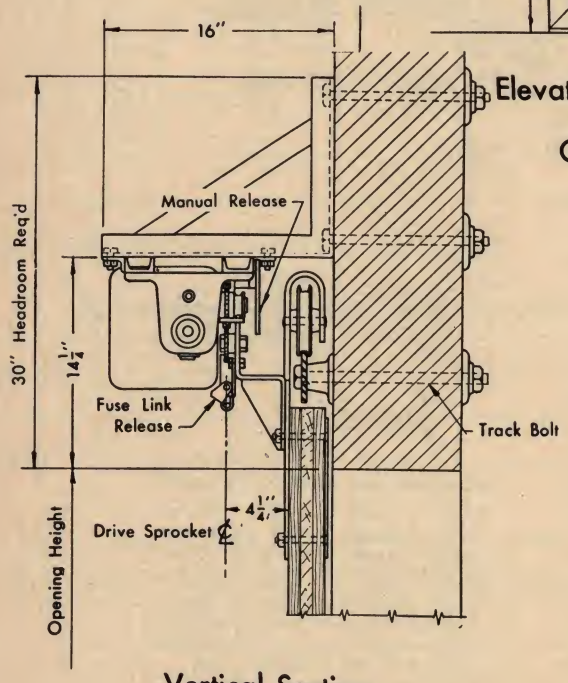
width of op'g	req'd head-room	width of op'g	req'd head-room
4'-0"	19"	9'-0"	22¾"
5'-0"	19¾"	10'-0"	23½"
6'-0"	20½"	11'-0"	24¼"
7'-0"	21¼"	12'-0"	25"
8'-0"	22"		

motorized metal clad doors

no scale



Elevation of 205A Tin Clad Door -- L. H. Slide Shown



Vertical Section

General Notes:

Operator may be arranged for either R.H. or L.H. slide.

Door and slide hardware can bear Underwriters' label.

Operator and fuse link release are not Underwriters' approved equipment.

Check with local insurance Rating Bureaus for a ruling on the application of motor operation to automatic fire doors located in hazardous locations.

Door will automatically close when fuse link on the operator release and on the closing device melt.

All operators are provided with a release to allow manual operation at any time.

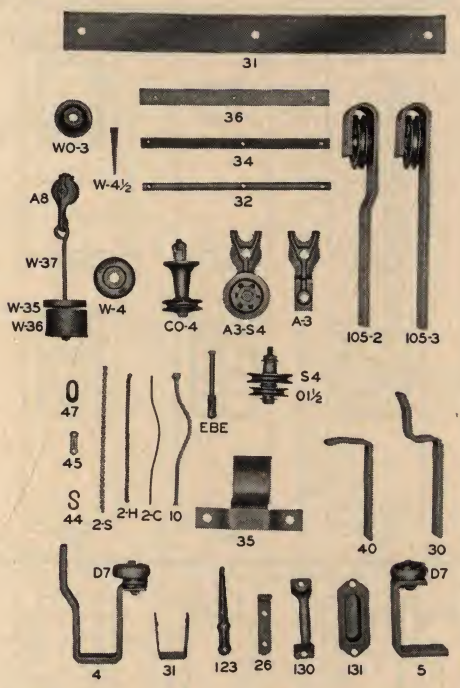
Motors can be furnished in 110 volt, 60 cycle, single phase A.C. and in 220 or 440 volt, 50 or 60 cycle, three phase A.C.

Standard door speed is about one foot per second.

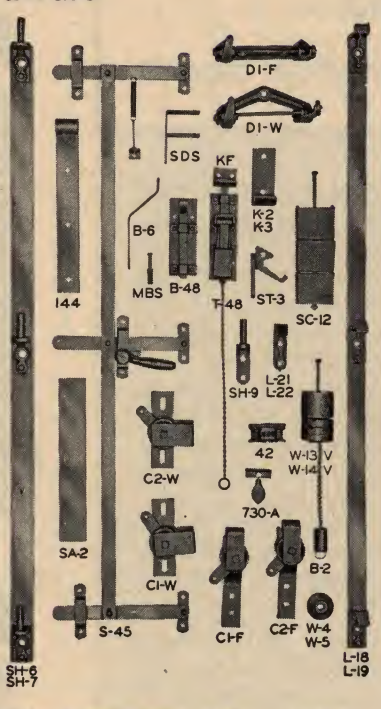
Request folder for complete information on RICHMOND MOTORIZED DOORS

Richmond metal clad fire doors 1

slide hardware



swing hardware



31	—Track	**47**	—Open Link	**SH6**	—Hinge Wall Strip and Pintle (3 ply)	**B48**	—Foot Bolt
36	—Roller Strip	**45**	—Fuse Link (165 Degree)	**SH7**	—Hinge Wall Strip and Pintle (2 ply)	**42**	—Foot Bolt Keeper
34	—Washer Strip	**44**	—S Hook	**L18**	—Latch Wall Strip and Pintle (3 ply)	**T48**	—Chain Bolt
32	—Chafe Strip	**2-S**	—Sash Chain	**L19**	—Latch Wall Strip and Pintle (2 ply)	**KF**	—Chain Bolt Keeper, Frame Type
105-2	—Door Hanger (2 ply)	**2-H**	—Hodef Chain	**S45**	—Triple Latch Assembly	**K-2**	—Chain Bolt Keeper, Wall Type (2 ply)
105-3	—Door Hanger (3 ply)	**2-C**	—Copper Wire	**S15**	—Single Latch Assembly (not shown)	**K-3**	—Chain Bolt Keeper, Wall Type (3 ply)
CO-4	—Wall Cone and Sheave	**10**	—Rope	**144**	—Strap Hinge	**B-6**	—Chain Fastener
A-3	—End Track Bumper	**30**	—Binder, Regular	**SA-2**	—Astragal	**MBS**	—Dead End Bolt and Shell
A3-S4	—End Track Bumper with Sheave	**35**	—Binder, Special	**C1-W**	—Wall Type Closing Device Bracket, Single Door	**ST-3**	—Padlock Latch Keeper
S4-01½	—Double Sheave Assembly	**40**	—Binder, Special	**C2-W**	—Wall Type Closing Device Bracket, Double Door	**L-21**	—Latch Keeper, Double Doors
EBE	—Dead End Bolt and Shell	**4**	—Floor Roller, Wall Type	**C1-F**	—Frame Type Closing Device Bracket, Single Door	**L-22**	—Latch Keeper, Single Doors
WO-3	—Adjustable Track Washer	**5**	—Floor Roller, Floor Type	**C2-F**	—Frame Type Closing Device Bracket, Double Door	**SH-9**	—Hinge Pintle, Frame Type
W4½	—Wedge	**130**	—Handle Pull	**D1-F**	—Frame Type Double Door Control	**730-A**	—Awning Pulley and Bracket
W4	—Wall Washer	**131**	—Flush Pull	**D1-W**	—Wall Type Double Door Control	**W-4**	—Wall Washer (¾" Bolt)
A8	—Awning Pulley	**26**	—Chain Angle	**SDS**	—Shoe for Double Door Control	**W-5**	—Wall Washer (½" Bolt)
W37	—Weight Rod	**123**	—Link Arm			**SC-12**	—Weights for Double Doors
W35	—2 lb. Weight	**31**	—Bumper Shoe			**W-13V**	—Small Weight for Single Door
W36	—8 lb. Weight	**D-7**	—Floor Roller Wheel			**W-14V**	—Large Weight for Single Door
						B-2	—Bob Weight and Chain with Ring

specifications

Where shown on plans and in door schedule, furnish automatic fire doors: single or double swing, frame or lap type; single or double slide, inclined or level track type, (metal clad "Fyrgard") (tin clad) construction as manufactured by the Richmond Fireproof Door Company, or equal.

tin clad doors: Wood core to be well seasoned white pine, fir or spruce, tongued and grooved, dressed both sides to 25/32 inch. Two-ply doors with one layer or ply vertical, and the other horizontal. Three-ply doors with outer plies vertical and center ply horizontal. Plies or layers to be nailed with cut clinch nails in rows not over 8 inches apart, driven in and clinched flush with surface. Cores to be I.C. 20# fire door standard Terne Plate all joints locked with ½-inch seams and nailed under seams. Sheets to be flat against core to avoid air spaces.

operators: Door operators for sliding fire doors shall be model MR operator and shall require but momentary contact of the control station and shall include the following: Motor to be of ample power and application to the type of electric service available; speed reduction by worm and worm gear running in lubricant; limit switch to shut off motor when door is fully opened or closed; magnetic brake for accurate stopping and locking; slip clutch in thermo circuit breaker for safety; release device so door can be opened manually if power is off, without removing bolts or pins or disturbing arrangement; equipment shall include fusible link release to disengage operator from the automatic closing device in case of fire.
Control shall be by wall switches located as shown on plans.
(All provisions for power outlet, wire and wiring to main line circuits, to be included in electrical specifications.)

hardware: To be furnished by Richmond Fireproof Door Company for the swing or slide doors indicated on the architect's plans and to bear the Underwriters' labels.

label: Doors and hardware to bear Underwriters' and will be provided with Factory Mutual labels only when specified.

Richmond hollow metal doors

The doors described in this section represent a high order of design, workmanship, materials, and appearance. Three distinctively different types are offered.

The "MD" type makes available a hollow metal door with the Underwriters' class B, C, D, and E label. Not only does the "MD" door offer this important safety feature, it has set new standards of beauty for this type of door. Pioneered by Richmond, the "MD" door has a beautiful appearance with moulding unmarred by screw heads and rivets.

To supplement the "MD" door, Richmond has recently added the "FD" flush door. Constructed of 16 gauge material, using the most current manufacturing techniques, the "FD" door lends itself well to any requirement where flush door is preferred, whether for labeled or nonlabeled application.

The Third type door described in this section is the "TD" door. This construction is primarily used for installations where appearance is secondary to heavy duty service.

It should be emphasized that "MD", "FD", and "TD" doors are custom-built products. This makes it possible to build exact sizes to fit specifications as well as doors built for special engineered uses. They are the finest doors built for use in warehouses, factories, service entrances for institutions and stores, armories, gymnasiums, and similar applications.

While it is preferred that these doors be furnished with standard Richmond hardware, they are available fitted to hardware furnished by others. A complete unit of door, frame, and hardware furnished by Richmond does insure that the entire unit will fit properly when assembled at the job.

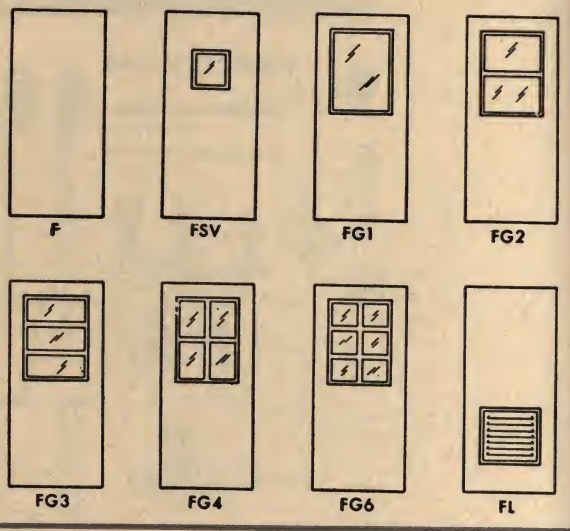
For Underwriters' requirements see page 2.

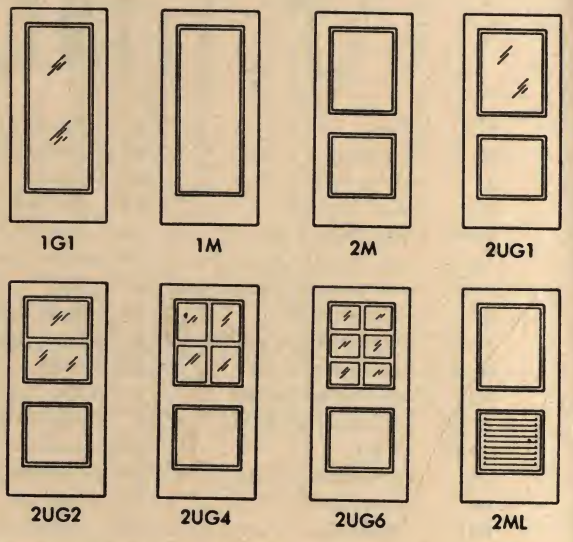
FD

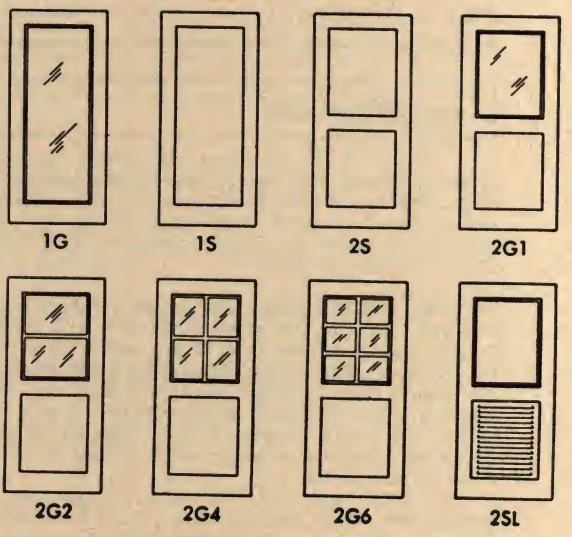
MD

TD

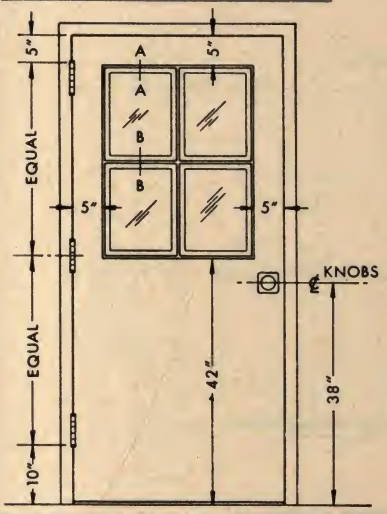
standard door designs

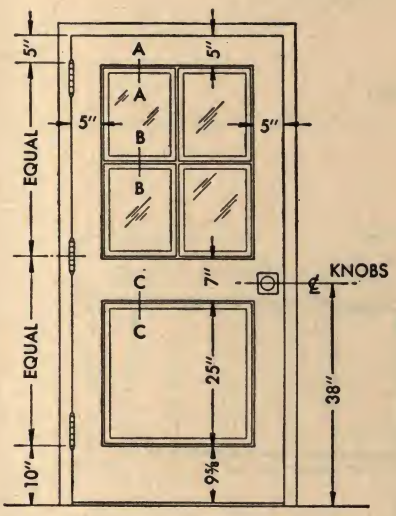


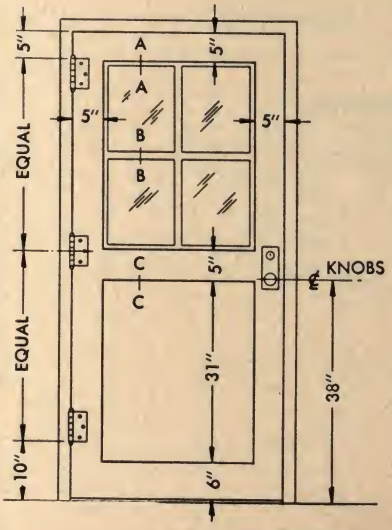




standard door dimensions

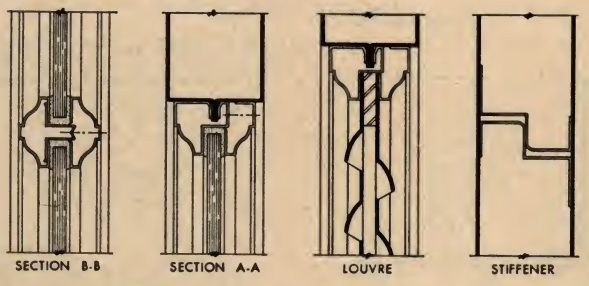




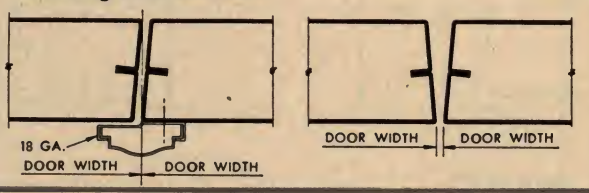


details

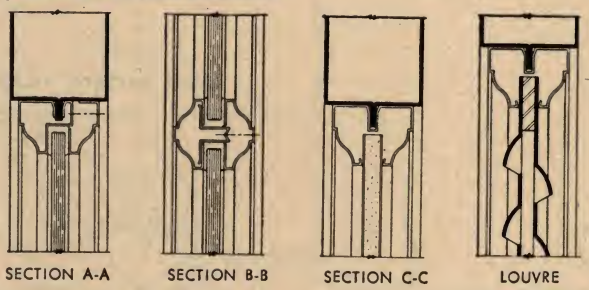
panel and sash sections



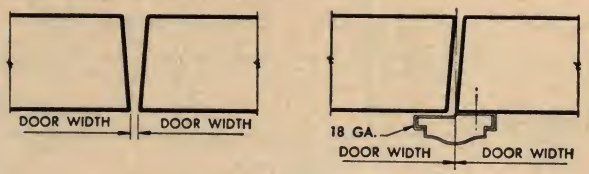
meeting stile sections



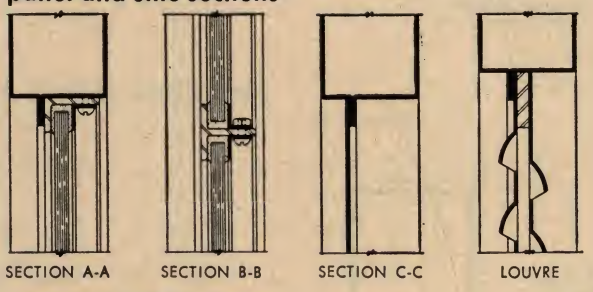
panel and sash sections



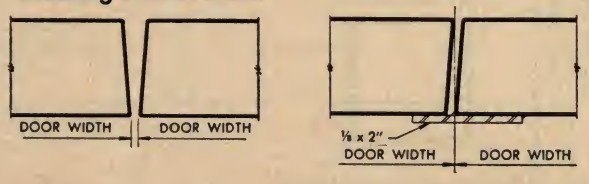
meeting stile sections



panel and stile sections



meeting stile sections



limitations

"FD" Doors

Label—With or without class B, C, D, or E, Underwriters' label. Class A label available for design "F" only. Swing doors only can bear Underwriters' label.

Operation—Single or double swing or slide.

Size—Custom-built — any size to 4'-0" wide x 10'-0" high—8'-0" maximum height for labeled doors, except class A.

Hardware—Richmond standard items or hardware furnished by others.

Construction—16 gauge steel and 1¾" thick only.

Internal reinforced and insulated.

"MD" Doors

Label—With or without class B, C, D, or E, Underwriters' label. Swing doors only can bear Underwriters' label.

Operation—Single or double swing or slide.

Size—Custom-built—any sizes to 4'-0" x 8'-0".

Hardware—Richmond standard items or hardware furnished by others.

Construction—16 gauge steel and 1¾" thick only.

Continuous 20 gauge hollow metal mould ¼" thick insulated panel.

"TD" Doors

Label—Not available.

Operation—Single or double swing or slide.

Size—Custom-built—any size up to 6'-0" x 10'-0" single or 12'-0"x15'-0" slide.

Hardware—Richmond standard items or hardware furnished by others.

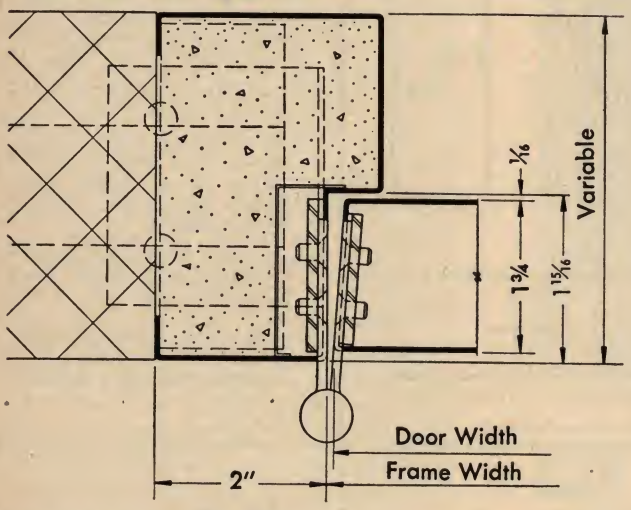
Construction—16 gauge steel in 1¾" thickness. 14 gauge steel in 1¾" or 2¼" thickness. 12 gauge steel in 2½" thickness.

typical jamb sections

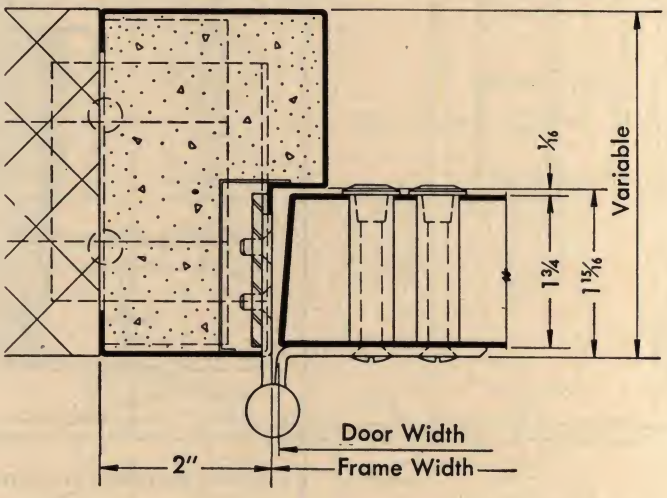
no scale

■ with unit steel frame

full mortise hinge shown

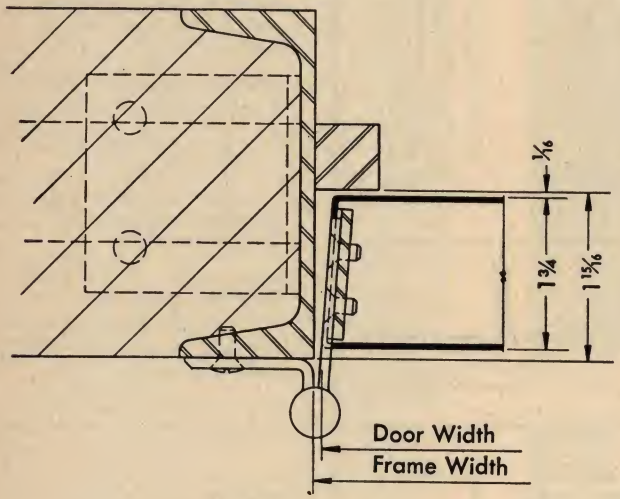


half surface hinge shown

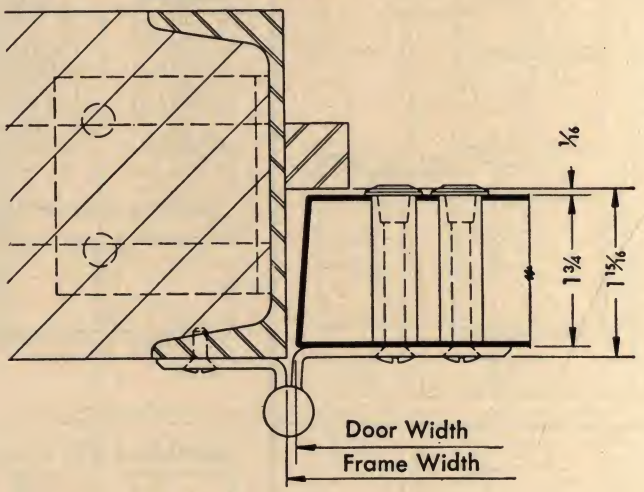


■ with channel frame

half mortise hinge shown

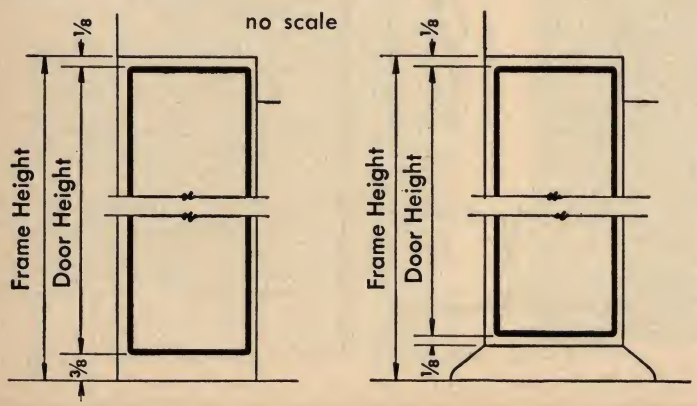


full surface hinge shown

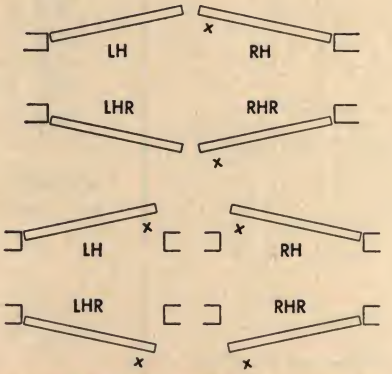


vertical door clearances

no scale



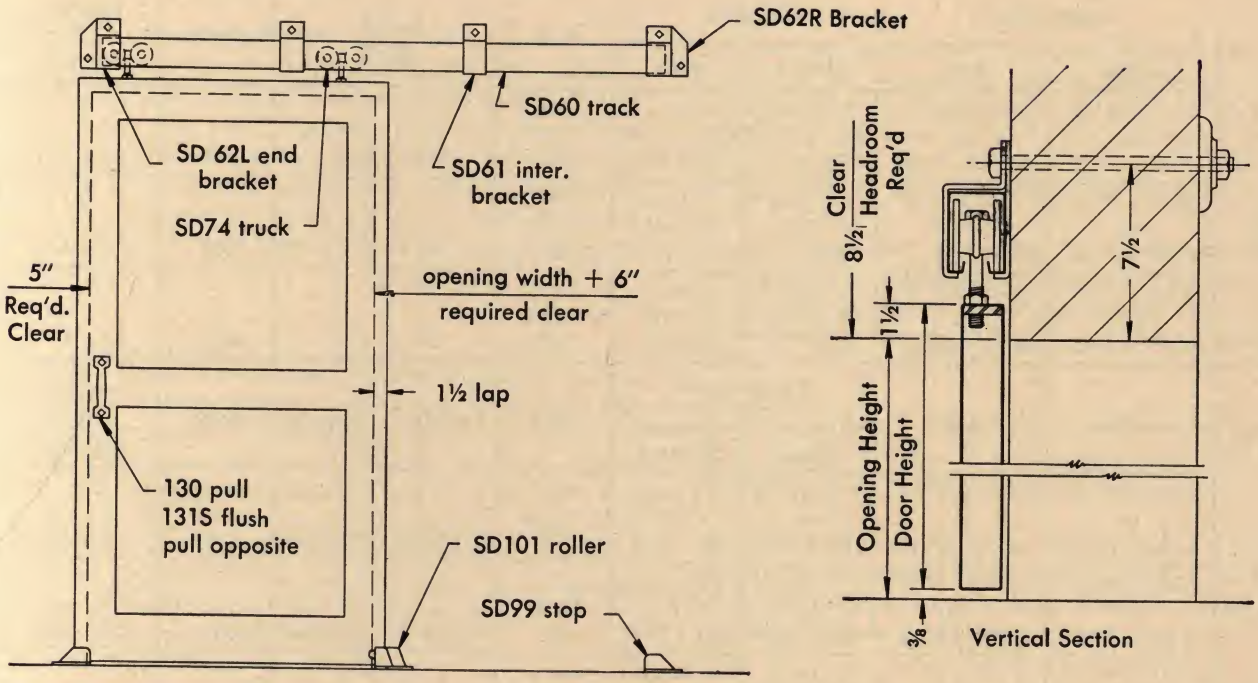
standard swing indications



x - Indicates Key Side for One Cylinder Lock Sets

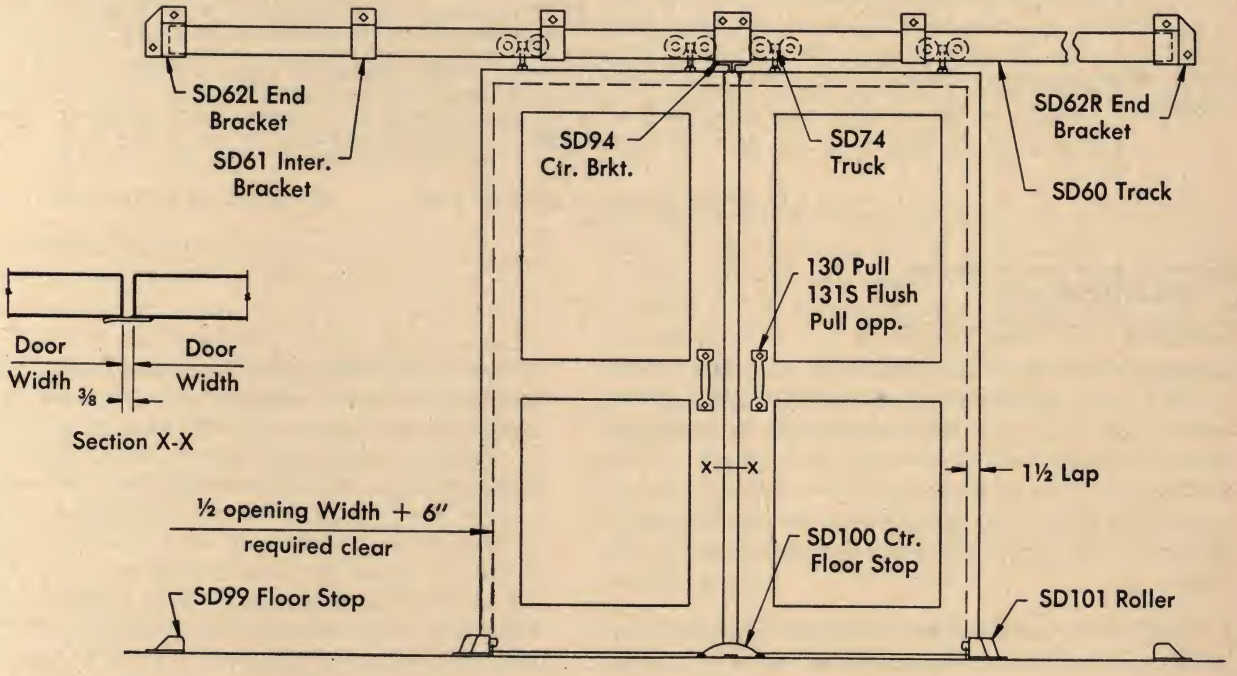
single slide door

no scale



pair of slide doors

no scale



suggested standard hardware sets

	frame size		hinges		lock	bolt■ flush		closer	bracket (when req'd.)
	single	pair	single	pair					
FD MD	2′-6″ x 6′-6″ to 3′-4″ x 7′-0″	5′-0″ x 6′-6″ to 6′-8″ x 7′-0″	1½ pair 4½″ x 4½″ BB179	3 pair 4½″ x 4½″ BB179	See Page 22	1116-12″		43V	53 x 43V
	3′-5″ x 7′-0″ to 4′-0″ x 7′-6″	7′-10″ x 7′.0″ to 8′-0″ x 7′-6″	1½ pair 5″ x 4½″ BB179	3 pair 5″ x 4½″ BB179	See Page 22	1116-12″		44V	53 x 44V
	4′-0″ x 7′-7″ to 4′-0″ x 8′-0″	8′-0″ x 7′-7″ to 8′-0″ x 8′-0″	2 pair 5″ x 4½″ BB179	4 pair 5″ x 4½″ BB179	See Page 22	1116-12″		45V	53 x 45V

	single	pair	frame type: pressed steel	frame type: channel frames	lock	foot■	chain■	closer	bracket (when req'd.)
TD	2′-6″ x 7′-0″ to 3′-4″ x 7′-0″	5′-0″ x 7′-0″ to 6′-8″ x 7′-0″	1½ pair▲ 5″ H. S. BB 133P	1½ pair▲ 5″ F. S. BB 131P	See Page 22	1056K-6″	1055K-6″	43V	53 x 43V
	3′-5″ x 7′-0″ to 4′-0″ x 7′-6″	6′-10″ x 7′-0″ to 8′-0″ x 7′-6″	1½ pair▲ 5″ H. S. BB 123P	1½ pair▲ 5″ F. S. BB 129P	See Page 22	1056K-6″	1055K-6″	44V	53 x 44V
	4′-0″ x 8′-6″ to 5′-0″ x 9′-0″	8′-0″ x 7′-7″ to 10′-0″ x 9′-0″	2 pair▲ 5″ H. S. BB 123P	2 pair▲ 5″ F. S. BB 129P	See Page 22	1056K-8″	1055K-8″	45V	53 x 45V

	single	pair	frame type: pressed steel	frame type: channel frames	locking devices	closer	bracket (when req'd.)
FD class A label	2′-6″ x 7′-0″ to 4′-0″ x 7′-6″	5′-0″ x 7′-0″ to 8′-0″ x 7′-6″	1½ pair▲ 5″ x 4½″ BB 118P	1½ pair▲ 5″ F. S. BB 129P	3-point Underwriters' approved locking or latching device is required for single doors or active leaf of pairs of doors. 2-point Underwriters' approved latching device is required for inactive leaf of pairs of doors. For specific operations see your Hardware consultant.	43VL 44VL	53 x 43 53 x 44
	4′-0″ x 7′-7″ to 4′-0″ x 10′-0″	8′-0″ x 7′-7″ to 8′-0″ x 10′-0″	2 pair▲ 5″ x 4½″ BB 118P	2 pair▲ 5″ F. S. BB 129P		44VL 45VL	53 x 44 53 x 45

▲ Quantities listed are for each door ■ Required for pairs of doors only

specifications

General: The contractor shall furnish and install "MD", "FD", or "TD" hollow metal doors as manufactured by The Richmond Fireproof Door Company, Richmond, Indiana, in all openings except as otherwise noted on drawings or herein specified. When indicated in the door schedule, Underwriters' label of the proper classification shall be attached to the door. All doors to be furnished complete with unit steel frames (or structural steel frames).

2. "MD" Door Construction: Doors shall be constructed of 16 gauge steel, with formed tubular stiles and rails. All joints shall be welded. Hinge and lock reinforcements are to be provided for hardware cutouts. 20 gauge rolled steel mouldings are to be provided around panels and sash openings. Except for loose glass stops there shall be no exposed screw heads at sash openings or panel openings. Panels for exterior doors to be constructed of ¼″ masonite panels glued between two layers of 24 gauge sheet steel with rubber base cement. Panels for interior doors to be ¼″ sheet rock, glued between two layers of 24 gauge sheet metal steel. Panels shall be ¼″ sheet rock, glued between two sheets of 24 gauge sheet steel. (Panels for labeled doors to be ¼″ asbestos in lieu of sheet rock.) Doors shall have 5″ stiles and top rail, 7″ center rail, and 9⅝″ bottom rail, all dimensions exclusive of moulding. Stiles shall have ⅛″ bevel and all doors shall be 1¾″ thick. Doors bearing Underwriters' label shall have stiles and rails insulated with ⅛″ sheet asbestos.

specifications concluded

2A. "FD" Door Construction: Door shall be constructed of 16 gauge stretcher leveled steel construction and reinforced inside with continuous interlocking 20 gauge vertical stiffeners, spaced a maximum of 6″ on center. Door to be insulated with two layers of 1″, 6 lb. to 7 lb. density industrial mineral wool felt between all stiffeners and surface sheets. 20 gauge rolled steel mouldings are to be provided around panels and sash openings. Except for loose glass stops, there shall be no exposed screw heads in moulding.

2B. "FD" Class A Door Construction: Doors shall be constructed of 16 gauge stretcher levelled steel construction and reinforced inside with continuous interlocking 20 gauge vertical stiffeners spaced a maximum of 6″ on center. Doors to be insulated with ½″ asbestos millboard or cellular asbestos the full thickness of the door between all stiffeners and surface sheet. All hardware, with the exception of door closers and other items of surface applied hardware, shall be delivered to door manufacturer for attachment to the doors in accordance with the Underwriters' requirements.

2C. "TD" Door Construction: Doors shall be constructed of 16 or 14 gauge steel, with formed tubular stiles and rails. All joints shall be welded. Hinge and lock reinforcements are to be provided for hardware cutouts. Sash where required, to have T bar muntins with angle side, bottom and top members; and formed angle removable glass stops. Sash unit to be welded to stiles and rails. Solid panels to be a single sheet of the same gauge as the stiles and rails. Panels to be securely spot welded to the stiles and rails. Doors shall have 5″ stiles, top rail, and center rail; 6″ bottom rail. Stiles shall have ⅛″ bevel, and all doors shall be 1¾″ thick. (*For alternate thicknesses, see page 9.*)

3. Frame Construction: Door frames shall be "Unit Steel" frames as manufactured by The Richmond Fireproof Door Company. Frames shall be manufactured of 16 gauge (or 14 gauge) steel with all angles, moulds, returns and miters neatly welded and ground smooth. Hardware reinforcements shall be provided for hinges and lock locations. All necessary tapped holes for mortised hardware to be made in factory and plaster guards provided to protect holes in reinforcing plates from mortar. Frames to be provided with adjustable slip anchors and sill clips for anchorage.

4. Hardware: All hardware to be furnished by the door manufacturer. Hinges shall be full mortise, regular weight, template type 4½″ x 4½″. Ball bearing hinges shall be furnished for doors using door closers.

(a) Locks and Latches shall be mortise template type. Locks shall have 2¾″ backset and shall be government type with heavy bronze front and strikes, cast iron cases, wrought bronze knobs and escutcheons. Cylinder locks shall have a protected front. Locks and latches for labeled doors shall have heavy bronze fronts and strikes, anti-friction ¾″ throw latch bolt.

Alternate: Locks and latches shall be "Integra" mortise template type. Lock cases shall be cold rolled steel cadmium plated. Front shall be wrought bronze. Knob shall be cold forged brass or bronze. Escutcheons shall be heavy cold forged brass or bronze.

(b) Top and bottom bolts (either surface mounted chain and foot bolt or mortise type flush bolts) shall be provided for top and bottom of inactive leaf for all pairs of doors.

(c) Door closers of proper size shall be provided where indicated. Closer brackets shall be provided for closers used on outswinging exterior doors or where conditions do not permit application to hinge side of door.

(d) All locks, latches, hinges, push plates, door pulls, and flush bolts shall be dull bronze finish (US10). Closers and brackets to be furnished in bronze enamel. Chain and foot bolts to be finished in cadmium plating. All hardware shall be packed and shipped separate for attaching in the field.

(e) Doors shall be mortised and reinforced for all required hardware and shall be drilled and tapped to receive all items of mortised hardware. For surface applied items such as closers, stops, escutcheons, kick plates, etc., doors shall be reinforced, but drilling and tapping shall be done in the field.

4A. Hardware for Class A Doors: All class A doors to be furnished with the proper number of extra heavy weight steel hinges, and hinges to be not less than 4½″ in height. Provide an approved three point locking device for each single door and the active doors of pairs. Furnish an approved two point locking device for inactive leaf ot pairs. All locking devices to be installed in the door at the time of manufacture and all hinges to be attached to the door at the factory.

5. Shop Finish: All material to be thoroughly cleaned of oil, grease, rust, and other impurities and then given shop coat of red oxide primer.

6. Glass and Glazing: Doors to be glazed by others with ¼″ glass as outlined in the general "Glazing" specifications.

Richmond kalamein doors

Richmond kalamein doors are built of 24-gauge galvanized sheets perfectly sealed over highest grade wood cores and are resistant to fire and corrosion. Prime coated, they are ready for a paint finish by contractor at the job. Ordinarily these doors may be designed with any number of, or combination of, flush areas, solid panels, glazed panels or vision panels. If a kalamein door is to be labeled, its size and glass area must conform to limitations detailed on page 15. While kalamein doors are more costly than wood doors, their maintenance cost is practically negligible.

application

Richmond kalamein doors are recommended where quiet, easy action is essential: as in schools, auditoriums, hotels, hospitals, apartments and industrial buildings; in stair wells, corridor partitions, room partitions and interior fireproof entrances. These doors are employed to greatest advantage when installed with Unit Steel Frames, and must bear Class B, C, D, or E Underwriters' labels.

Underwriters' approval

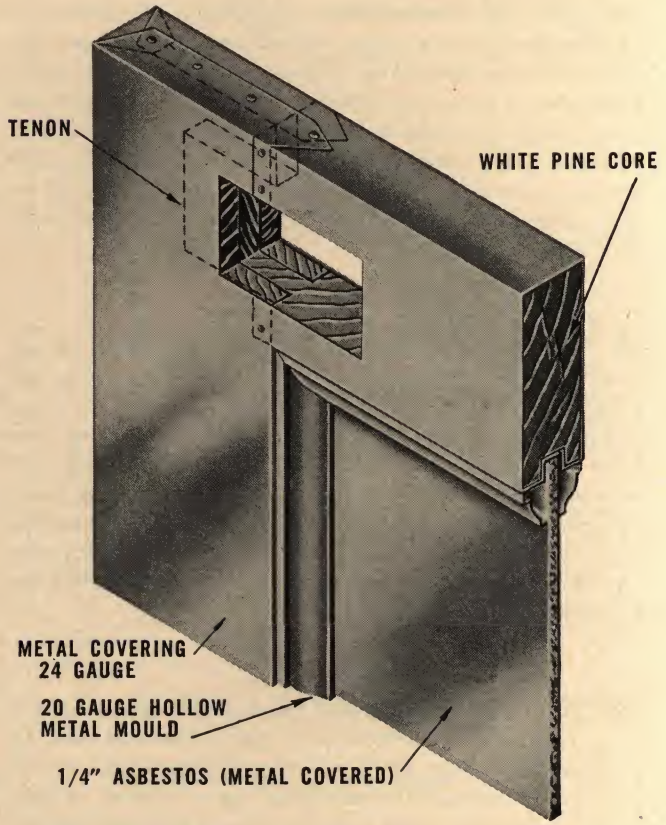
Richmond kalamein doors, to comply with insurance requirements, must bear Underwriters' labels (for all openings except Class "A"). Kalamein doors have little or no effect on the reduction of insurance rates unless the frame also is approved and labeled.

"UNIT STEEL" frames

Richmond "Unit Steel" frames when equipped with adjustable anchors welded to backs of jambs, may bear the label of the Underwriters' laboratories, thus complying with insurance requirements. Therefore, we recommend the use of a complete assembly of Richmond labeled kalamein doors, Richmond labeled unit steel frames, and hardware approved by the Underwriters'. (See Sections 4 and 5.)

For Underwriters' requirements see page 2.

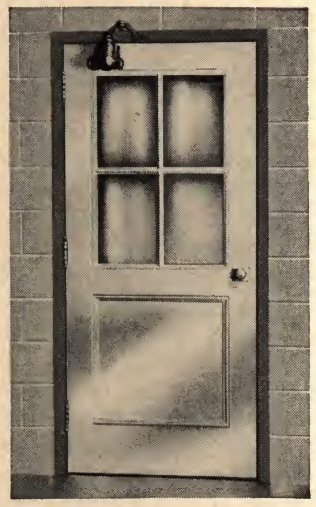
construction features



corner section of door showing construction and assembly

two basic types

flush type door

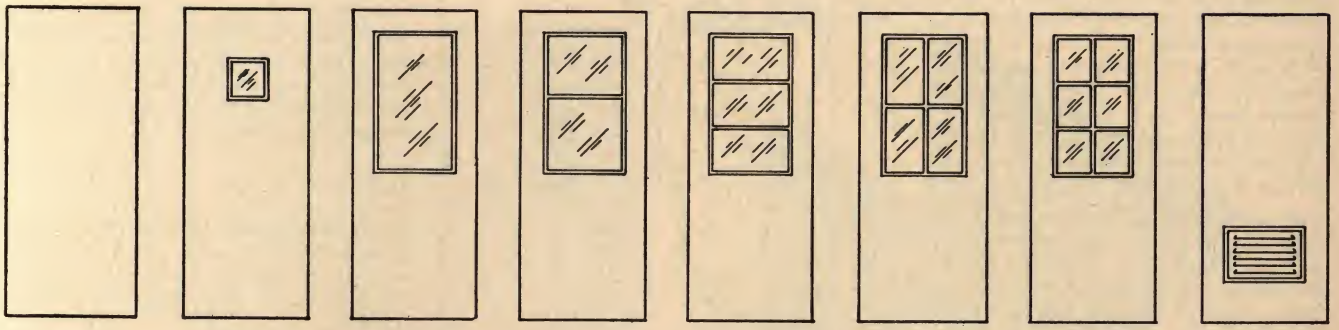


paneled type door

standard door designs

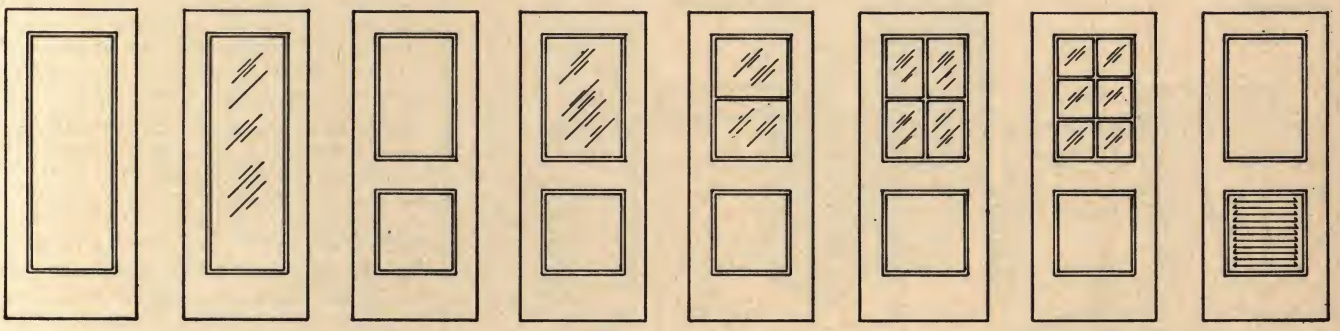
other designs are available

■ flush



F FSV FG-1 FG-2 FG-3 FG-4 FG-6 FL

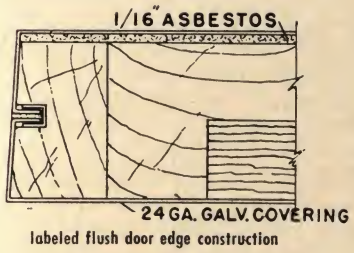
■ paneled



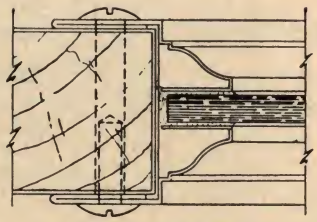
1M 1G1 2M 2UG1 2UG2 2UG4 2UG6 2ML

door details

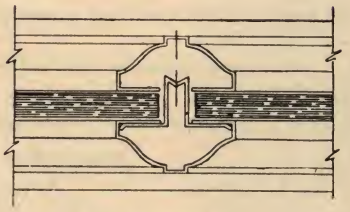
half size



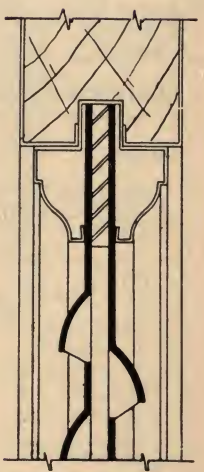
labeled flush door edge construction



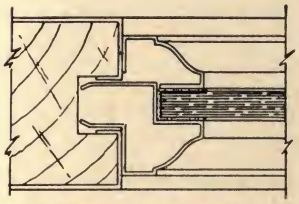
detail of labeled flush door sash



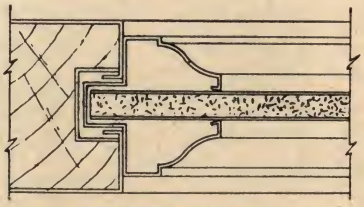
detail of muntin bar



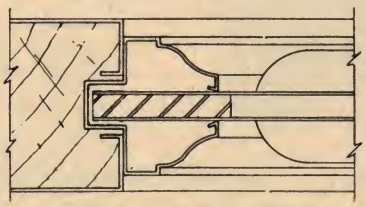
vertical section thru louvre



detail of labeled and non-labeled panel type sash construction



detail of paneled mould



top view of louvre (non-label doors only)

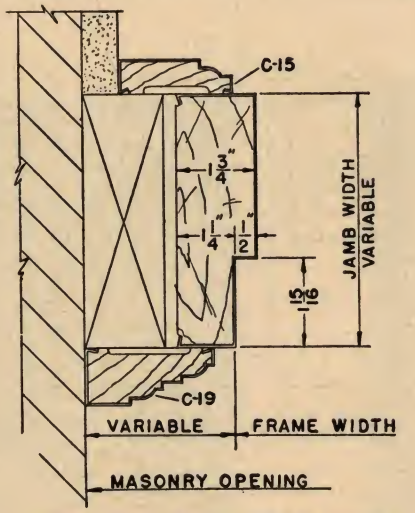
standard kalamein frames

scale 3″=1′-0″

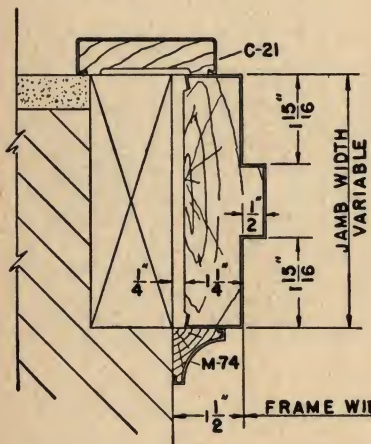
Metal covered frames are fabricated similarly to doors. The wood cores are first machined out of solid pieces of kiln dried white pine, free from knots, dry rot, or sap. Only in the case of extra wide jamb, is it necessary to splice two pieces to form the core. Kalamein frames cannot bear Underwriters' labels. If reinforcements are specified, they are fastened to the core by wood screws of proper size.

The metal covering is preformed by a large power press, assuring straight, uniform edges. Here, again, the wood and metal are assembled by use of a frame crimping machine. The back side of the kalamein frame is not covered, as there is no advantage gained by so doing.

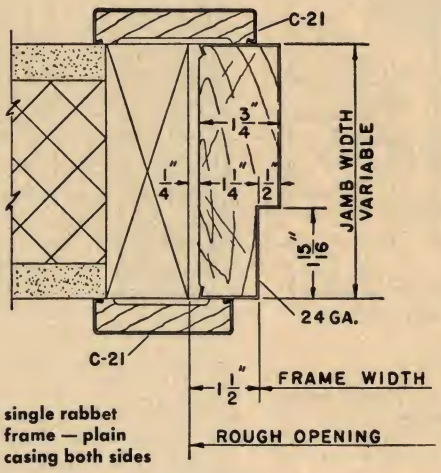
Kalamein frames are mortised for hardware providing necessary information and templates are received for each opening.



single rabbet frame — moulded casing both sides



double rabbet frame — moulded one side, plain casing other side.



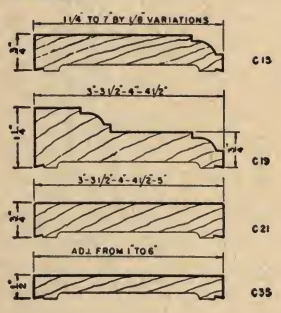
single rabbet frame — plain casing both sides

Kalamein frames available with any standard casing or mould arrangement.

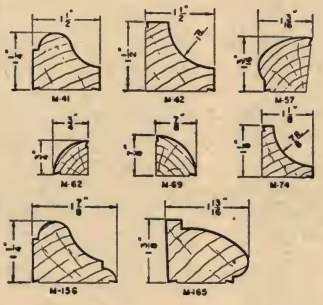
standard kalamein trim

scale 3″=1′-0″

casings



mouldings



specifications

Where shown on plans and hereinafter specified furnish labeled flush kalamein doors 1¾ inch thick. Wood cores to be completely covered with 24-gauge galvanized steel, glued under pressure, free from waves or buckles, furnished in Richmond special gray galvanized metal primer. All finished painting shall be done in the field by painting contractors.

flush

Doors shall have two-ply wood cores. Edges reinforced with metal and wood strips full height and width, 1/16th inch thick sheet asbestos insulation glued to one side.

When mortise finish hardware is to be applied, steel reinforcing plates, 5/32 x 1⅝ in., drilled and tapped for hardware, shall be applied to the edges of the cores.

All seams shall be in the center of the door edges and shall be finished with solder and ground smooth. No seams shall be made on the face of the door, unless door exceeds 36 in. in width. In this case, seam shall be inverted and flushed smooth with solder.

Glass to be set in 16-gauge pressed steel sash attached to door with special steel bolts and machine screws.

paneled

Doors shall have cores of selected kiln dried non-resinous white pine. Stiles shall be mortised to receive rail tenons of 3-in. length. Tenons to be 2-in. less in width than width of the stiles.

The metal covering of the stiles and rails shall be locked together at all joints. The locked joints of the metal shall be recessed into wood core. Seams shall be flushed with solder and scraped smooth flush with surface.

Panel core shall be not less than ¼ in. asbestos, covered with No. 24-gauge galvanized steel. Hollow rolled steel panel mouldings made in continuous pieces. Corners of moulding shall be mitered and brazed before assembling into stiles and rails. No metal covered mouldings or exposed nail or screw heads shall be accepted.

Panels shall be moulded with hollow metal. Loose glass moulds shall be secured by small oval head sheet metal screws one side of door only. No metal covered mouldings or muntin bars shall be accepted.

When kalamein paneled doors are to bear Underwriters' label or otherwise specified, stiles shall be reinforced with 3/32 x 1⅝-in. steel reinforcements, drilled and tapped to receive finish mortise hardware.

Underwriters' Labeled Doors meet all Code requirements

Richmond unit steel frames

Richmond unit steel frames are available for any size opening and wall thickness. If labeled, the Underwriters' restrictions govern maximum sizes, as shown in table below.

recommended uses

Richmond unit steel frames can be used in conjunction with paneled and flush kalamein doors or industrial steel doors. They are recommended for use in stair shafts, corridor and room partitions, and room entrances in hotels, hospitals, schools, auditoriums, apartment and industrial buildings.

hardware information

In the manufacturing of Richmond unit-steel frames, mortises and reinforcings for all mortised hardware are made at the proper time. All cut-outs, drilling and tapping are made at the easiest and most convenient time in order to speed up production and reduce cost. Therefore, it is absolutely necessary that a complete hardware schedule and templates, blue print or physical, for each frame be forwarded promptly to the factory. Manufacture of frames cannot be started until after hardware schedule and all necessary hardware templates are received at the factory.

Underwriters' label

Richmond unit-steel frames, when equipped with adjustable anchors welded to backs of jambs, may bear the Underwriters' label. Labeled frames may be made with 24 inch high transoms for class B, C, D and E situations. For classes B and D, transom sash must have solid panels. For classes C and E, transom sash may be glazed. Transoms may be side pivoted, top or bottom hinged, or stationary. A center frame mullion is required in transom opening for frames exceeding 4'-0" in width. The table below will give Underwriters' requirements for labeled frames:

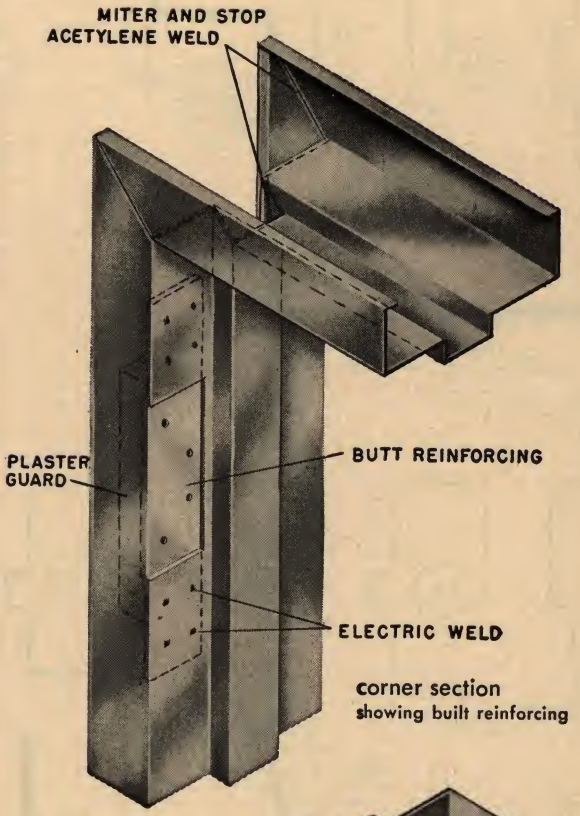
Underwriters' size limits for unit steel frames

metal thickness	maximum sizes			
	single swing		pairs	
	width	height	width	height
16-ga.	3'-6"	7'-6"	5'-0"	7'-6"
14-ga.	4'-0"	10'-0"	8'-0"	10'-0"

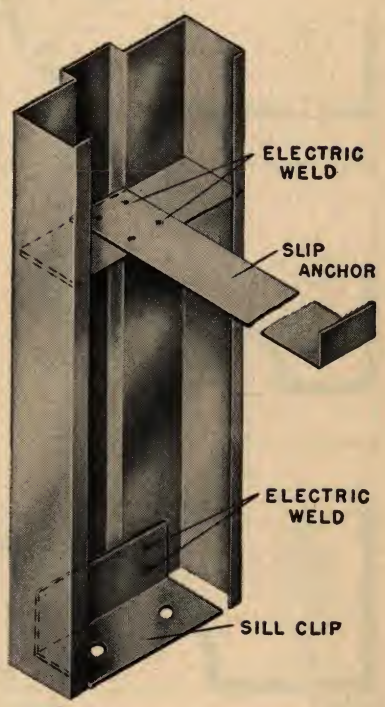
Minimum jamb width 4 in.; minimum stop width 1 in.; minimum flange width 2 in.

Request folder pertaining to Richmond Stock-Engineered hollow metal door frames.

frame construction



corner section
showing built reinforcing

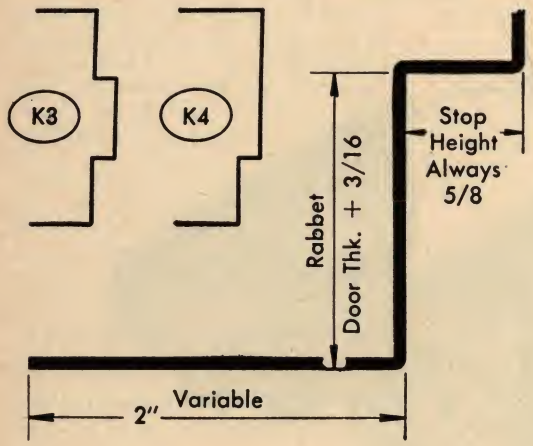


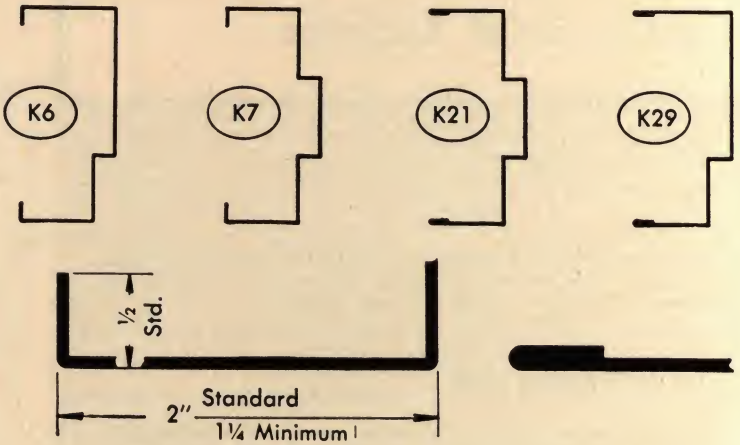
floor section
showing slip anchors and floor connection

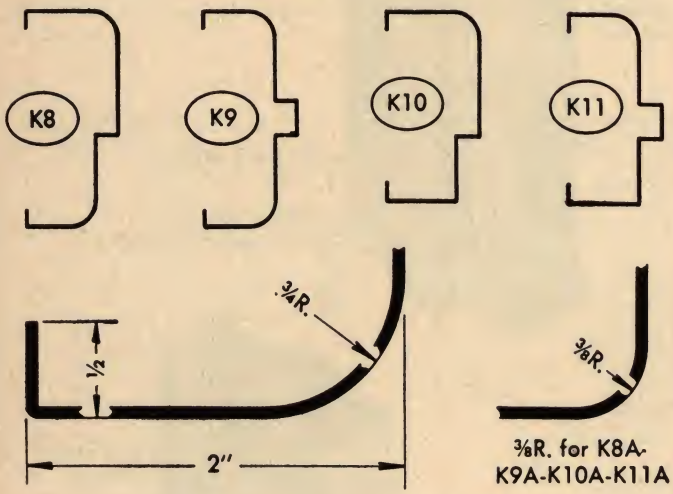
type K-7 unit steel frame
pressed in 16 - 14 - 12 or 10 gauge

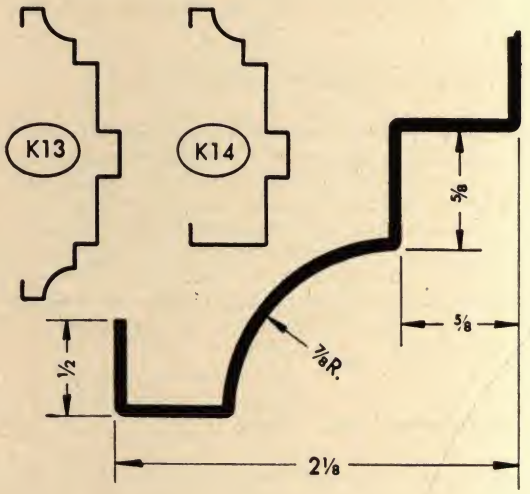
standard frame designs

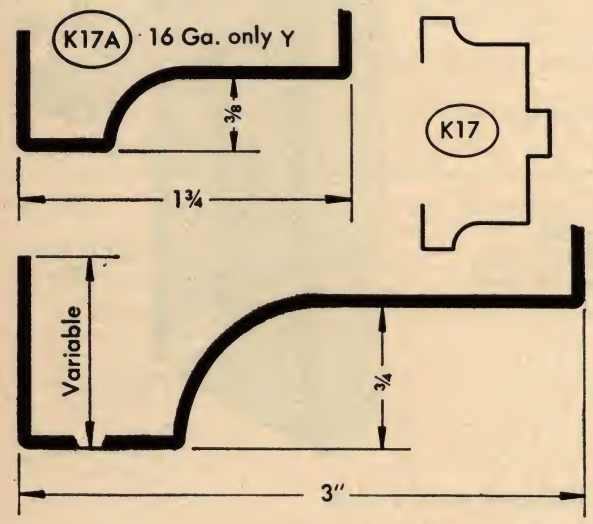
available in 16 GA or 14 GA steel except as noted





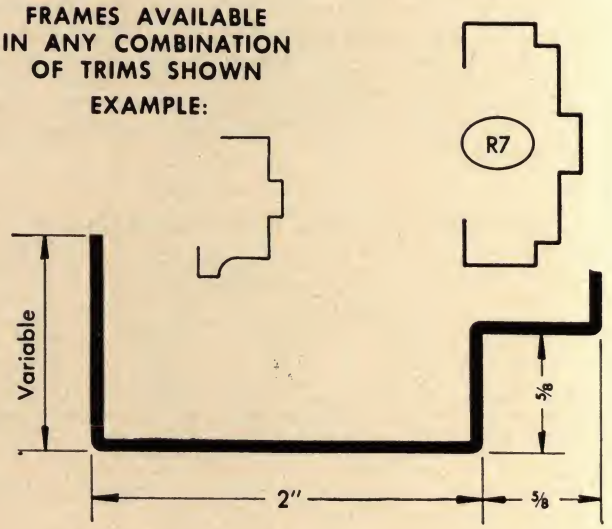






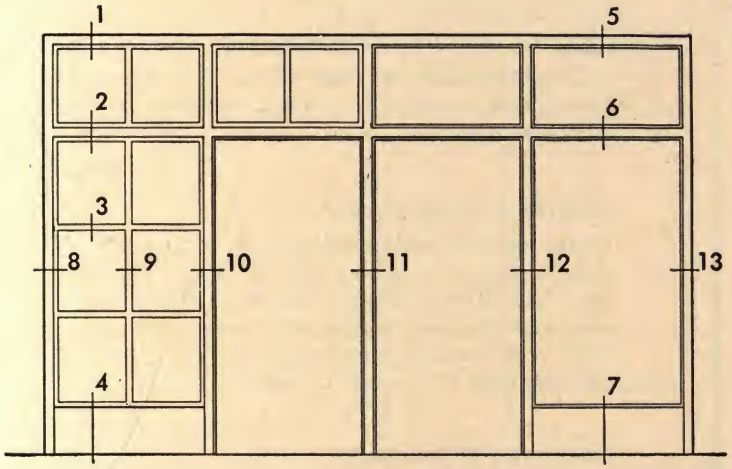
FRAMES AVAILABLE IN ANY COMBINATION OF TRIMS SHOWN

EXAMPLE:

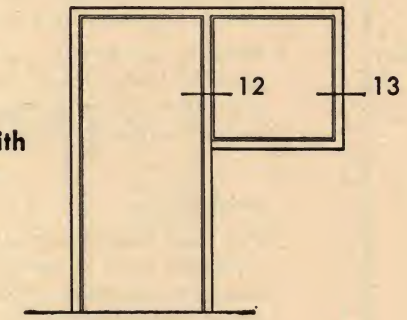


special units

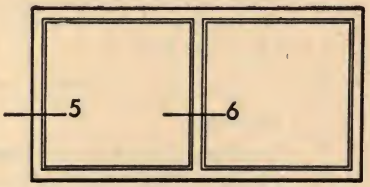
no scale



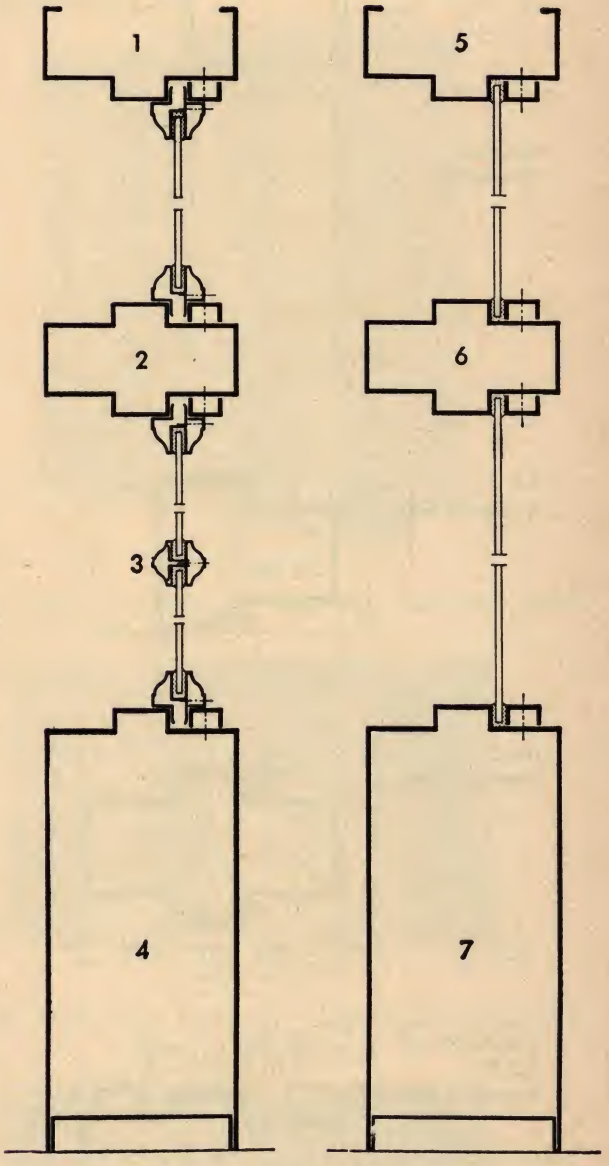
entrance or smoke screen unit



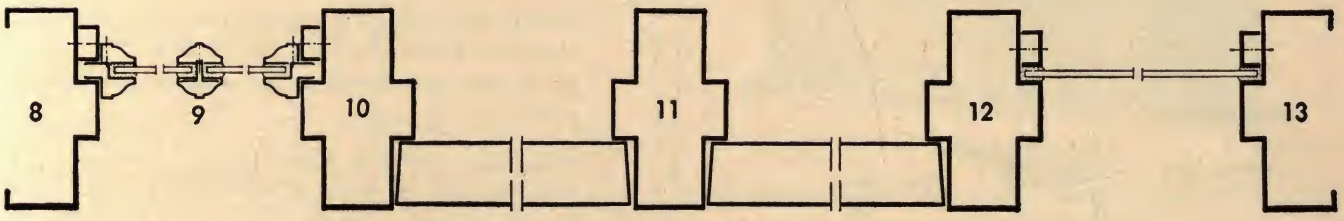
frame with sidelight



borrowed light with mullion



vertical sections

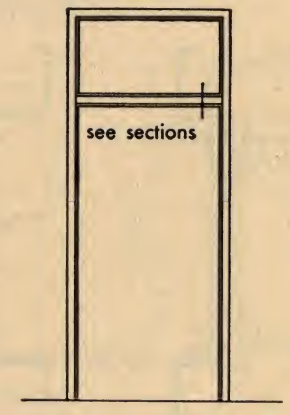


plan sections

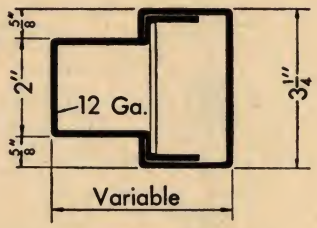
transom frames

scale ¼″=1′-0″

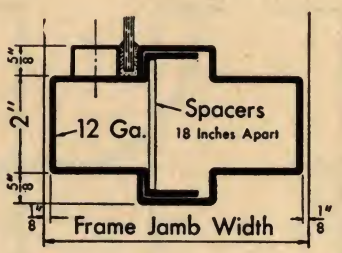
typical elevation



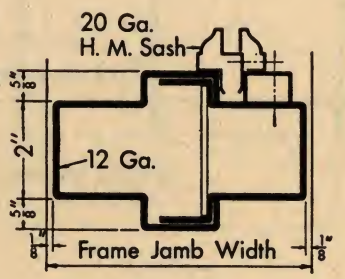
no. 1 transom bar



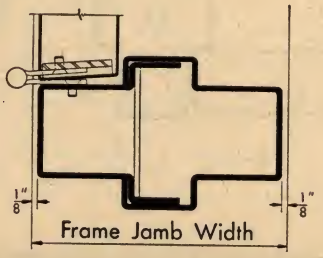
no. 2 transom bar



variation of no. 2 transom bar



variation of no. 2 transom bar



specifications

scope

Furnish Richmond Unit Steel Frames in standard steel construction in accordance with details as shown on plans; Richmond design no. ———.

material & workmanship

Frames shall be manufactured of 16 or 14 gauge cold rolled steel with all angles, moulds, returns and miters neatly welded and ground smooth. Where removable glass stops occur, they shall be formed from the same gauge of metal as the frame. All transom bars, and mullions shall be constructed of 12 gauge material.

hardware reinforcement

At hinge and lock locations ⅛ in. x 1¾ in. x 12 in. long reinforcement plates are to be spot welded to inner surface of jambs, over which 24-gauge galvanized plaster guards are to be spot welded to protect tapped holes in reinforcing plates from mortar.

Necessary holes shall be drilled and tapped from template to receive hinges and lock strikes. Templates for this purpose to be furnished to the frame manufacturer by the hardware contractor.

anchors

For non-labeled frames slip anchors shall be provided with each frame at intervals not to exceed 2 ft. 6 in. on centers at each jamb. If frames are to bear Underwriters' labels, furnish adjustable anchors of not less than 14-gauge steel spot welded to the inside of the jamb on not more than 2 ft. 6 in. centers.

Each jamb shall be provided with sill clips welded to the frame and punched with two ⅜ in. holes for anchoring to the floor.

setting

All frames shall be securely anchored by general contractor to the floor construction by means of concrete nails, screws or expansion bolts through sill clips.

painting

All interior frames shall receive one shop coat of standard Unit Steel Frame primer before shipment.

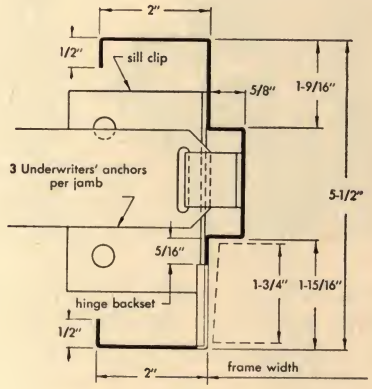
All finished field painting to be done by painting contractor.

Co-operation with other trades: Hardware schedules and templates must be furnished to the frame manufacturer by the hardware manufacturer coincidental with the ordering of frames, to insure immediate submission of frame drawings and scheduling of material production.

stock-engineered frames

Richmond Stock-Engineered Frames K7-M & K7-C are available in labeled or non-labeled 16 gauge construction for immediate delivery in standard sizes, hardware locations, hardware cut outs, and standard design.

design:



sizes:

frame opening sizes

Single Swing Frame Width	Frame Height
2'-4"	
2'-6"	
2'-8"	
3'-0"	
3'-4"	6'-8" or 7'-0"
Pair Frame Width	
5'-0"	
▲6'-0"	

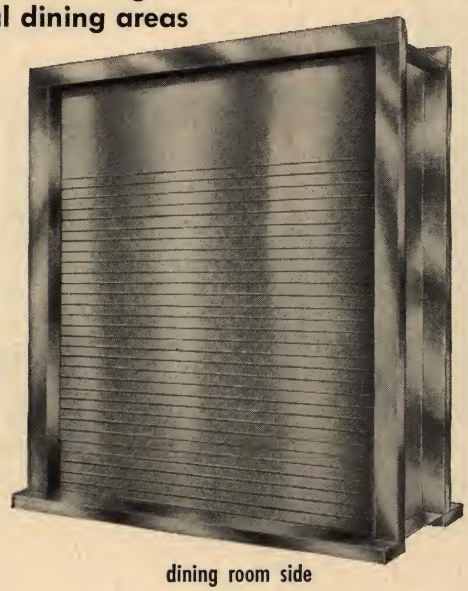
▲Cannot Bear Underwriters' Label

hardware preparation:

- Stock Frame K7-C for most cylindrical locksets.
- Stock Frame K7-M for most mortised case locksets.
- All frames mortised for 1½ pair regular weight template type 4½" x 4½" butts.
- Pairs reinforced for flush bolts.
- All frames with welded reinforcements for surface closers and brackets. Hardware preparations will also accommodate certain types of panic devices, overhead door holders and semi-concealed closers.
- Request complete folder on Richmond Stock-Engineered Frames.

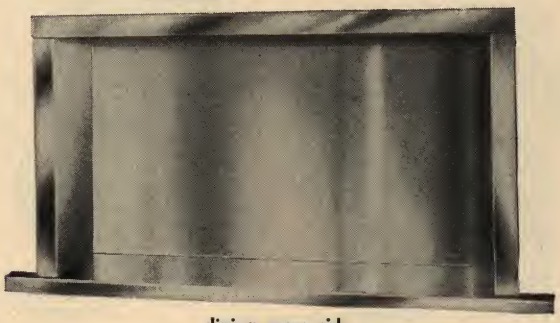
pass windows

3 types with integral frames for schools and institutional dining areas



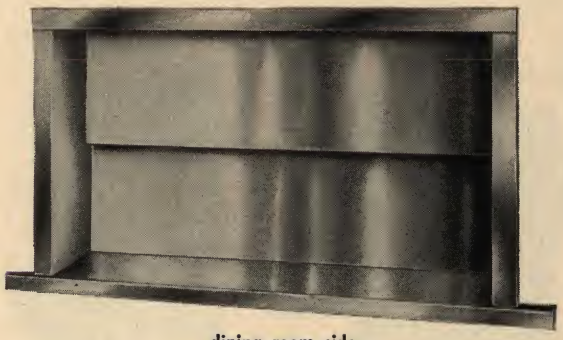
dining room side

rolling type—aluminum shutter stainless steel frame



dining room side

regular type—for average application stainless steel or plain steel



dining room side

telco type—for low headroom conditions stainless steel or plain steel

Request complete catalog or see section 16g/Ri for complete details.

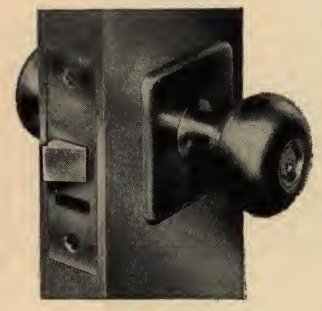
mortise locks

Note: Use 7600 series locks where better quality installation might be preferred, and when not required to adhere to original master-key system.

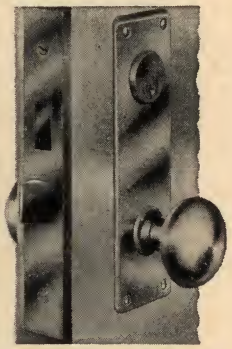
Also for labeled doors.

Use 7700 series locks where best quality of lock is not required. Also use 7700 locks if cylinders are to be keyed to original master-key system.

LOCKSET (For Utility Doors)



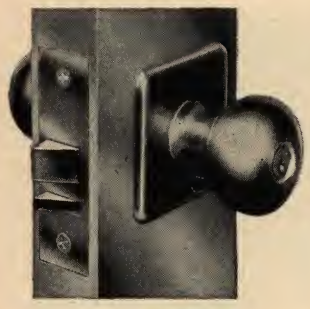
7626HMR



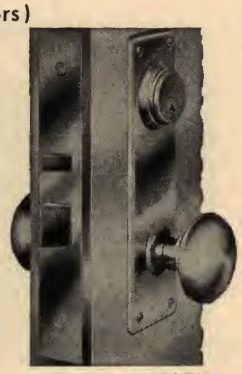
7726MR

Dead bolt from both sides by key. Latch bolt from both sides by knobs.

LOCKSET (For Class Room Doors)



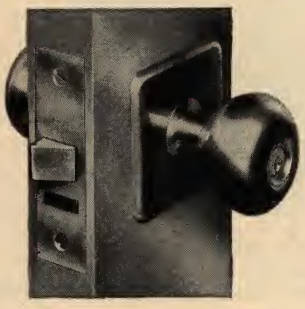
7637HMR



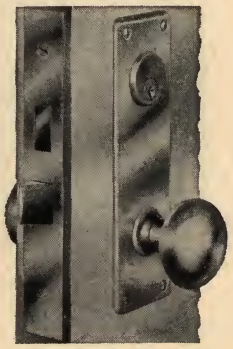
7737MR

Inside always by knob. Key on outside permits operation of outside knob or makes it stationary as desired. Guard bolt dead locks latch bolt.

LOCKSET (For Utility Doors)



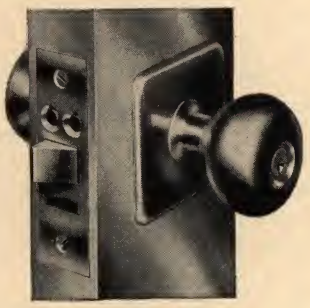
7625HMR



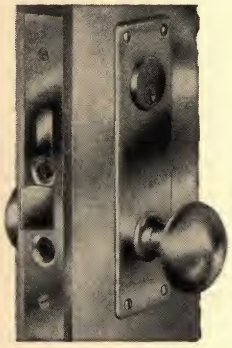
7725MR

Latch bolt from both sides by knobs. Dead bolt by turn lever from inside and key from outside.

LOCKSET (For Entrance Doors)



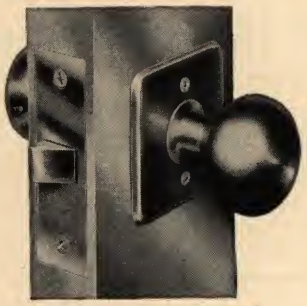
7645HMR



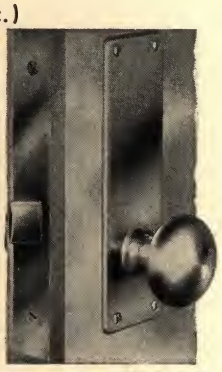
7745MR

Both bolts from outside by key. Dead bolt from inside by turn lever. Latch bolt from both sides by knobs. Outside knob set by push button stop in lock face.

LATCHSET (For Closet Doors, etc.)



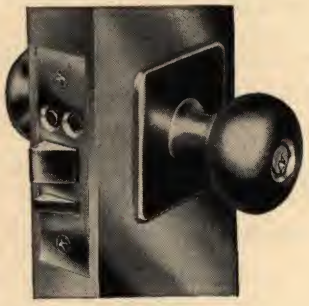
7615HMR



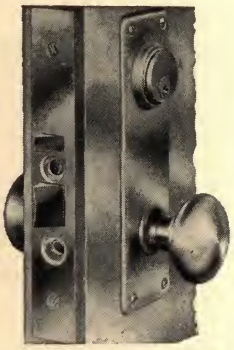
7715MR

Latch bolt from both sides by knobs. Acts only to hold door closed. No dead bolt, stops or other device for locking.

LOCKSET (For Office Doors)



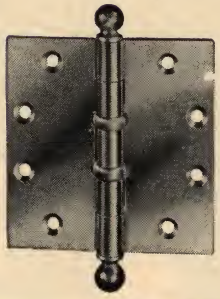
7605½HMR



7705½MR

Outside always by key. Both sides by knobs except when outside is set by push button stop in lock face. Can be released by pushing in extended stop. Guard bolt dead locks latch bolt.

ball bearing hinges



REGULAR WEIGHT FULL MORTISE

Non-Rising Loose Pin
4½" x 4½" and 5" x 4½"

BB179 wrought steel planished and plated.

BB146 wrought steel primed for painting button tips.

BB193 wrought bronze.
For Medium Weight Doors Receiving Average Frequency Service.

REGULAR WEIGHT HALF SURFACE

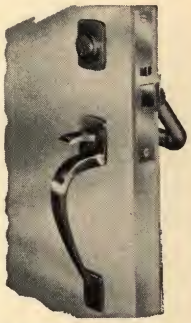
Non-Rising Loose Pin
4½" and 5"

BB173 wrought steel planished and plated.

BB133 wrought steel primed for painting button tips.

BB112 wrought bronze.
For Medium Weight Doors Receiving Average Frequency Service.

exit bolts



24VA and 24U

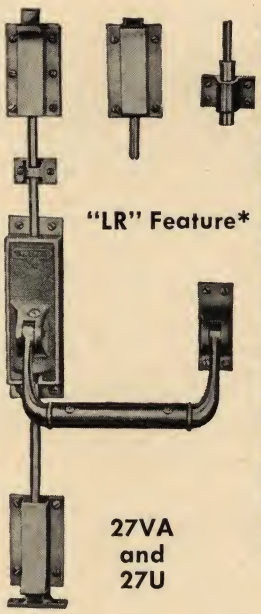
For emergency exit single doors or active door of pairs

24VA—Bronze
24U—Malleable

Operation:
By cross bar from inside at all times. By thumb piece from outside except when thumb piece is set by key from outside.

Description:
24VA—Bronze internal parts and forged bronze outside trim, cross bar 1" outside diameter, bronze tubing.

24U—Locks and outside trim are forged bronze. All cast parts malleable iron, dead black finish. Cross bar ⅞" outside diameter steel tubing.



"LR" Feature*

27VA and 27U

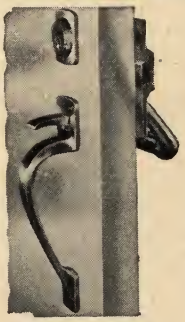
For emergency exit single doors or pairs.
27VA—Bronze
27U—Malleable

Operation:
One cross bar removes both top and bottom bolts from strike. Rods are held in open position until door is closed and rods are automatically released on 27U and LR.

Description:
27VA—Cross bar bronze tubing 1" outside diameter. Actuating case and hinge stile bracket forged bronze.

27U—Cross bar ⅞" outside diameter steel tubing, actuating case and hinge stile bracket malleable iron, dead black finish.

***"LR" Feature** — *Latchmatic Retractor feature for doors without thresholds. Specify with prefix "LR". Optional on 27VA device.*



56A

58A

For emergency Exit. For single doors or pairs of doors with mullion or without mullion using #27VA device on inactive door.

56A—Bronze **58A—Bronze**

Operation:
56A—By cross bar from inside at all times. Cross bar can be locked down by key from inside. Can be unlocked from outside by key.

58A—By cross bar from inside at all times. Can be used for exit only. Cannot be operated from outside.

Description:
56A and 58A—Cross bar 1" outside diameter bronze tubing. Actuating case and hinge stile bracket forged bronze.

550

11

550x14

1055

1056

1116

miscellaneous

PUSH PLATE—550
15" x 3½", Wrought Bronze

DOOR PULL—11
Cast Bronze,
Length Overall 7½"
Center to Center 5½"
Width of Base 2"

PULL PLATE—550x14
15" x 3½", Wrought bronze plate.
Cast bronze pull.

TOP CHAIN BOLT—1055
6, 8, or 10 in.

BOTTOM FOOT BOLT—1056
6, 8, or 10 in.

FLUSH BOLT—1116
12" Bronze, ½" Square Bolt

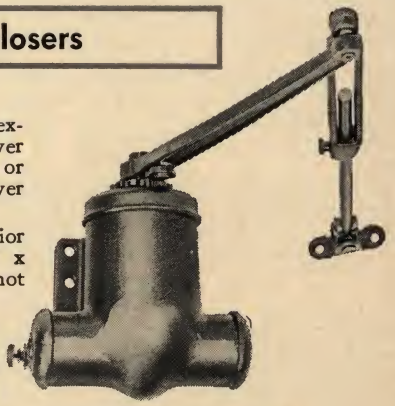
liquid door closers

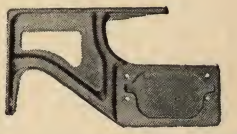
Bronze Enamel Finish

No. 43V—For light exterior doors. Not over 2'-6" x 7'-0". Corridor or office doors. Not over 3'-4" x 7'-0".

No. 44V — For exterior doors not over 3'-5" x 7'-0". Interior doors not over 40'-0" x 7'-6".

No. 45V — For exterior doors not over 4'-0" x 7'-6". Interior doors not over 4'-8" x 8'-0".





Use **No. 53 corner bracket** for exterior door swingout and interior door where closer cannot be mounted on hinge side of door.

agents and representatives

THE RICHMOND FIREPROOF DOOR COMPANY N.W. "F" St. Richmond, Ind. 81606

THE PEELLE COMPANY (PARENT COMPANY) 47 Stewart Ave. Brooklyn, N. Y. EV 6-7600

state	city	name	address	telephone
alabama	Birmingham	Wilson Door & Window Supply Co.	716 Eighth Court West	ALpin 1-4533
	Mobile	Underwood Builders Supply Co.	P. O. Box 1587	HEmlock 2-3581
	Montgomery	S. M. Stewart	1262 Magnolia Curve	AM 2-0473
arizona	Phoenix	Baker Thomas Woolsey Wholesalers, Inc.	300 S. Twelfth St.	ALpine 4-5503
california	San Francisco	Hughdon Equipment Co.	178 Townsend St.	YU 2-0888
colorado	Denver	The Colorado Builders' Supply Co.	1534 Blake St.	AComa 2-3851
florida	Jacksonville	Aichel Steel & Supply Co.	Box 2677	ELgin 5-6535
	Panama City	Panama Machinery & Supply Co.	Box 850	SUnset 5-5252
	Pensacola	Manufacturers Sales Co.	1826 N. Pace Blvd.	HEmlock 8-8951
	Tampa	LaHayne Builders Products	4405 Suwannee	33-9231
georgia	Atlanta	Atlanta Steel Erectors, Inc.	285 Hull Street, N. W.	JAckson 3-8241
	Albany	Samco Steel & Supply Co.	P. O. Box 1185	HEmlock 6-1323
	Savannah	McCarthy, Inc.	Box 624	AD 66993
illinois	Chicago	Richmond Fireproof Door Co.	4037 N. Kedzie Avenue	INdependence 3-4493
	Peoria	W. W. Grote Company	3208 N. University	5-5612
	Rockford	Architectural Iron, Inc.	904—22nd St.	3-8403
	Springfield	Schlitt Supply Co.	1010 E. Adams St.	8-4338
indiana	Elkhart	Miller Steel & Supply Co., Inc.	920 N. Plum St.	2-2225
	Evansville	Schlamp Building Specialties Co.	Box 516	HArrison 3-4475
	Ft. Wayne	Jones Engineering Products Inc.	3416 Fairfield Avenue	HArrison 4131
	Gary	Gary General Equipment Co., Inc.	Tolleston Box 2017	TUrner 5-5578
	Indianapolis	Engineering Metal Products Co.	620 South Belmont Ave.	MElrose 2-6592
iowa	Burlington	Barngrover & Son Glass Co.	3rd and Valley Sts.	PLaza 2-6307
	Cedar Rapids	Kelleys, Incorporated	609 American Building	EMpire 3-9616
	Davenport	Plath Building Supply	1111 West Third St.	6-0177
	Des Moines	Lemke Builders Supply Co.	610 Walnut Building	ATlantic 2-9611
kansas	Wichita	Chester L. Anderson Company, Inc.	Box 2254	HObart 4-9354
kentucky	Lexington	E. H. Straus Company	Delaware Ave.	3-1153
	Louisville	Atlas Plaster & Supply Co., Inc.	2932 Greenwood St.	SPring 6-4621
louisiana	New Orleans	Metal Building Products Co.	1937 Lafayette St.	RAymond 3242
	Shreveport	Harold Lipper Company	301 Spring Street	4-6686
maine	Portland	Hutchins & Thompson	57 Exchange Street	SPruce 4-6579
maryland	Baltimore	Talbott & Degele, Inc.	328 E. 25th St.	HOpkins 7-5407
massachusetts	Boston	Spencer Sales Co., Inc.	236 Huntington Avenue	COpley 7-2361
michigan	Detroit	The Clyde Bickel Company	911 Fox Building	WO 2 4050
	Flint	J. P. Burroughs & Son, Inc.	625 West 2nd St.	CEdar 2-2181
	Grand Rapids	Haven-Busch & Sons	3441 Chicago Drive., S.W., Grandville, Michigan	LE 2-3641
	Lansing	Young Brothers & Daley	720 East Michigan Avenue	GL 9-4173
minnesota	Duluth	Duluth Builders Supply Co.	402 Builders Exchange	IVanhoe 45431
	St. Paul	Builders Engineering Co.	501 Lynnhurst Avenue	RAndolph 2-6361
mississippi	Jackson	John B. Howard & Company	Box 4505	Midway 6-9623
missouri	Kansas City	Edelman-Lyon Company, Inc.	Box 5899 Westport Station	4-2346
	St. Louis	M. L. Glucksman	56 Aberdeen Place	VAlentine 1-4340
	Springfield	Reynolds Manufacturing Company	Box 1065 S. S. S.	PArkview 1-5140
montana	Billings	Montana Steel & Supply Co., Inc.	Box 851	2-4343
	Great Falls	Montana Steel & Supply Co., Inc.	Box 1137	9-3639
nebraska	Lincoln	R. L. White Sales Co.	824 "O" St.	GL 3-1361
new jersey	Newark	Yunker Metal Products Co.	Box 509, Millburn, N. J.	2-1025
new mexico	Albuquerque	Cobusco Steel Products	2001 Gold Avenue, S. E.	DRexel 9-5096
new york	Albany	Frank J. Spath	32 Buckingham Drive	3-2291
	Binghamton	Babcock, Hinds, Underwood	174 Washington St.	2-0993
	New York City	Richmond Door & Building Specialties, Inc.	635 West 125th St.	2-6461
	Rochester	The Maurer Company, Inc.	31 Richmond Street	RIverside 9-5613
	Syracuse	B. R. Johnson & Son	5900 South Salina St.	HAmilton 6-0030
	Utica	The American Hard Wall Plaster Co.	326 Broad Street	9-3244
north carolina	Asheville	S. R. Goldman	212 Haywood Building	2-4156
	Charlotte	Joel E. Martin & Company	618 East Morehead St.	3-1151
	Goldsboro	Dewey Bros., Inc.	Box 1027	FRanklin 68294
	Salisbury	Colonial Steel & Iron Co.	P. O. Box 1350	1800
	Winston-Salem	Brenner Iron & Steel	P. O. Drawer 2776	4991
ohio	Akron	Fred J. Crisp, Inc.	720 North Main St.	PA 5-8333
	Canton	Louis G. Peter	715 Shorb Ave., N. W.	BLackstone 3-5103
	Cincinnati	Durbrow-Otte Associates, Inc.	1426 Clay Street	GLendale 6-0755
	Cleveland	C. F. Irelan	405 Caxton Building	PArkway 1-0068
	Columbus	Alvan Tallmadge Company	624 Harmon Avenue	PRospect 1-0990
	Dayton	Dayton Fabricated Steel Co.	Box 98, Station A	CApitol 1-7858
	Mansfield	The Mansfield Structural & Erecting Co.	429 Park Avenue East	BAldwin 8-7178
	Toledo	S. L. Everitt, Inc.	3215 Sylvania Ave.	4215-6
	Youngstown	Jack A. Williams Company	12 Hogue Street	GReenwood 9-7834
oklahoma	Oklahoma City	Murray R. Womble Co.	121 N. E. 26th	RIverside 6-6341
	Tulsa	Murray R. Womble Co.	216 East 16th St.	JA 5-7417
oregon	Portland	Northwest Tube & Metal Fabricators	Box 2310	LUther 4-2414
pennsylvania	Erie	Geo. H. Kraft Associates	Box 628	BElmont 4-5488
	Harrisburg	Mason-Norton Company	310 South 10th St., Lemoyne, Pa.	52648
	Philadelphia	The Richmond Fireproof Door Co.	Room 226, 34 S. 17th St.	REgent 7-4558
	Pittsburgh	James R. Pitcairn	2301 1st Nat'l Bank	LOcust 7-5605
	Reading	John H. Millard	Box 934	ATlantic 1-7544
	Scranton	Richard N. Colman	2126 Jefferson Ave.	3-6450
south carolina	Greenville	A. N. Stall	Box 306	DI 2-2805
tennessee	Chattanooga	The Currin Co., Inc.	1208 Carter St.	CEdar 5-2686
	Johnson City	Lancaster Associates	Box 629	AM 6-2762
	Knoxville	Lancaster Associates	Andrew Johnson Hotel Bldg.	3200
	Memphis	Pierce & Barry Hardware Co.	1717 Lamar Ave.	44623
texas	Amarillo	Jenkins Brick & Supply Co.	820 West Sixth St.	BR 8-2814
	Austin	L. B. Shifflett Co.	710 West Avenue	DRake 2-4336
	Beaumont	Harding & Lawler, Inc.	Box 2162	GR 7-8116
	Dallas	R. E. L. Whitten Company	Box 7171	5-5397
	El Paso	Neff-Buckner-Holt, Inc.	600 West Paisano Drive	ENerson 3-2531
	Ft. Worth	Chas. F. Williams Co., Inc.	Box 1724	3-1405
	Houston	Jim Lunsford Co.	1525 North Post Oak Rd.	ED 2-6363
	Longview	Walter P. Hurst, Sr.	310 Petroleum Bldg.	UN 4-4451
	Lubbock	Western Brick & Supply Co., Inc.	P. O. Box 414	3-2255
	San Antonio	Jno. A. Williamson Co.	P. O. Box 11275	SH 4-4501
utah	Salt Lake City	Cobusco Steel Products	660 West S. Temple	CApitol 5-2666
virginia	Lynchburg	Associated Steel, Inc.	1403 Stephenson Ave.	EMpire 4-8481
	Norfolk	Hall-Hodges Company, Inc.	Box 7055 Lafayette Station	2-1259
	Richmond	J. S. Archer Company	328 West Cary St.	MA 5 8275
washington	Seattle	Bradley-Zesbaugh, Inc.	6624 White-Henry-Stuart Bldg.	MIlton 4-7846
west virginia	Charleston	Oscar F. Henry Company	605 Delaware Avenue	ELiot 5065
	Huntington	James J. Weiler & Sons, Inc.	Box 1856	2-4001
wisconsin	Milwaukee	Wm. M. Heinz	757 N. Broadway	8123
hawaii	Honolulu	Lewers & Cooke, Ltd.	Box 2930	BRoadway 1-7049

5-1961

BULLETIN 1960

THE RICHMOND FIREPROOF DOOR CO.

NORTHWEST FOURTH STREET • RICHMOND, INDIANA

SAINO

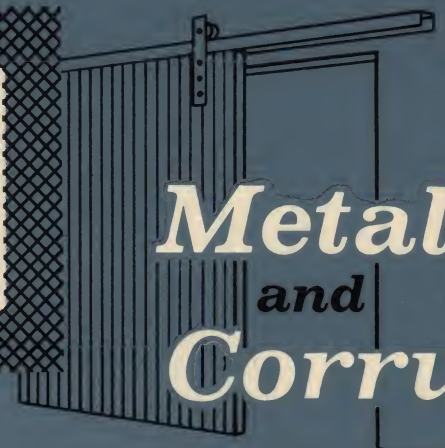
Permaslab Composite

FIRE DOORS and FRAMES

for . . .

- Hotels
- Apartments
- Schools
- Hospitals
- Offices
- Public Buildings

SAINO



Metal Clad and Corrugated

FIRE DOORS

for . . .

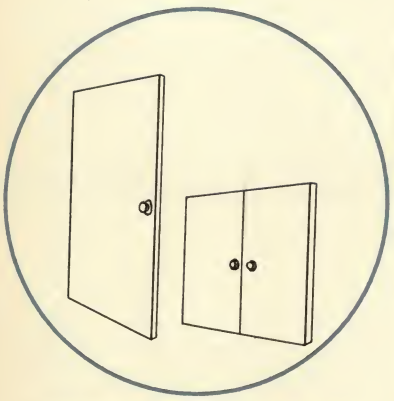
- Factories
- Warehouses

The F. L. SAINO MANUFACTURING CO. • MEMPHIS 2, TENNESSEE

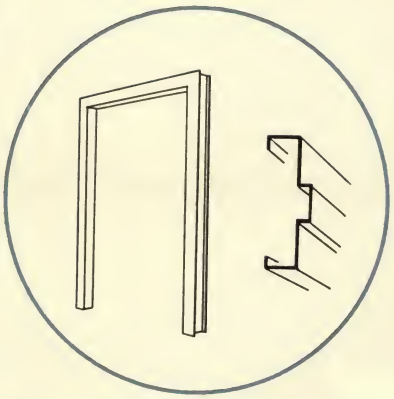
A.I.A. FILE NO. 16A

PRESENTS MORE THAN 50 YEARS OF QUALITY ACHIEVEMENT

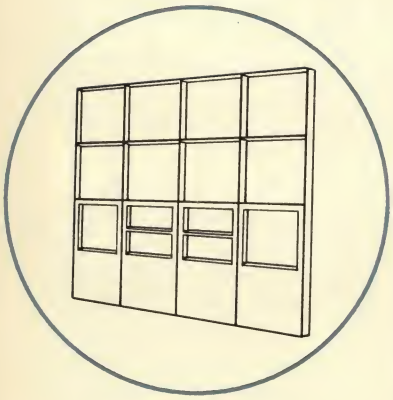
The present day **F. L. Saino Manufacturing Company** has been built on a reputation through the years of quality products, good service and up-to-date engineering. The keynote of the company's policy has always been a willingness to stand behind and insure our products. Not the least of our assets has been our ability to lead the field in any new development. Time and again SAINO has been the developer of something new. Always in tune with the modern trends, we have strived to grow and up-date our plant and products. The construction of a new plant and the modernization of our manufacturing facilities only this year points up this desire. We present in this catalog an abbreviated synopsis of some of the products and services that we have to offer. However, our facilities and capacity are greater than can be put down in a brochure and we solicit your inquiries concerning your needs.



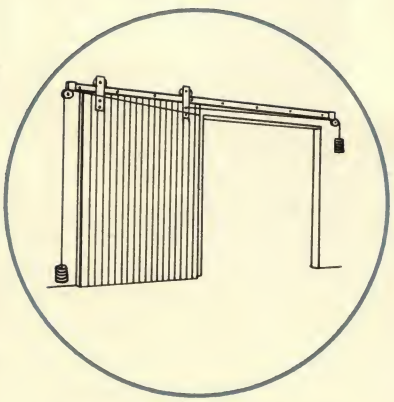
permaslab doors — pages 2-5



frames • hardware — pages 8-9



special construction pages 6-7



metal clad and corrugated doors pages 10-12

Permaslab Composite

- **economical**
- **designed for lifetime use**
- **modern flush seamless design**
- **maximum fire protection at all times**

1 22 gauge zinc coated stretcher level steel is bonded to the core under pressure that assures a perfectly flat, smooth surface.

2 Core is assembled in 18 gauge steel channel frame that surrounds entire perimeter of the door. It is welded at the corners to give durable, rigid assembly.

3 Steel lock housing built into core of door and welded to channel framing.

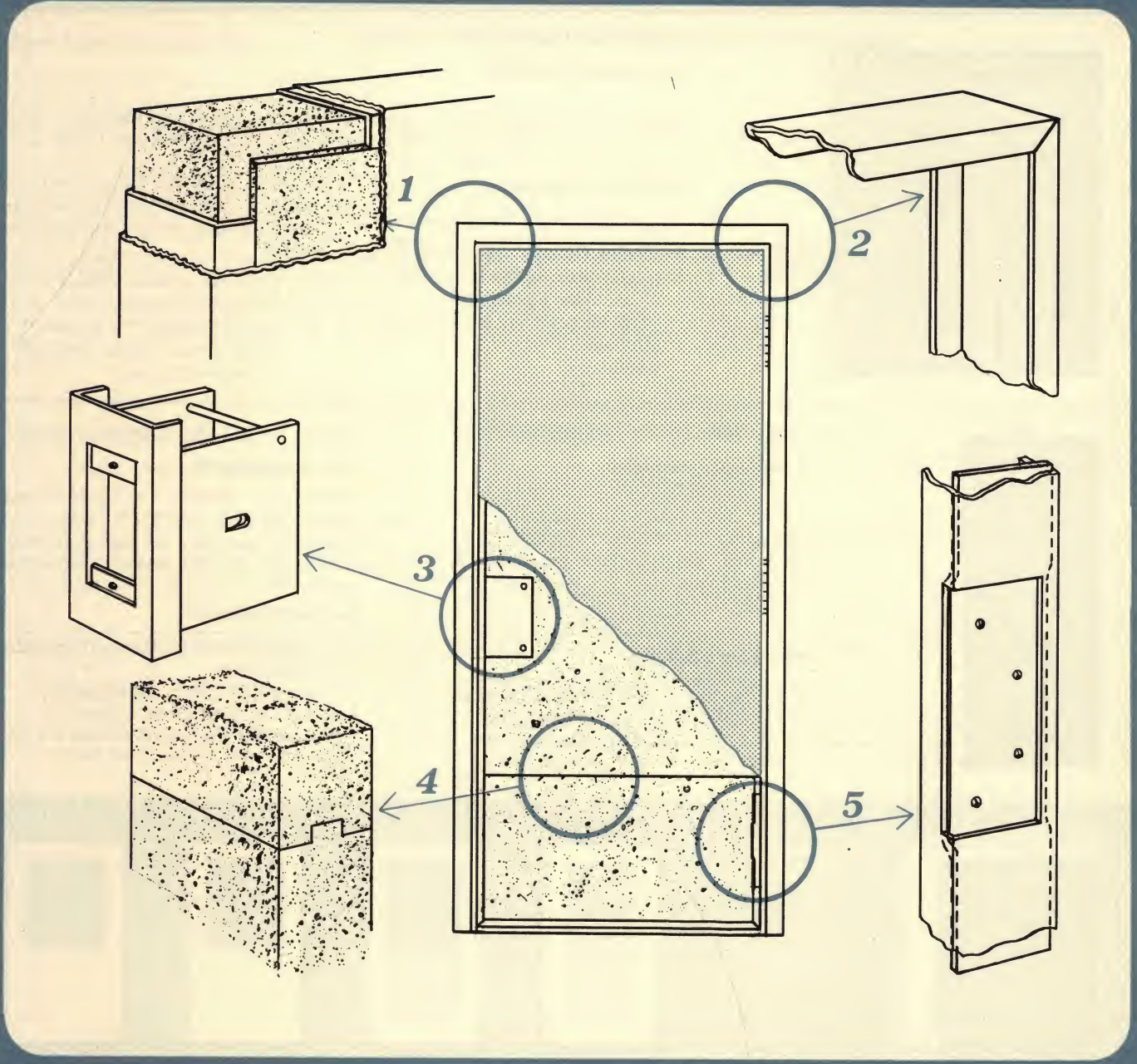
4 Principal construction feature of the **Permaslab Door** is its core of hydrous calcium silicate with asbestos binder . . . a material that possesses remarkable insulating properties. Great strength by weight—completely incombustible. Modulus of rupture: 175 lb. per sq. in. Modulus of elasticity: 160,000 lb. per sq. in. Compressive strength: 500 lb. per sq. in. Nominal density: 20 lb. per cu. ft.

5 The steel hinge reinforcing is welded to the inner channel framing.

CONSTRUCTION

truly a "years-ahead" fire door design ● 3-hours (A) Underwriters' label . . . with SINGLE POINT LATCH or LOCK

The **Permaslab Composite Fire Door** offers features never before found in competitive products. It is inherently fireproof and its simple, rugged construction offers complete protection from warp, twist, shrinkage or expansion, rattle and faults found in alternate products.



great strength—The unique assembly combination of solid structural mineral core, zinc coated and bonderized steel covering and all welded construction, gives the **Permaslab Door** exceptional structural resistance to impact, transverse and corner loads.

sound reduction—The **Permaslab Door** offers exceptional sound reduction with a rating of 32 to 34 decibels at average frequencies of 1 to 2000.

Permaslab Composite FIRE DOORS

MAXIMUM FIRE AND LIFE PROTECTION . . . with SINGLE POINT LATCH or LOCK!

3-Hour (A) Underwriters' Label

In applications that require maximum protection of life and property the SAINO **Permaslab Composite Class A Door** leads the field. The combination of modern functional design, beauty, long life and sure fire stopping ability makes the **Permaslab Door** right for the job.

type PA-10 • pair swing

with single point latch

3-hour (A) Underwriters' labeled for opening not exceeding 7′0″ wide x 7′6″ high. Complete unit must include doors, frame and hardware.

hardware schedule

(1 Leaf active, 1 Leaf inactive)

3 Pairs BB 4½″ Template Butts.
1 Cylinder Lock or Latch Set.
1 Fuse Arm Door Closer.
1 Set Manual Throw Flush Bolts.
1 Astragal.

NOTE: If BOTH leaves are to be active and stand in open position, the following hardware must be added:

1 Fuse Arm Door Closer.
1 Co-ordinating device.
1 Set AUTOMATIC throw Flush Bolts. (Used instead of manual throw.)

type SA-10 • single swing

with single point latch

3-hour (A) labeled for opening not exceeding 3′6″ wide x 7′6″ high. Complete unit must include door, frame and hardware.

hardware schedule

1½ pairs BB 4½″ Template Butts.
1 Cylinder Lock or Latch Set.
1 Fuse Arm Door Closer.

type A-10 • single swing

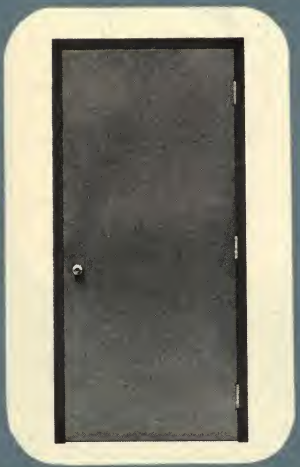
with 3 point latch

3-hour (A) labeled for opening not exceeding 4′0″ wide x 8′0″ high. Not available in pairs swing. Complete unit must include door, frame and hardware.

hardware schedule

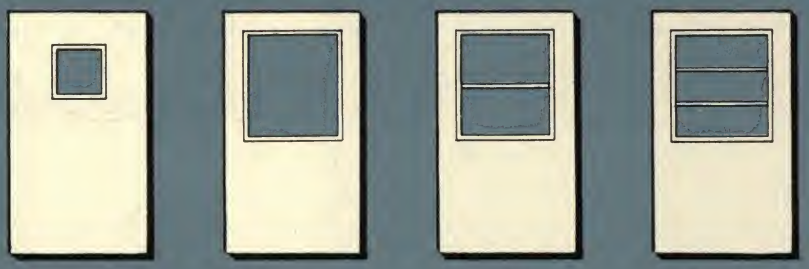
1½ pairs BB 4½″ Heavy Template Butts.
1 3-point Latch Assembly*.
1 Fuse Arm Door Closer.

*Where cylinder lock is required, door is available with Mortise Cylinder Dead Bolt.



standard designs

Type 2400 —Single Swing
Type 2401 —Pairs Swing



S-2 single P-2 pairs | S-3 single P-3 pairs | S-4 single P-4 pairs | S-5 single P-5 pairs

COMMERCIAL APPLICATIONS...

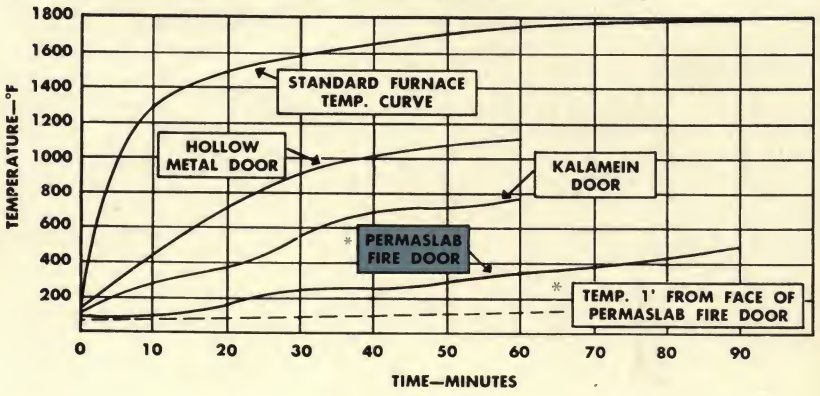
The **Permaslab Door** offers a great combination of advantages for use either as an Underwriters' labeled fire door, or non-labeled, on any opening . . . in any type building where an attractive, yet durable and substantial door is desired.

With its core of structural insulation, plus unusual assembly, the **Permaslab Fire Door** offers a combination of advantages not available in any other door construction: low heat transmission—great strength—lower maintenance cost.

low heat transmission

A good fire door must not only be a barrier to fire, but be so constructed that heat transmission through the door be low so as to prevent loss of life. Recent casualties in hotel and institutional fires have stressed the importance of using fire doors that offer the very lowest possible transmission of heat. That this has been accomplished by the **Permaslab Door** is shown in the chart at right. (Taken from fire test report Underwriters' Laboratories, Inc.; others from U.S. Senate hearings on safety at sea)

COMPARATIVE HEAT TRANSMISSION CHART



Underwriters' Labeled

(Also Factory Mutual Approved)

The SAINO **"PERMASLAB" Composite Fire Door** has been asssigned the highest Label Classification of the Underwriters' Laboratories as follows:

time	temperature rise 30 minutes
3-hour (A)	250° F maximum
1½-hour (B)	250° F maximum
¾-hour (C)	
1½-hour (D)	250° F maximum
¾-hour (E)	

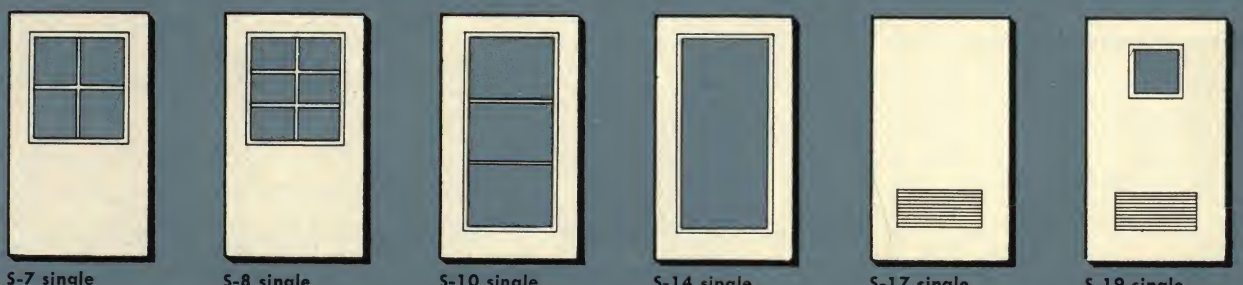
UNDERWRITERS' SIZE LIMITS (in inches)

time	3-hour (A)	1½-hour (B)	¾-hour (C)	1½-hour (D)	¾-hour (E)
	250° firewall or division wall	250° vertical shaft	corridor or room partition	250° exterior wall severe exposure	exterior wall
SINGLE SWING Single Point Lock 3 Point Latch	42 x 90 48 x 96	48 x 96	48 x 96	48 x 96	48 x 96
PAIRS SWING Single Point Lock	84 x 90	90 x 90	90 x 90	90 x 90	90 x 90
GLASS SIZE	none	10 x 10*	1296 sq. in.**	none	720 sq. in.***

* 100 sq. in. maximum area exposed wire glass per opening. Neither dimension exceeding 12". (Pair Doors can have 50 sq. in. per leaf.)

** One or more wire glass lights. Exposed area each light not exceeding 1296 sq. in. with no dimensions exceeding 54".

*** One or more wire glass lights. Exposed area each light not exceeding 720 sq. in. with no dimensions exceeding 54".



S-7 single
P-7 pairs

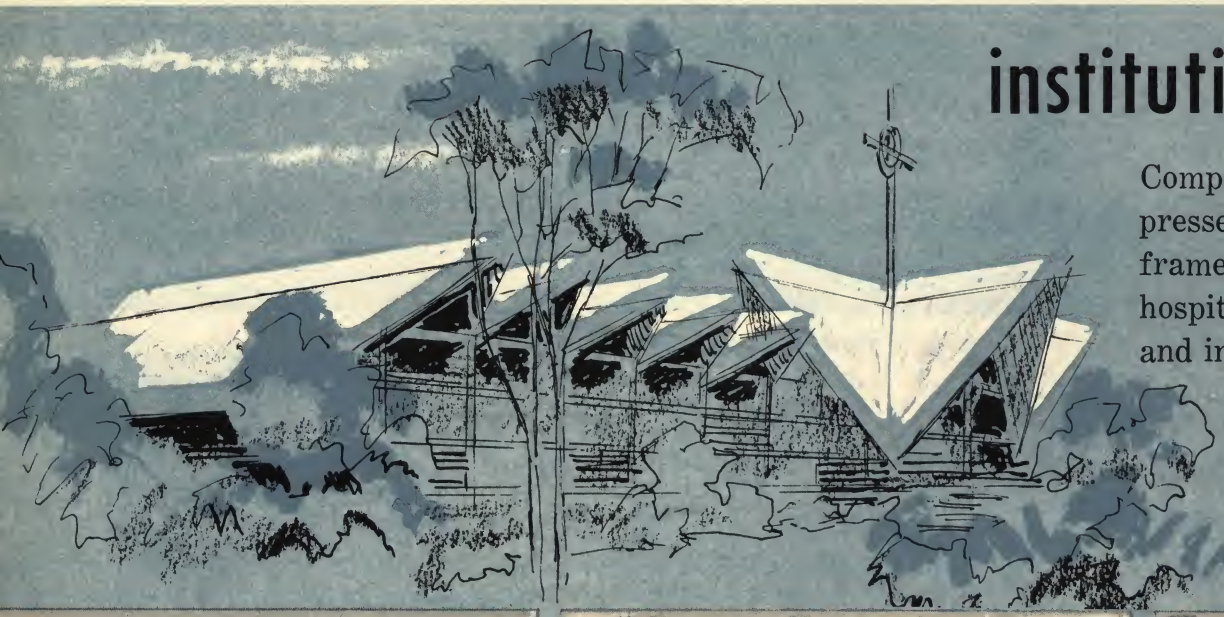
S-8 single
P-8 pairs

S-10 single
P-10 pairs

S-14 single
P-14 pairs

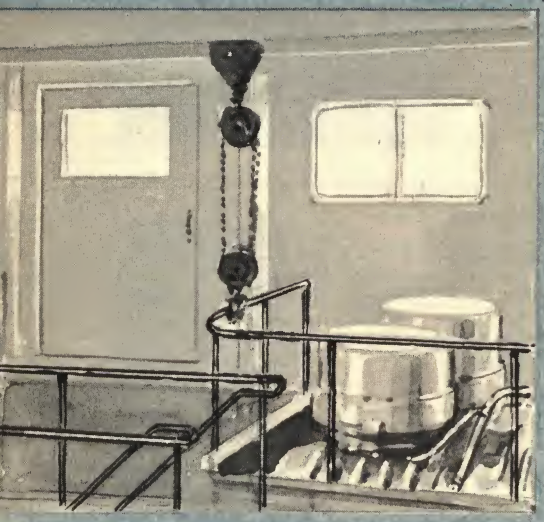
S-17 single
P-17 pairs

S-19 single
P-19 pairs



institutional....

Composite doors and pressed steel entrance frames for churches, hospitals, schools and institutions.

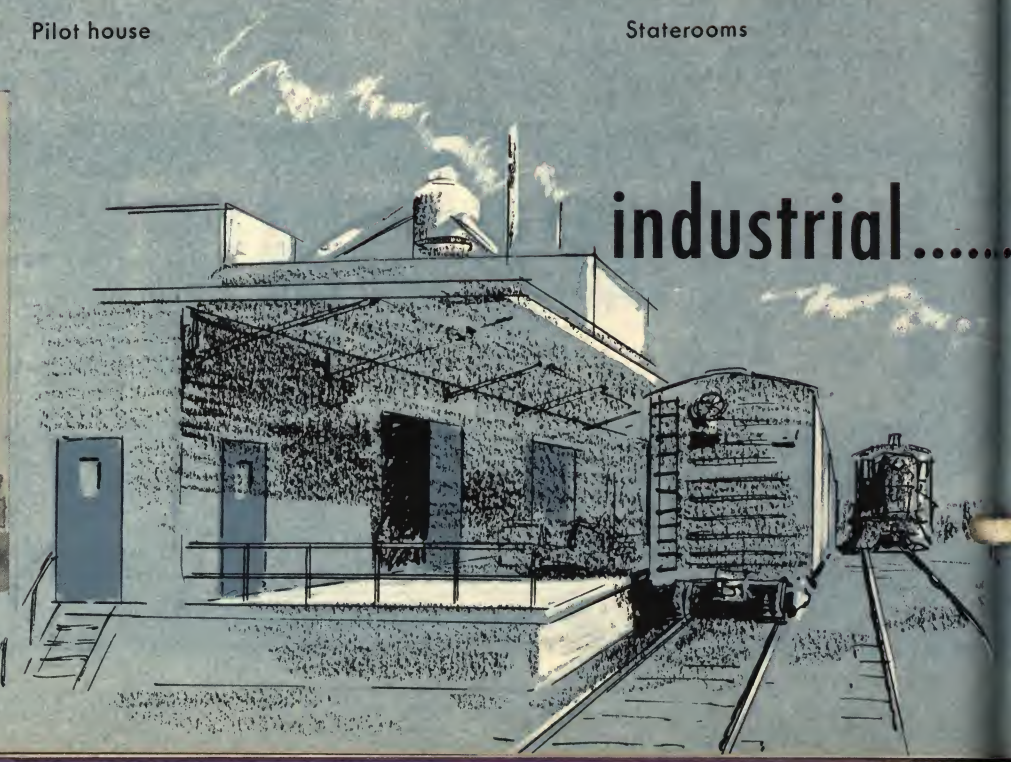


Engine room

Pilot house

Staterooms

Loading Dock



industrial.....

Entrance doors and frames

The **F. L. Saino Manufacturing Company** does not restrict itself to the production of Underwriters' labeled products. A background of over 50 years of experience in the manufacture of swinging and sliding doors and pressed metal products gives SAINO the capability to design for a variety of markets. The illustrations on these pages gives an indication of this diversity.

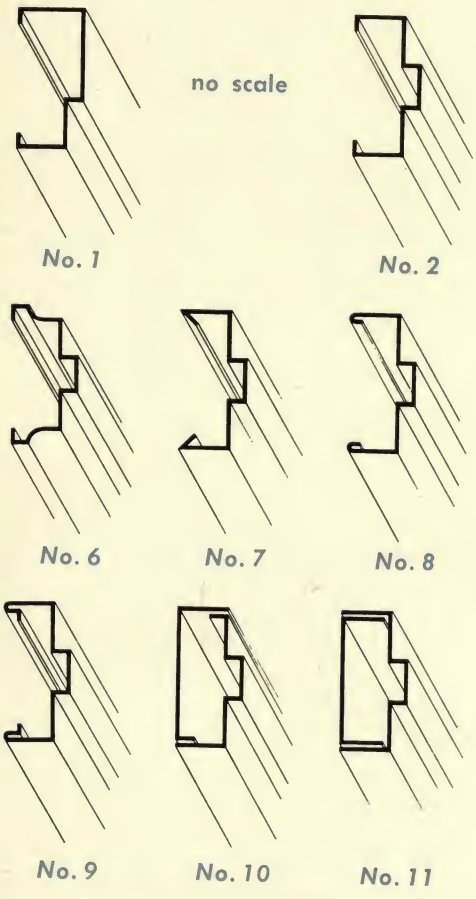
marine....

Moistureproof and fireproof composite doors, galvanized frames and hardware for a variety of maritime applications.

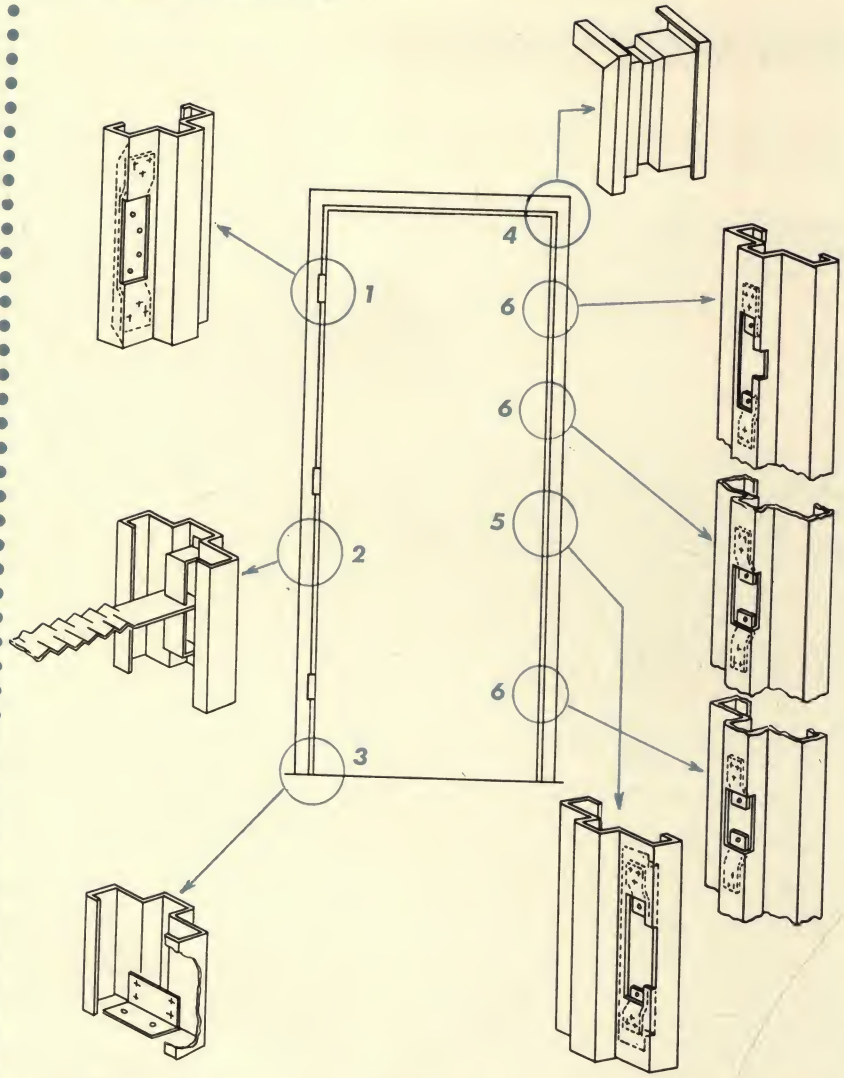
Flush metal fireproof warehouse doors with modern enclosed track and hardware for warehouses and manufacturing plants.

pressed steel frames

The frame profiles shown below are some of the more popular types. The profiles and the returns shown are only a small sample of the many variations possible with pressed steel. SAINO is able to offer a wide variety of gauges (16, 14 and 12), materials (cold rolled steel, hot rolled steel, paint bond steel, stainless steel), and designs. We solicit inquiries concerning your pressed steel requirements.



frame details



1 Hinge Reinforcing
2 Adjustable Masonry Anchor (labeled)
3 Floor clip
4 Mitered and Welded Corner
5 Strike Mortise and Reinforcing
6 3-Point Strike Mortise and Reinforcing (Type A-10 only)

SPECIFICATIONS

frames

Frames to be of _____ gauge (16, 14 or 12) cold rolled steel as manufactured by **The F. L. Saino Manufacturing Company.**

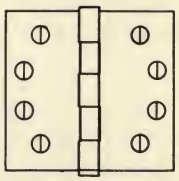
Frame section to be SAINO type _____ (type 2, 5½" jamb depth is standard). Frames to be SAINO standard welded construction. Corners of frames mitered, welded and ground smooth. Clip angles spot welded to bottom of each jamb for anchoring to floor. Frames mortised and reinforced for hardware. Cutouts covered with mortar guards welded to frame. Frames to be cleaned and phosphatized by the Phosteem process. Frames to be given a shop coat of red primer paint, air dried.

hardware

Furnish hardware as called for in schedule except as noted for doors that are to have 3-hour (A) Underwriters' label.

For 3-hour (A) Underwriters' labeled doors the hardware is to be supplied by **The F. L. Saino Manufacturing Company** as required by the Underwriters' Laboratories and in accordance with their specifications.

hardware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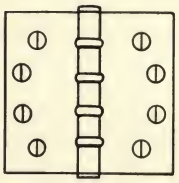
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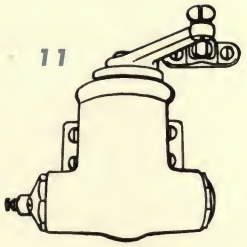
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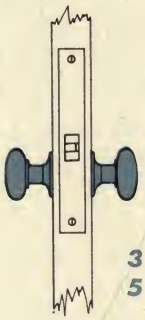
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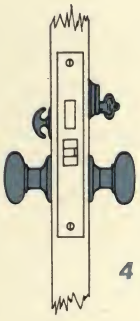
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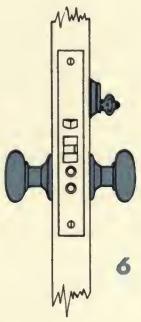
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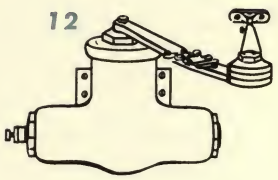
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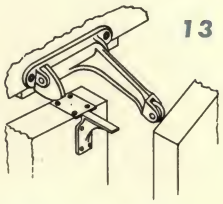
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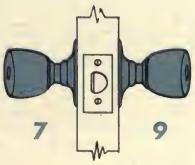
15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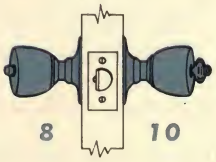
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10

14

1 No. 179P Butts (BB179P, 2 ball bearings)
2 No. BB168P Butts
3 No. 2025 Mortise Latchset
4 No. 2024 Mortise Lockset
5 No. 23025 Mortise Latchset, ¾" throw
6 No. 23056 Mortise Lockset, ¾" throw
7 No. 410 Cylindrical Latchset
8 No. 440 Cylindrical Lockset
9 No. 410 ¾ Cylindrical Latchset
10 No. 440 ¾ Cylindrical Lockset
11 Size D Closer
12 Size D1F2 Fuse Arm Closer
13 No. 2900 Coordinating Device
14 No. 194 Flush Top and Bottom Bolt
15 No. A-10 3-Point Surface Applied Latch

doors

To be **Permaslab** flush design 1¾" thick as manufactured by **The F. L. Saino Manufacturing Company, Memphis, Tennessee.** Core to be hydrous calcium silicate block insulation, tongue and grooved. Core to be surrounded by an 18 gauge rolled steel channel, mitered and welded at corners. Face sheets to be 22 gauge zinc coated and bonderized steel bonded to core with resorcinal waterproof adhesive. Face sheets to be welded to channel around entire perimeter of door edge. Exposed edges of door to be filled with metal filler. Door to be given a shop coat of green primer paint, air dried. Door to be reinforced with heavy gauge steel reinforcing plates for both mortise and surface applied hardware.

PACKAGE UNITS

The **Permaslab Door** is available as a package unit which consists of door, frame and hardware. The most popular sizes and types will be carried in stock. The use of the package unit will not only represent a savings in initial cost, but will assure quicker delivery because of the elimination of delays so common when hardware is supplied by others.

types—package unit doors can be supplied in any standard type as shown on pages 4 and 5. We however recommend types 2400 and S-2 in single swing and types 2401 and P-2 in pairs swing for quicker delivery.

sizes—available in any standard or intermediate size desired.

frame—the type 2 with 5½" jamb width is recommended for quicker delivery. However other types as shown on page 8 can be supplied.

Underwriters' label—package unit doors are available with 1½-hour (B), ¾-hour (C), 1½-hour (D) and ¾-hour (E) labels within the limitations as given on page 5.

hardware—items as shown below and to the left are carried in stock and are particularly adapted for use with the Permaslab stock door.

hardware

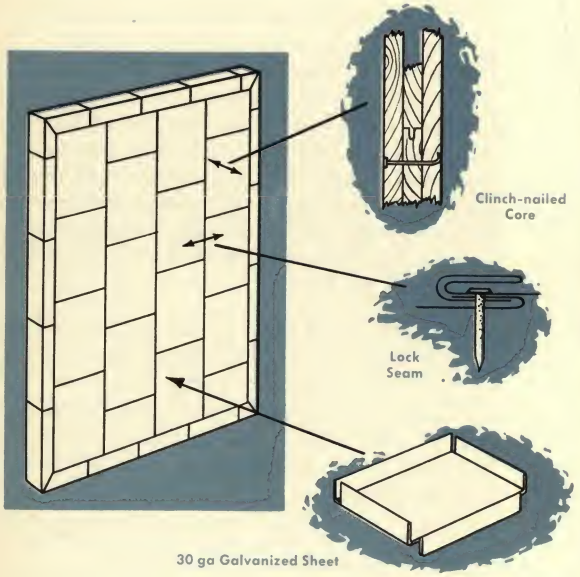
SINGLE SWING

1½	Prs. 179P Template Butts*
1	440 or 2024 Lockset or 410 or 2025 Latchset
1	Size D Door Closer**

PAIRS SWING

3	Prs. 179P Template Butts*
1	440 or 2024 Lockset or 410 or 2025 Latchset
1	Set 194 Flush Top and Bottom Bolts
1	Astragal
1	Size D Door Closer**

*BB-179P Hinges can be substituted
**Door Closer may be omitted if desired



SAINO METAL CLAD FIRE DOOR

More commonly called Tin-Clad it has proven itself to be a most effective fire stop.

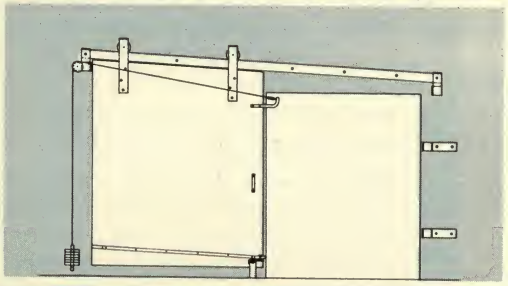
construction

The **SAINO Metal Clad Fire Door** is available in two thicknesses. The 3-ply door is 2½″ thick and carries the 3-hour (A) Underwriters' Label, 250 max. The 2-ply door is 1¾″ thick and carries the 1½-hour (B) Underwriters' label. The core of the door is made of well seasoned, selected, nonresinous lumber, tongue and grooved at both edges, laid at right angles and clinch nailed together in rows not more than 8″ apart. The covering is 30 gauge galvanized sheets applied with all joints between sheets locked with ½″ seams and nailed under the seams. All in exact accordance with Underwriters' Laboratories requirements.

specifications

All openings as indicated shall be covered with Type No. _____ **SAINO Metal Clad Fire Door** as made by **The F. L. Saino Manufacturing Company, Memphis, Tennessee.** The doors shall be made in strict accordance with the specifications of the Underwriters' Laboratories and covered with No. 30 gauge galvanized sheets. The door shall bear the Class _____ Label of the Underwriters' Laboratories and shall also be Factory Mutual Approved. They shall be supplied complete with hardware.

SINGLE GRAVITY SLIDE (Incline Top)



type 100 ● SAINO Metal (Corrugated Steel)
type 700 ● 3-ply Metal Clad
type 1700 ● 2-ply Metal Clad

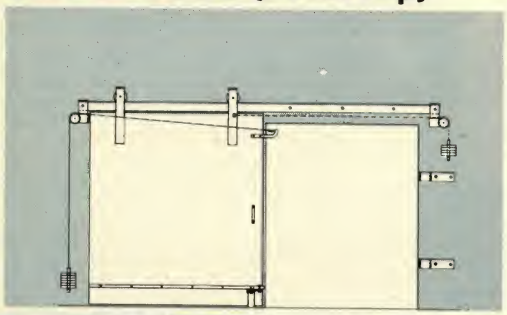
Simple in operation and easy to install, the Single Gravity Slide is recommended in all cases where there is sufficient headroom.

sideroom required: closing side, 14″; opening side, width of opening plus 19″.

headroom required: 14″ plus 1½″ for each foot of opening width.

Underwriters' labeled: types 100 & 700—for openings not exceeding 120 sq. ft. with neither width nor height exceeding 12′ 0″. type 1700—for openings not exceeding 80 sq. ft.; width or height not exceeding 10′ 0″.

SINGLE SLIDE (Level Top)



type 102 ● SAINO Metal (Corrugated Steel)
type 702 ● 3-ply Metal Clad
type 1702 ● 2-ply Metal Clad

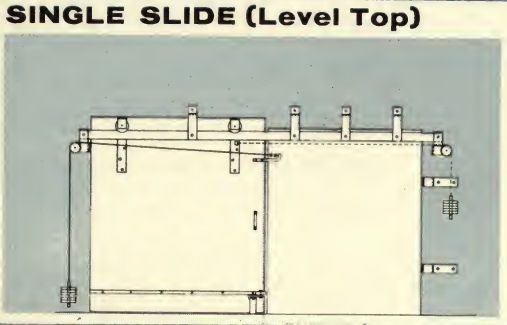
Recommended where there is insufficient headroom clearance to take care of the Gravity Slide Incline Top Door. Two sets of weights are used. Back weight is held in position by a Fusible Link. The approach of fire releases the weight permitting the front weight to pull the doors shut.

headroom required: 14″

sideroom required: closing side, 19″; opening side, width of opening plus 19″.

Underwriters' labeled: type 102 & 702—for openings not exceeding 120 sq. ft. with neither width nor height exceeding 12′ 0″. type 1702—for openings not exceeding 80 sq. ft.; width or height not exceeding 10′ 0″.

SINGLE SLIDE (Level Top)



type 103 ● SAINO Metal (Corrugated Steel)
type 703 ● 3-ply Metal Clad
type 1703 ● 2-ply Metal Clad

Generally called "Drop Bracket" this type is designed for use on openings where the headroom is limited. Its principal of operation is the same as for the type 102, 702 or 1702.

headroom required: 8″.

sideroom required: closing side, 19″; opening side, width of opening plus 19″.

Underwriters' labeled: types 103 and 703—for openings not exceeding 120 sq. ft. with neither width nor height exceeding 12′ 0″. type 1703—for openings not exceeding 80 sq. ft.; width or height not exceeding 10′ 0″.

SAINO METAL (Corrugated Steel) FIRE DOOR

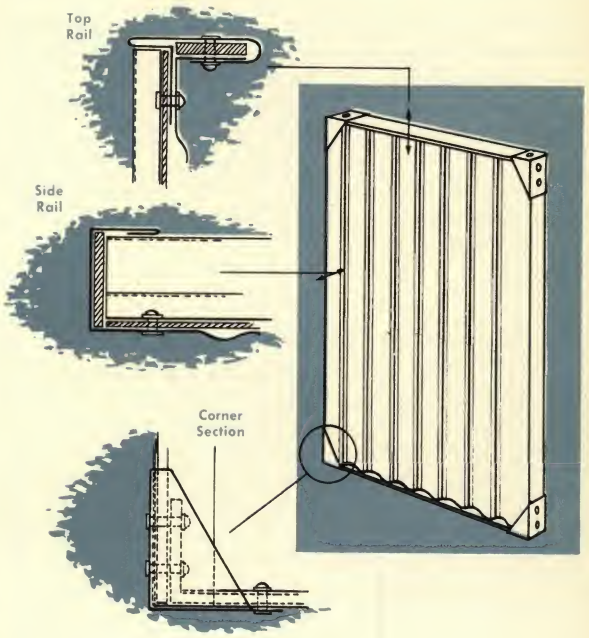
Has many advantages over other types of Fire Doors because of its permanent construction and ability to withstand severe fire exposure. Being light in weight it is easy to install and made entirely of steel, it will last a lifetime.

construction

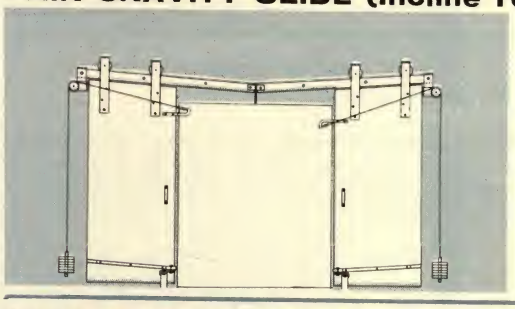
The **SAINO Metal (Corrugated Steel) Fire Door** is made of two thicknesses of 22 gauge 2½" corrugated galvanized steel with sheet asbestos lining. The vertical corrugations are on the exposed side while the horizontal corrugations are on the unexposed or wall side. The sheets are assembled in a substantial frame which, together with our exclusive assembly features provide for proper expansion and contraction along straight lines which is very essential when the door is exposed to fire. Doors are 2½" thick and weigh 5 lbs./sq. ft., without hardware. 3-hour (A) Underwriters' label and Factory Mutual Approved.

specifications

All openings as indicated shall be covered with Type No. _____ **SAINO Metal (Corrugated Steel) Fire Doors** as manufactured by **The F. L. Saino Manufacturing Company, Memphis, Tenn.** The doors shall be made of two thickness 22 gauge galvanized corrugated sheets with asbestos lining. The doors shall carry the 3-hour (A) label of the Underwriters' Laboratories and shall also be Factory Mutual Approved. They shall be supplied complete with hardware.



PAIR GRAVITY SLIDE (Incline Top)

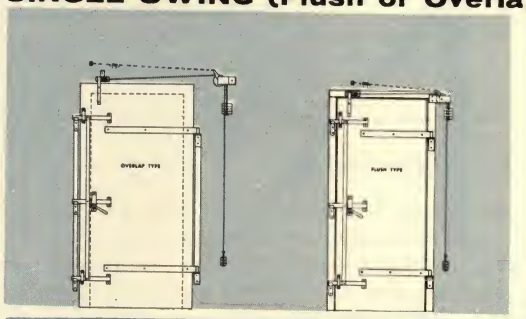


type 101 ● SAINO Metal (Corrugated Steel)
type 701 ● 3-ply Metal Clad
type 1701 ● 2-ply Metal Clad (NOT labeled)

Recommended only where there is not enough clearance on either side to permit use of the Single Slide Type. Can also be supplied with notch at center top for overhead conveyor track, however such doors cannot be Underwriters' labeled.

sideroom required: On each side—one half width of opening plus 15".
headroom required: As the track is inclined, the headroom clearance will vary according to the opening width.
Underwriters' labeled: types 101 and 701—for openings not exceeding 120 sq. ft. with neither width nor height exceeding 12' 0".

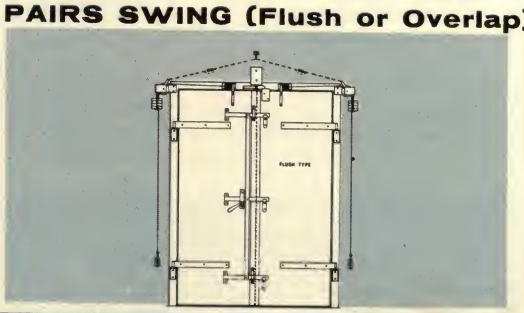
SINGLE SWING (Flush or Overlap)



type 104 ● SAINO Metal (Corrugated Steel)
type 704 ● 3-Ply Metal Clad
type 1704 ● 2-Ply Metal Clad

overlap type: made to overlap the masonry opening 4" at each side and at top. No steel frame required.
flush type: made to fit into structural steel frame. Underwriters' labeled channel iron frame recommended.
Underwriters' labeled: types 104 and 704—for openings not exceeding 6' 0" wide and 12' 0" high. type 1704—for opening not exceeding 6' 0" wide and 10' 0" high.

PAIRS SWING (Flush or Overlap)



type 105 ● SAINO Metal (Corrugated Steel)
type 705 ● 3-Ply Metal Clad
type 1705 ● 2-Ply Metal Clad

overlap type: Made to overlap the opening 4" at each side and at top. No steel frame required.
flush type: Made to fit into structural frame. Underwriters' labeled channel iron frame recommended.
10' 0" wide and 12' 0" high. type 1705—for openings not exceeding 10' 0" wide and 10' 0" high.

JUNIOR DOORS

corrugated steel • non-labeled

Designed to meet the rugged requirement of use in factories, warehouses and cotton mills, the **SAINO Metal Junior Doors** are positively rigid, immune to weather and wear, thus assuring permanent service and utmost economy in industrial doors. Corrugated galvanized steel construction gives the **SAINO Metal Junior Door** a place of increasing preference in construction.

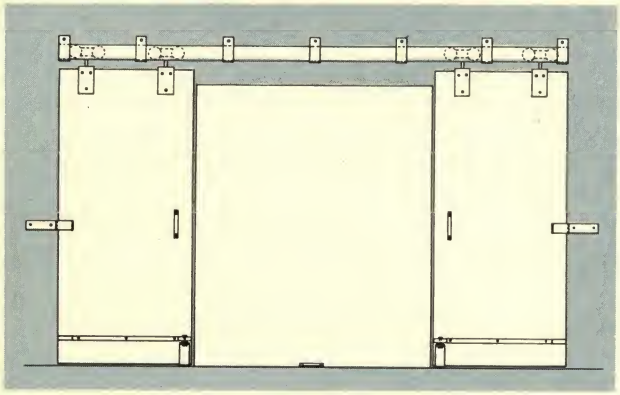
construction features

The **SAINO Metal Junior Door** is made of two-thickness 22 gauge 2½″ corrugated galvanized steel assembled on a substantial frame and interlined with sheet asbestos. The vertical corrugation is on the outside while the horizontal corrugation is on the wall side. The door is 1½″ thick. It weighs approximately 4 lb. per sq. ft. without hardware.

The door is not Underwriters' labeled.

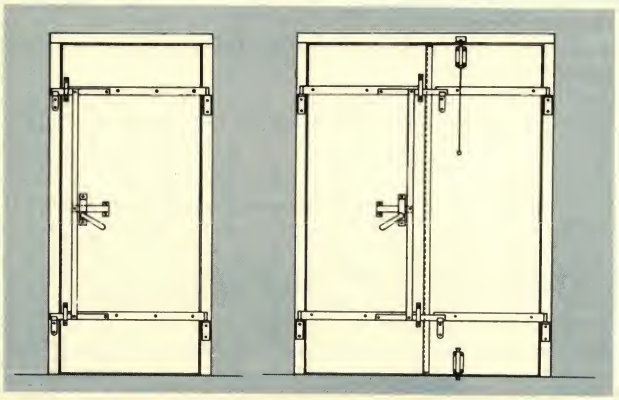
type 400 • single slide

The type 400 single slide **SAINO Metal Junior Door** is ideal for use on any opening where Underwriters' labeled doors are not necessary yet a durable light weight door is desired. Furnished complete with roller bearing hangers and enclosed track, it is simple to install, easy to operate and will give years of trouble-free service. Generally made to overlap the opening 4″ at each side and at top.



type 401 • pairs slide

Recommended on large openings or where conveyor track passes through opening. Doors can be notched for conveyor track. Generally made to overlap opening 4″ at each side and at top.



type 404 • single swing

Available in flush type as shown with pressed steel or structural steel frame and overlap type. The overlap type is generally made to overlap the opening 4″ at each side and at top. Furnished complete with substantial strap hinges and bar latch.

type 405 • pairs swing

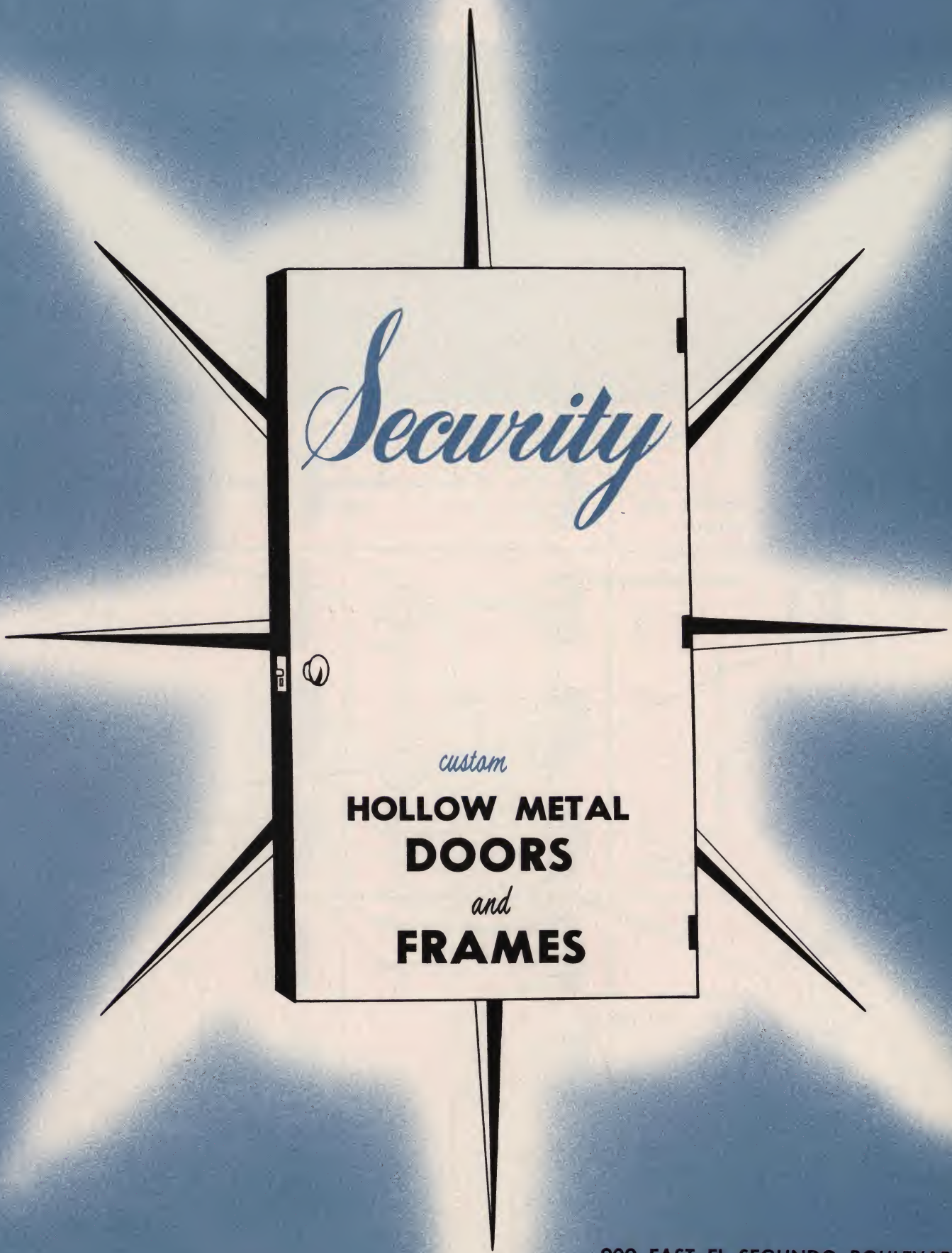
Recommended on large openings or where conveyor track passes through opening. Doors can be notched for conveyor track. Available in flush type as shown with pressed steel or structural steel frame and overlap type.

The F. L. SAINO MANUFACTURING CO.

66 WEST COLORADO AVENUE, MEMPHIS 2, TENNESSEE • WHitehall 2-1511

REPRESENTATIVES IN ALL PRINCIPAL CITIES

Printed in U.S.A.



AIA FILE 16A-16B

909 EAST EL SEGUNDO BOULEVARD
EL SEGUNDO, CALIFORNIA

Security METAL PRODUCTS CORP.

• specifications

Hollow Metal Frames shall be as manufactured by SECURITY METAL PRODUCTS CORPORATION.

Frames shall be constructed of 16 or 14 gauge steel in accordance with profiles indicated on the plans. All corners are to be mitered and welded to insure a rigid joint. Not less than 3 anchors per jamb are to be provided for masonry partitions and 4 anchors per jamb and 1 at the head where wood and steel stud partitions occur. Floor clips are to be welded to the bottom of each jamb. A removable steel angle spreader is to be furnished at the bottom of all 3 sided frames to insure proper rigidity during transit and handling.

Frames shall be mortised and reinforced with 3/16" thick steel and tapped where mortised hardware is specified. Surface type hardware such as closers, holders, etc. will be reinforced with 14 gauge steel. All drilling and tapping to be done in the field by the door erector. Frames can be prepared for silencers when specified. Mortar boxes are to be welded over all hardware cutouts.

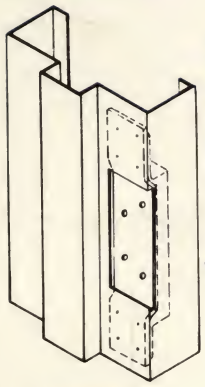
After fabrication, all frames are to be cleaned thoroughly of dirt and oil, then filled, sanded smooth and finished with the manufacturer's standard rust inhibitive primer.

Underwriters' Label Frames shall be in strict accordance with the procedures specified by the Underwriters' Laboratories, Inc. and bear their label.

• typical construction features

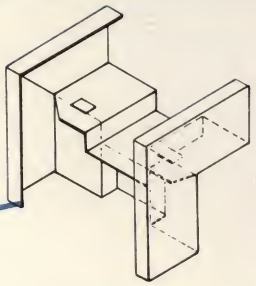
frame details

STANDARD WALL ANCHORS



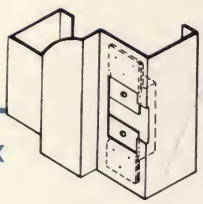
MORTAR BOX
#6010
3/16" THICK
HINGE REINFORCEMENT

HINGE



INTERLOCKING AND
WELDED TABS

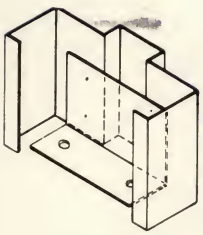
CORNER



MORTAR BOX
#6010
REINF. TABS
3/16" THICK

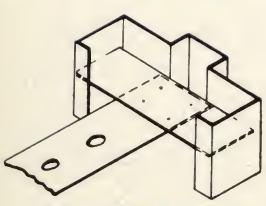
LOCK STRIKE

REMOVABLE ANGLE
SPREADER

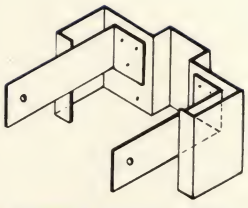


ANGLE CLIP
WELDED TO BOTTOM
OF JAMB

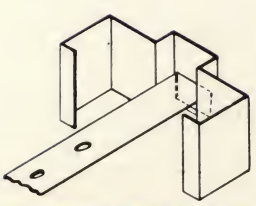
FLOOR ANCHOR
#6004



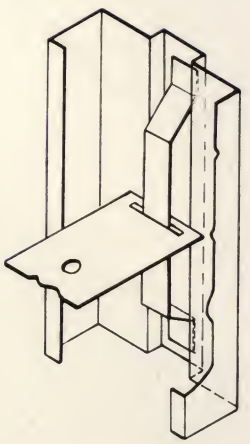
ADJUSTABLE "TEE"
#6001
FOR BLOCK OR BRICK



WOOD STUD CLIPS
#6008

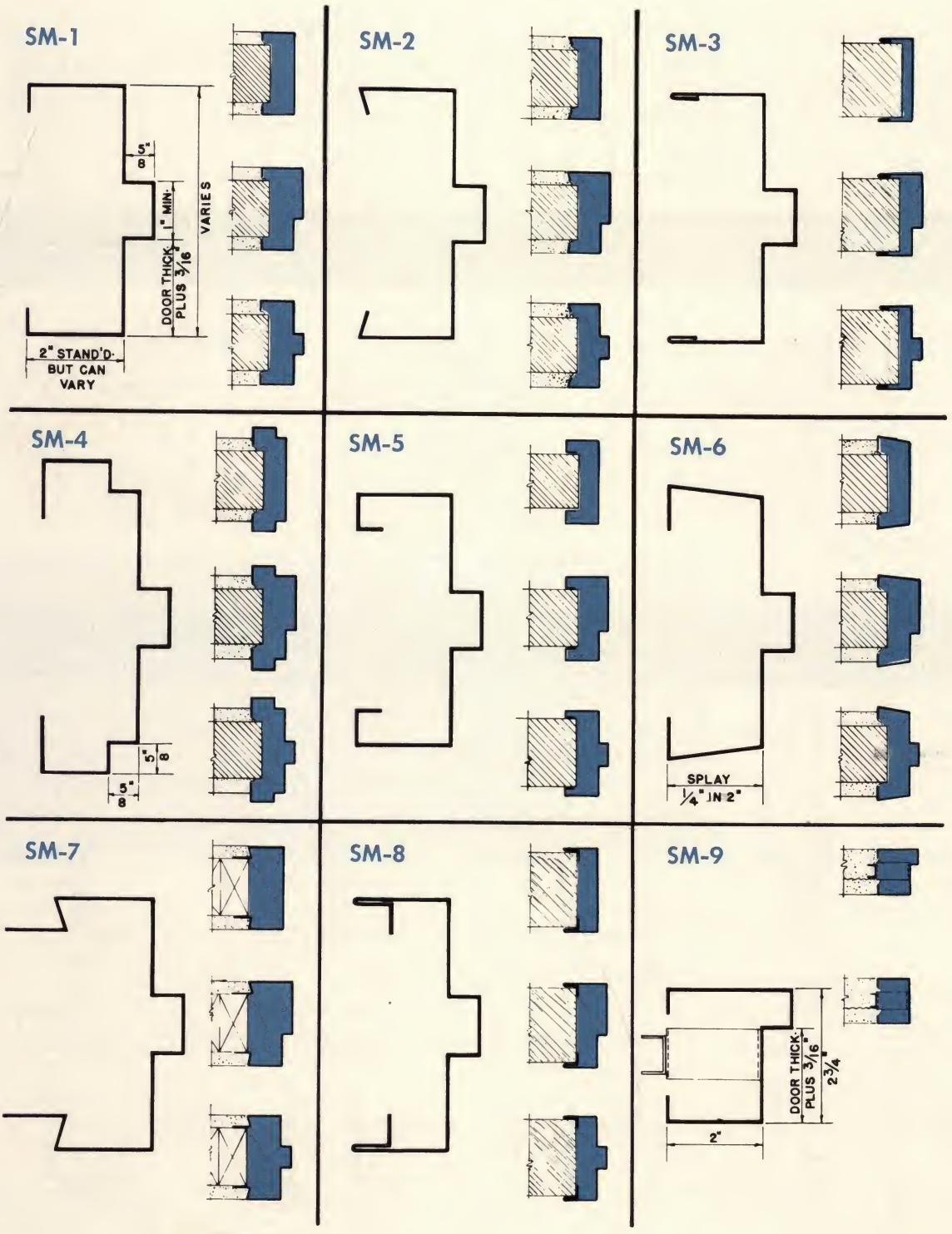


CONCRETE STRAP ANCHOR
#6002



UNDERWRITER ANCHOR
#6012

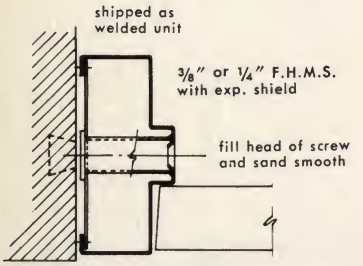
• standard frame profiles



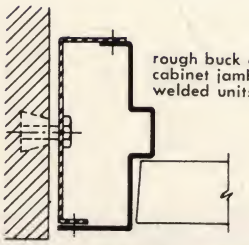
Security METAL PRODUCTS CORP.

frames for existing walls – no scale

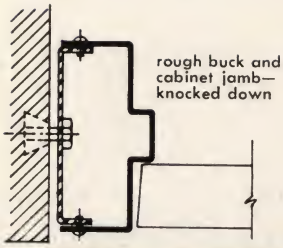
RB 1



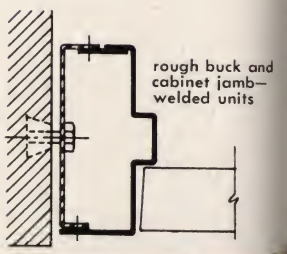
RB 2



RB 3

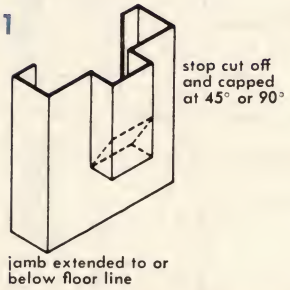


RB 4

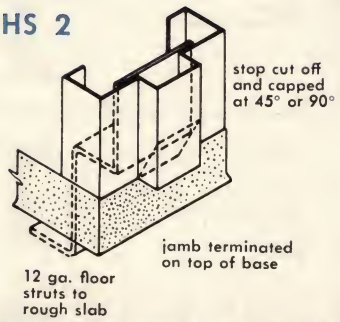


sanitary type door jamb stops – no scale

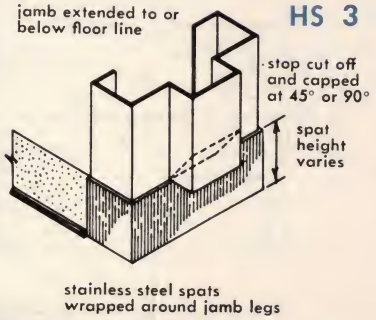
HS 1



HS 2



HS 3

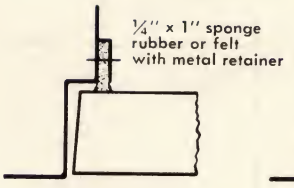

jamb extended to or below floor line
stop cut off and capped at 45° or 90°
spat height varies
stainless steel spats wrapped around jamb legs

NOTE: STOPS MUST EXTEND TO FLOOR WHERE LEAD LINED, LIGHT PROOF AND LABEL FRAMES OCCUR

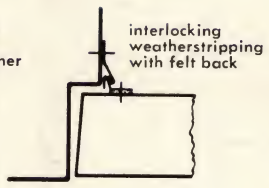
standard frame profiles – scales ½FS & 1½" = 1' - 0"

jamb detail

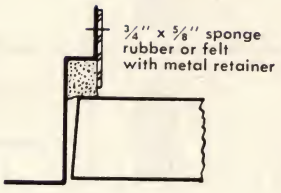
FWS 1



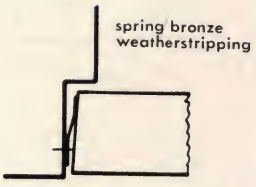
FWS 2



FWS 3

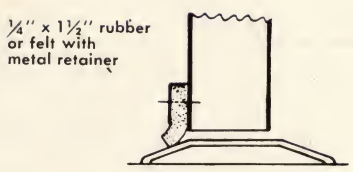


FWS 4

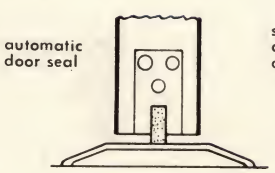


sill detail

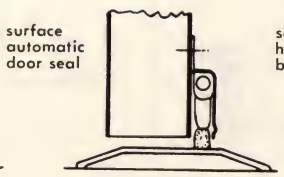
DWS 1



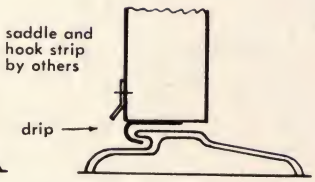
DWS 2



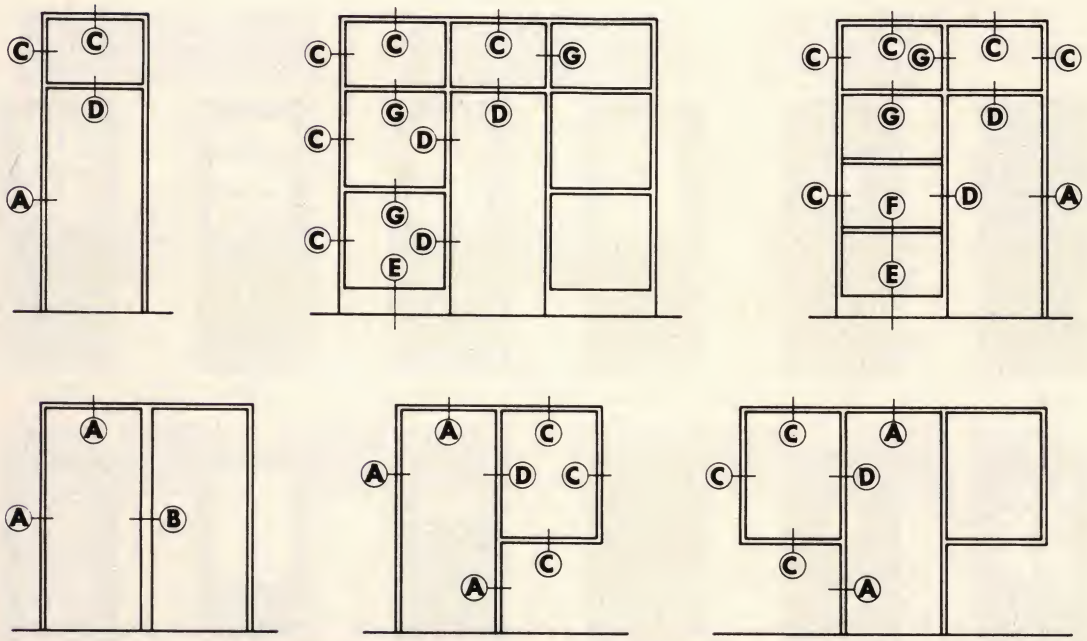
DWS 3



DWS 4

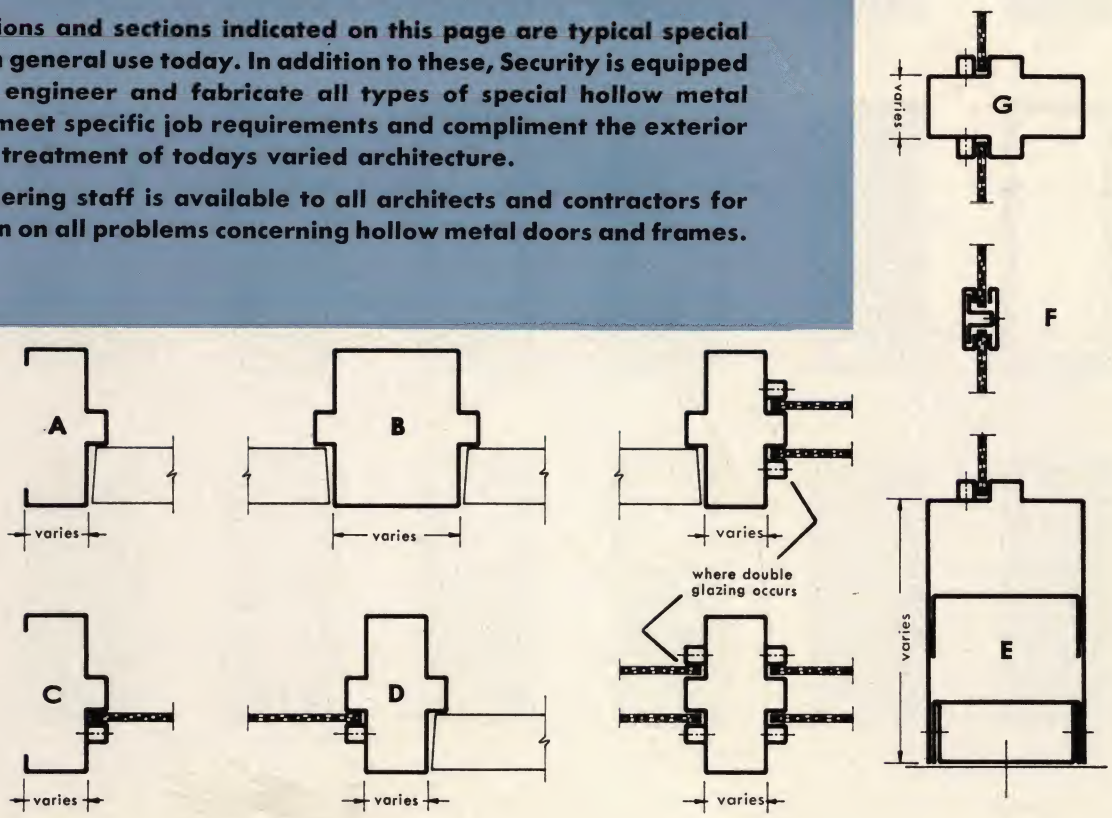


• special frames

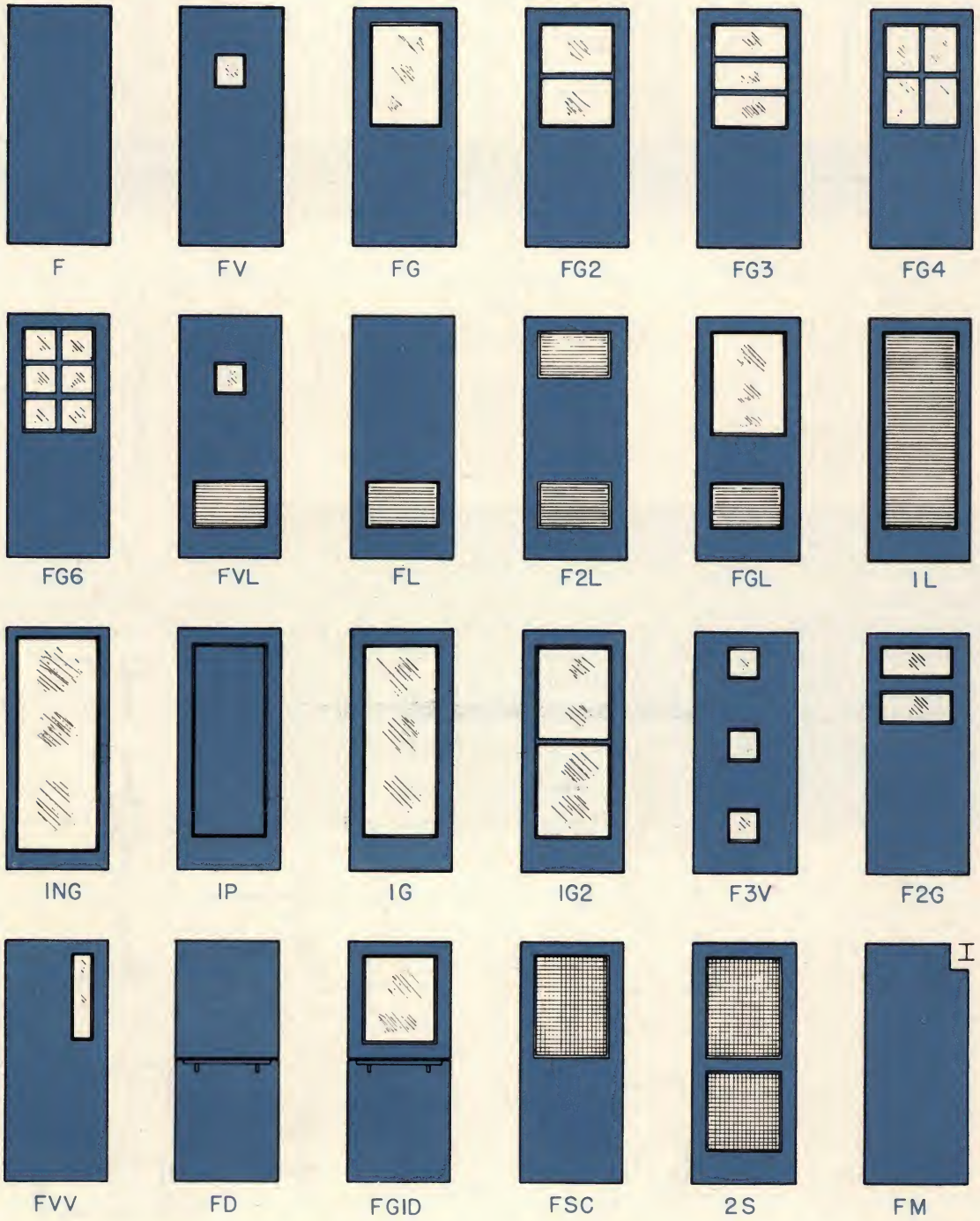


The elevations and sections indicated on this page are typical special openings in general use today. In addition to these, Security is equipped to design, engineer and fabricate all types of special hollow metal frames to meet specific job requirements and compliment the exterior or interior treatment of todays varied architecture.

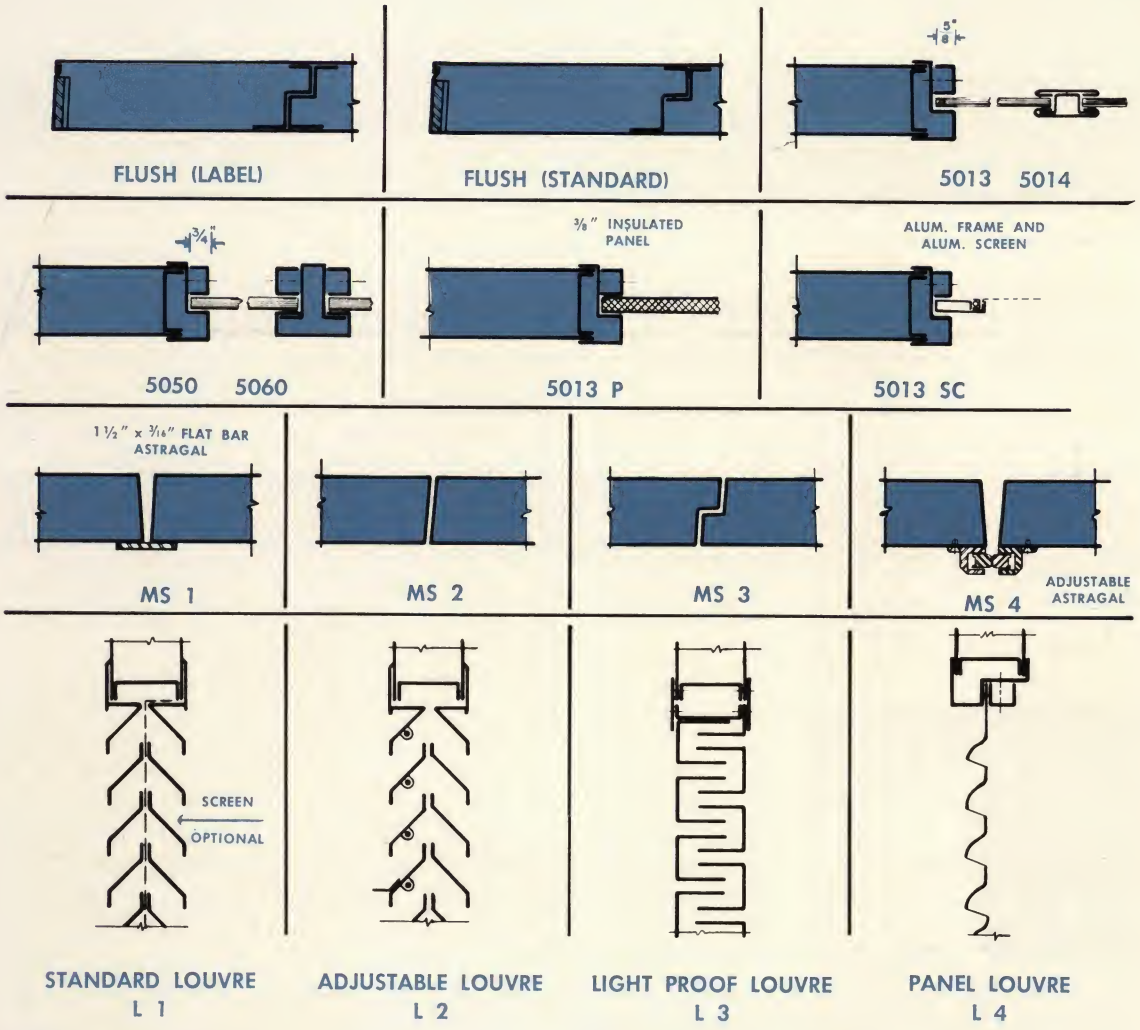
Our Engineering staff is available to all architects and contractors for consultation on all problems concerning hollow metal doors and frames.



standard door types – no scale



• standard door sections



• specifications

Hollow Metal Doors shall be as manufactured by SECURITY METAL PRODUCTS CORPORATION.

Doors shall be constructed of 2 outer face sheets of 18 gauge (available in 16 and 14 gauge) sheet steel. Face sheets are to be rigidly connected by continuous vertical stiffeners spaced 6" on center maximum and spot welded to the face sheets 4" on center maximum. Doors shall be provided with an Underwriters' approved sound deadening, insulated rigid type mineral rock wool. Top and bottom of doors is to be reinforced with a 16 gauge continuous channel full width of door and spot welded to both face sheets. Tops of all exterior doors are to be capped to prevent an accumulation of water.

Underwriters' Label Doors shall be in strict accordance with the procedures specified by the Underwriters' Laboratories, Inc. and bear their label.

Louvres where required shall be inverted "V" type unless otherwise specified. Glass moulding shall be 18 gauge die formed with 20 gauge removable glazing stop.

Doors shall be mortised and reinforced with 3/16" thick steel and tapped for all mortised type hardware. Surface type hardware, such as closers, push and pull plates, etc., will be reinforced with 14 gauge steel, and all drilling and tapping to be done by the door erector.

FINISH: All welds and joints are to be ground smooth. Doors shall be thoroughly cleaned, filled, and sanded smooth prior to painting. Doors shall be painted with manufacturer's standard rust inhibitive primer and baked. Doors receiving a baked enamel finish are to receive suitable additional coats, each baked on and sanded smooth. Color to be as selected by the architect.

L. A. Sports Arena
Los Angeles, California
Contractor:
L. E. Dixon Company
Architect:
Welton Beckett & Associates

• partial list of installations

DELANO JOINT UNION HIGH SCHOOL
Bakersfield, California
Guy E. Hall, Contractor
Stuhr-Hicks, Architect

HUGHES AIRCRAFT CO.
Tucson, Arizona
Del E. Webb Construction Co.
John C. Lindsay, Architect

UNITED STATES COURT HOUSE
Sacramento, California
Dinwiddie Construction Co.
General Service Administration, Architect

RAMO WOOLDRIDGE LABORATORIES
Canoga Park, California
Twaits-Wittenberg Co., Contractor
Albert C. Martin & Associates, Architects

LAS VEGAS CONVENTION CENTER
Las Vegas, Nevada
Lembke Construction Co.
Adrian Wilson & Associates, Architects

PASADENA HIGH SCHOOL
Pasadena, California
H. B. Nicholson, Contractor
Zimmerman & Howell and Georgi & Kline, Architects

ARIZONA STATE SCHOOL
Fort Grant, Arizona
W. F. Connelly Construction Co.
Terry Atkinson, Architect

JUVENILE UNIT, NAPA STATE HOSPITAL
Imola, California
Joseph Bettancourt, Contractor
State of California, Architect

NATIONAL REACTOR TESTING STATION
Scoville, Idaho
Teller Construction Co.
Norman Engineering Co., Architect

SAGE TECHNICAL FACILITIES
Great Falls, Montana
Sound-Riedesel-Lowe, Contractors
Western Electric Co., Architect

STATE OFFICE BUILDING
Los Angeles, California
Diversified Builders, Contractors
State of California, Architect

BETHLEHEM PACIFIC COAST OFFICE BUILDING
San Francisco, California
Swinerton & Walberg Co., Contractor
Welton Beckett & Associates, Architects

N.C.O. OPEN MESS
Ellsworth Air Force Base, South Dakota
H. Halvorson, Contractor
Craig-Whitman & Associates, Architects

GENERAL ELECTRIC COMPUTER PLANT
Phoenix, Arizona
T.G.K. Construction Co.
Daniel, Mann, Johnson & Mendenhall, Architects

CRITICAL MASS LABORATORY FACILITIES
Richland, Washington
Howard S. Wright Construction Co.
General Electric Co., Architect

TEST TRACKING STATION
Vandenberg Air Force Base
Fredericksen & Kasler & Stolte Inc., Contractor
Ralph M. Parsons Company, Architects

Cadet Social Center
U.S.A.F. Academy
Colorado Springs, Colorado
Contractor:
Robert E. McKee Company
Architect:
Skidmore, Owings & Merrill

Kaiser Center
Oakland, California
Contractor:
Robert E. McKee Company
Architect:
Welton Beckett & Associates

Security

METAL PRODUCTS CORP.
CUSTOM HOLLOW METAL DOORS AND FRAMES

EXECUTIVE OFFICES AND PLANT

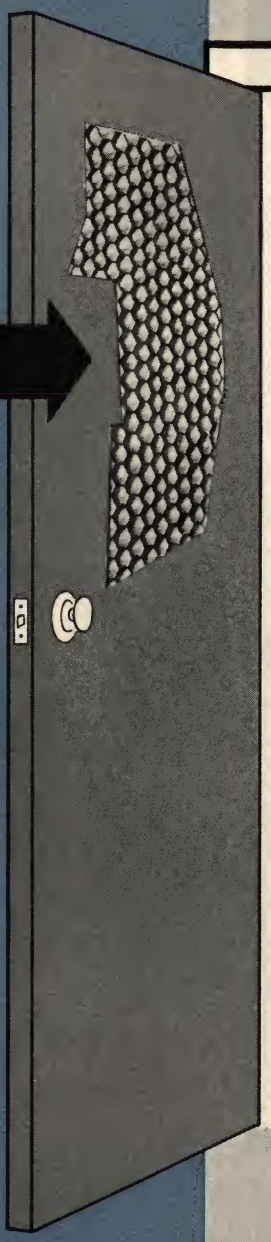
909 EAST EL SEGUNDO BOULEVARD • EL SEGUNDO, CALIFORNIA ORegon 8-9047

AIA FILE NO. 16-

STEELCRAFT

... the most complete line of STANDARD HOLLOW METAL DOORS and FRAMES

(stocked by local distributors)



ALL HONEYCOMB REINFORCED

greater rigidity
improved sound deadening
greater damage resistance
unusual flatness

- **STANDARD DUTY DOORS**
  series 20—1⅜"
- **COMMERCIAL DUTY DOORS**
  series 18 and 20—1¾"
- **EXTRA HEAVY DUTY DOORS**
  series 16—1¾"
- **FULL FLUSH—CUSTOM TYPE**
  series H-18
- **DOOR FRAMES**
- **WRAP-AROUND FRAMES**
- **TRANSOMS, SIDELITES, BORROWED LITES**

"Time is of the essence" ...

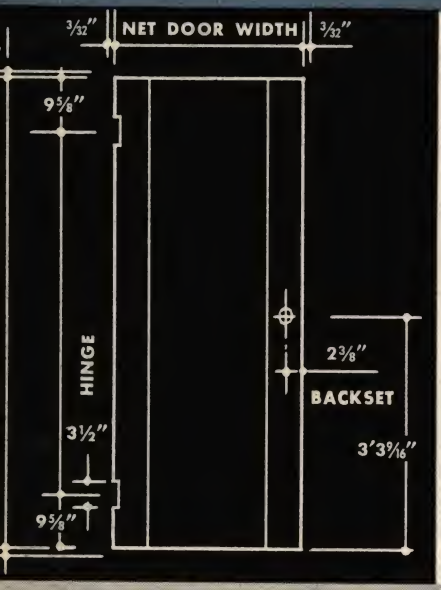
It is one of the primary functions of the authorized Steelcraft distributor to supply, and coordinate the delivery and application of the proper hardware with the doors and frames. In this way the Steelcraft distributor is able to deliver a complete package in accordance with local requirements and specifications.

We believe our policy of having our distributor complete the door — frame — hardware package, at the local level, is efficient, economical, and best serves the architectural profession, and the building industry.

SDI STEEL DOOR INSTITUTE

STEEL Craft

SERIES 20 1⅜" standard duty doors



M V G G2 G3 L TL BL DD

Available sizes—1'6" to 3'0" single, 4'0" to 6'0" double; 6'8" and 7'0" high.

HONEYCOMB REINFORCEMENT—Tremendous resistance to impact and flexing is obtained by using kraft cellular "honeycomb" structures in the center panel which also provides insulation, absolute flatness and sound deadening.

MECHANICAL INTERLOCKING—Maximum strength is obtained through positive, full length interlocking of the stiles to the center panel. Multiple right angle bends build remarkable structural strength into each stile.

BEVELED EDGE—Not usually found in a low cost steel door is the ⅛" in 2" bevel which allows easy operation with close tolerances.

BONDERIZED and PRIME PAINTED—Doors are carefully treated in a five-stage bonderizing system to guard against rust. This provides an excellent base for the baked-on prime paint.

specifications

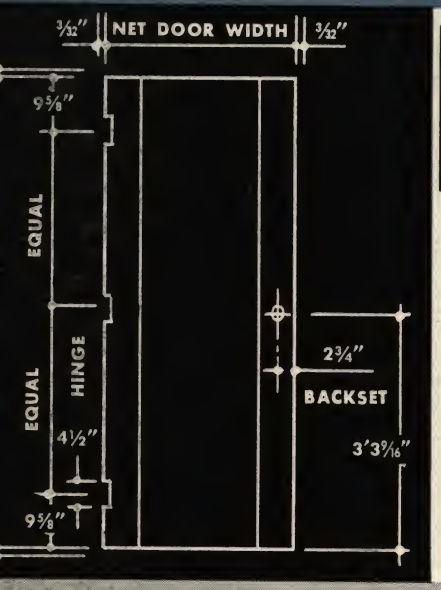
Doors shall be 1⅜" thick and of the flush three section type consisting of lock and hinge stile and center panel. Door stiles and panels shall be of 20 gage cold rolled prime quality steel. The vertical joints shall be tight and flush and designed to assure full length positive interlocking between center panel and stiles.

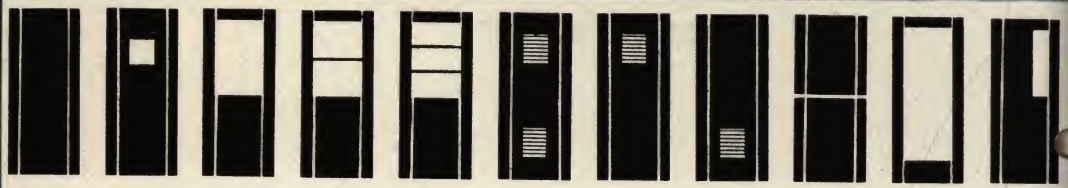
Doors shall be stiffened and sound deadened with Kraft honeycomb laminated to the inside of center panels. Top and bottom reinforcing channels of 16 gage cold rolled steel are to be spot-welded within the doors to provide horizontal rigidity and close the top and bottom of each door. All doors are to be beveled ⅛" to 2". The doors shall be mortised for standard duty cylindrical locksets, Government No. 160 series with 2⅜" backset and for one pair of 3½" x 3½" template or non-template hinges.

All doors shall be provided with 10 gage steel hinge reinforcements and an integral lock box of 16 gage steel all securely welded into the stile. Hinge and lock reinforcements are to be drilled and tapped to receive finish hardware which is to be applied in the field. Doors shall be reinforced for surface applied hardware with a minimum of 16 gage steel. Drilling and tapping for surface applied hardware shall be done in the field.

All doors shall be Bonderized and receive one coat of baked-on prime paint.

SERIES 18 & 20 1¾" commercial duty doors





M V G G2 G3 L TL BL DD LG NL

Available sizes—2'0" to 3'4" single, 4'0" to 6'8" double; 6'8" and 7'0" high.

The commercial duty doors of 18 or 20 gage steel have in addition to the features listed under standard duty doors—*see above*—the following features:

REINFORCING CHANNELS of extra heavy 14 gage steel, 1" deep, securely welded into the top and bottom to provide greater lateral rigidity—a tight, rugged door.

1½ Pair of 4½" x 4½" HINGES to insure extra long life in high frequency openings.

specifications

Doors shall be of the flush three section type consisting of lock and hinge stile and center panel. Door stiles and panels shall be made of 20 gage (for Series 20 doors) or 18 gage (for Series 18 doors) cold rolled prime quality steel. The vertical joints shall be tight and flush and designed to assure full length positive inter-locking between center panels and stiles.

Doors shall be stiffened and sound deadened with Kraft honeycomb laminated to the inside of the center panels. Top and bottom reinforcing channels of 14 gage cold rolled steel are to be spot-welded to the panel and stiles of the door to provide horizontal rigidity and close the top and bottom of each door. All doors are to be beveled ⅛" in two inches.

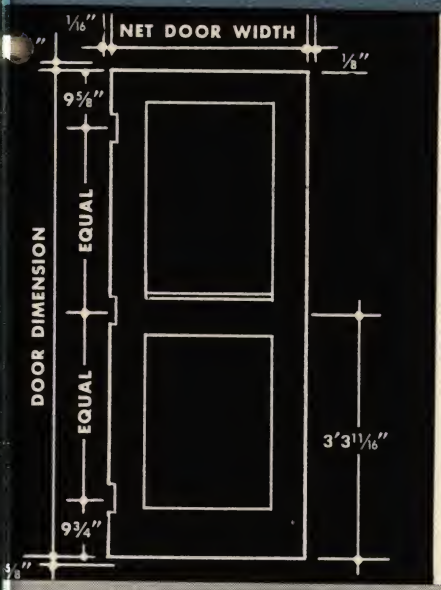
The doors shall be mortised for heavy duty cylindrical locksets, Government No. 161 with 2¾" backset and one and one-half pair of 4½" x 4½" template hinges.

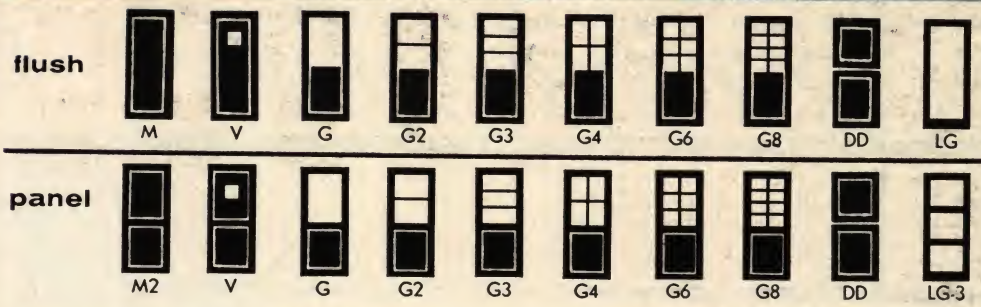
All doors shall be provided with 10 gage steel hinge reinforcements and an integral lock box of 16 gage steel all securely welded into the stile. Hinge and lock reinforcements are to be drilled and tapped to receive finish hardware which is to be applied in the field. Doors shall be reinforced for surface applied hardware with a minimum of 16 gage steel. Drilling and tapping for surface applied hardware shall be done in the field.

All doors shall be Bonderized and receive one coat of baked-on prime paint.

UNDERWRITERS' LABEL DOORS A

SERIES 16 Extra heavy duty doors





Available sizes—2'0" to 5'0" single, 4'0" to 10'0" double; 6'8", 7'0", 8'0" and 10'0" high.

TUBULAR STILE and RAIL CONSTRUCTION—Heavy 16 gage material provides tremendous resistance to racking and heavy abuse, insuring long life and trouble free operation.

ARC-WELDED CORNERS—All corners are mitered, reinforced, arc welded and neatly ground smooth.

HONEYCOMB REINFORCEMENT—in center panels results in greater impact resistance in addition to insulation and sound deadening values.

specifications

Doors shall be of 16 gage steel stile and rail construction. Stiles, top rails and center rails shall be of tubular construction, 1¾" thick and 5½" high. Bottom rail shall be 8" high. Door corners shall be mitered, reinforced with 16 gage channels, continuously face welded and ground smooth.

Doors shall have identical appearance on both sides except that glazing bead and muntin screws shall always be on the inside.

Panel Type Doors shall be equipped with ⅜" thick sandwich panel made of two pieces of 18 gage steel with insulation filler.

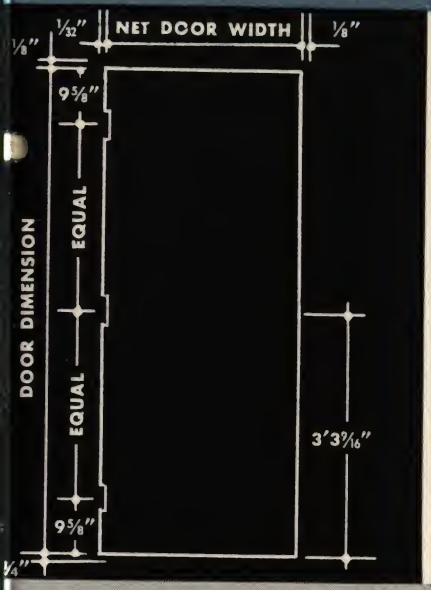
Flush Type Doors shall be equipped with 1¾" thick panels made of two pieces of 18 gage steel separated, stiffened and sound deadened with impregnated Kraft honeycomb laminated within the panels.

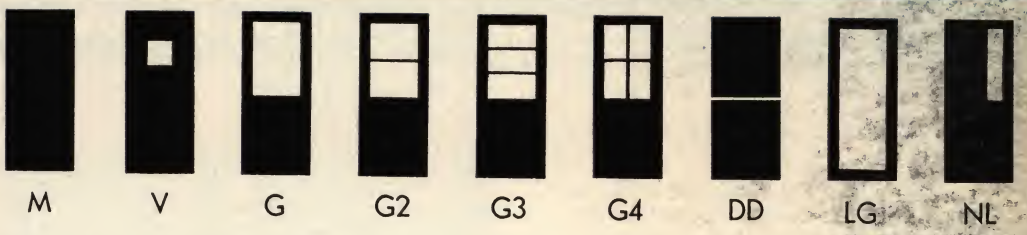
Standard weight 4½" x 4½" full mortise template hinges shall be used; 1½ pair for doors up to 7'0", 2 pair on doors over 7'0".
Doors shall be mortised and reinforced for Government series 86 mortise locks, Government No. 161 heavy duty cylindrical locks or Government No. 140 integra lock as specified.

Doors shall be provided with 3/16" steel hinge reinforcements, ⅛" steel lock reinforcements all securely welded into place and each drilled and tapped to receive field installed finished hardware. Doors shall be reinforced with 16 gage steel for closers and other surface applied hardware when required.

All doors shall be Bonderized and receive one coat of baked-on prime paints.

SERIES H-18 completely flush doors





Available sizes—2'0" to 3'6" single, 4'0" to 7'0" double; 6'8" and 7'0" high.

FULLY FLUSH—Absolutely no seams are to be found on either the face or edges of this door.

HONEYCOMB CORE—Provides billiard table flatness *without weld marks*, resistance to impact and flexing, plus insulation and sound deadening values.

STRONG and RUGGED—Independent Laboratory tests have proved that this honeycomb reinforced door is much stronger than intermittent girder reinforced types.

specifications

Door panels are 18 gage cold rolled steel of pan type construction, reinforced, stiffened, sound deadened and insulated with an impregnated honeycomb core completely filling the inside of the doors and laminated to both inside faces of the panels. Joints in all edges of doors are intermittently arc-welded and concealed by a plastic filler ground smooth.

Aluminum glazing beads are of the snap-on type not requiring screws.

Doors are prepared for 1½ pair of 4½" x 4½" standard weight full mortise template hinges and Government 86 mortise lock, Government 161 heavy duty cylindrical lock, Government 140 integra lock or Government 90 unit lock, as specified.

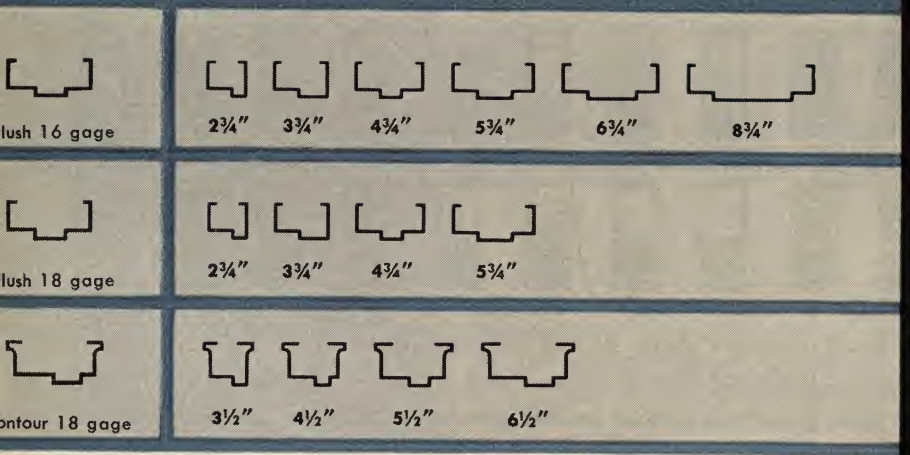
10 gage steel hinge reinforcements and 16 gage lock reinforcements are securely welded in place and are drilled and tapped to receive finish hardware for field application.

Doors are reinforced for closers and other surface applied hardware when required. Drilling and tapping of surface applied hardware is to be done in the field. All reinforcing is a minimum of 16 gage steel.

All doors are bonderized and receive one coat of baked-on prime paint.

BE AVAILABLE IN ALL DOOR TYPES

DOOR FRAMES

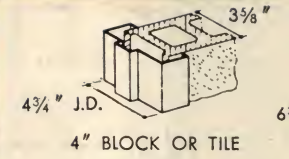


specifications

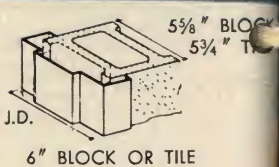
FLUSH—Frames for 1⅜" doors are 18 gage cold rolled steel, mortised, machined and reinforced for one pair of 3½" x 3½" hinges. Frames for 1¾" doors are 16 gage, mortised, machined, and reinforced for 1½ pair of 4½" x 4½" hinges. Standard construction is KD (set-up welded available on request). Mitered corners have heavy reinforcements with 4 integral tabs at each corner for secure and easy interlocking of jambs to heads. All strikes and hinge reinforcements are protected by plaster guards. Two rubber bumpers are factory installed in strike jambs. Frames are bonderized and finished with baked-on grey primer.

CONTOUR—Formed of 18 gage cold rolled steel and furnished KD. Corners are reinforced and provide interlocking tabs and mitered corners to be drawn up and secured by screws. One pair of welded on 3½" x 3½" hinges for 1⅜" doors. 1½ pair of welded on 4½" x 4" hinges for 1¾" doors. All frames prepared for universal strike for cylindrical locks. Rubber bumpers are factory installed. Frames are bonderized and finished with baked-on prime coat.

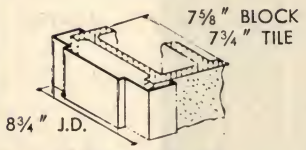
WRAP AROUND FRAMES



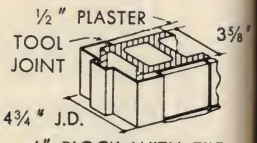
4" BLOCK OR TILE



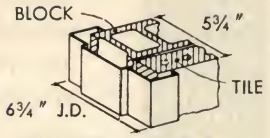
6" BLOCK OR TILE



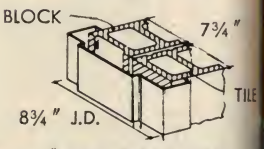
8" BLOCK OR TILE



4" BLOCK WITH TILE WAINSCOTE ONE SIDE



6" BLOCK AND TILE COMBINATION



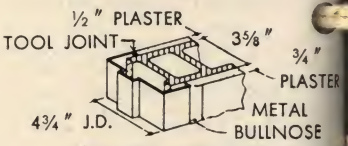
8" BLOCK AND TILE COMBINATION 8" DOUBLE TILE

Block — 8" coursing

6'8" frames use 10 courses
7'0" frames use 10½ courses

Tile — 5⅓" coursing

6'8" frames use 15 courses
7'0" frames use 16 courses
(7'1⅓" course concealed inside 2" face)



4" BLOCK WITH TILE WAINSCOTE ONE SIDE

ADVANTAGES

- reduces door and frame cost
- reduces masonry cost
- available from distributor stock
- attractive appearance.

TRANSOMS, SIDELITES and BORROWED LITES

Extended deliveries are eliminated by the use of pre-engineered components for the fabrication of these frames.

Steelcraft pre-engineered components offer these advantages:

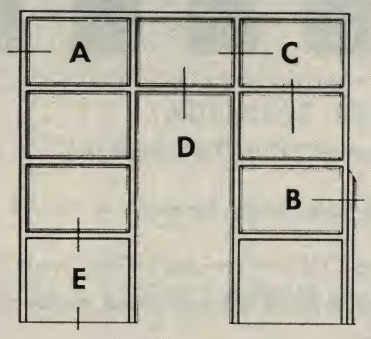
All the quality construction features of architecturally designed hollow metal.

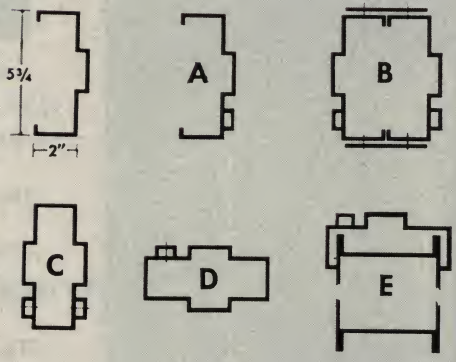
Prompt, dependable delivery since units may be assembled by the local distributor.

Versatile, allowing complete freedom of design.

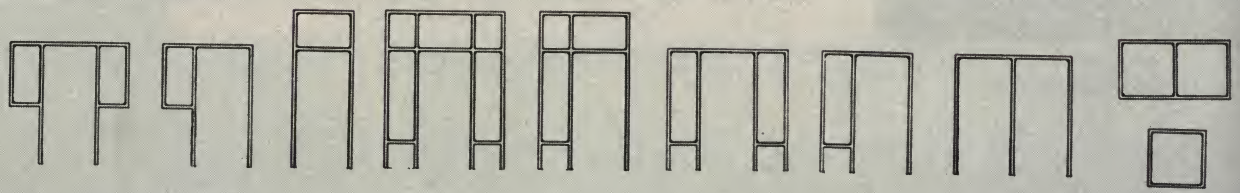
Lower costs, achieved by mass production.

Hardware flexibility since units are coordinated locally with hardware schedules and templates.





typical types



The most complete line of standard steel doors and frames

STEEL Craft

THE STEELCRAFT MANUFACTURING COMPANY
9017 Blue Ash Road, Cincinnati 42, Ohio

Hollow Metal

AT IT'S BEST

Superior

FIREPROOF DOOR
and SASH CO., INC.

hollow metal doors and frames
hollow metal window trim
hollow metal specialties
metal base and trim
convector enclosures
special hollow metal for prisons
stainless steel specialties
elevator entrances and cabs
metal specialties

executive offices
4175 Park Avenue, N.Y. 57, N.Y.

SUPERIOR FIREPROOF DOOR AND SASH CO., INC.

Hollow Metal *at its best*

Hollow Metal Doors & Frames
Elevator Entrances
Convector Enclosures
Metal Base & Trim
Metal Wainscoting & Wall Linings
Custom Partitions
Stall Partitions & Cubicles
Stainless Steel Specialties
Hollow Metal Specialties
Special Hollow Metal Lockers

Doors and frames constitute only a portion of "HOLLOW METAL".

"HOLLOW METAL" is the mark of a trade that has the ability to coordinate and fabricate many related sheet steel products.

It is not an afterthought of manufacturing a few more items. Rather it is the experience of having made these specific related products over a long period of time.

Forty-four years of experience in manufacturing "HOLLOW METAL" has given us the ability to combine planning and production with economy into a service for the construction industry.

We operate a completely integrated manufacturing plant in Scranton, Pa., comprising 120,000 sq. feet, where new and modern equipment is combined with production efficiency to insure a smooth, fast flow of raw material into the finished product by skilled mechanics.

General offices including purchasing and sales are maintained in New York City to combine the facilities and convenience of the city with the obvious manufacturing advantages of the smaller community.

At left is a list of the type of work that we do. We have supplied these hollow metal products for many of America's modern buildings. We have helped solve the space and lighting problems of dramatic high-rise office structures. The special demands of hospital and prison hollow metal have been met. We have worked with the unique requirements of contemporary school architecture. Whatever your hollow metal needs, Superior Fireproof Door & Sash Company can satisfy them.

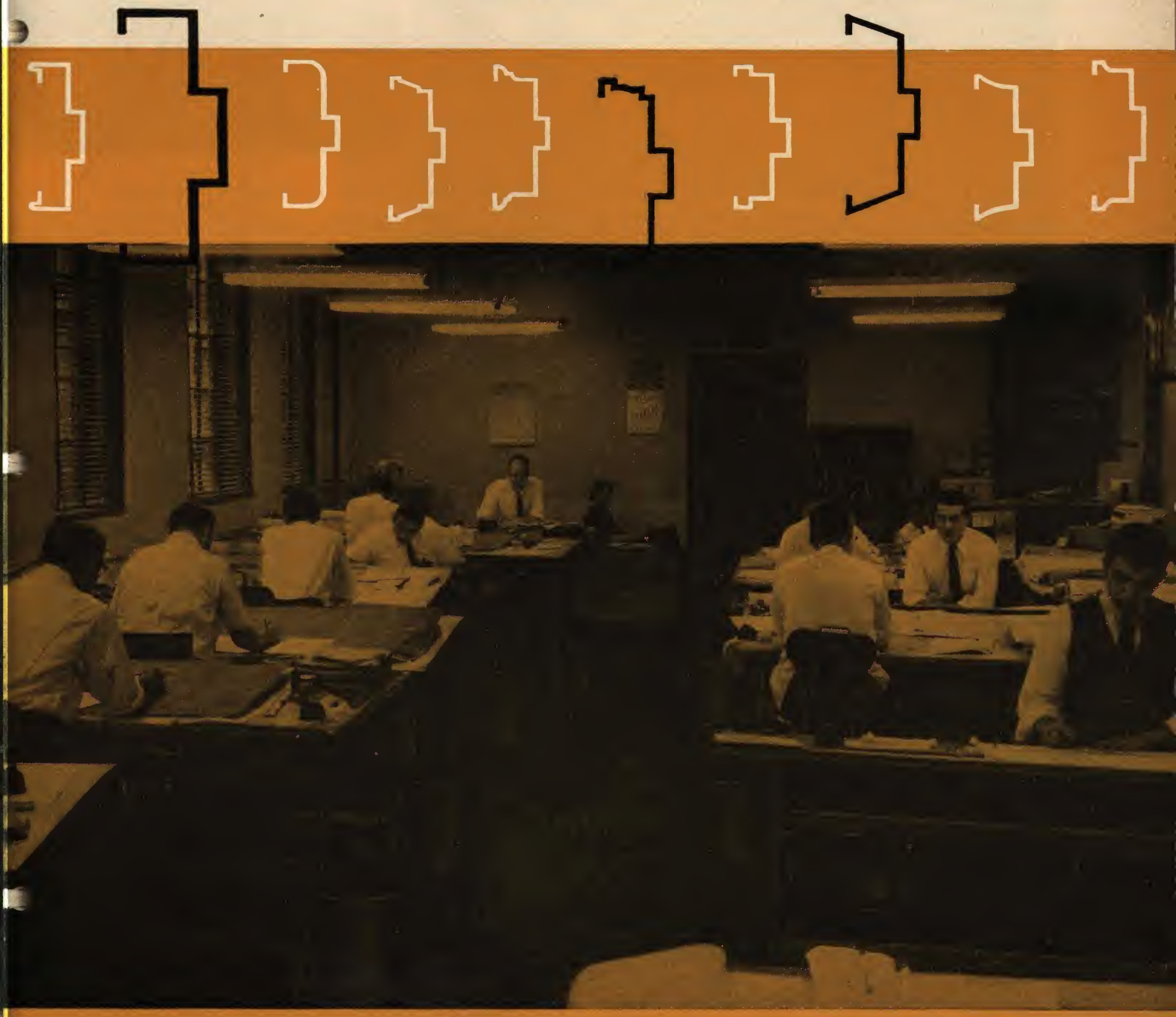
Limited space prevents us from giving a complete information about all of our products. However, our staff will always be available for consultation without obligation. Write for details, specifications or additional information about any of our hollow metal products.

Contact us before specifying your next hollow metal supplier. Superior Fireproof Door & Sash Company assures satisfaction.

HOLLOW METAL ENGINEERING

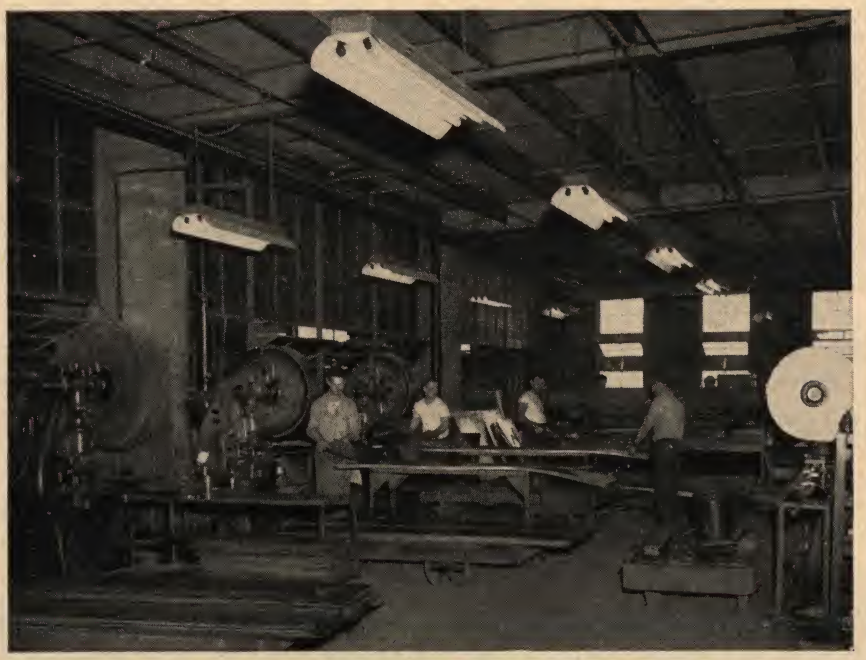
Superior Fireproof's engineering department is among the finest in the country. No building project has ever been too big... no question of minute detail has ever been too small... to receive the absolute attention that these experienced hollow metal men give to every job. Their years of training and practical experience are available for hollow metal consultation service without obligation to architects, engineers and contractors. Superior Fireproof's engineering staff is ready to answer any questions.

A technical Hollow Metal Engineering Catalog is available for registered architects. It contains much more information about our products than we can include in this catalog. Do not specify hollow metal suppliers until you have thoroughly checked with Superior Fireproof Door & Sash Company's ability to satisfy your hollow metal needs.

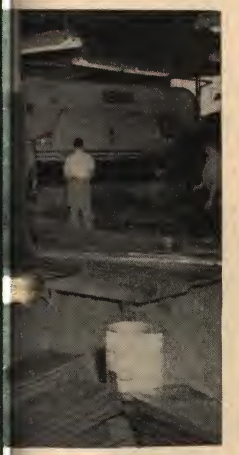


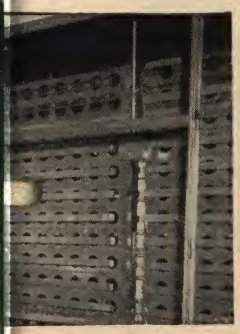
MANUFACTURING

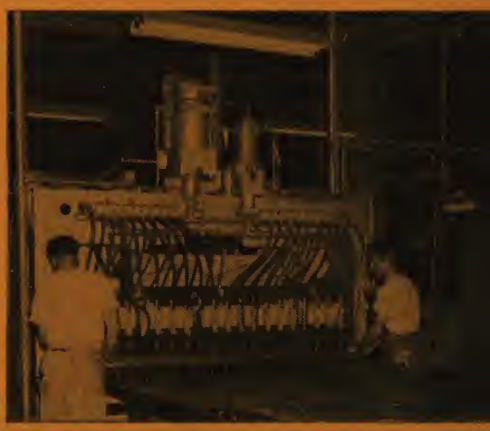
Illustrated here are a few scenes from our modern factory. Space limitations prevent showing all of the steps in our quality manufacturing process. However, these views give some idea of the vast factory floor space and up-to-date precision machinery needed to turn out hollow metal products used in America's finest buildings.

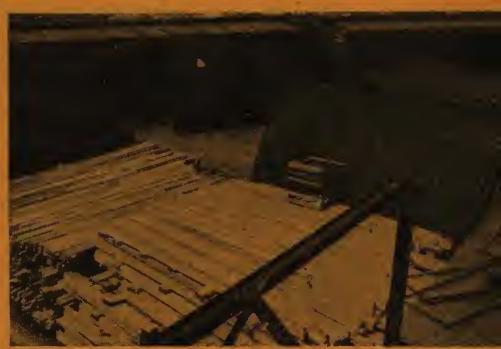


Hollow Metal









OFFICE BUILDINGS

Working areas, interior breakups and light distribution problems are most readily solved in contemporary office buildings by custom hollow metal building components. They can be engineered to meet any design specification and manufactured to building tolerances. Hollow metal quality is high, cost is low and delivery is prompt.

Superior Fireproof supplied hollow metal for the office buildings pictured here. The staff that helped create the custom hollow metal units that solved architectural problems in them is available to help you. Contact Superior Fireproof for hollow metal work for your next office building.

U.S. Military Personnel Records Center,
St. Louis, Mo.
Arch.: Peter Kiewit & Sons
Con.: Fruin-Conlon

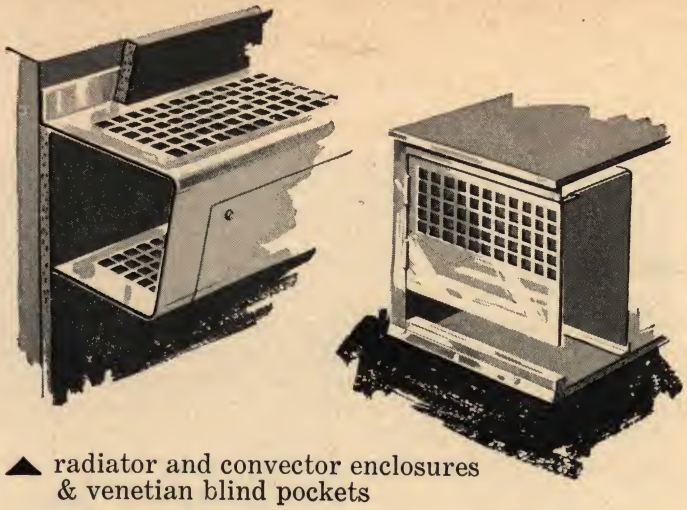
Commercial Credit Building
Arch.: Harrison & Abramovitz
Con.: Consolidated
Engineering

Getty Building
Arch.: Emery, Roth
& Sons
Con.: Cauldwell
Wingate Co.

Southland Center
Arch.: Welton Becket, Faia, & Associate
Con.: J. W. Bateson

Henry C. Beck Building
Arch.: Neild-Somdal Ass.
Con.: Henry C. Beck Co.

Hollow Metal



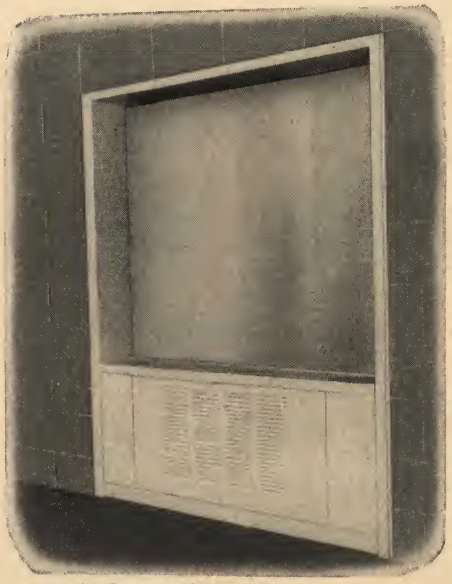
▲ radiator and convector enclosures & venetian blind pockets

Typical Hollow Metal products for office buildings

- Hollow Metal Doors & Frames
- Borrowed Light Partitions
- Porcelain Panels for Borrowed Light Partitions
- Window Sills
- Window Trim
- Convector Enclosures
- Stainless Steel Specialties

When outlining scope of work for your Hollow Metal section include all of these related products.

▲ frames and doors



▲ window trim

▲ elevator entrances and cabs

Ford Motor Company
Central Office Building
Arch.: Skidmore,
Owens & Merrill
Con.: Bryant & Detwiler

HOSPITALS

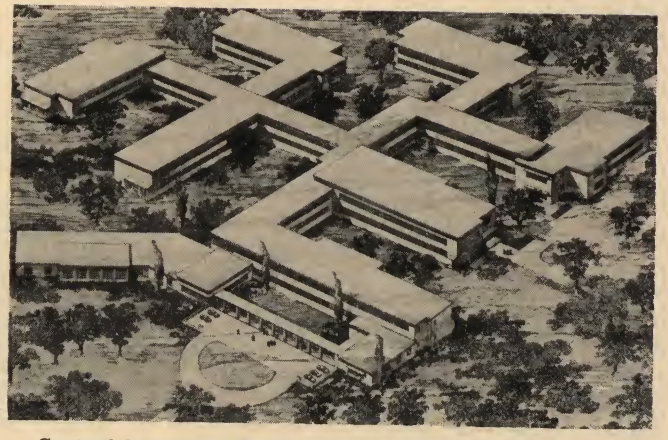
Hollow Metal work for hospitals requires a high degree of engineering skill and precision manufacturing building. Superior Fireproof Door & Sash Co., Inc. has provided Hollow Metal for the modern hospitals shown on these pages. We have had many years of experience and we have acquired a know-how for the many Hollow Metal products for hospitals as enumerated below:

- Hollow Metal Doors and Frames.
- Special Frames and Screens.
- Window Trim.
- Convector Enclosures.
- Radiator Fronts.
- Hose Cabinets.
- Tub & Shower Controls.
- Nurses Stations.
- Narcotics Cabinets.
- Lead Lined Doors and Frames.
- Radio Speaker Frames.
- Stainless Steel Corner Guards.
- Cubicals Detention.
- Paper Holders.
- Stainless Steel Doors and Frames.

When outlining scope of work for your Hollow Metal section include all of these related products.

Carswell Hospital, Carswell Air Force Base, Texas
Arch.: York and Sawyer and Roscoe DeWitt
Con.: George A. Fuller Company

Veterans Administration Neuropsychiatric Hospital,
Topeka, Kansas
Arch.: Veterans Administration Architects
Con.: Peter Kiewit & Son, Omaha, Nebraska



Central Reception & Classification Center,
Columbus, Ohio
Arch.: Conrad & Simpson, Cleveland, Ohio
Con.: Baler Coombs, Morgantown, West Virginia

Hollow Metal

Metropolitan Hospital, New York
Arch.: Charles B. Meyers, Dept. of Public Works
Con.: Wilaka Construction Co.

▲ special entrances

Elmhurst General Hospital, Elmhurst, New York
Arch.: Fellheim-Wagner
Con.: Depot Construction Co.

SCHOOLS

The Dearborn High School is just one of many school jobs for which we have furnished Hollow Metalwork.

You will note from the photographs that this job is of an extremely complicated nature. The side walls shown on the photograph of the gymnasium below were made in Hollow Metal by Superior Fireproof Door & Sash Co., Inc. Wind bracing was furnished to tie the members in with the structural form.

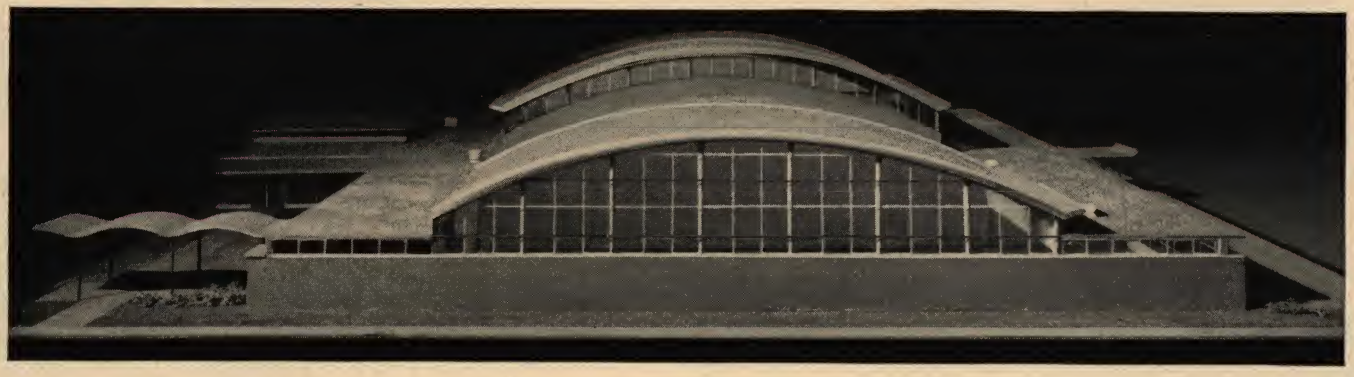
"KNOW HOW" in both engineering and manufacturing is a "must" in order to manufacture such units as these, so that when they reach the job they "*fit.*"

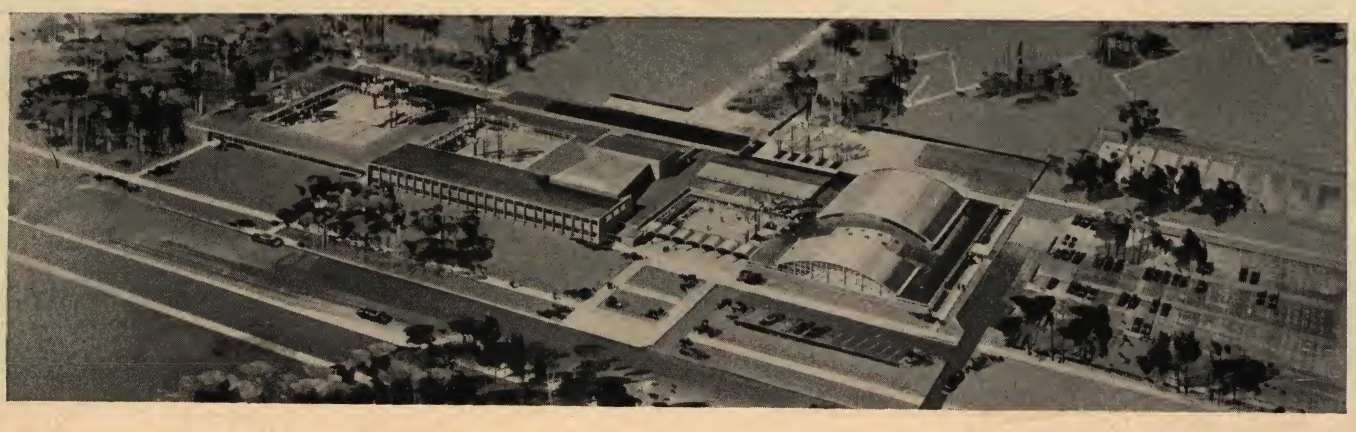
Interior borrowed lite partitions and side light entrances are other special Hollow Metal items which are required in the modern school. Listed below are some typical Hollow Metal items which we manufacture regularly for school type construction.

- Hollow Metal Doors and Frames
- Borrowed Light Partitions
- Porcelain Panels for Borrowed Light Partitions
- Window Sills
- Window Trim
- Convector Enclosures
- Black Board Trim
- Shelving
- Soundproof Doors

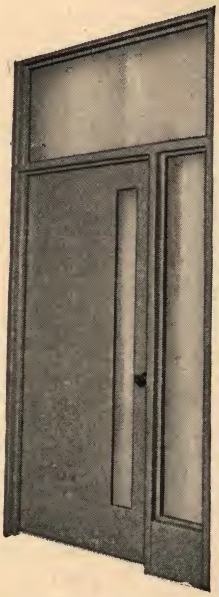
When outlining scope of work for your Hollow Metal section include all of these related products.

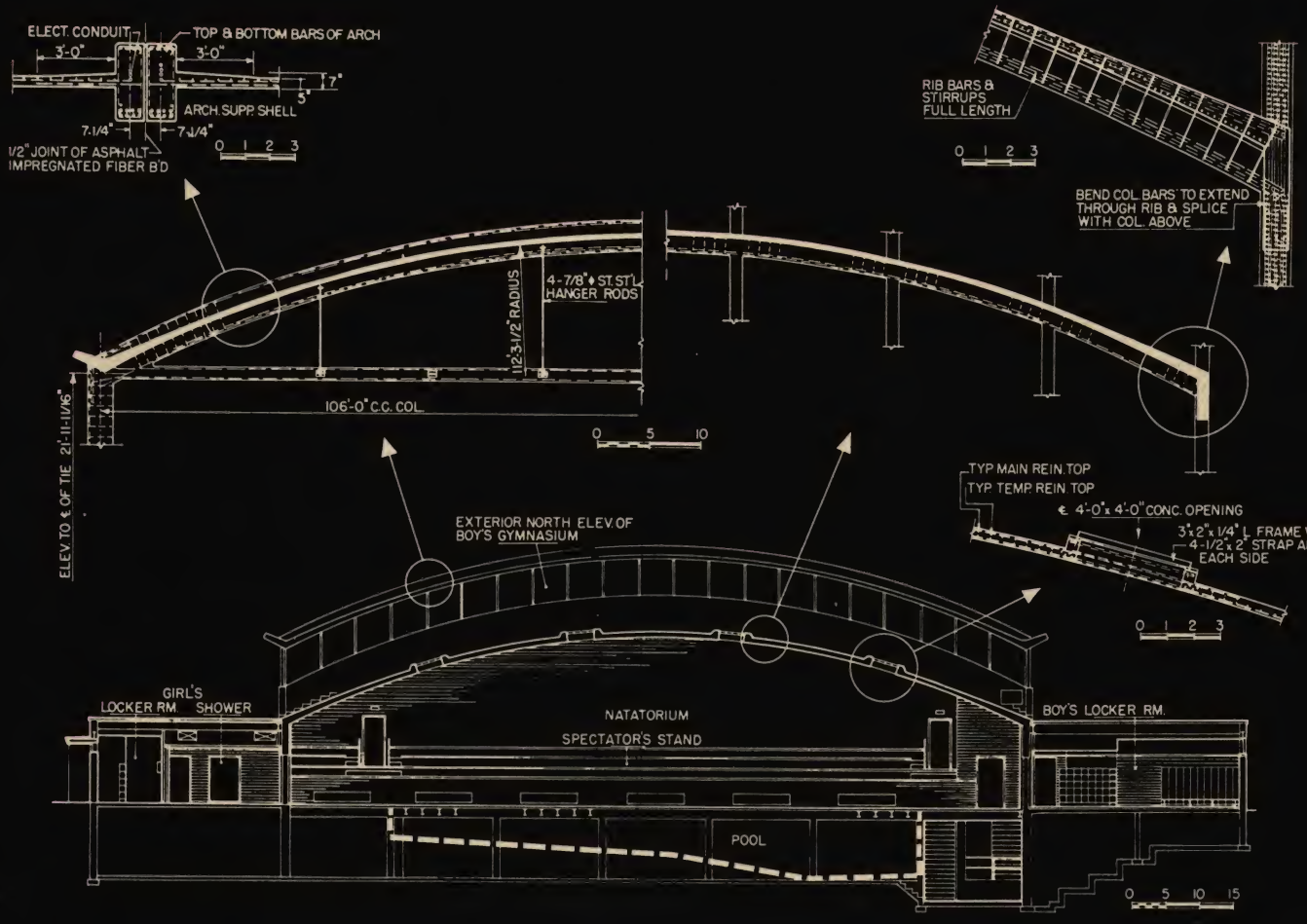
Arch: Eberle M. Smith Associates





Hollow Metal





PRISONS

Hollow metal required for prison work is highly special. In addition to all normal quality demands, the added element of security must be considered. Superior Fireproof Door and Sash Co. has supplied various hollow metal specialties to meet contemporary design and security demands in the country's newest prisons, jails, and neuropsychiatric hospitals.

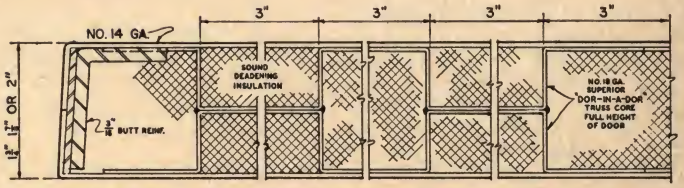
Superior Fireproof's design and engineering departments have years of experience in producing the hollow metal specialties needed for detention and security type buildings. We have designed, produced, and installed Security Doors, Speaking and Observation Cubicles, Detention Window Trim, Detention Screens, in addition to regular hollow metal borrowed light partitions, entrances, doors and frames for the detention centers pictured here. The experienced hands that helped erect these modern prisons are available for your next building project of this type. Contact us for details of our Prison Hollow Metal Work. Our special catalog is available covering Prison Hollow Metal. Write for Superior Fireproof Door and Sash Co.'s A.I.A. catalog #16-A-58-2.

Nassau County Jail
Arch.: Chapman, Evans & Delehanty
Charles V. Smith, Com. of Public Works

Hollow Metal

Maryland State Penitentiary,
Baltimore, Md.
Arch.: Buckler, Fenhagen,
Meyer & Ayers
Con.: Kirby & McGuire, Inc.

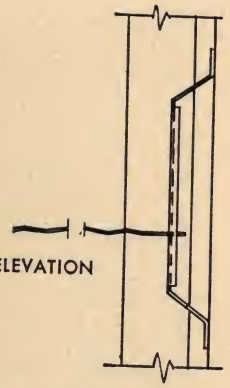
▲ special hollow metal for prisons



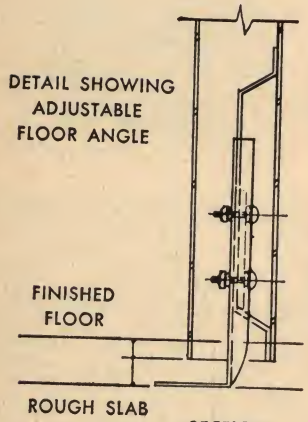
SECTION THRU HINGE STILE–SHOWING NO. 18 GA. SUPERIOR "DOR-IN-A-DOR" TRUSS CORE

Kent County Jail, Michigan
Arch.: Obyron & Kapp
Con.: Owen, Ames, Kimball

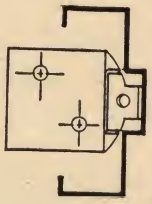
FRAMES



DETAIL OF ANCHOR



SECTION



PLAN

The following is a recommended specification and shall only be furnished if this specification is incorporated into the hollow metal specification for each job.

SPECIFICATIONS

All hollow metal frames shall be designed to suit job conditions.

Frames shall be made of 16 gauge or 14 gauge, as specified, and shall be to the trim profile shown on the architectural plans.

Frames shall be mitered at the trim and door stop so that only a hair line appears at this joint. Trim and stop are continuously welded on the concealed portion of the frames.

Wall anchors shall be furnished to suit types of walls indicated on architectural plans. "Superior" type adjustable floor anchors are furnished, adjustable to 3½". Spreaders are channel type, clipped to floor anchors and are adjustable therewith.

Hinge reinforcements shall be no lighter than 8 gauge and thoroughly spot-welded to the frames. A mortar protection box shall be installed behind each hinge cutout to prevent screw holes from being filled when frames are grouted.

Lock strike reinforcements shall be no lighter than 11 gauge, with mortar box protection as noted for hinges. Frames shall be suitably reinforced for surface applied hardware with a gauge of proper thickness to insure maximum development of screw thread security. All drilling and tapping for surface applied hardware to be performed by field installation men.

After assembly, all surface imperfections shall be ground smooth, and all exposed surfaces degreased and thoroughly cleaned of rust, oil, and other impurities.

All exposed surfaces shall be phosphate coated, producing a coating that actually conditions the surface of the metal to resist and inhibit corrosion, and to promote increased paint adhesion.

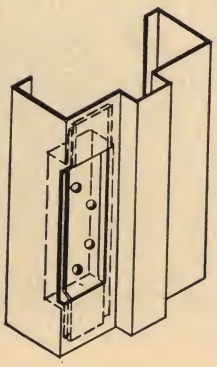
A mineral paste filler shall be knife applied to fill any remaining surface irregularities.

Frames shall be fully immersed in a rust resisting red zinc chromate primer, coating and protecting all hidden as well as exposed surfaces.

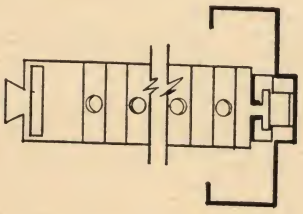
Frames shall then be oven baked to develop maximum hardness and abrasion resistance of the prime paint.

Exposed surfaces of 1st Prime Coat shall be sanded smooth as required, and sprayed with one coat of a light gray primer baked on, to increase the thickness of the prime paint film and to provide a non-bleeding light colored base for succeeding field coats, which will be applied by the painting contractor.

To maintain the factory finish, we recommend that materials be stored away from excess moisture and handled in a manner to minimize abrasions. Scratches, nicks, dents and other marring of the paint film due to causes of job conditions shall be cleaned and touched up in the field by the painting contractor.

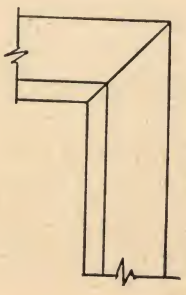


BUTT REINF. & MORTAR BOX

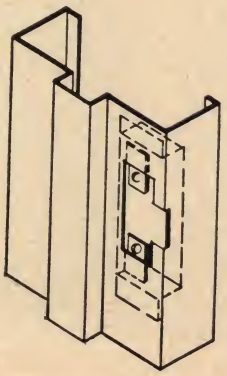


PLAN

DETAIL OF ANCHOR



CORNER OF FRAME SHOWING MITRED STOP & TRIM



LOCK STRIKE REINF. & MORTAR BOX

Hollow Metal

DOORS

The following is a recommended specification and shall only be furnished if this specification is incorporated into the hollow metal specification for each job.

SPECIFICATIONS

All hollow metal doors shall be made in accordance with Superior Fireproof Door & Sash Co.'s *Underwriters' Laboratories "B" Label procedure.*

Surface sheets shall be made of 18 or 16 gauge as specified, cold rolled sheet steel prime commercial quality.

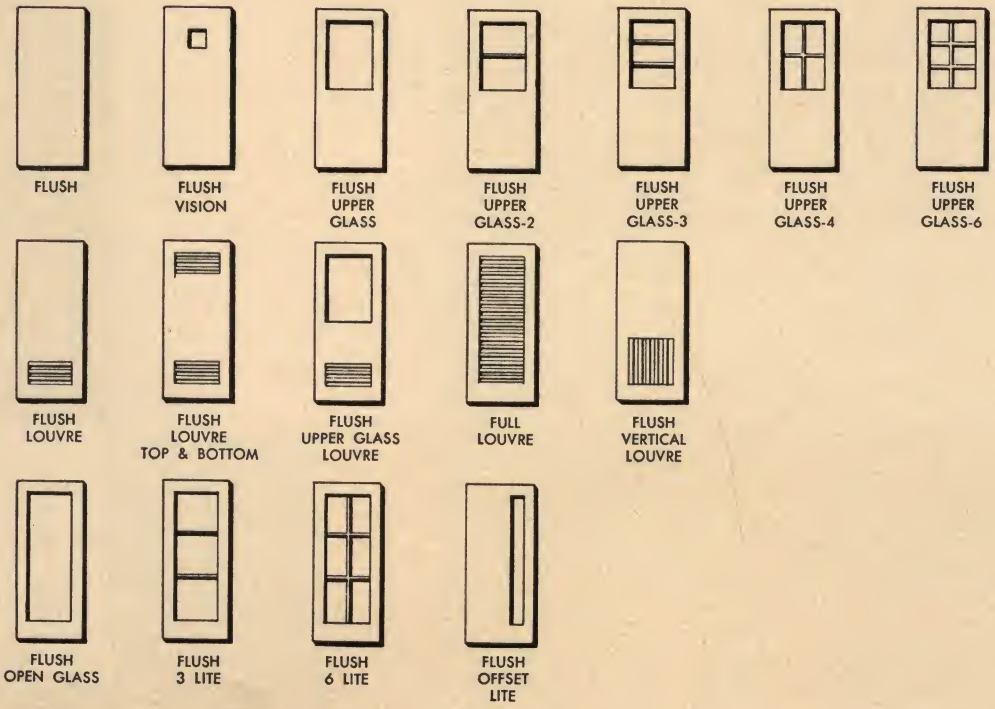
Vertical stiffener reinforcements shall run full length of the door between top and bottom channels and shall be spot welded to the face sheets. These spot welds shall be no more than 3½" on center.

Vertical stiffeners shall be 22 gauge truss shapes. Space between truss reinforcement shapes shall be no more than 6" on center. Truss shapes shall be joined by internal welding so that no movement between shapes can occur. Edge backing strip shall be spot welded to the inside edges of doors prior to continuous welding. Edges shall be continuously welded using the Heliarc method of continuous welding. Edges shall then be ground smooth and roughages filled prior to finishing operations.

All hinge reinorcements shall be no lighter than 8 gauge. These hinge reinforcements shall be of an angle shape so that at least 1½" of metal shall be spot welded to the face sheet of the door with at least 6 spot welds so as to create full bearing for the hinge reinforcement. Lock reinforcements shall be 11 gauge for the face of the lock and 14 gauge for escutcheon and lock reinforcements.

All doors shall be painted on the inside surfaces prior to assembly. Doors shall also be filled with Underwriter's approved type sound deadening material. Doors shall have 16 gauge top and bottom channels spot welded to each face. These spot welds shall be spaced at least 2" on center.

All doors are to receive necessary grinding and polishing and any imperfections shall be filled and sanded so that doors may be prepared to receive a baked enamel finish. All doors shall then receive two coats of a light gray prime baking enamel applied and baked separately.



SUPERIOR FIREPROOF DOOR AND SASH CO., INC.

some completed jobs

PROJECT	LOCATION	CONTRACTOR	MATERIALS & QUANTITIES
Metropolitan Hospital	New York City New York	Wilaka Const. Co. New York City	2,800 HM Doors 3,000 HM Frames 165 Elev. Fronts
Veterans Hosp. East 23rd Street	New York City New York	Cauldwell-Wingate New York City	250 HM Doors 4,500 HM Frames 235 Elev. Fronts
Statler Center	Los Angeles Calif.	Robert E. McKee Los Angeles	1,850 HM Doors 6,000 HM Frames
N. Y. State Hosp.	Central Islip New York	Lasker-Goldman New York City	700 HM Doors 750 HM Frames 750 Rad. Encl.
N. Y. State Hosp.	Creedmoor New York	Wilaka Const. Co. New York City	1,880 HM Doors 2,100 HM Frames 20 Elev. Fronts 2,000 Rad. Encl.
N. Y. State Hosp.	Central Islip New York	Turner Const. Co. New York City	1,900 HM Doors 2,000 HM Frames 20 Elev. Fronts
Veterans Hosp.	Albany New York	Ring Const. Co. Minneapolis	500 HM Doors 3,500 HM Frames
Elmhurst Gen. Hosp.	New York City New York	Depot Const. Co. New York City	690 HM Doors 3,800 HM Frames 109 Elev. Fronts
Brockton VA Hosp.	Brockton, Mass.	Gust K. Newburg Co. Chicago, Ill.	3,000 HM Frames 400 HM Doors 2,000 Window Trim
Ford Central Staff	Dearborn, Mich.	Bryant-Detwiler Detroit, Mich.	900 HM Doors 1,200 HM Frames 16,000 Lin. Ft. Convectors 16,000 Lin. Ft. Venetian Blind St. St. Door & Frames
Hotel Statler	Dallas, Texas	Otis Elev. Co.	180 Elev. Fronts
U.S. Military Personnel Records Center	St. Louis Missouri	Fruin-Conlon Peter Kiewit & Sons	3,000 Ft. HM B.L. Partitions 800 HM Doors 800 HM Frames 120 Fan Encl.
Commercial Credit Office Bldg.	Baltimore Maryland	Consolidated Eng. Co.	500 HM Doors 500 HM Frames
Hotel Statler	Washington, D.C.	John W. Harris Co.	3,000 HM Frames 500 HM Doors
Veterans Research Hosp.	Chicago Illinois	O'Neil Const. Co. Chicago, Ill.	2,000 HM Frames 400 HM Doors
Morton Med. Lab.	Chicago Illinois	Ragner-Benson Co. Chicago, Ill.	
Topeka VA Hosp.	Topeka Kansas	Peter Kiewit & Sons	1,500 HM Frames 375 HM Doors 1,601 Windows HM Window Trim
Creedmoor Hosp.	New York	Depot Const. Co.	2,200 HM Doors 90 Elev. Fronts 2,200 HM Frames 1,700 Radiator, Convector Enclosures Corner Guards St. St. Specialties

Superior Fireproof Door and Sash Co., Inc.
executive offices: 4175 Park Ave., New York 57, N. Y.
manufacturing plants: New York, N. Y. and Scranton, Pa.

A.I.A. File No. 16-A

TRUSCON

HOLLOW METAL

DOORS AND FRAMES

1960 CATALOG

A.I.A. File No. 16-A

REPUBLIC STEEL CORPORATION · TRUSCON DIVISION
YOUNGSTOWN 1, OHIO

TRUSCON 1¾" HOLLOW METAL DOORS AND FRAMES — SERIES 57

FOR RESIDENTIAL, COMMERCIAL AND PUBLIC BUILDINGS

Truscon 1¾" Hollow Metal Doors are designed for exterior or interior use. Fabricated of heavy gauge steel, doors are reinforced, welded and sound deadened to eliminate metallic sounds in normal operation. They are adaptable for residential and industrial construction, and are particularly recommended for monumental structures including schools and hospitals. Bonderized and primed with a high quality light gray paint baked on at the factory, the finish affords a perfect base for field painting in any color.

The Series 57 Hollow Metal Door is inherently fire resistant. No warping or shrinking due to atmospheric changes is ever encountered. Doors always operate freely and require a minimum of maintenance.

Doors are available in flush panel, half glass, full glass and vision panel designs, and may also be equipped with integral pierced louvers. Combinations of these designs are also stocked.

Also available is a wide range of heavy duty hardware in handsome modern designs and finishes as illustrated and described in the following pages.

Pressed steel frames for Series 57 Hollow Metal Doors of 16 gauge steel are 5½" deep in double rabbeted design — permitting installation of screen doors. Frames are shipped knocked down for simple field assembly by clinching tabs at upper corners.

All doors and frames are reinforced and prepared for hinges and locks as described and may be furnished with surface applied closer reinforcements. Factory preparation for these items eliminates costly and time consuming field work. Warehouse stock doors and frames include many sizes and types normally required for the average project. They are available with preparation for cylindrical locksets (2¾" backset) in accordance with Federal Specification FF-H-106a, Series 161 locks; or with preparation for mortise locksets in accordance with Federal Specification FF-H-106a, Series 86 locks. Warehouse type doors available prepared for standard Truscon Panic Exit hardware.

SPECIFICATIONS

1. General — Doors and frames shall be Truscon Hollow Metal Doors and Frames, Series 57, as manufactured by the Republic Steel Corporation, Truscon Division, Youngstown, Ohio.

2. Materials and Construction — Doors shall be of flush construction, 1¾" in thickness. Door stiles shall be 5½" wide, of formed 16 gauge steel, reinforced for hinges and prepared to receive either cylindrical or mortise type locks, as required. Reinforcements shall consist of specially formed steel plates, securely and accurately welded in place, and provided with tapped holes where required for attachment of standard Truscon hardware.

Panels shall be of 18 gauge prime quality cold rolled steel, spot welded to 18 gauge channels at each vertical edge. Panel assembly shall be reinforced at approximately 17" centers, alternating at front and rear so that a horizontal stiffener occurs at approximately every 8½". Stiffener shall consist of U-shaped transverse sections formed of 24 gauge steel, welded to the inside of the panel. Panel assembly shall be rigidly interlocked with stiles, and the top and bottom of doors reinforced and closed with 14 gauge steel channels securely spot welded to the inside of both panels and stiles.

In addition, doors for exterior use shall be fitted with a channel filler of 18 gauge steel at the head. Double swing doors shall have steel astragal attached to the inactive leaf.

Doors requiring glass lights or glass panels shall be of types standard with manufacturer and as illustrated in current catalog. Muntins and glazing moldings shall be of 18 gauge steel, and arranged for glazing with glass of ¼" thickness. All glazing moldings shall be of the snap-on type, with no exposed screws.

3. Sound Deadener — All doors shall have sound deadening material of an approved type applied to the interior surface of panels. Sound deadener shall eliminate all metallic reverberations incident to normal door operation. The sound deadener consists of a composition felt material applied to the interior surface of the panels.

4. Hardware — All door hardware and provisions for same shall be of manufacturer's standard design.

(a) Hinges: Shall be full mortise template butt hinges 4½" x 4½", loose pin type. Three hinges per door leaf for leaves up to 7'-6" in height. Hinges shall be (select one): (1) steel, prime painted; (2) steel, 2-race ball bearing, prime painted; (3) bronze, U. S. 10 finish, 2-race ball bearing.

For structural steel frames, furnish hinges as previously described, except they shall be of the half-mortise type.

(b) Locks: Shall be (select one):

(1) Heavy duty bronze cylindrical locks, Government Series 161, in function as required. Finish shall be bronze, U. S. 10.

(2) Heavy duty bronze mortise locks, Government Series 86, in function as required, complete with escutcheons, knobs and keys.

All locks shall be furnished complete with strikes and machine screws for attachment.

(c) Door Closers (where required): Door closers shall be cast iron, painted, U. S. Government Type 3001. Furnish corner brackets where required.

(d) Double Swing Doors shall have the inactive leaf prepared for standard Truscon surface applied top and bottom bolts.

(e) Miscellaneous Hardware Requirements: Where called for on drawings, or where specified, the following hardware items as illustrated and described in door manufacturer's current catalog shall be furnished (delete inapplicable items): (1) Panic Exit Hardware (specify set number). (2) Door Stops. (3) Push and Pull Plates. (4) Push and Pull Bars. (5) Kick Plates. (6) Thresholds.

5. Frames — Frames shall be fabricated of 16 gauge steel in a double rabbeted design. Depth of the frame shall be 5½", with face 2" wide. All frames shall be furnished knocked down and designed for simple field assembly of header to jamb members by tenons, forming square and rigid corners with tenons bent in place to securely lock the assembly. Frame shall be prepared and reinforced for standard hinges and lock strike, and equipped with dust box for strike. Standard floor anchors and three stud or masonry wall anchors per jamb shall be furnished. The lock side member of frame shall be prepared for three rubber mutes, which shall be furnished for field attachment.

6. Louvers — Louvers shall be of the fixed type, stamped into door panels and in accordance with manufacturer's standard design as illustrated in current catalog.

7. Shop Finish — All doors, frames and collateral steel items shall be bonderized and primed with one coat of light gray (phenol-resin) paint oven-baked for one hour at 350° Fahrenheit.

8. Erection (By Others) — Frames shall be installed plumb, rigid and in true alignment, with all clearances accurately maintained. Doors shall be hung, and all hardware attached after finish painting.

9. Glazing — (By Glazing Contractor) — All glass shall be of ¼" thickness, bed puttied and held in place by glazing moldings furnished by door manufacturer. Glazing shall be done prior to finish painting.

Note: We reserve the right to amend specifications and details, without notice, in the interest of product improvement.

Copyright Republic Steel Corporation, Truscon Division, Youngstown, Ohio, January, 1960

TRUSCON 1¾″ HOLLOW METAL DOORS AND FRAMES—SERIES 57

TYPES AND SIZES

LEAF DESIGN AND GLASS SIZES

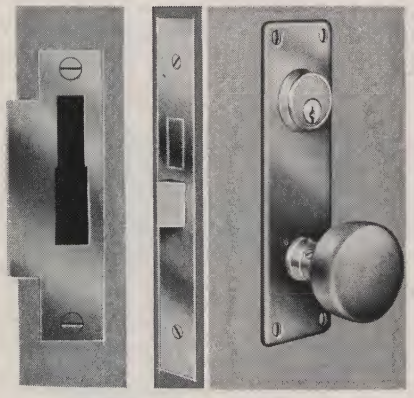
SINGLE SWING DOORS													
Single Swing Type	Door Opening Dimensions		FP	HG-1	HG-2	HG-3	HG-4	HG-6	FG	VP	HG-1 L2B	L2B	L2TB
	Width	Height		Glass Size	Glass Size	Glass Size	Glass Size	Glass Size	Glass Size	Glass Size	Glass Size		
2068	2′-0″	6′-8″		11″ x 30″	11″ x 14¾″	11″ x 9⅝″			11″ x 56″	10″ x 10″	11″ x 30″		
2070	2′-0″	7′-0″		11″ x 34″	11″ x 16¾″	11″ x 11″			11″ x 60″	10″ x 10″	11″ x 34″		
2468	2′-4″	6′-8″		15″ x 30″	15″ x 14¾″	15″ x 9⅝″	7¼″ x 14¾″	7¼″ x 9⅝″	15″ x 56″	10″ x 10″	15″ x 30″		
2470	2′-4″	7′-0″		15″ x 34″	15″ x 16¾″	15″ x 11″	7¼″ x 16¾″	7¼″ x 11″	15″ x 60″	10″ x 10″	15″ x 34″		
2668	2′-6″	6′-8″		17″ x 30″	17″ x 14¾″	17″ x 9⅝″	8¼″ x 14¾″	8¼″ x 9⅝″	17″ x 56″	10″ x 10″	17″ x 30″		
2670	2′-6″	7′-0″		17″ x 34″	17″ x 16¾″	17″ x 11″	8¼″ x 16¾″	8¼″ x 11″	17″ x 60″	10″ x 10″	17″ x 34″		
2868	2′-8″	6′-8″		19″ x 30″	19″ x 14¾″	19″ x 9⅝″	9¼″ x 14¾″	9¼″ x 9⅝″	19″ x 56″	10″ x 10″	19″ x 30″		
2870	2′-8″	7′-0″		19″ x 34″	19″ x 16¾″	19″ x 11″	9¼″ x 16¾″	9¼″ x 11″	19″ x 60″	10″ x 10″	19″ x 34″		
3068	3′-0″	6′-8″		23″ x 30″	23″ x 14¾″	23″ x 9⅝″	11¼″ x 14¾″	11¼″ x 9⅝″	23″ x 56″	10″ x 10″	23″ x 30″		
3070	3′-0″	7′-0″		23″ x 34″	23″ x 16¾″	23″ x 11″	11¼″ x 16¾″	11¼″ x 11″	23″ x 60″	10″ x 10″	23″ x 34″		
3468	3′-4″	6′-8″		27″ x 30″	27″ x 14¾″	27″ x 9⅝″	13¼″ x 14¾″	13¼″ x 9⅝″	27″ x 56″	10″ x 10″	27″ x 30″		
3470	3′-4″	7′-0″		27″ x 34″	27″ x 16¾″	27″ x 11″	13¼″ x 16¾″	13¼″ x 11″	27″ x 60″	10″ x 10″	27″ x 34″		
3868	3′-8″	6′-8″		31″ x 30″	31″ x 14¾″	31″ x 9⅝″	15¼″ x 14¾″	15¼″ x 9⅝″	31″ x 56″	10″ x 10″	31″ x 30″		
3870	3′-8″	7′-0″		31″ x 34″	31″ x 16¾″	31″ x 11″	15¼″ x 16¾″	15¼″ x 11″	31″ x 60″	10″ x 10″	31″ x 34″		
4068	4′-0″	6′-8″		35″ x 30″	35″ x 14¾″	35″ x 9⅝″	17¼″ x 14¾″	17¼″ x 9⅝″	35″ x 56″	10″ x 10″	35″ x 30″		
4070	4′-0″	7′-0″		35″ x 34″	35″ x 16¾″	35″ x 11″	17¼″ x 16¾″	17¼″ x 11″	35″ x 60″	10″ x 10″	35″ x 34″		

NOTES:

- Any of the above doors can be furnished as pairs. Door opening widths to be double that of single doors. Heights remain the same.
- Warehouse stock doors include single swing units indicated in shaded blocks under leaf design. Any warehouse stock door leaf listed above may be modified and used with any similar size single swing door leaf to compose a double swing door. Necessary modifications are made in warehouse.
- Warehouse stock doors and frames are surface reinforced for door closers, when required, at slight additional cost. Drilling to receive closer not included.
- Standard pressed steel frames for stock doors are available from warehouse.
- All sizes and types of doors shown above, but not warehoused, are available for factory shipment.
- Doors and frames are prepared for cylindrical locksets in accordance with Federal Specification FF-H-106a Series 161.
- Doors and frames are prepared for mortise locksets in accordance with Federal Specification FF-H-106a Series 86.
- Doors and frames are available from warehouse stocks provided for standard Truscon panic exit hardware (inside and outside control).

TRUSCON 1¾" HOLLOW METAL DOORS AND FRAMES—SERIES 57

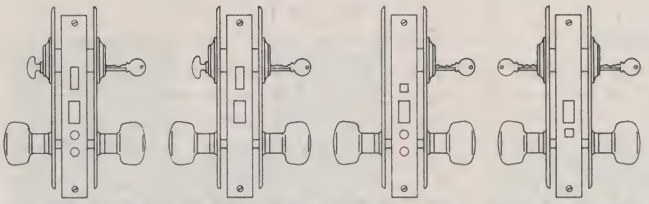
MORTISE LOCKS



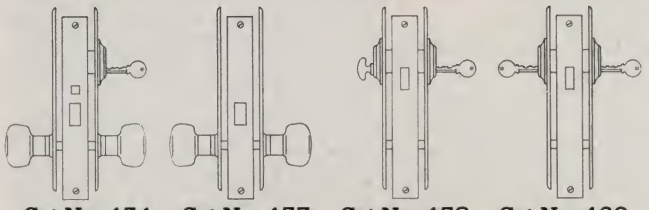
MORTISE LOCKSET WITH STRIKE

All locksets shown on this page are heavy duty mortise type and meet Federal Specification FFH-106a for designs as illustrated. Standard finish is bronze, U.S. 10, with U.S. 26D dull chrome finish optional, factory shipment. Locksets are furnished with cylinders keyed different, but keyed alike or masterkeyed cylinders will be furnished when so specified, and at additional cost.

See page 5 for deadbolt locksets used in conjunction with Push and Pull Handle and Bar hardware.



Set No. 443 Set No. 444 Set No. 448 Set No. 452



Set No. 454 Set No. 457 Set No. 458 Set No. 460

Set No. 443; Gov't No. 86-A, FRONT DOOR LOCK—Latch bolt by knob from either side, except when outer knob is locked by stop in face. When outer knob is locked, latch bolt by key from outside. Dead bolt by key from outside and thumb turn from inside. Not reversible.

Set No. 444; Gov't No. 86-B, LATCH AND DEADLOCK (ENTRANCE DOOR)—Latch bolt by knob from either side. Dead bolt by key from outside and thumb turn from inside. Reversible. Also available with cylinders both sides (Gov't No. 86C).

Set No. 448; Gov't No. 86-E, OFFICE LOCK — Latch bolt by knob from either side, and from inside at all times. Outer knob is locked by stop in face. When outer knob locked, latch bolt by key from outside. When door is closed, auxiliary bolt deadlocks latch bolt against end pressure. Not reversible.

Set No. 452; Gov't No. 86-G, APARTMENT ENTRANCE, OFFICE DOOR AND PUBLIC TOILET LOCK — Latch bolt by knob from either side except when outer knob locked by stop works controlled by inside cylinder. When outer knob locked, latch bolt by key outside. When door closes, auxiliary bolt deadlocks latch bolt. When specified, inside cylinder by master key only. Not reversible.

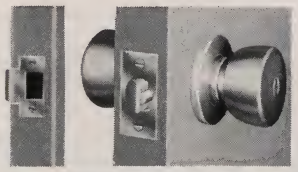
Set No. 454; Gov't No. 86-J, CLASSROOM LOCK — Latch bolt by key from outside and by knob from inside at all times. Latch bolt by knob from outside, except when locked by key. Cylinder controls stop works. When door is closed, auxiliary bolt shall deadlock the latch bolt against end pressure. Not reversible.

Set No. 457; Gov't No. 86-N, KNOB LATCH FOR PASSAGE OR CLOSET DOOR — Latch bolt by knob from either side. Reversible.

Set No. 458; Gov't No. 86-P, DEADLOCK — Dead bolt by key from one side and by thumb turn from other side. Fixed knobs on both sides. Recommended for use with door closer.

Set No. 460; Gov't No. 86-T, DEADLOCK — Dead bolt by key from either side. Fixed knob on hinge side only. Recommended for use with door closer.

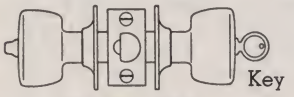
CYLINDRICAL LOCKS



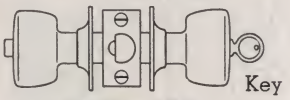
CYLINDRICAL LOCKSET, STRIKE

Cylindrical (key-in-knob type) locks offer convenience and economy. Truscon's standard preparation is for the heavy duty lockset, 2¾" backset, Series 161 under Government Specification No. FFH-106a. Pin tumbler cylinder is in knob. Cylinders are furnished keyed different although keyed alike or masterkeyed cylinders are available when required and at slight additional cost.

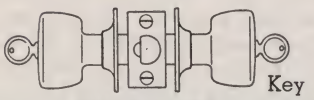
Standard finish is bronze, U.S. 10, with U.S. 26D dull chrome finish available from factory. On special order, other finishes are available. Illustrated are seven standard locksets, in function as most frequently required. Twelve other locksets comprising the balance of Government functions in Series 161 locks are available on special order. All warehouse stock doors and frames are prepared to receive all locksets shown below.



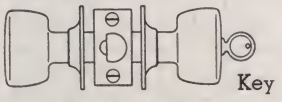
★Set No. 356



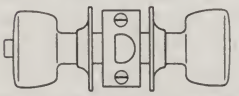
Set No. 352



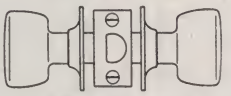
★Set No. 355



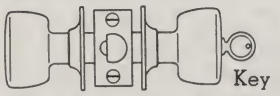
Set No. 357



Set No. 353-A or 353-B



★Set No. 351



★Set No. 354

★Indicates warehouse stock items.

★Set No. 356; Gov't No. 161-A, FRONT OR OFFICE DOOR LOCK — Latch bolt from either side by knob, except when outside knob locked by inside turn button. Operable by key or inside knob when outer knob set. Latch bolt automatically deadlocked against end pressure when door closed. Turn button must be manually operated to release outside knob.

Set No. 352; Gov't No. 161-B, OFFICE DOOR LOCK — Latch bolt from either side by knob, except when outside knob locked by inside push button. Turning inside knob or key automatically releases push button and outside knob. Closing door does not release push button or knob. Latch bolt automatically deadlocked against end pressure when door is closed.

★Set No. 355; Gov't No. 161-C, ENTRANCE, OFFICE BUILDING, AND LAVATORY LOCK — Latch bolt from either side by knob, except when outside knob is locked by inside key. Lock operable by key or inside knob when outside knob locked. Latch bolt automatically deadlocked against end pressure when door is closed.

Set No. 357; Gov't No. 161-D, STOREROOM AND EXIT DOOR LOCK — Latch bolt by outside key and inside knob. Outside knob always locked. Latch bolt automatically deadlocked against end pressure when door is closed.

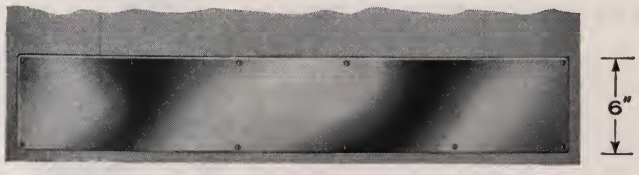
Set No. 353-A or 353-B; Gov't No. 161-L, BEDROOM AND BATHROOM DOOR LOCK — Latch bolt by knob from either side, except when outside knob locked by inside push button — then by emergency key only. Push button and outside knob automatically released when inside knob turned, and also when door swings into closed position. (Set 353-B for bathroom has chrome finish on inside trim and strike.)

★Set No. 351; Gov't No. 161-N, PASSAGE DOOR—SIMPLE KNOB LATCH — Latch bolt by knob from either side at all times.

★Set No. 354; Gov't No. 161-R, CLASSROOM DOOR LOCK — Latch bolt by knobs from either side, except when outside knob locked by key. Latch bolt by inside knob at all times. Latch bolt is automatically deadlocked against end pressure when door is closed.

TRUSCON 1¾″ HOLLOW METAL DOORS AND FRAMES—SERIES 57

MISCELLANEOUS HARDWARE



KICK PLATES

K-6807 Kick Plates are available in bronze, aluminum, or stainless steel. All are 16 gauge in thickness, drilled for screws, and furnished complete for field attachment. Doors to be drilled in field, using kick plate as template.

THRESHOLDS

BP-6804 Thresholds are available in brass or aluminum, 5″ wide and ½″ high. Furnished cut to length and proper contour for door frame, drilled and countersunk for installation and complete with screws and expansion shields.

TOP AND BOTTOM BOLTS

★TOP BOLT

★BOTTOM BOTT

★Set No. 3017, surface applied. Furnished for inactive leaf of double swing doors. Complete with keepers and screws for attachment.

Standard is bronze, U.S. 10 finish. Also available in cadmium-plated steel.

HOSPITAL ARM PULL

Standard is bronze, U.S. 10 finish. Attached in field, using base as template.

NOTES:

- ★Indicates warehouse stock item.
- Unless shown otherwise, all hardware illustrated on this page is bronze, U.S. 10 finish, and is also available in U.S. 26D dull chrome finish. Factory shipment.

PUSH AND PULL PLATES

★Set BP-6537, shown at left, is standard. Plates are cast bronze, 2½″ x 8″. Standard finish is bronze, U.S. 10.

Also available is **Set P-3706** (not illustrated), similar in appearance, but 3″ x 12″ in size.

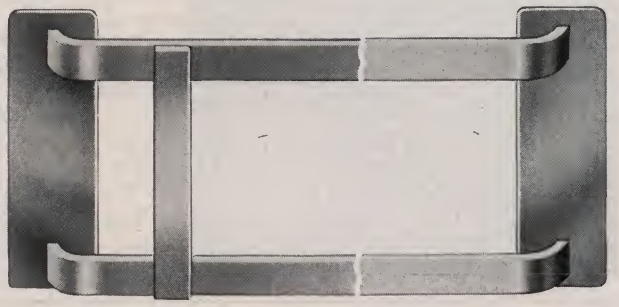
PUSH AND PULL PLATE DEADBOLT LOCKSETS

★Set No. 372 — (As illustrated, except push plate not shown.) Key cylinder outside and thumb turn inside.

★Set No. 373 — Key cylinder inside and outside.

Set No. 371 — Key cylinder outside; plain push plate inside.

Set No. 370 — Plain push and pull plates. No lock.



PUSH AND PULL BARS

Set No. 366 — Plain Push and Pull Bars only. (Pull Bar assembly illustrated above.)

Set No. 367 — Includes P-6613 deadbolt lock. Pull Bar assembly with key cylinder outside. Plain Push Bar assembly inside.

Set No. 368 — Same as Set No. 367, except inside Push Bar assembly includes thumb turn.

Set No. 369 — Same as Set No. 367, except key cylinders inside and outside.

DOOR STOP

Simple floor-mounted type, furnished complete with screws and expansion shields.

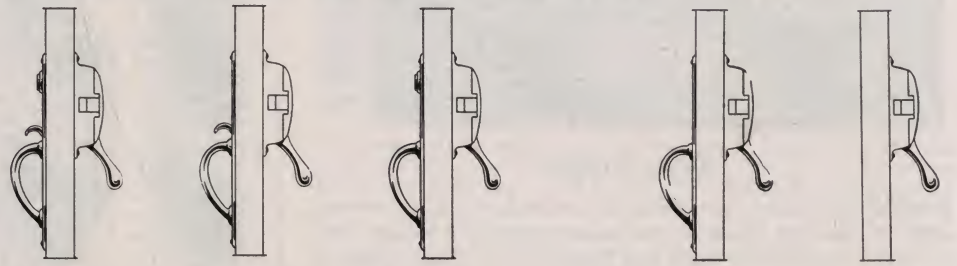
Other designs of floor and wall type door stops are available on special order.

TRUSCON 1¾" HOLLOW METAL DOORS AND FRAMES—SERIES 57

PANIC EXIT HARDWARE—DOOR CLOSERS—HINGES

★ Indicates Warehouse Stock Items

BRONZE PANIC EXIT DEVICES FOR SINGLE SWING DOORS

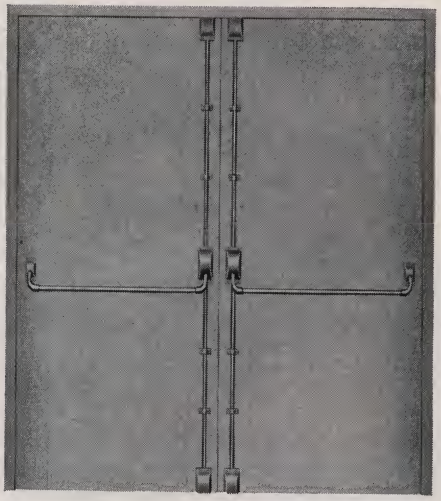


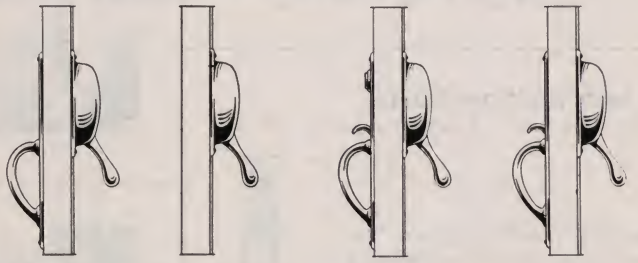
★ No. 5333 x 2513 With Cylinder | No. 5322 x 2512 No Cylinder | No. 5311 x 2511 With Cylinder — INSIDE AND OUTSIDE CONTROL

No. 5300 x 2510 | No. 5300 — INSIDE CONTROL

Typical interior elevation shown at left. All devices illustrated are surface applied. Standard finish is bronze U.S. 10. Also available in U.S. 26D dull chrome finish.

BRONZE PANIC EXIT DEVICES FOR DOUBLE SWING DOORS



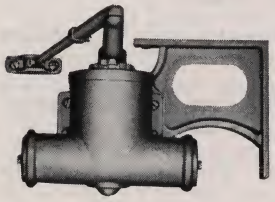


No. 5400 x 2510 | No. 5400 — INSIDE CONTROL

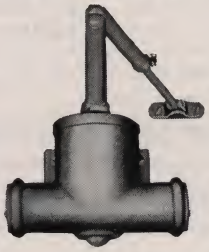
★ No. 5433 x 2513 With Cylinder | No. 5422 x 2512 No Cylinder — INSIDE AND OUTSIDE CONTROL

Detail of rubber astragal. Furnished on all double swing doors with panic exit hardware.

Typical interior elevation shown at left. All devices illustrated are surface applied. Standard finish is bronze U.S. 10. Also available in U.S. 26D dull chrome finish.



★ Door Closer P-3534 with corner bracket for Outswing Doors.



★ Door Closer P-3535 for Inswing Doors.

DOOR CLOSERS

Heavy Duty door closers shown at left are Government type 3001, Specification No. FFH-121c. Closers are cast iron, finished in bronze, aluminum or dead black lacquer. Surface-applied reinforcing plates are standard for doors and frames requiring closers. All drilling and tapping for closer attachment is to be performed in the field. Hold-open, Fusible Link, and Hospital Arms are available for use with all closers.

★ P-6577. Steel plain bearing, prime painted.

★ P-6577-A. Steel, 2-race ball bearing, prime painted.
★ P-6577-B. Bronze, 2-race ball bearing, U.S. 10 finish.

HINGES

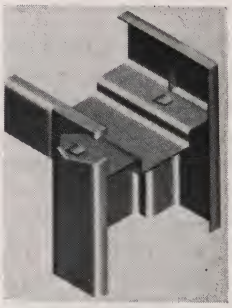
Hinges are 4½" x 4½" full mortise template type, loose pin. Also available, but not illustrated, are 4½" half mortise hinges for use in conjunction with structural steel frames.

Three hinges per door leaf furnished on doors up to 7'-6" in height. Furnished complete with screws for attachment and hinge filler clips.

Note: Ball bearing hinges are recommended for doors equipped with closers.

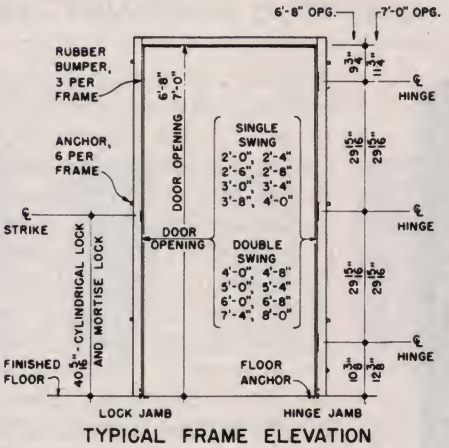
TRUSCON 1¾" HOLLOW METAL DOORS AND FRAMES—SERIES 57

FRAMES FOR SWING DOORS

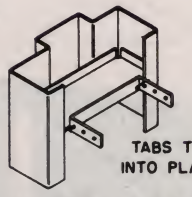


Detail of frame corner connection. Assembled in field by clinching tabs.
(Patent No. 2601164)

- For rough opening sizes add 4½" in width and 2¼" in height to door opening dimensions.
- Frames are shipped knocked down for field assembly. See illustration at left.
- To determine hand of frames refer to illustration below.
- Factory shipment frames include all sizes shown, and are prepared for standard Truscon hardware as required.

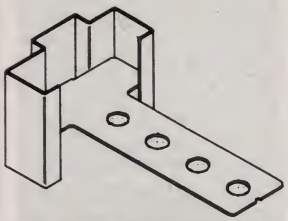


TYPICAL FRAME ELEVATION

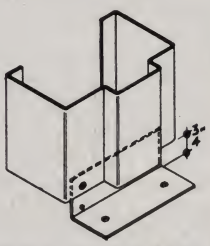


TABS TO BE BENT INTO PLACE IN FIELD

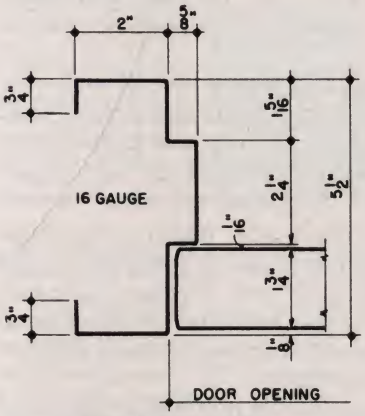
P-6572 ADJUSTABLE STUD ANCHOR



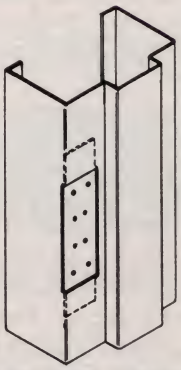
P-6571 ADJUSTABLE MASONRY ANCHOR



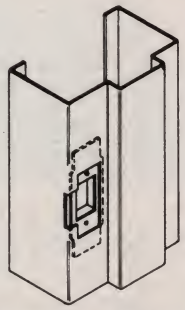
P-6570 ADJUSTABLE FLOOR ANCHOR TO SUB-FLOOR



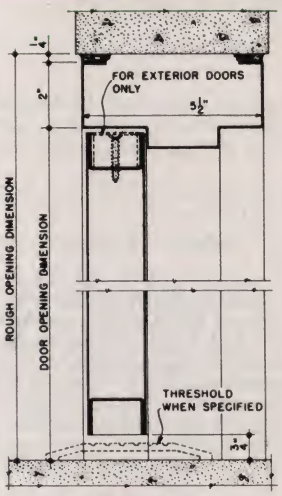
FRAME DETAIL



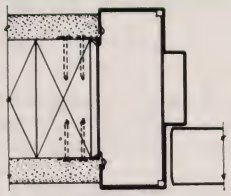
WELDED HINGE REINFORCEMENT
4½" x 4½" FULL MORTISE HINGES ONLY



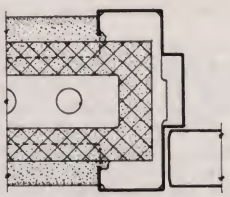
WELDED STRIKE REINFORCEMENT AND PLASTER GUARD
FOR CYLINDRICAL LOCKS



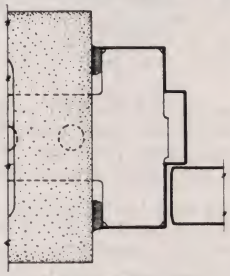
VERTICAL SECTION THROUGH DOOR



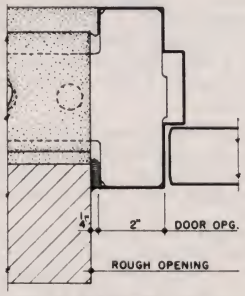
WOOD STUD PARTITION



4" HOLLOW TILE PARTITION

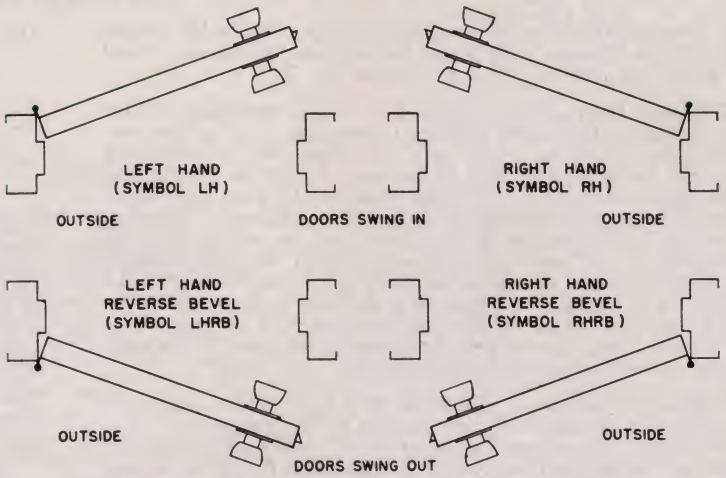


SOLID BRICK OR CEMENT BLOCK WALL



SOLID MASONRY WALL WITH PLASTER ONE SIDE

INSTALLATION DETAILS

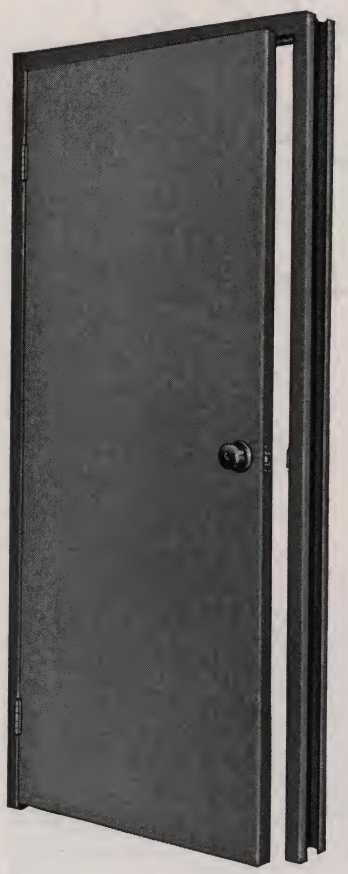


TO DETERMINE HAND OF DOOR ALWAYS VIEW FROM OUTSIDE.

- The hand of a door is determined by location of hinges when door is viewed from the outside. See illustration above.
- The **outside** of a door is the street side of an entrance door, and the corridor side of a room door.
- The **outside** of a communicating door (from one room to another) is the side from which the hinges are not visible when the door is closed.
- The **outside** of a closet door is the room side, thus reversing the rule which applies to other doors.
- Symbols for hand and swing of door are shown above, and should be used in ordering doors, frames and hardware.

TRUSCON 1⅜" HOLLOW METAL DOORS

SWING DOORS AND FRAMES — SERIES 50



Truscon Series 50 Steel Doors and Frames are made from high quality steel and reinforced to provide maximum rigidity. They will not warp, twist, shrink or swell. Doors are sound deadened for quiet operation, and are bonderized for maximum rust protection and paint adherence. Finished with a baked-on prime coat of paint. Mass production economies and low installation costs assure an economical installation in any type of building.

Doors are 1⅜" thick and of a pleasing, flush design. They are available in the standard height of 6'-8", and with the six most popular widths, 1'-8", 2'-0", 2'-4", 2'-6", 2'-8" and 3'-0". Also available are doors with louvers, glass or vision panels, combinations and double doors. Four types of cylindrical locksets (2⅜" backset), designed to meet all normal requirements of residential doors, are offered. They are in accordance with Federal Specification FF-H-106a, Series 160 of dull bronze U.S. 10 material. Truscon now offers, in addition to the above, doors prepared to receive 2¾" backset heavy duty hardware. Available in popular types and sizes from warehouse stocks. Others from factory only.

Frames for the doors are designed to fit practically every type of wall construction. Shipped knocked-down, they are easily and quickly assembled with the corner connections forming neat hairline joints. Frames are available in depths of 2¾", 3¼", 4¼", 5¼" and 6¼", with all except the 3¼" door frames procurable from warehouses in the stock door sizes mentioned above.

Doors shipped from warehouse stocks are bound with heavy corrugated paper strips for protection during shipment. Each door leaf is designed for use in either right or left hand swing, and to open in or out. Frames, however, must be ordered right or left hand to accommodate required swing of door and are bundled for shipment. Frames complete with hinges, rubber bumpers and strike plates are available for use with wood doors.

Underwriters' Labeled Doors and Frames are available in popular types and sizes from warehouses. Others are available from the factory. Consult the nearest Truscon representative for detailed information.

SPECIFICATIONS

1. General—Doors and frames shall be Truscon Hollow Metal Steel Doors and Frames, Series 50, as manufactured by Republic Steel Corporation, Truscon Division, Youngstown, Ohio.

2. Swing Doors — Doors shall be of flush construction, 1⅜" in thickness. Door stiles shall be constructed of 20 gauge steel roll-formed with ⅛" bevel in 2" on edges and reinforced for hinges and locks with steel plates welded in place. Panels shall be constructed of 20 U. S. gauge prime quality cold rolled steel, roll-formed and mechanically stiffened to achieve flatness and rigidity. On doors over 2'-0", panels shall be reinforced at approximately 17" centers, alternating at front and rear so that a stiffener occurs at approximately every 8½" in the door. Stiffeners shall be U-shaped steel transverse sections, securely welded to the inside of the panel. The top and bottom of doors shall be reinforced and closed with die-formed steel channels securely spot welded to the inside of both panels.

3. Sound Deadener — All doors shall have sound deadening material of an approved type applied to the interior surface of panels. Sound deadener shall eliminate all metallic reverberations incident to normal door operation. The sound deadener consists of a composition felt material applied to the interior surface of the panels.

4. Hardware — Doors shall be prepared to receive cylindrical type locks in accordance with Federal Specifications FF-H-106a, Series 160 or Series 161, as specified.

5. Miscellaneous Hardware — The items hereinafter mentioned shall not be included under the door contract but preparation to receive same shall be provided as described.

(A) Door Closers — Door and frame shall be adequately reinforced at points of application. The drilling and tapping for installation shall be performed in field to permit maximum accuracy by using the door closer as a template.

(B) Push-Pull Plates — Standard hardware cutout shall be omitted from door and frame upon request — factory shipment only. Installation with through machine screws shall be made in field.

(C) Door Stops and Holders (Not provided for by Truscon) — To be installed in field with sheet metal screws.

(D) Kick Plates (Not provided for by Truscon) — To be installed in field with sheet metal screws.

6. Frames — Frames shall be of rabbeted design, 2¾", 3¼", 4¼", 5¼" or 6¼" in depth as shown on plans and/or in door schedule. They shall be constructed of 18 U. S. gauge steel except that the 2¾" frames shall be of 16 gauge steel. All frames shall be of knocked-down type with ends of members forming upper frame corners specially designed, insuring a square and solid joint held securely in place by double tenon construction with tenons bent to firmly lock the assembly. The strike cutout shall be provided with heavy gauge steel reinforcement, securely spot welded in the jamb.

(A) Hardware — Frames shall be equipped with two 3-knuckle leaf hinges (3½" x 3½") welded in place at the factory. The two knuckle leaves of hinges, hinge pins and No. 10-24 flat head machine screws shall be furnished separately for attaching door. Three rubber bumpers shall be provided for each frame.

(B) Anchors — Each frame shall be equipped with eight welded anchors for rigid attachment to metal or wood studs. For masonry walls six loose adjustable anchors per frame shall be furnished, and, if required, two adjustable floor anchors.

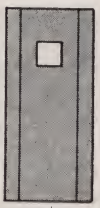
7. Shop Finish — All doors and frames shall be bonderized for maximum rust protection and paint adherence. In addition they shall receive one shop coat of high grade gray paint, oven-baked.

Note: We reserve the right to amend specifications and details, without notice, in the interest of product improvement.

TRUSCON 1⅜″ HOLLOW METAL DOORS AND FRAMES—SERIES 50

TYPES AND SIZES

LEAF DESIGN AND GLASS SIZES

SINGLE SWING DOORS										
Single Swing Type	Door Opening Dimensions		FP	GP	VP	L2B	L2T	L2TB	GP L2B	VP L2B
	Width	Height		Glass Size	Glass Size	Free Air Passage (Square Inches)			Glass Size	Glass Size
1868	1′-8″	6′-8″				19.2	19.2	38.4		
2068	2′-0″	6′-8″		10″ x 30″	10″ x 10″	26.4	26.4	52.8	10″ x 30″	10″ x 10″
2468	2′-4″	6′-8″		14″ x 30″	10″ x 10″	38.4	38.4	76.8	14″ x 30″	10″ x 10″
2668	2′-6″	6′-8″	★	★16″ x 30″	★10″ x 10″	★39.6	★39.6	79.2	16″ x 30″	10″ x 10″
2868	2′-8″	6′-8″	★	★18″ x 30″	★10″ x 10″	★39.6	★39.6	79.2	18″ x 30″	10″ x 10″
3068	3′-0″	6′-8″	★	★22″ x 30″	★10″ x 10″	★57.6	★57.6	79.2	22″ x 30″	10″ x 10″

Any of the above doors can be furnished as pairs. Door opening widths to be double that of single doors.

Warehouse stock doors include single swing units indicated in shaded blocks under leaf design. Any warehouse stock door leaf listed above may be modified and used with any similar size single swing door leaf to compose a pair of doors. Necessary modifications are made in warehouse.

Doors with "L3B," "L3T" or "L3TB" louvers are available for factory shipment.

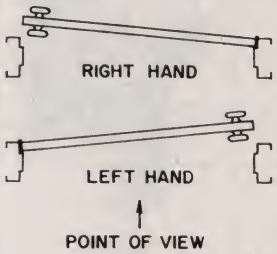
All sizes and types of doors shown above, but not warehoused, are available for factory shipment.

Doors and frames are prepared for cylindrical type locks in accordance with Federal Specifications FF-H-106a, Series 160. (2⅜″ backset.)

Those items indicated with a star (★) are also available from warehouse stocks prepared for cylindrical type locks in accordance with Federal Specifications FF-H-106a, Series 161. (2¾″ backset.)

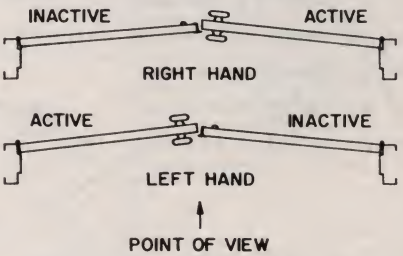
SINGLE DOOR

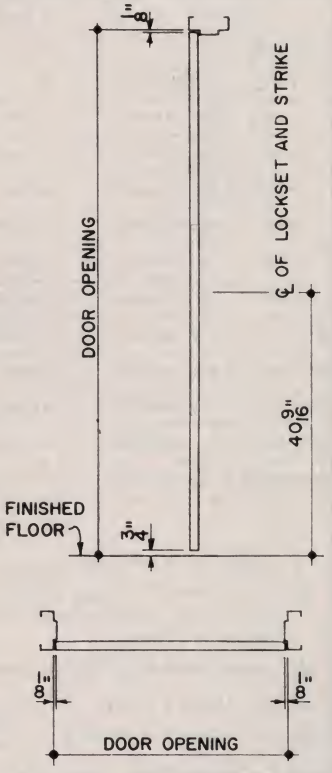
HAND OF DOOR MAY BE DETERMINED BY REFERRING TO SKETCHES BELOW. DOOR MUST ALWAYS SWING AWAY FROM POINT VIEWED.



PAIRS OF DOORS

HAND OF DOORS IS DETERMINED BY LOCATION OF ACTIVE LEAF WHEN DOORS SWING AWAY FROM POINT VIEWED.

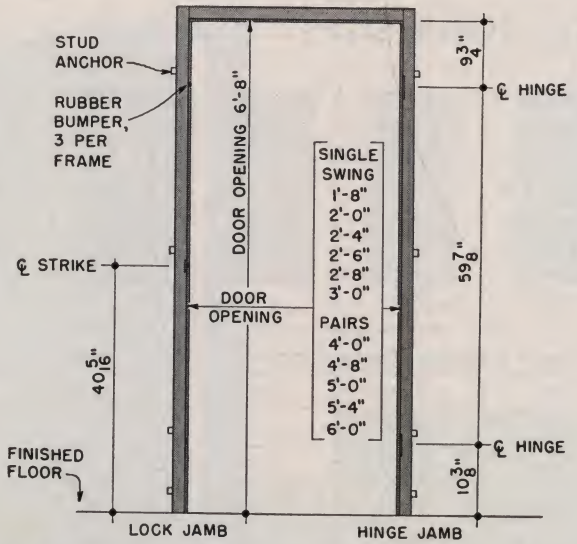




RD 15

TRUSCON 1⅜" HOLLOW METAL DOORS AND FRAMES—SERIES 50

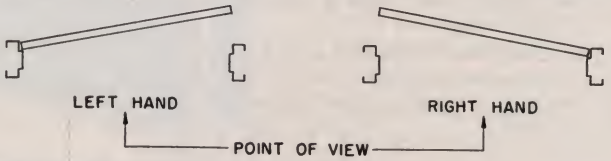
FRAMES FOR SWING DOORS



ELEVATION - TYPICAL SWING DOOR FRAME

FOR STUD OPENING SIZES USE DOOR OPENING DIMENSIONS SHOWN AND ADD 4½" IN WIDTH AND 2¼" IN HEIGHT

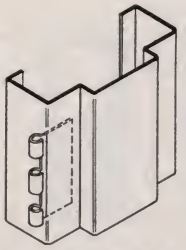
HAND OF FRAME IS DETERMINED BY REFERRING TO SKETCHES BELOW. NOTE THAT DOOR MUST ALWAYS SWING AWAY FROM POINT VIEWED.



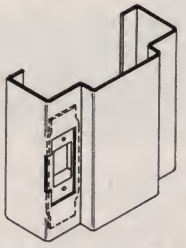
DOOR TYPE	FRAME TYPE				
	FRAME DEPTHS				
	◆ 2¾"	3¼"	4¼"	5¼"	6¼"
1868	★ 2-1868	3-1868	★ 4-1868	★ 5-1868	★ 6-1868
2068	★ 2-2068	3-2068	★ 4-2068	★ 5-2068	★ 6-2068
2468	★ 2-2468	3-2468	★ 4-2468	★ 5-2468	★ 6-2468
2668	★ 2-2668	3-2668	★ 4-2668	★ 5-2668	★ 6-2668
2868	★ 2-2868	3-2868	★ 4-2868	★ 5-2868	★ 6-2868
3068	★ 2-3068	3-3068	★ 4-3068	★ 5-3068	★ 6-3068
✦ 4068DS	★ 2-4068DS	3-4068DS	★ 4-4068DS	★ 5-4068DS	★ 6-4068DS
✦ 4868DS	★ 2-4868DS	3-4868DS	★ 4-4868DS	★ 5-4868DS	★ 6-4868DS
✦ 5068DS	★ 2-5068DS	3-5068DS	★ 4-5068DS	★ 5-5068DS	★ 6-5068DS
✦ 5468DS	★ 2-5468DS	3-5468DS	★ 4-5468DS	★ 5-5468DS	★ 6-5468DS
✦ 6068DS	★ 2-6068DS	3-6068DS	★ 4-6068DS	★ 5-6068DS	★ 6-6068DS

NOTES

- ★ DENOTES WAREHOUSE STOCK FRAMES.
- ● "R. H" OR "L H" (HAND OF FRAME) MUST FOLLOW THE FRAME SYMBOL. SEE "HAND OF FRAME" ABOVE FOR SINGLE DOORS AND PAGE 10 FOR PAIRS OF DOORS
- ✦ DENOTES PAIRS OF SWING DOORS ONLY
- ● 2¾" FRAMES ARE OF 16GA STEEL; ALL OTHERS OF 18GA
- ◆ TOP STRUTS REQUIRED FOR 2¾" FRAMES

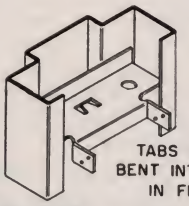


HINGE LEAF WELDED TO FRAME

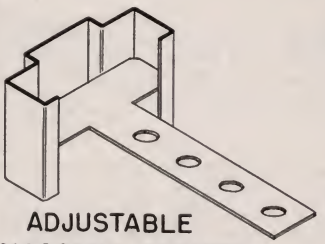


WELDED STRIKE REINFORCEMENT

ANCHORS

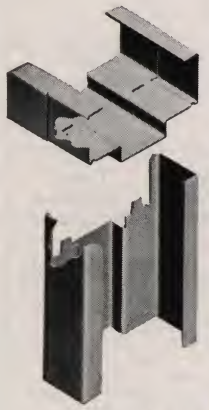


WELDED STUD ANCHOR
4 PER JAMB
ATTACHED IN SHOP

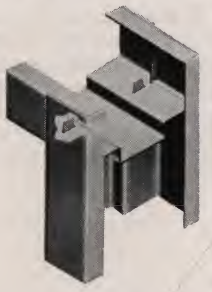


ADJUSTABLE MASONRY ANCHOR

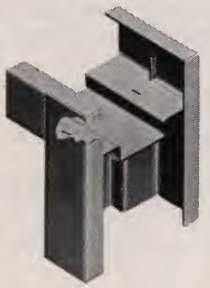
ASSEMBLY OF DOOR FRAMES



STEP 1
Jamb and Head Members before assembly



STEP 2
Jamb and Head Members partially assembled. Note two tenons ready to be bent in place



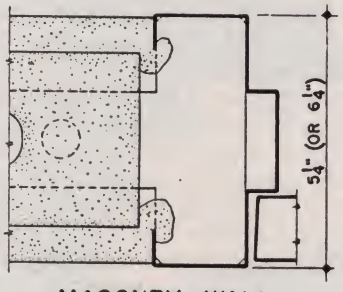
STEP 3
Jamb and Head Members assembled. The two tenons bent in place, securely locking the joint

(PATENT No. 2601164)

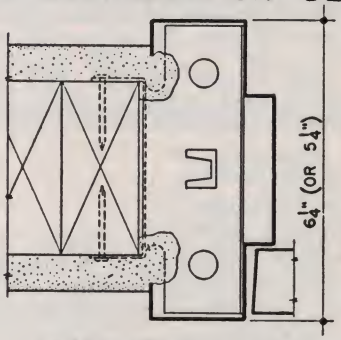
TRUSCON 1⅜″ HOLLOW METAL DOORS AND FRAMES—SERIES 50

FRAMES FOR SWING DOORS

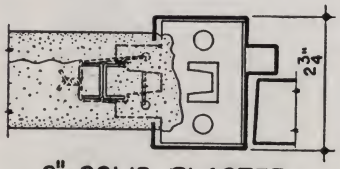
FRAME INSTALLATION DETAILS



MASONRY WALL

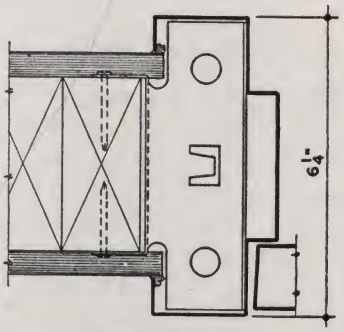


WOOD STUD WALL

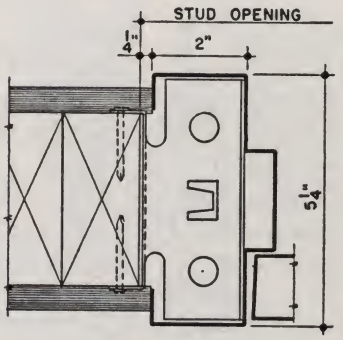


2" SOLID PLASTER PARTITION WITH METAL LATH CORE

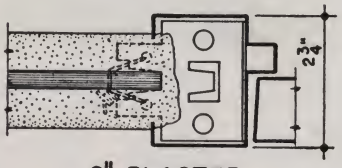
(TOP STRUTS REQUIRED)



DRY WALL

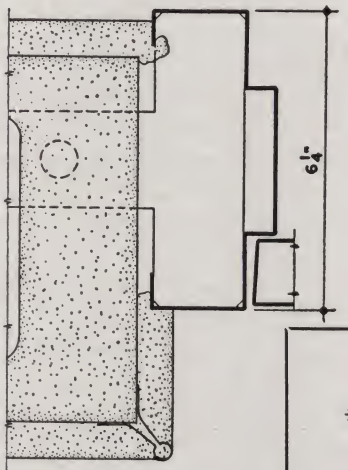


DRY WALL

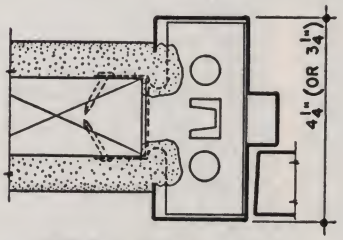


2" PLASTER PARTITION WITH ROCKLATH CORE

(TOP STRUTS REQUIRED)



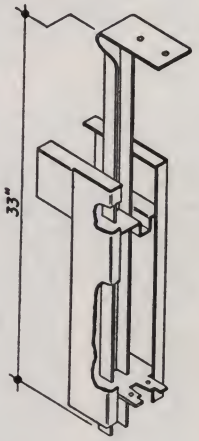
HEAVY MASONRY WALL



WOOD STUD WALL

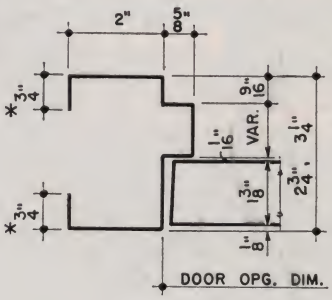
TOP STRUT

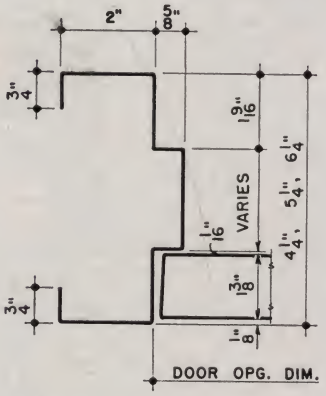
FURNISHED FOR 2" SOLID PLASTER PARTITIONS



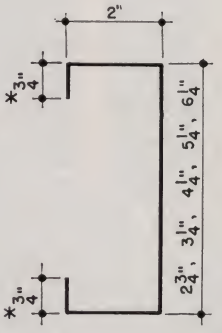
FRAME DETAILS

* THIS DIMENSION IS ½" FOR 2¾" FRAMES.





SWING DOOR FRAMES



TRIM FRAMES

RD 12

- 2¾" FRAMES ARE FORMED FROM 16GA. STOCK. ALL OTHERS ARE 18 GAUGE.
- ★ WAREHOUSE STOCK FRAMES ARE 2¾", 4¼", 5¼" AND 6¼" DEPTHS.

TRUSCON STEEL SLIDING CLOSET DOORS—SERIES 51 AND 51B

SLIDING CLOSET DOORS

These modern Sliding Doors provide total closet accessibility, more usable floor space and materially reduce construction costs. Outstanding economy is obtained through the elimination of material and labor required, (1) to construct and plaster approximately one-half the area occupied by the full width of the Sliding Door opening, and (2) to furnish and install frame, swing door and hardware.

Series 51 and 51B Flush Type Sliding Closet Doors are precision made of prime quality cold rolled sheets heavily reinforced for rigidity, thus insuring perfect fit and permanent trouble-free operation. All Truscon doors are bonderized to provide maximum resistance to corrosion, and finished with a prime coat of baked-on paint. Each door panel is equipped with two noiseless nylon rollers, nylon top guides and rubber bumpers at jambs to provide smooth, quiet operation.

Finger pulls are fitted into each side of both panels at the factory. Units are available in four standard widths, 3′-0″, 4′-0″, 5′-0″ and 6′-0″. Height of doors is 6′-8″.

SERIES 51B—FRAMED UNITS

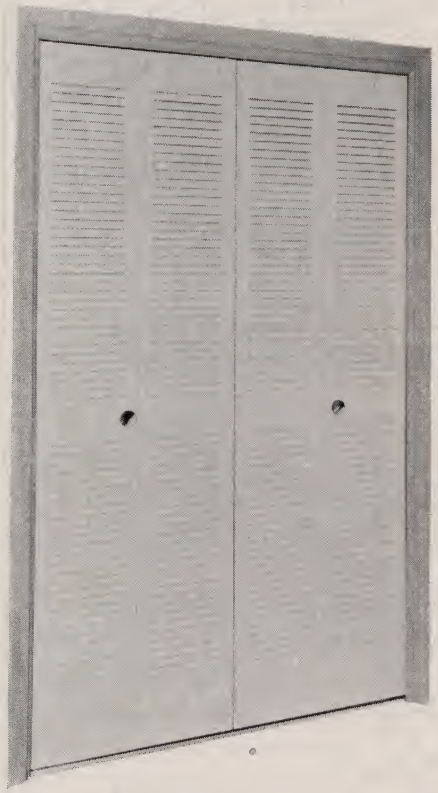
Series 51B Sliding Closet Doors differ from the Series 51 only in that they are equipped with a knocked-down door frame matching that of the swing doors in appearance and assembly. Materials are packaged in sturdy cartons with the exception of the door frames. The necessity of wood bucks and trim is eliminated in this type of installation.

SERIES 51—"KD" PACKAGE UNITS

Series 51 Sliding Closet Doors are shipped from warehouse stock as complete units, packaged in sturdy cartons containing two door panels, all necessary hardware, and accurately punched header, jamb and track sections; also all screws for assembly and installation in wood frame partitions. Wood trim is not included.

TRUSCON COLONIAL CLOSET DOORS

LOUVERED STEEL FOLDING TYPE



ADVANTAGES

HARMONIOUS STYLING — Colonial Closet Doors are designed to harmonize with any decor. Their slim, clean lines are instantly appealing.

FULL ACCESSIBILITY — Doors fold open so that complete wall-to-wall accessibility is available. Hidden, hard-to-reach corners are eliminated.

ECONOMICAL — They are economically priced and, made of steel, they will never swell, warp or sag.

EASY INSTALLATION — The panels are simple and economical to install for either the amateur handy man or professional carpenter.

OPERATION — The sound-deadened doors open and close effortlessly and quietly on lifetime nylon pivots and nylon track guides.

VENTILATION — Although the doors are louvered primarily for appearance, they also offer a plus advantage for closet ventilation.

Truscon Colonial Closet Doors are constructed of 24 gauge prime quality cold rolled sheets. Folding panels are joined together with piano type hinges.

All units are furnished completely packaged including finger pulls, pivots, pilot brackets and top and bottom tracks. Cartons are of the heavy duty type offering full protection during shipment. Truscon Colonial Closet Doors are chemically cleaned and treated after which they receive a standard baked-on shop coat of cream colored prime paint.

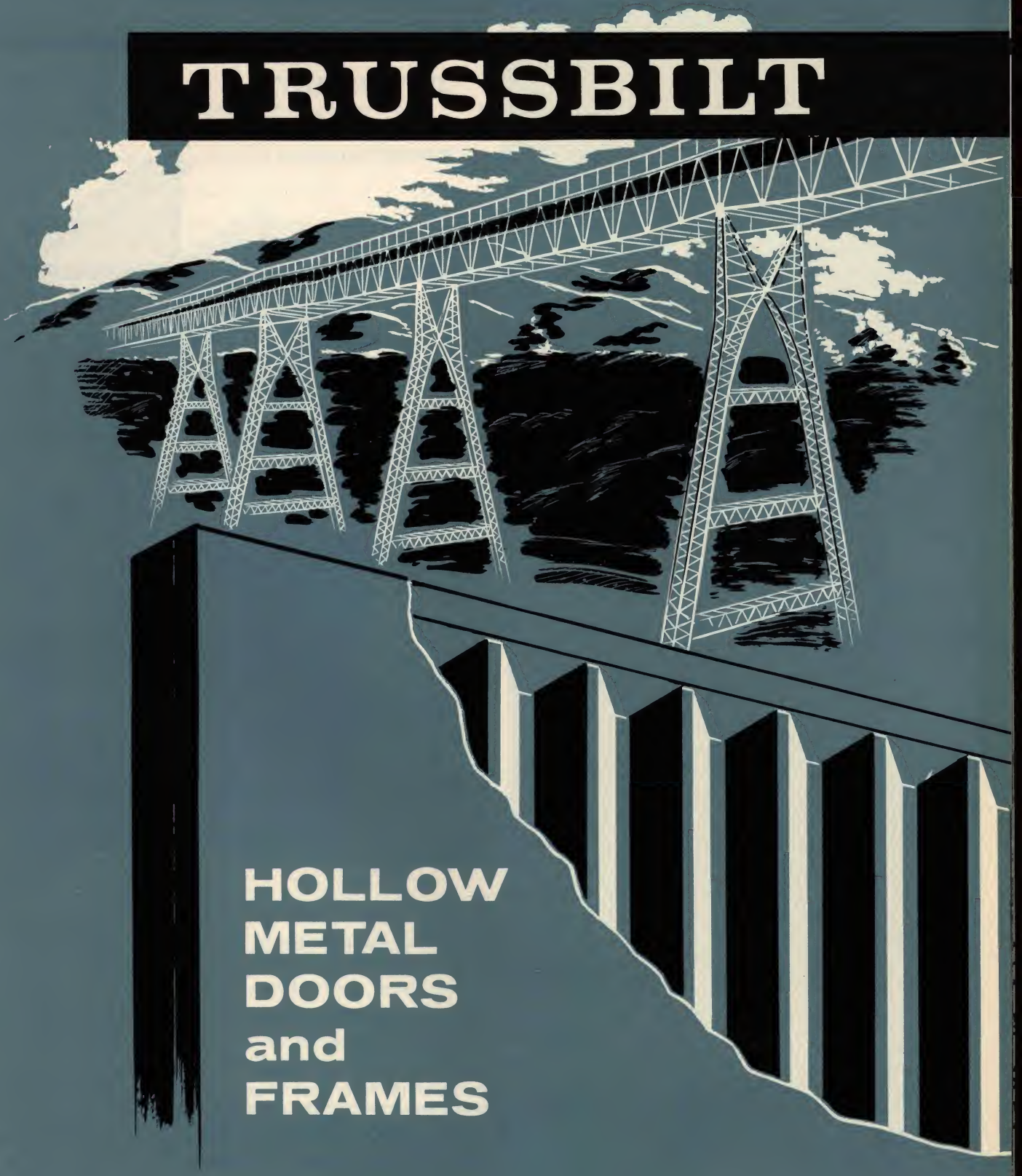
In addition to the standard 6′-8″ high folding closet doors, Truscon also offers the units in 8′-0″ heights.

If a flush type of door is desired, Truscon's folding closet door can be furnished without louvers in any of the standard widths in either 6′-8″ or 8′-0″ heights.

Refer to Truscon Steel Window Catalog in Section $\frac{17b}{Tr}$ for Complete List of Sales Offices

16b
Tru

TRUSSBILT



HOLLOW METAL DOORS and FRAMES

TRUSSBILT DIVISION of Siems Bros., Inc.
St. Paul 8 Minnesota

TRUSSBILT

custom doors

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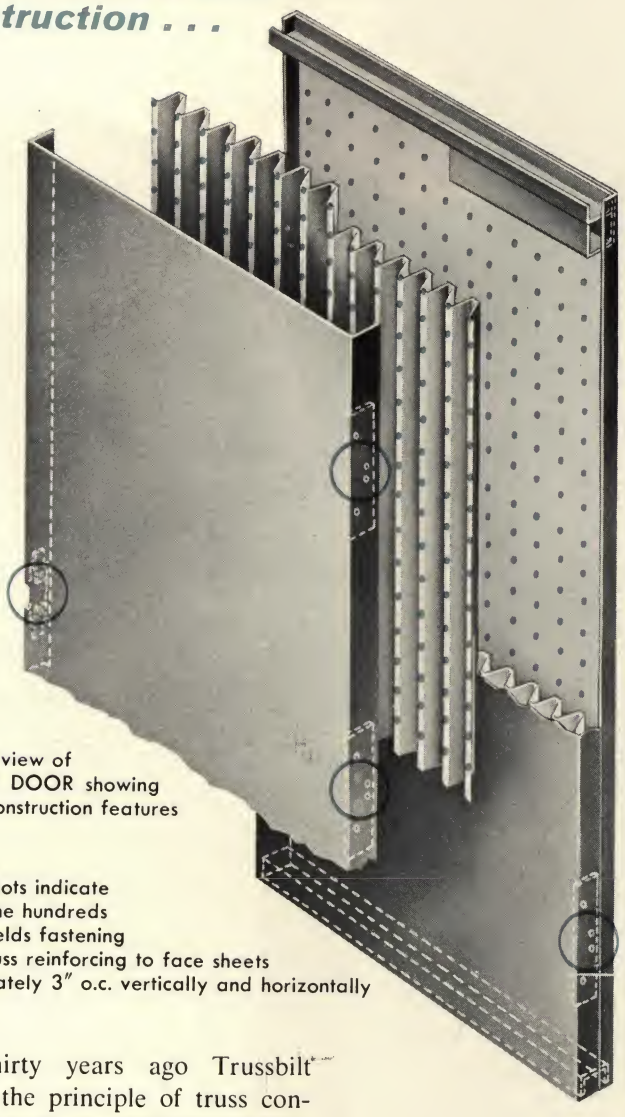
Note:
Bullet-proof Doors
Although not detailed or described in this catalog, TRUSSBILT does design and fabricate Bullet-proof Doors to meet the most exacting individual requirements. Write us for information.

THIS TRADEMARK IS A GUARANTEE OF QUALITY

TRUSSBILT

superior flush door construction . . .



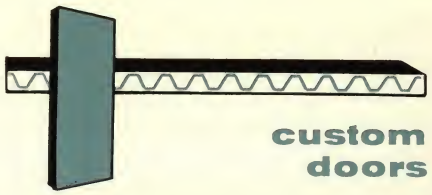
exploded view of TRUSSBILT DOOR showing superior construction features

Note:
Colored dots indicate some of the hundreds of spot welds fastening interior truss reinforcing to face sheets approximately 3″ o.c. vertically and horizontally

Over thirty years ago Trussbilt adapted the principle of truss construction to the manufacture of hollow metal doors. Using specially designed assembly and welding equipment an entirely new method of hollow metal construction was developed which produced a door of unusual strength, rigidity and flatness.

Trussbilt flush steel doors are also desirable for their fine appearance and fire resistance. Suitable for the finest hotels and apartments as well as office buildings, schools, hospitals, prisons and commercial buildings.

Trussbilt's extensive modern facilities make possible the fabrication of a complete line of hollow metal doors, frames, trim and window walls.



custom doors

features

- Over thirty years, of proven quality, in the custom-built hollow metal door industry.
- Hollow metal construction with extreme rigidity.
- Patented continuous "Trusscore" construction.
- Face sheets spotwelded to core 3" on center both vertically and horizontally. No weld marks.
- Every door provided with heavy channel check reinforcement.
- Extra heavy 3/16" steel butt and lock front reinforcements.
- Completely painted inside and out with a baked-on primer.
- Complete selection of baked enamel finishes available.

oversized doors

"TRUSSCORE" RIGIDITY ADAPTED TO OVERSIZE DOORS

"Trusscore" construction is not confined to the standard size door. This rigid construction, along with formed channel reinforcements, offers the architect and contractor custom built doors of very large size that can be made of 16 or 14 gauge steel less than 2" thick. Doors can be furnished in pairs: two-fold or four-fold, as may be required. All doors are custom built permitting a wide variety of features to be incorporated, such as pilot doors, access doors, or cut-outs for Mono-rails, pipes, etc.

Oversize doors are to be hung in structural iron frames.

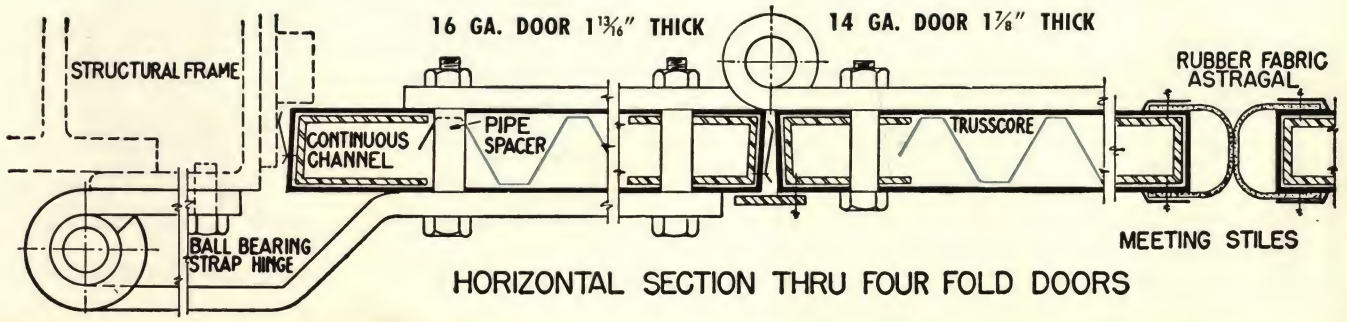
A pair of flush doors with pilot door, opening size of 10'-7" x 10'-0", at Trussbilt factory

Four-fold flush doors with an opening size of 20'-0" x 22'-0" at the Northern States Power Co.

hardware

It is recommended that the door manufacturer provide the necessary hardware and power operators where required, and suggest you write for particulars.

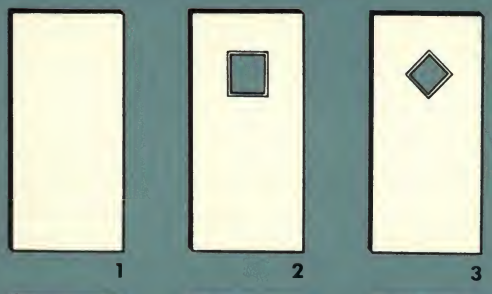
We offer you our many years of experience and our Engineering staff is at your service.

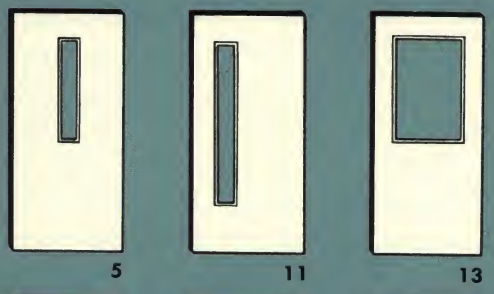


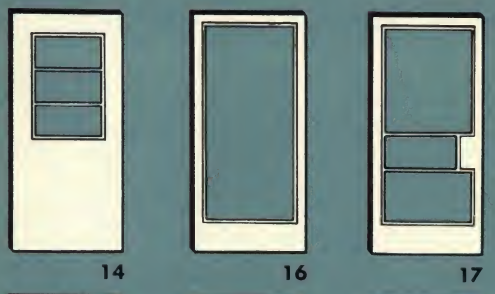
HORIZONTAL SECTION THRU FOUR FOLD DOORS

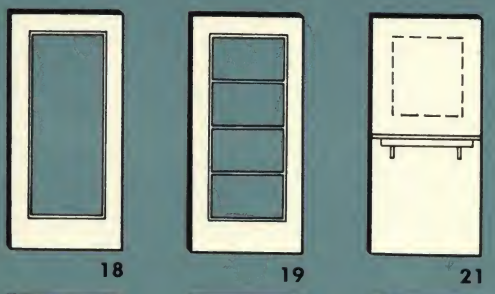
TRUSSBILT

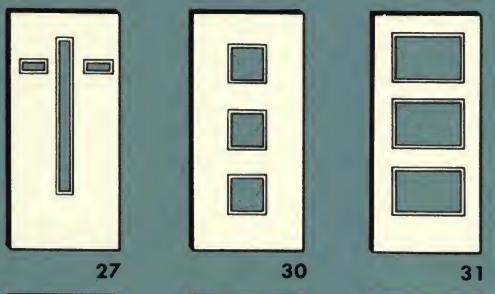
door types

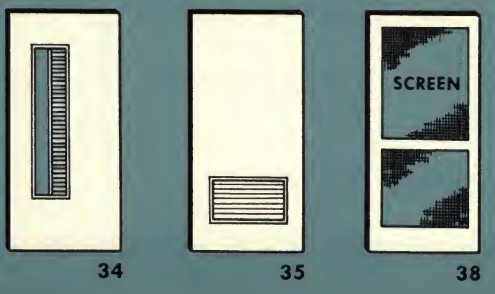






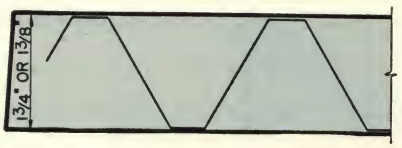




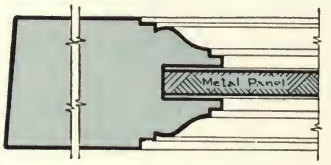


custom doors

panel details

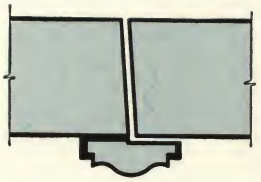


FLUSH TRUSS CORE DOORS



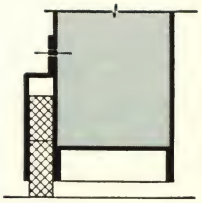
METAL PANEL DOORS

meeting stiles

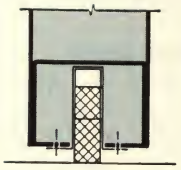


PARALLEL MEETING STILES

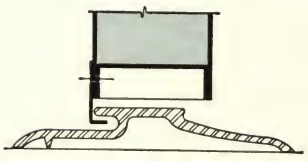
door bottoms



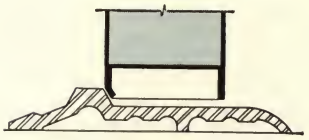
SURFACE TYPE
AUTOMATIC DOOR BOTTOM



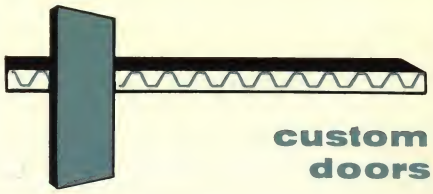
MORTISE TYPE
AUTOMATIC DOOR BOTTOM



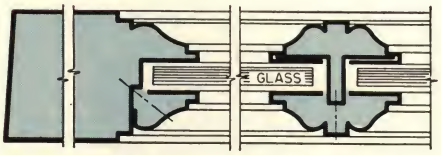
WEATHERSTRIP THRESHOLD



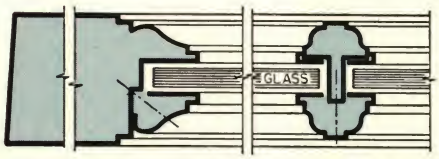
PANIC DEVICE THRESHOLD



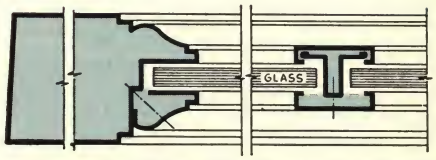
custom doors



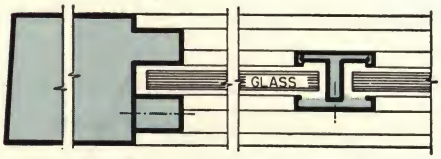
TYPE 10 GLASS PANEL DOORS



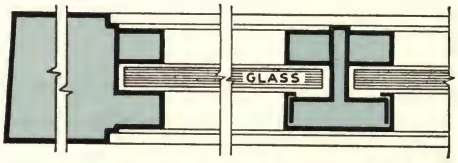
TYPE 20 GLASS PANEL DOORS



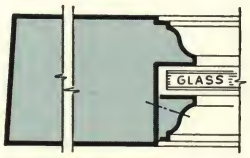
TYPE 30 GLASS PANEL DOORS



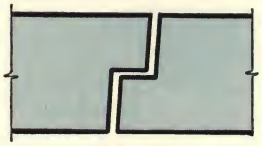
TYPE 40 GLASS PANEL DOORS



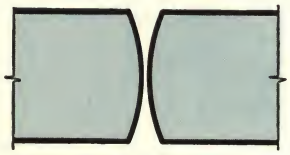
TYPE 50 GLASS PANEL DOORS



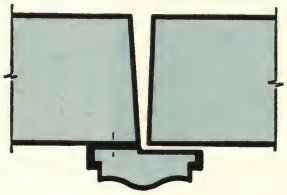
VISION PANEL



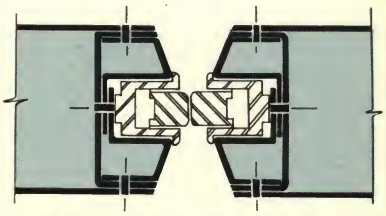
RABBETED MEETING STILES



DOUBLE ACTING MEETING STILES

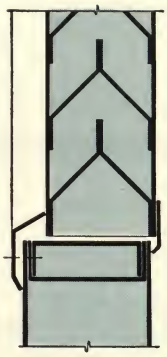


"V" BEVEL MEETING STILES

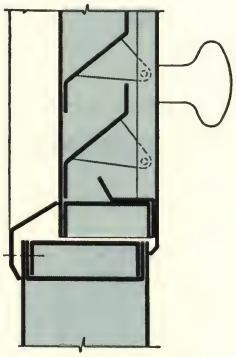


MICHAELS TYPE "E" ASTRAGAL

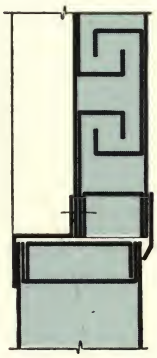
door louvers



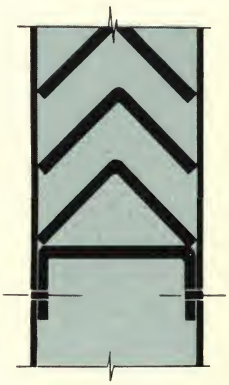
AIROLITE NO. 520®
FIXED LOUVER



AIROLITE NO. 643®
ADJUSTABLE LOUVER



AIROLITE NO. 619®
LIGHTPROOF LOUVER



12 GAUGE LOUVER

TRUSSBILT

cold drawn moulds

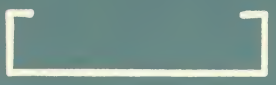
½ full size

casings

1404

1139

1405


1474

1107

890

scribes

997

403

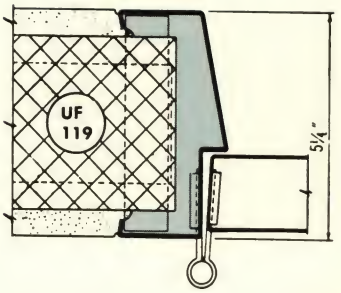
1731

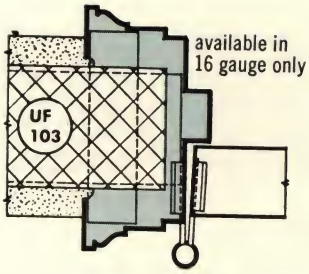
1920

1010

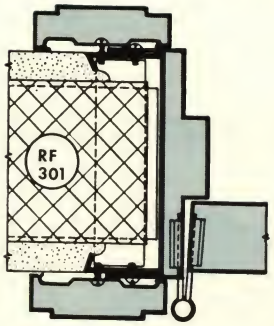
door frames and transom bars

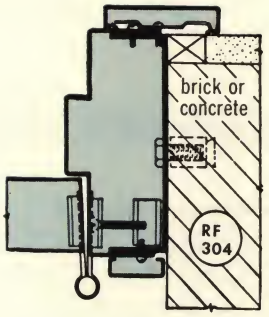
typical frame details

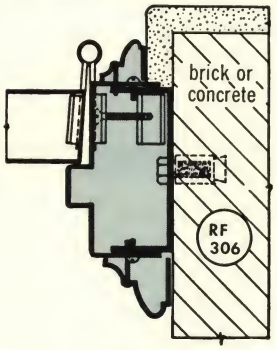


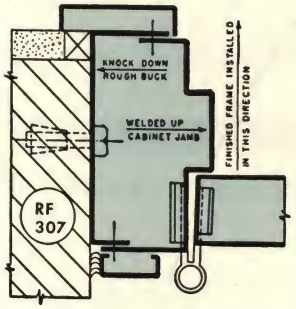


rough buck and cabinet jambs

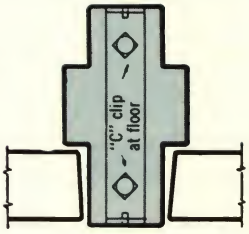




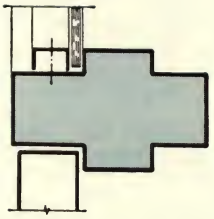




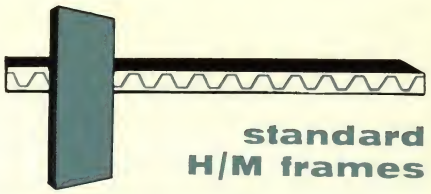
mullions and transom bars



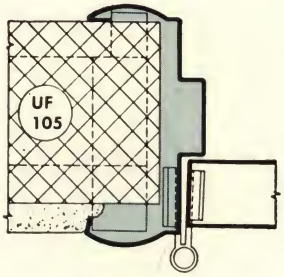
MULLION

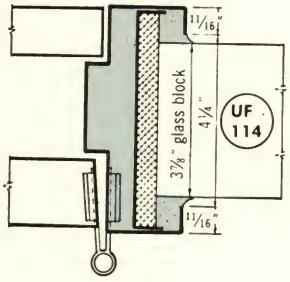


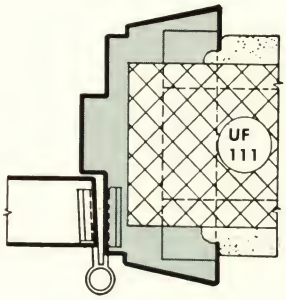
TRANSOM BAR NO. TR 402

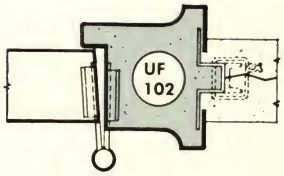


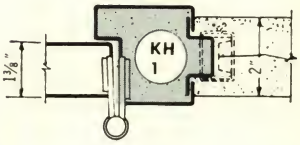
standard H/M frames

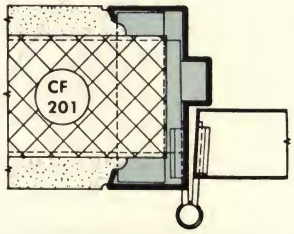


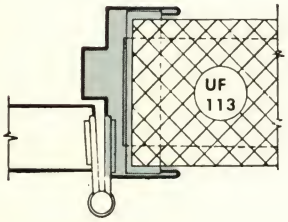


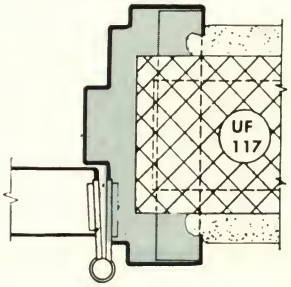


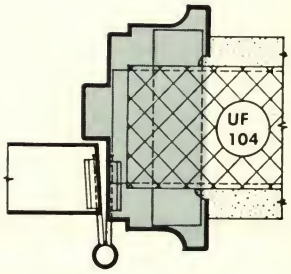


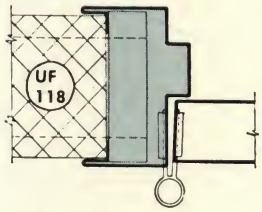


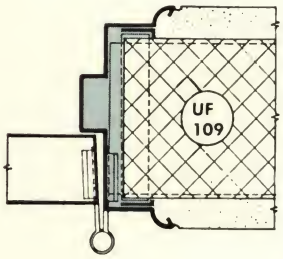


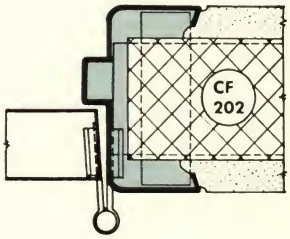


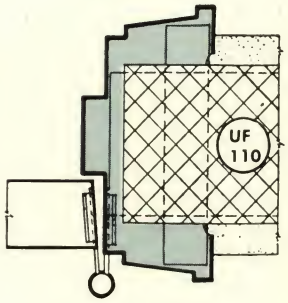


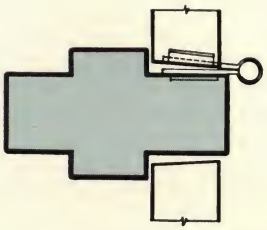




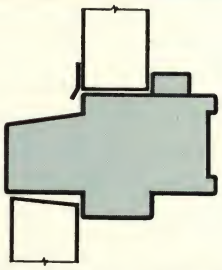




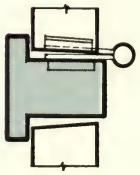




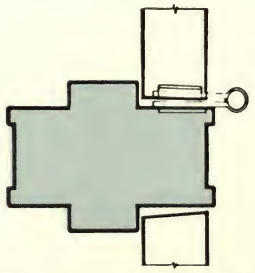
TRANSOM BAR NO. TR 403



TRANSOM BAR FOR EXTERIOR UNIT WITH STATIONARY SASH
TRANSOM BAR NO. TR 405

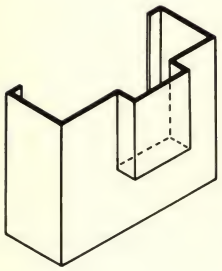


TRANSOM BAR NO. TR 401

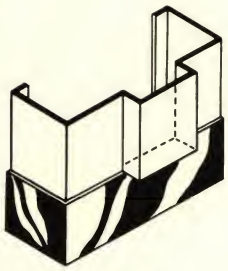


TRANSOM BAR NO. TR 404

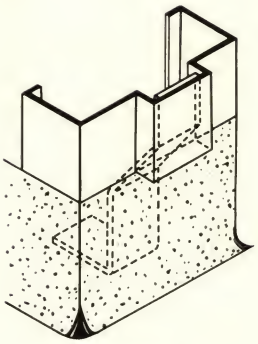
base and anchor details



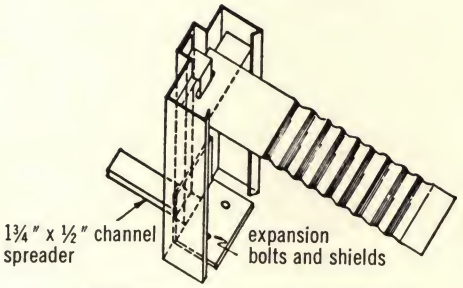
JAMB EXTENDS TO OR BELOW FINISH FLOOR LINE



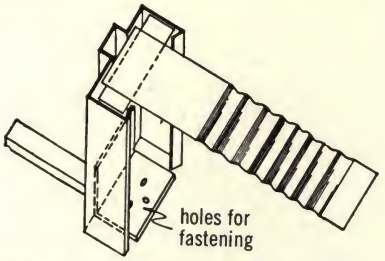
JAMB TERMINATING AT TOP OF TERRAZZO, CERAMIC TILE, OR CONCRETE BASE



JAMB EXTENDS TO OR BELOW FINISH FLOOR LINE



ANCHORS ON LABELED FRAMES



STANDARD ANCHORS AND FASTENING

architect's specifications

custom doors

FLUSH TYPE DOORS—Shall be as manufactured by Trussbilt Division of Siems Bros., Inc., 2575 Como Avenue, St. Paul 8, Minnesota, and as indicated on drawings. Doors shall be constructed of 18 gauge full cold rolled, full pickled, stretcher leveled sheet steel with rolled truss shaped inner core of 28 gauge steel, extending full height and width of door. "Trusscore" shall be spot-welded to both face sheets of door approximately 3" on center, both horizontally and vertically. (16 or 14 gauge face sheets are also available where special conditions require them.)

NON-LABELED DOORS—Shall be insulated with standard fibre board insulation. (Corrugated chipboard, air cell asbestos, or compressed cork insulation available for special conditions.)

UNDERWRITERS' LABELED DOORS—Shall be insulated with asbestos as required by Underwriters' Laboratories, Inc.

PANEL-TYPE DOORS—Stiles, rails and panels shall be formed of 18 gauge full cold rolled, full pickled, stretcher leveled sheet steel. Stock 18 gauge mouldings shall be used for glass or metal panels. Joints at stiles and rails and at panel mouldings are to be continuously welded and ground smooth. Panel insulator shall be ¼" chipbroad for non-labeled doors and ¼" asbestos for labeled doors. Stile and rail insulation shall be corrugated chipboard for non-labeled doors; asbestos, as required, for labeled doors.

HARDWARE—Doors shall be mortised and reinforced for hardware furnished under Builders Hardware section of this specification. Reinforcements for hinges shall be a minimum of 3/16" x 1½" x 12" long. Lock front reinforcements shall be 3/16" x 1¼" x 4" long. Reinforcements for escutcheons or roses shall be of 14 gauge. Provide centering clips to hold lock case in alignment. Door check reinforcement shall be 12 gauge channel type 3½" deep by 14" long.

Hardware items such as butts, locksets, panic devices, kickplates, push bars, push and pull plates and mortise holders are to be shipped to the door manufacturer prepaid, if required by the architect's specifications. The door manufacturer will apply these items at the factory at no additional cost.

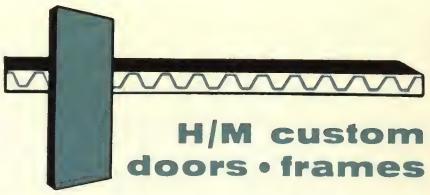
Reinforce doors only for surface items such as surface and semi-concealed closers, brackets, surface holders, transom operators, door stops, etc.

Drilling and tapping and installation of these surface items to be done in the field by others.

FINISH—All material shall be thoroughly cleaned of rust, grease and other impurities. Initial base coat shall consist of a dip coat of baked-on red oxide prime, covering inside as well as outside of door. In the process of baking, the dip coat shall provide a bond for the fibre board insulation and shall eliminate the metallic ring. Follow by metallic filler coat sanded smooth. Two (2) additional coats of baked-on red oxide prime shall then be applied.

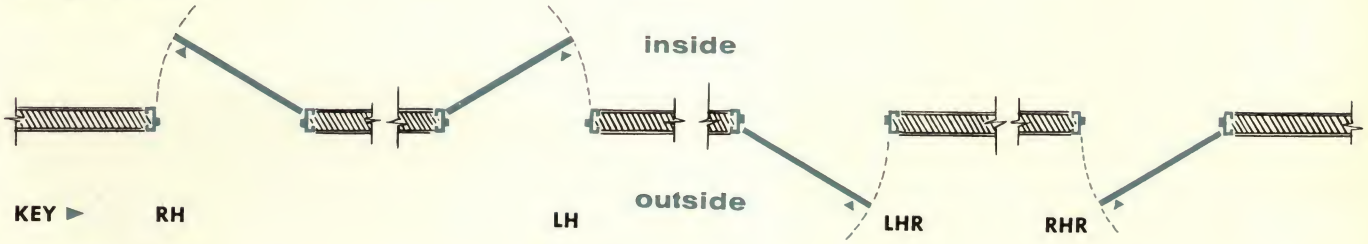
Grained or plain enamel finish, where required, shall consist of four (4) coats of enamel, each baked-on and final coat finished to an egg shell gloss.

Doors shall be erected by other trades.

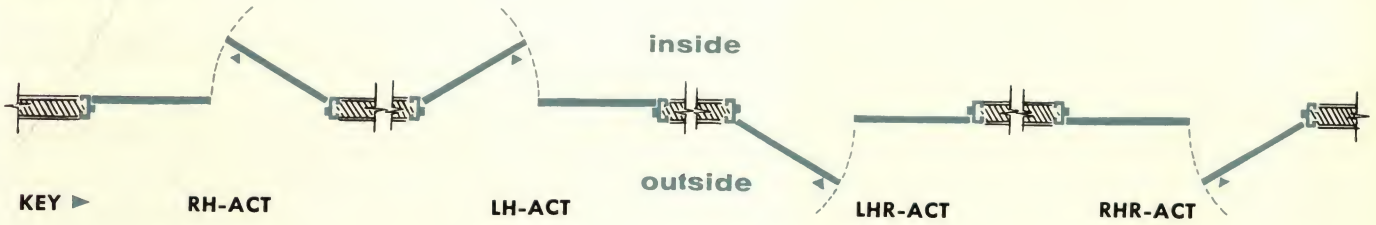


door swing designations

single swing



pair swing



custom frames

COMBINATION FRAMES—Shall be as manufactured by Trussbilt Division of Siems Bros., Inc., 2575 Como Avenue, St. Paul 8, Minnesota, and as indicated on drawings.

*Frames shall be formed of (state the gauge, recommended gauges will be furnished upon request) pickled and annealed steel.

The frames shall be mortised, reinforced, drilled and tapped for all mortise hardware EXCEPT that the drilling and tapping for surface door closers, door closer brackets, transom lifters and adjusters shall be done in the field by erectors.

This manufacturer will mortise or drill for door silencers as required, to be applied in the field by others.

Provide steel hinge reinforcements 3/16" x 1½" x 12" long and lock strike reinforcements 3/16" x 1¼" x 4" long. Hinge and strike plate cutouts to be protected with pressed steel cover boxes spotwelded to the back of the frames behind these mortises.

Frames shall be neatly and fully mitered with the miter continuously welded its entire length and ground smooth for an invisible joint.

Provide 12 gauge angle clips at the bottom of all frames with punched holes for securing the frames to floor construction. Also provide a formed steel channel spreader at the bottom of all frames in order to avoid twisting of frames in shipment.

Provide corrugated steel anchors 24" on center.

FINISH—All material shall be given one (1) coat of baked-on red oxide prime covering inside as well as outside surfaces.

ROUGH BUCKS—Shall be made of 10, 12 or 14 gauge steel (state gauge desired). Provide corrugated anchors 24" on center for welded up bucks. 12 gauge angle clips shall be welded to the bucks for securing to the floor. Knock down bucks shall be provided with holes punched for bolts for fastening to existing walls.

Drilling and tapping of rough bucks for securing cabinet jambs shall be done in the field by erectors.

CABINET JAMBS—Knocked down cabinet jambs shall be made of 12, 14 or 16 gauge pickled and annealed steel (state gauge desired). Intersections shall be coped. Provide holes for securing to rough bucks.

Mortising and reinforcing for hardware shall be similar to that specified for combination frames.

CASING AND SCRIBE MOULDS—Shall be made of cold drawn shapes as selected from stock profiles. Casing will be mitered, welded and ground smooth. Provide concealed fastenings or screws as required.

Scribe mouldings shall be mitered and shipped knocked down. Secured to cabinet jamb with screws.

***ARCHITECT'S NOTE:** We do not recommend the use of 18 or lighter gauge steel for door frames. For rigid construction specify a minimum of 16 gauge steel.

TRUSSBILT

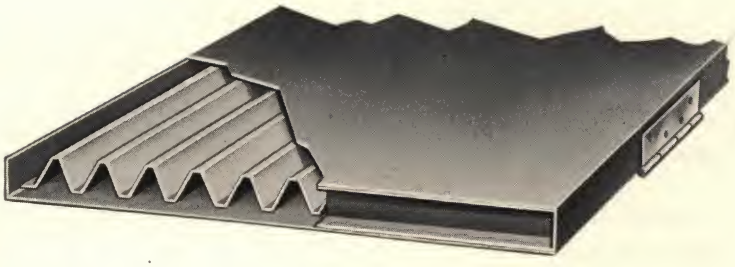
door types

	SIZE	REMARKS
1-S	30x80 30x84	
	36x80 36x84 42x80 42x84	for B label specify 1-SB
	48x80 48x84	2 pr. butts 2 pr. butts
6-S	30x80 30x84	
	36x80 36x84 42x80 42x84	for B label specify 6-SB
		3″x33″ glass
13-S		36″ glass
15-S		36″ glass
	30x80 30x84 36x80 36x84 42x80 42x84	all glass moulds modern "square" design
14-S		36″ glass
35-S		14″ louver
		louvers integral with door no loose mouldings

Note:
all types—either right or left hand swing
all types—either right or left hand swing

hollow metal stock doors & frames

TRUSSBILT
stock doors *with rugged custom quality!*

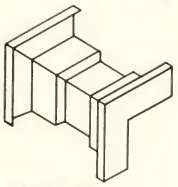


. . . for immediate delivery

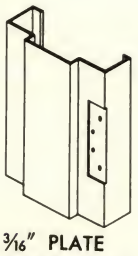
features

- finest quality hollow metal construction
- unequaled Trusscore inner-reinforcement
- 12 ga. channel check reinforcement—all doors
- two coats red oxide prime baked on
- husky 3/16″ plate butt reinforcements
- sound deadened with fibreboard
- smooth flush surfaces—no seams

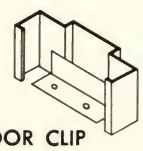
stock frames
low cost • custom quality



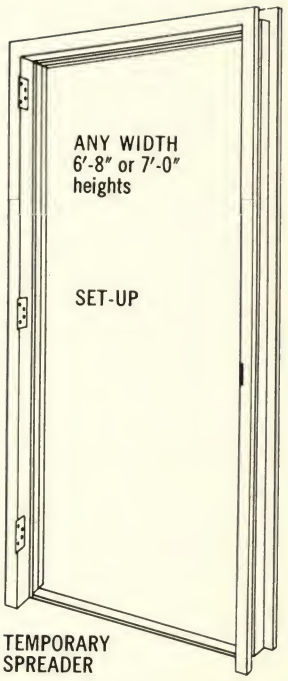
INVISIBLE MITRE JOINT



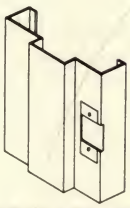
3/16″ PLATE HINGE REINF.



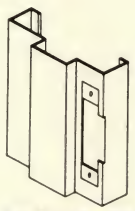
FLOOR CLIP



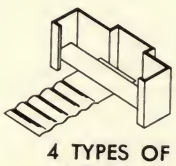
TEMPORARY SPREADER



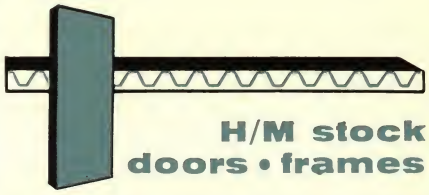
2 3/4″ SCHLAGE TYPE STRIKE



5 3/4″ MORTISE TYPE STRIKE



4 TYPES OF ANCHORS



H/M stock doors • frames

New from Trussbilt a custom quality stock door available for immediate delivery. Full Trusscore construction with 4 to 5 times more electric welds than any other steel door insures maximum strength and rigidity. A new low cost (only slightly higher than wood) makes this fine quality door competitive with the light-duty industrial steel doors and eliminates all unsightly face seams. We further guarantee our Trusscore door to be the most rigid and heavily reinforced door in the stock door market. All doors are perfectly matched to our stock frames. If your next job requires prompt delivery and you desire trouble-free service for many years, specify Trussbilt Model "SD" doors.

hardware

CONTRACT—Hardware may be supplied by any regular hardware supplier. We carry only a minimum stock for urgent requirements and normally we suggest that hardware be furnished by others.

BUTTS—Template 4½ x 4½ standard weight.

LOCKS—Any lock or latch Fed. Spec. 161 with 2¾ backset. We recommend heavy duty locks for most installations.

OTHER HARDWARE—Provision will be made for push plates, pulls mounted on plates, surface bolts, surface anti-panic devices, kickplates and surface holders.

architects' specifications • stock doors

All doors shall be Trusscore Model "SD" as manufactured by Trussbilt, 2575 Como Ave., St. Paul 8, Minnesota. Provide continuous inner reinforcement electric welded 2¾" o.c. both vertically and horizontally to 18 ga. furniture steel face sheets. All doors shall have a flatness tolerance of $\frac{3}{32}$" minimum. Provide U/L class "B" label doors as noted. Clean all doors and mechanically sand smooth. Paint with two coats of red oxide prime, each coat separately baked on.
Hardware Reinforcements: Butts—$\frac{3}{16}$" x 1½" x 12". Closers—12 ga. channel 3½" x 14".

Hollow metal frames for immediate delivery now available with the usual Trussbilt quality. For the first time a set-up frame with full mitre and continuous weld at no premium in price. If early completion of your building is demanded, be sure and specify Trussbilt Type "S" frames. Matched to our new stock steel doors for perfect operating units.

hardware

Since many prefabricated sections are used, the selection of finish hardware is somewhat limited. Special hardware reinforcements can be furnished as follows: 1. Blank jambs supplied for push and pull hardware or cased openings. 2. Pairs reinforced for standard type bolts. For inactive doors. 3. Panic devices—reinforcement will be provided for surface type panic strikes and vertical rod devices only.

BUTTS—All frames cut for 4½ x 4½ butts.

STRIKES—2 types optional for all frames:

TYPE C STRIKE CUTOUT	TYPE M STRIKE CUTOUT
Schlage A & D Series	Corbin 7000-8000 Series
Yale 5300-5400 Series	Russwin 2000
Corbin 400-800 Series	Yale 9100-9500
Russwin 200-400 Series	Lockwood 5100
Sargent 6G-6U-8G-8U Series	Sargent 7700-7800 Series

CLOSERS—All frames reinforced for closers. Reinforcement for corner brackets where required.

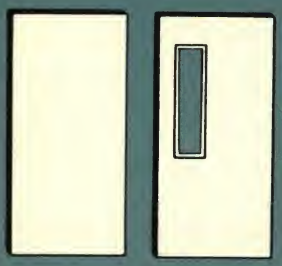
architects' specifications • stock frames

H/M frames shall be Trussbilt Type "S" of 16 gauge steel (14 gauge if required for U/L labels, etc.) with full mitres and continuous weld for an invisible joint. Butt and strike reinforcements shall be minimum of $\frac{3}{16}$" steel plate. All frames reinforced for closers. Provide welded temporary spreaders and anchors as required. Furnish Underwriters' Labels as noted. Protect all cutouts with mortar boxes. Provide one coat of red oxide prime and two button rubber bumpers each frame.

TRUSSBILT

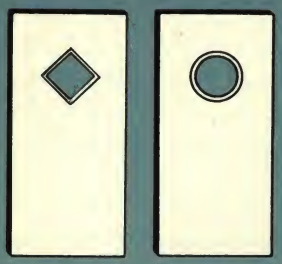
door types and labels

Approved flush type doors all 1¾″ thick. Metal panel doors 1¾″ thick available for B-C-D-E labels.



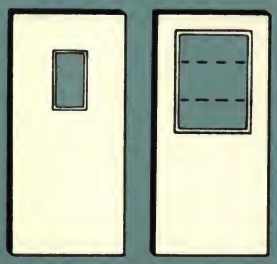
1
A-B-C-D-E

6
B-C-E



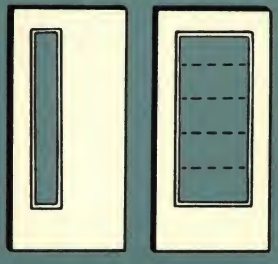
3
B-C-E

4
B-C-E



7
B-C-E

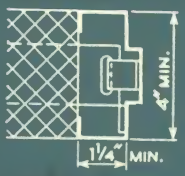
13
C-E



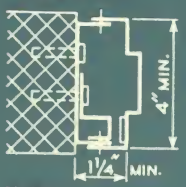
11
C-E

18
C-E

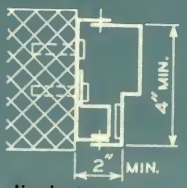
frames



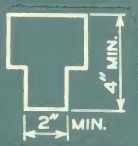
combination frames
Welded one-piece construction. Choice of plain or moulded trim. Loose trim optional. Approved for A-B-C-D-E.



K-D two member frame
Rough buck and finished frame K-D. Loose trim optional. Approved for A-B-C-D-E.



slip-in two member frame
Rough buck K-D. Finished frame welded one-piece construction. Loose trim optional. Approved for A-B-C-D-E.



removable mullion
(for use with combination frames) Minimum 16 gauge steel. Maximum height 8″-0′. Approved for B-C-D-E.

transom bar
Minimum 16 gauge steel. C label maximum glass area of 1296 sq. in. each light. E label maximum glass area of 720 sq. in. each light. Stopped glass or H/M sash optional. Approved for C-E.

underwriters' approved hollow metal doors & frames

classifications*

A label (3-hour)—fire division walls, transformer vaults, etc.
B label (1½-hour)—stair shafts, boiler rooms, machine rooms, vertical shafts
C label (¾-hour)—corridor and room partitions
D label (1½-hour)—severe exterior exposure
E label (¾-hour)—fire escape exposure

* *Location and classifications subject to state and local codes.*

3-hour A label door

SAVE $100.00, or MORE, on TRUSSBILT A LABEL (3-hour) HOLLOW METAL FIRE DOORS

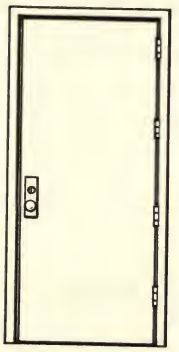
- Any approved single-point lock with ¾″ throw
- Fusible link door closer
- Standard steel butt hinges for doors up to and including 3′-0″ x 7′-0″

No longer necessary to specify cumbersome, expensive, three-point locking devices.

Now available, for the first time, A label (3-hour) hollow metal fire doors with approved one-point locks with ¾″ throw.

Single flush-type doors only, sizes to 4′-0″ x 8′-0″.

Approved by Underwriters' Laboratories.

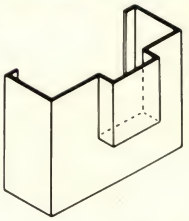


gauges and sizes

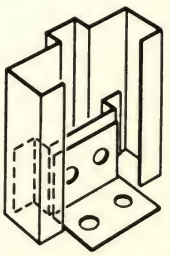
A label
Minimum 14 gauge steel.
Maximum size—
single 4′-0″x8′-0″;
pair 8′-0″x10′-0″.
Frame stop height—¾″

B-C-D-E label
Maximum size—
16 gauge steel
single 3′-6″x7′-6″
pair 5′-0″x7′-6″
14 gauge steel
single 4′-0″x10′-0″
pair 8′-0″x10′-0″
Frame stop height—⅝″

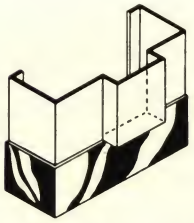
base and frame details



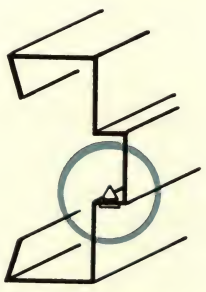
JAMB TERMINATING AT TOP OF TERRAZZO, CERAMIC TILE, OR CONCRETE BASE



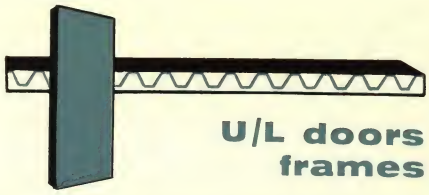
ADJUSTABLE FLOOR CLIPS



STAINLESS STEEL SPATS WRAPPED AROUND FRAME



RUBBER SILENCERS ON H/M FRAMES



U/L doors frames

door and hardware requirements

single A (3-hour)

Maximum size—4′-0″ x 8′-0″. Minimum 18 gauge steel.
Hardware requirement—

BUTTS—Steel minimum 4½″ high, regular weight, for doors 36″ or less wide. Extra heavy for doors over 36″ wide. One butt required for each 30″ of door height.

LOCKS—Approved single-point, mortise or cylindrical with ¾″ throw, or approved 3-point lock.

DOOR CLOSER—Recommended hold-open type with fusible link (optional).

pair A (3-hour)

Maximum opening size—8′-0″ x 10′-0″. Minimum 18 gauge steel.
Hardware requirement—

BUTTS—Steel minimum 4½″ high, regular weight, for doors 36″ or less wide. Extra heavy for doors over 36″ wide. One butt required for each 30″ of door height.

LOCKS—Active door, approved 3-point lock.
Inactive door, approved 2-point lock.

DOOR CLOSER—Recommended hold-open type with fusible link (optional).

ASTRAGALS—Required for each door.

single and pair • B (1½-hour) • C (¾-hour) • D (1½-hour) • E (¾-hour)

Maximum opening size—single 4′-0″ x 10′-0″; pair 8′-0″ x 10′-0″.

Steel gauge—flush type 18, 16 and 14 gauge; panel type 18 gauge only.

Maximum exposed wire glass area—
B label—single opening 100 sq. in. with no dimension exceeding 12″ except type 6. Maximum height 33″. Pairs of doors 50 sq. in. per door.

C label—1296 sq. in. each light. Muntin bars optional.
D label—No glass.
E label—720 sq. in. each light. Muntin bars optional.

Approved glass mouldings must be used. Pairs of doors to have astragal one side.

Hardware requirements—
BUTTS—4½″ regular weight steel, one for each 30″ of height.

LOCKS—Knob latch, lock or panic device. Pairs must have ¾″ bolt throw. Doors exceeding 8′-0″ in height to have 3-point lock. Inactive door of pairs to have top and bottom bolts or panic device.

DOOR CLOSER—Rixson floor hinge with mortised pivots permitted.

Spring hinges, push-pulls, deadlocks not permitted.

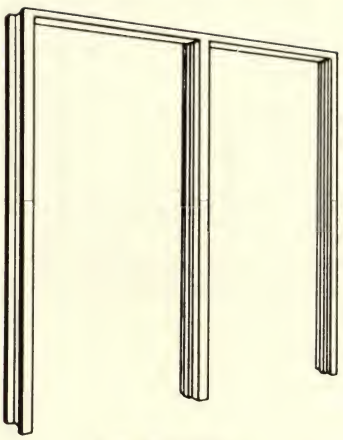
important notes

1. Cutting and closing of frame stops at 45° or 90° approved.
2. Standard rubber bumpers and mutes approved.
3. Hospital type extensions for terrazzo base approved.
4. Stainless steel spats 6″ high of 20 gauge (max.) approved.
5. Adjustable floor clips approved.
6. Double door frames with removable mullions approved.
7. Frames with transoms (class C and E only) approved.
8. Use of uni-check and pivots approved.
9. Concealed closers in frames or transom bar approved.
10. Approved type anchors must be furnished. Two required for first 60″ of height and one additional for each 30″ of height or fraction thereof.

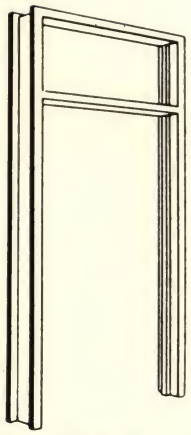
NOT PERMITTED

1. Stainless steel or aluminum frames. 2. Frames bolted into masonry or in stud walls, plaster partitions.

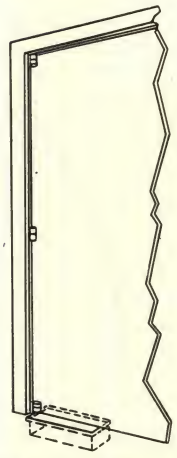
frames • closers • hinges



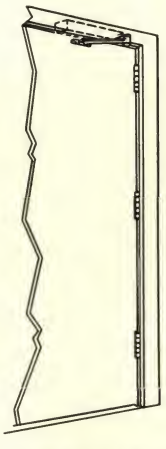
U/L FRAMES
WITH MULLIONS



U/L FRAMES
WITH TRANSOMS



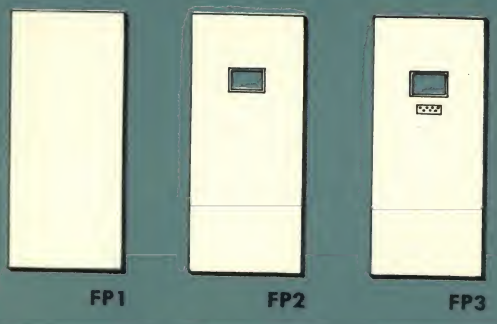
FLOOR HUNG ON
FLOOR CHECK AND PIVOTS

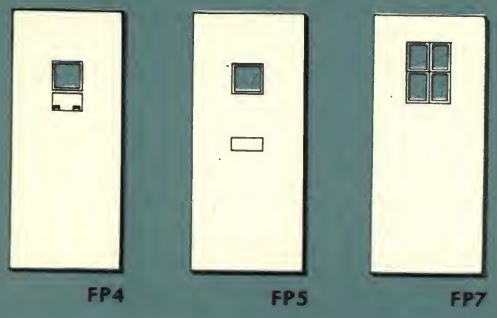


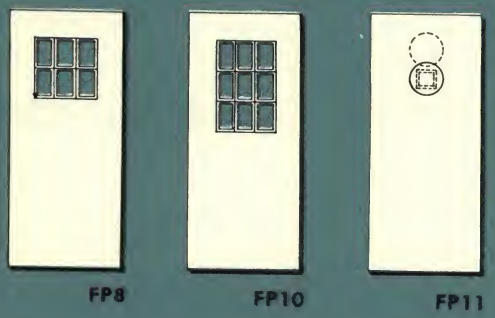
CLOSER CONCEALED
IN FRAME HEAD

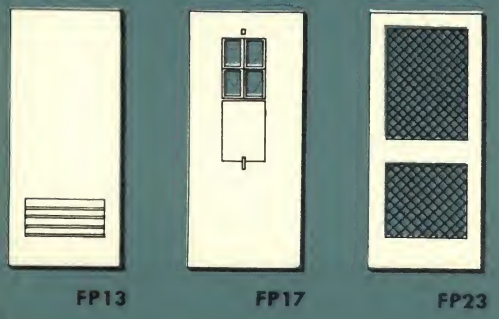
TRUSSBILT

door types









hollow metal prison and detention doors

Original, medium security prison, Soledad, California
Architect: State of California, Department of Public Works, Division of Architecture
Contractor: M and K Corporation

For over seventeen years TRUSSBILT has furnished prison and detention type Hollow Metal doors and frames for many installations.

The TRUSSCORE flush type door has been approved by the Federal Bureau of Prisons as well as many noted prison architects for use in maximum security prisons, medium detention homes and hospitals.

The prison illustrated above has a medium security installation. The door installation detailed on the opposite page is for a maximum security situation.

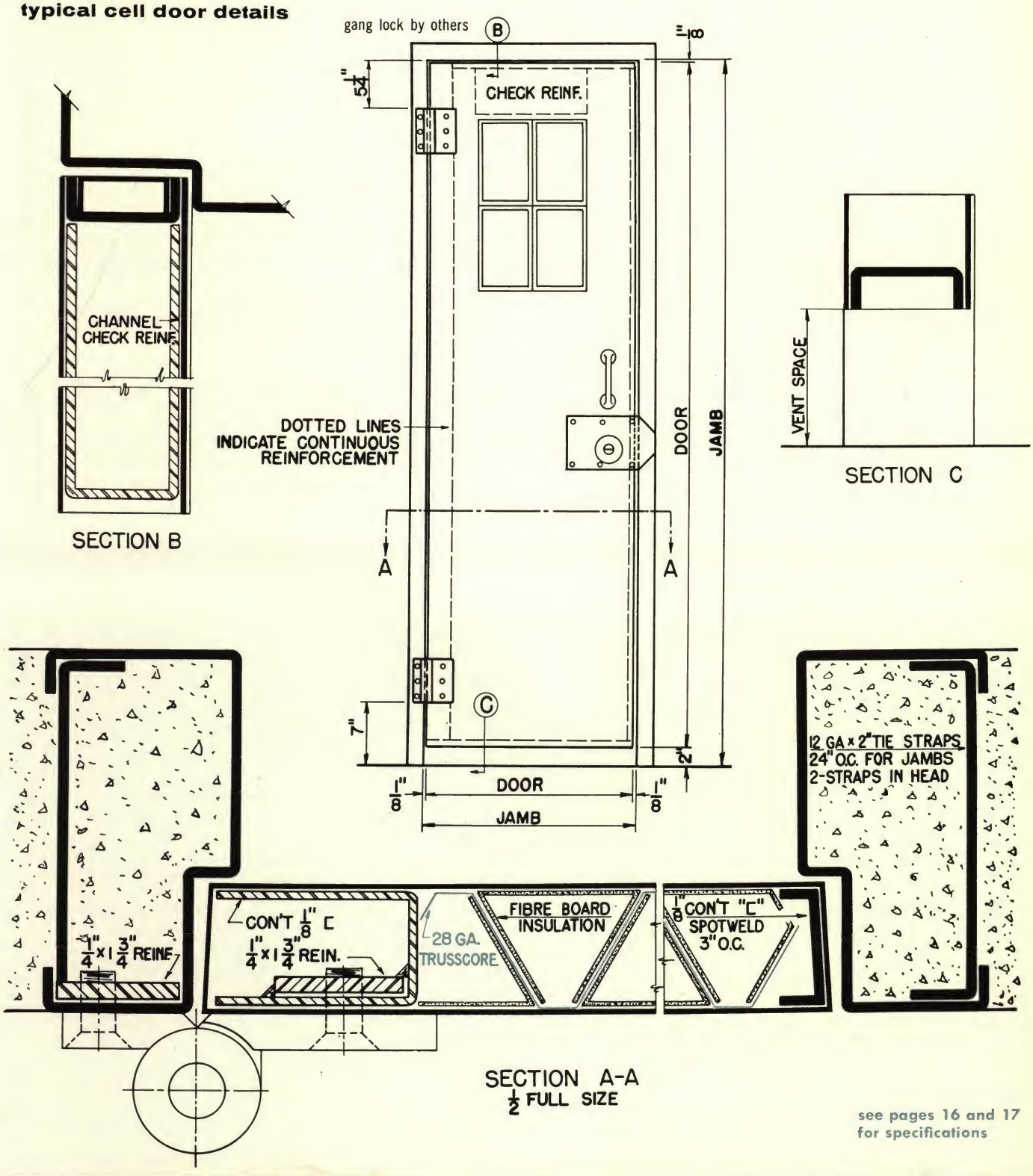
For further information and details, we offer to you our many years of experience; our able engineering staff is at your service.

representative jobs of recent TRUSSBILT security installations

United States Government Maximum Security Disciplinary Barracks • Camp Cooke, California
State of California Medium Security Prison • Soledad, California
State of Ohio Training School • Marion, Ohio
State Institution for Defective Delinquents • Luzerne, Pennsylvania
Illinois Youth Commission Diagnostic Center • Joliet, Illinois
Chester County Prison Farm • Philadelphia, Pennsylvania
Ohio Correctional Institution • Lebanon, Ohio
Courthouse and Jail • San Diego, California
Connecticut State Prison • Enfield, Connecticut
Juvenile Youth Study Center • New Orleans, Louisiana

prison and detention doors

typical cell door details



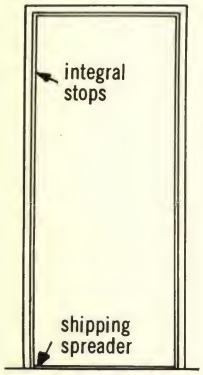
SECTION A-A
1/2 FULL SIZE

see pages 16 and 17 for specifications

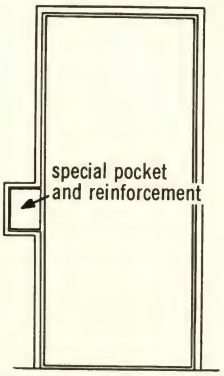
TRUSSBILT

hollow metal prison and detention doors

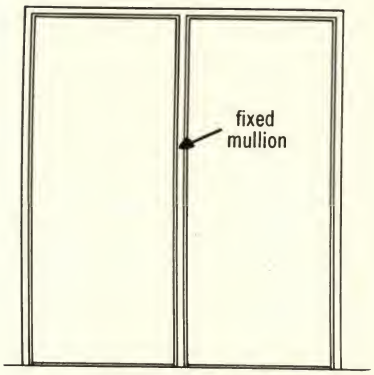
pressed steel frames



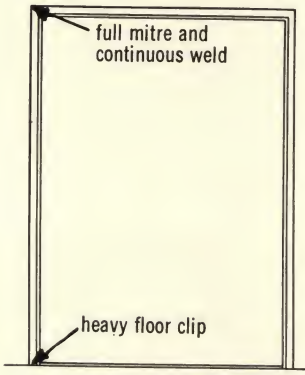
SINGLE FRAME



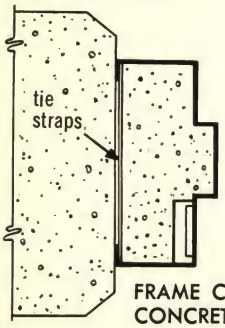
ELECTRIC LOCK FRAME



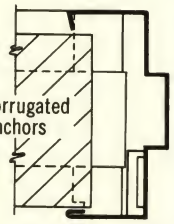
MULLION FRAME



FRAME FOR PAIRS



FRAME CAST INTO CONCRETE WALL



FRAME IN MASONRY PLASTERED WALL OR GLAZED TILE

- **one-piece construction**
- **heavy hardware reinforcements**
- **neat appearance**
- **low initial cost**

For use with our Trusscore detention doors we recommend pressed steel frames of 12 gauge material. These frames are maintenance-free, neat in appearance and have low initial cost. Space limitations of this catalog restrict the number of possible applications, and we invite your inquiry for additional information. For general specification data, see paragraph (J) of specifications below.

architects' specifications

(A) Where required by plans, all pressed steel frames and doors set up for prison locks shall be prison doors as manufactured by Trussbilt Division of Siems Bros., Inc., 2575 Como Ave., St. Paul 8, Minnesota.

(B) GENERAL—Prison doors shall be approximately 2" thick to receive prison locks. Edges at top and sides shall finish flush. Doors shall have not more than ⅛" clearance at sides and top and shall have proper bevel to operate without binding. Accurately mortise and reinforce prison doors for application of hardware and prison equipment items.

(C) DOOR CONSTRUCTION—Prison doors shall have face sheets of 14-gauge furniture steel with Trussbilt continuous inner-reinforcement (Trusscore) full width and height of door.

Inner-reinforcement shall be a true truss design with triangular form whose shape cannot alter without changing the length of the sides. Flat apexes of inner-reinforcement shall be electric spot welded to face sheets 2¾" o.c. both vertically and horizontally across entire surface of door. Each flute of inner-reinforcement to receive a special fibreboard sound deadener—paint impregnated to become an integral part of door.

(Where an open type specification is required, the following door construction is to be considered a minimum equal to the continuous inner-reinforcement of Trussbilt doors:) Where continuous inner-reinforcement construction as described above is not furnished, only the following door construction will be considered: Face sheets 12-gauge furniture steel with vertical reinforcements of 10-gauge channels spaced 4" o.c. spot welded 3" o.c. vertically. Channels shall run full height of door and have 1" legs. Spaces between channels shall have air-cell asbestos insulation solidly filling all voids.

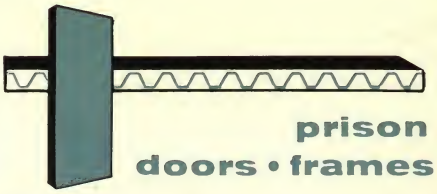
(D) PRISON DOOR REINFORCEMENTS—Provide internally ⅛" steel channel banding around complete door perimeter, spot welded to face sheets 3" o.c. The butt reinforcing channel shall receive an additional backup reinforcement of 3/16" plate, arc welded in place, all properly drilled and tapped to receive screws. The lock channel shall not be cut except for passage of lock bolt. Pull reinforcement shall be ⅜" x 2" x 12", closer reinforcement one-piece channel 12-gauge x 3½" x 14".

(E) PRISON LOCK POCKET—A special pocket shall be built into door where prison locks are used. Detention side of door shall finish flush with a 3/16" backup plate to protect lock. Backup plate shall be drilled and tapped to receive lock which shall be factory installed with 4 F.H. or twist-off bolts. Provision shall be made so it is impossible for removal of lock when bolt is in extended (locked) position. Lock coverplates shall be provided and factory installed after lock is in place. Coverplate shall be 3/16" steel plate, extending at least ¾" beyond cutout on all edges. Plate shall have extended offset lip to lap over jamb and protect lock bolt. Plate shall have all edges neatly beveled and fastened to door with 6 twist-off head security bolts. Finish coverplate to match door finish.

(F) PRISON DOOR FENESTRATION——

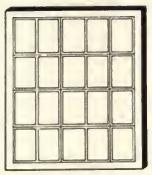
Standard Vision—Vision openings shall be provided where required. See plans for size. Solid bar glazing bead with spanner-head screws shall be provided.

Multiple Glass Lights—Doors where indicated by plans shall be equipped with special guard inserts. Opening in door shall be

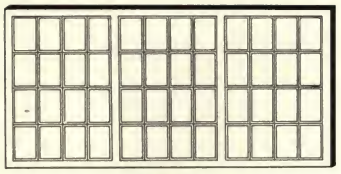


prison doors • frames

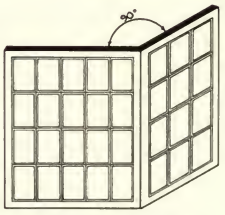
pressed steel relite frames



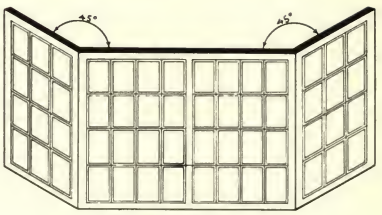
SINGLE



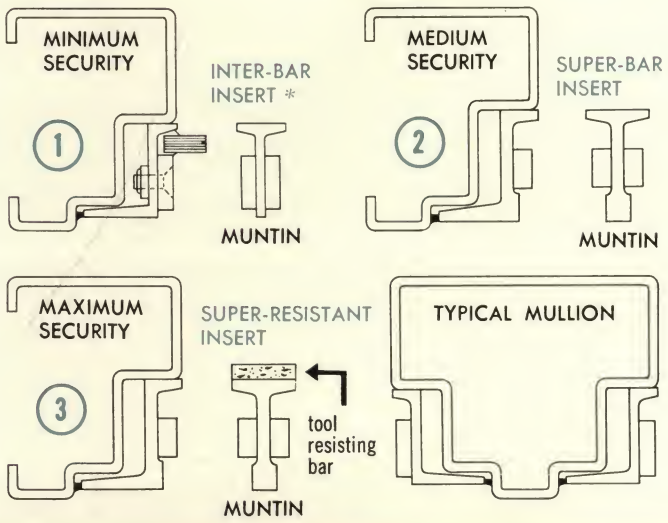
TRIPLE



CORNER VIEW



CORRIDOR VIEW



• three distinct classes of security available

The use of pressed steel relite frames in detention institutions is considered a necessity. Relites offer a full, unobstructed view of any security area without endangering personnel to attack from inmates and in many areas allow for visual inspection without the opening of critical security doors. Relites come complete with factory built-in security sash with a common glass-size module of 6″ x 9″. For specification data covering security sash, please refer to paragraph (F) Prison Door Fenestration of specifications below.

Note: Glazing bars occur on non-detention side—always.

*see specifications below

framed with a steel channel (same gauge as door) around perimeter of insert and spot welded 3″ o.c. Inserts shall be continuously arc welded into door construction on both sides and welds ground smooth on a 45° angle.

Guard Inserts—Shall be supplied by door manufacturer as required by plans. Muntin spacing shall be a common glass size module of 6″ x 9″ with solid bar glazing beads complete with spanner-head screws.

Minimum Security Inserts—"INTER-BAR" Inserts—(All doors unless otherwise noted) section 1½″, glazing rabbet 5/16″, frame weight 1.27 lb., muntin weight 1.0 lb., frame and muntins tenoned and riveted.

Medium Security Inserts—"SUPER-BAR" Inserts—Section 1¾″, glazing rabbet ⅜″, frame weight 2.0 lb., muntin weight 1.9 lb., frame and muntins tenoned, riveted and arc welded. Welds may not project more than 1/16″ and shall not be ground.

Maximum Security Inserts—"SUPER-RESISTANT" Inserts—Section 1¾″, glazing rabbet ⅜″, frame weight 2.0 lb., muntin 1.9 lb., frame and muntins tenoned, riveted and arc welded. Welds may not project more than 1/16″ and shall not be ground. Tool-resisting bar of ¼ sq. in. area, composed of 12 high carbon-chrome steel inserts, embedded in a low carbon steel matrix, then heat treated, shall be welded to inside face of all vertical and to web of all horizontal muntins with 1″ welds spaced 9″ o.c.

(G) FACTORY HARDWARE APPLICATION—This manufacturer shall factory install following hardware and prison equipment which shall be "prepaid" by others for delivery at door plant. Prison locks and deadbolts, protection plates, pulls, push plates, hangers, door guides, kickplates, butts, cremone bolts, key escutcheons, head and foot bolts. Also, where limit switches are used or electric locks are used for pairs of doors, door supplier shall factory build in doors all boxes and conduit to receive wiring furnished by others. Balance of hardware and prison equipment to be field installed by other trades.

(H) FACTORY PRIME—Each door shall be automatically pressure sanded on both sides to remove blemishes and foreign matter, also to serve as grip for paint. Completely dip door in red oxide prime so interior of door is completely coated with primer. Spot glaze with metallic filler to smooth any irregularities and sand smooth. Follow with two spray coats of red or gray primer, each coat baked on.

(J) PRESSED STEEL FRAMES—Where indicated by plans, provide pressed steel frames of 12-gauge pickled and annealed steel. Frames shall be fully mitred at corners and continuously welded on backside of mitre—at all points. For butts, provide a continuous 3/16″ plate reinforcement, 1½″ wide by full height, drilled and tapped. Factory install lock bolt keepers which will be "prepaid" to frame plant. Protect all mortises with pressed steel boxes. Provide 12-gauge angle floor clips at bottom of frame with holes for securing to floor. Also provide a temporary channel type spreader welded to bottom of frame. Where electric locks are mounted in frame, provide special housing with 3/16″ backup for attachment of lock. Frames shall receive one coat of red oxide prime baked on.

NOTE: For specification data covering Standard Hollow Metal Doors and Frames, see pages 8 and 9 of this catalog.

TRUSSBILT

window walls • curtain walls

. . . custom fabricated of durable steel

Illustrations on these pages are current examples of Trussbilt's window wall system. Each installation proves that it is possible to design a tight and leak-proof window wall, beautiful in appearance and economical in price.

With steel you have complete freedom of design and a full range of color selections including today's new miracle finishes.

We are in a position to contract for the complete requirement including framing, metal panels, porcelain enamel, vent sash, etc.

Write for full particulars of construction.

1. St. Michael School • Morgan, Minnesota

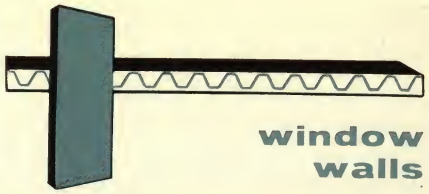
2. Southwest Junior High School • Albert Lea, Minnesota

4. Golden Valley Civic Center • Golden Valley, Minnesota

7. Arlington Hills Presbyterian Church • St. Paul, Minnesota

architects

1. A. J. Ross & Associates
   Mankato, Minnesota
2. Hammel & Green, Inc.
   St. Paul, Minnesota
3. Hammel & Green, Inc.
   St. Paul, Minnesota
4. Patch & Erickson, Inc.
   Minneapolis, Minnesota
5. Patch & Erickson, Inc.
   Minneapolis, Minnesota
6. Patch & Erickson, Inc.
   Minneapolis, Minnesota
7. E. D. Corwin & Associates
   St. Paul, Minnesota
8. A. J. Ross & Associates
   Mankato, Minnesota
9. Ellerbe & Company
   St. Paul, Minnesota



window walls

3. Southwest Junior High School • Albert Lea, Minnesota

5. Golden Valley Civic Center

6. Minnehaha Lutheran Church—Educational Center • Minneapolis, Minnesota

8. Sacred Heart High School • Waseca, Minnesota

9. Trussbilt Home Office • St. Paul, Minnesota

TRUSSBILT representatives

state	city	write	call
Alabama	Birmingham (4)	Oscar M. Price, Jr., 1026 No. 19th St.	FA 2-1028
California	Glendale (4)	Engineered Metals of S. Cal., 437 Fernando Court	CH 5-2614
	San Diego (3)	Albert J. Ehlers, 3525 Fifth Ave.	CY 5-7294
	San Francisco (5)	Boris Kitchin, 53 Stevenson St.	GA 1-7087
Colorado	Denver (2)	Colorado Bldrs. Supply Co., 1534 Blake St.	AC 2-3851
Florida	Jacksonville	Aichel Steel & Supply Co., 2205 Edison Ave.	EL 5-6535
Georgia	Atlanta (3)	Industrial Equip. Co., 78 Baker St., N. W.	JA 2-2615
Illinois	Chicago (6)	Branch Nicoloff Co., 549 W. Washington Blvd.	RA 6-5057
	Moline	Builders Sales & Service Co., 202—34th St.	MO 4-7445
Indiana	Fort Wayne (2)	Jones Engineering Products Co., 3416 Fairfield	HA 4131
	Gary (8)	Gary Gen. Equip. Co., Inc., 2727 W. 9th Ave.	TU 5-5578
	Indianapolis (6)	Holliday Steel Warehouse, 545 W. McCarty St.	ME 1-8311
Iowa	Des Moines (10)	Swanson Sales, Inc., 2737 Douglas Ave.	CR 9-9793
	Sioux City	Burke Eng. Sales Co., 2210 E. 4th St.	5-5091
	Waterloo	Pinkerton Bldg. Supplies, 302½ W. 4th	AD 3-3361
Kansas	Wichita (1)	Chester L. Anderson Co., Inc., 700 So. Emporia	HO 4-9354
Kentucky	Louisville (1)	Atlas Plaster & Supply Co., 2932 Greenwood	SP 6-4621
Michigan	Grand Rapids (7)	Steele Bros. & Todd, 1050 Cottage Grove S. E.	CH 5-0416
	Lansing (2)	Payne-Rosso Company, 2211 W. St. Joseph St.	IV 44547-48
	Marquette	C. T. DeHaas Company, Washington St.	CA 6-6515
Minnesota	St. Paul (8)	Trussbilt, 2575 Como Ave.	MI 6-7181
Missouri	Kansas City (11)	Edelman-Lyon Co., 4303 Main St.	VA 1-4340
Montana	Billings	Montana Steel & Supply Co., 714—6th Ave. No.	9-3639
	Great Falls	Montana Steel & Supply Co., 1107 Central Ave. W.	GL 2-2011
Nebraska	Omaha (10)	Trustin-Carlson & Assoc., 2300 N. 18th St.	AT 4586
New Mexico	Albuquerque	Cobusco Steel Products, 2001 E. Gold Ave.	CH 3-2291
New York	Rochester (7)	The Maurer Co., Inc., 31 Richmond St.	HA 6-0030
North Dakota	St. Paul (8), Minn.	Trussbilt, 2575 Como Ave.	MI 6-7181
Ohio	Cleveland (28)	Hope Products Co., 15812 Miles Ave.	LO 1-3363
Oklahoma	Oklahoma City (5)	Murray R. Womble Co., 121 N. E. 26th St.	JA 5-7417
	Tulsa (19)	Murray R. Womble Co., 216 East 16th St.	LU 4-2414
Pennsylvania	Upper Darby	MacKay & Walls, Inc., 60 Sherbrook Blvd.	CL 9-5666
South Dakota	St. Paul (8), Minn.	Trussbilt, 2575 Como Ave.	MI 6-7181
Tennessee	Johnson City	Lancaster Assoc., John Sevier Hotel Bldg.	3200
	Knoxville (1)	Lancaster Assoc., Andrew Jackson Hotel Bldg.	4-4623
	Nashville	Vernon S. Tupper Co., 206 Tuck Bldg.	AL 4-6559
Texas	Dallas (1)	J. L. O'Hearn, 809 Wilson Bldg.	RI 2-2306
	San Antonio (1)	Kirby Bldg. Specialties, 3504 Bandera Rd.	PE 3-8169
Utah	Salt Lake City (4)	Cobusco Steel Products, 660 W. So. Temple	EM 4-8481
Washington	Seattle (1)	Bradley-Zesbaugh, Inc., 505—White-Henry-Stuart Bldg.	MA 4-1570
	Spokane (4)	Brant-Bernhard Corp., 34 W. 2nd Ave.	RI 7-2081
Wisconsin	Green Bay	La Force Builders Hardware, 347 S. Washington	HE 7-0541
	Milwaukee (3)	Phillip Gross Hdwe. Co., 174 W. Wisconsin Ave.	BR 1-2929
Wyoming	Casper	Colorado Bldrs. Sup. Co., 2100 E. Yellowstone Highway	3-3785

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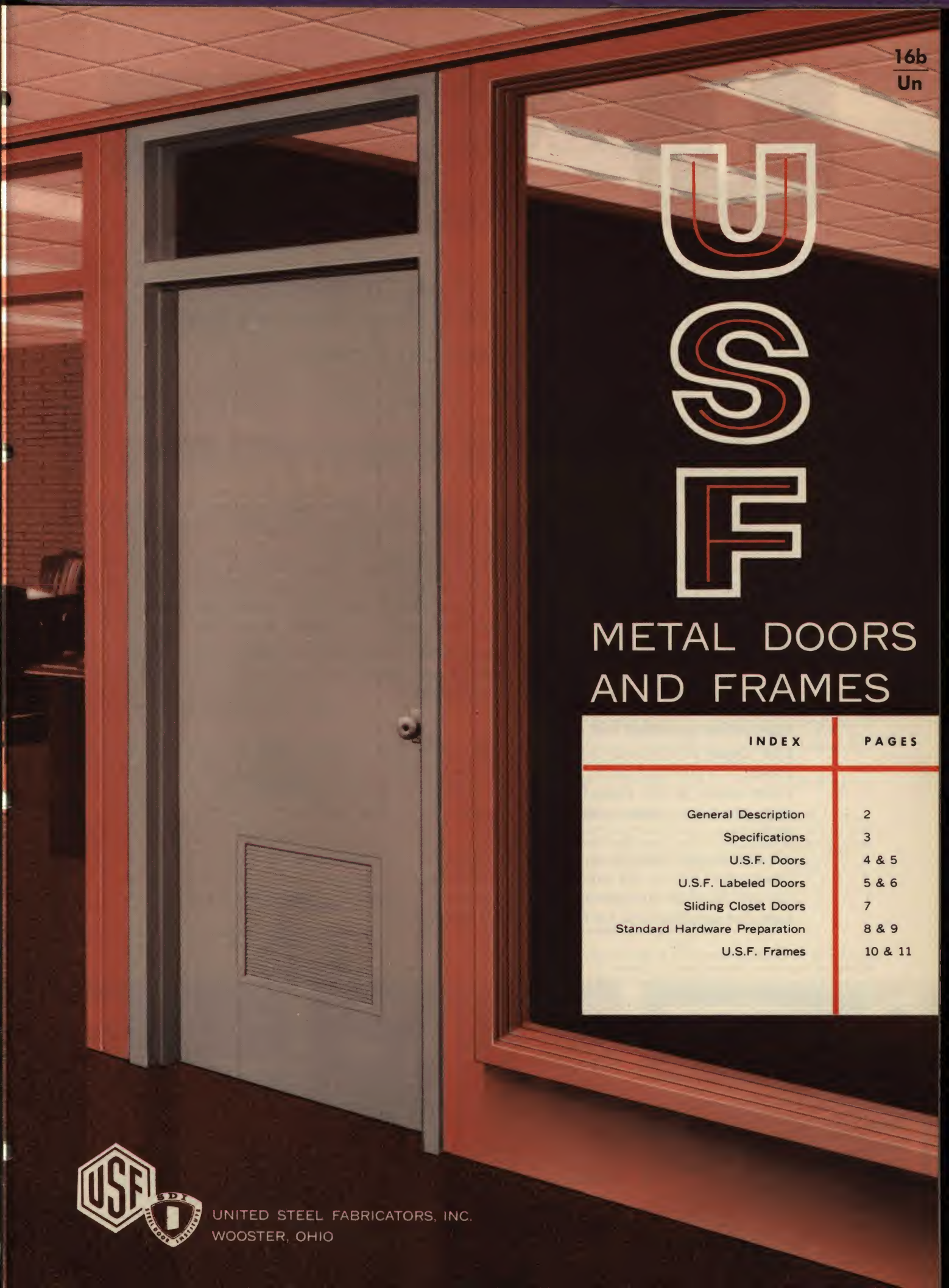
2575 COMO AVENUE • ST. PAUL 8, MINNESOTA • MIdway 6-7181



U S F

METAL DOORS AND FRAMES

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U.S.F. Labeled Doors	5 & 6
Sliding Closet Doors	7
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U.S.F. Frames	10 & 11

UNITED STEEL FABRICATORS, INC.
WOOSTER, OHIO

USF

precision tooling assures STANDARDIZED top quality and uniformity in USF Doors and Frames installations coast to coast....

mechanically engineered products

USF Metal Doors and Frames for interior and exterior openings are a *standardized* design and match throughout the line. They offer a degree of quality and uniformity unequalled in the industry.

Mechanically engineered to a basic design, USF Doors and Frames are mass produced on the most completely tooled assembly line in the industry, custom designed welding equipment, precision dies, special jigs and fixtures. Constructed with die-formed, interlocking components, USF Doors offer positive plumb, squareness and precise dimensions. Modular dimensioned, USF Doors and Frames not only fit each other perfectly but fit other modular building materials. Shop primed and mortised for hardware, they require no fitting on the job . . . no frame building . . . no mortising . . . no planing or sanding.

The USF line includes matching flush panel doors for all standard sized openings, including double opening pairs and by-pass sliding closet doors with frames. See following pages for complete specifications and engineering details.

construction exclusive USF design

USF Doors offer unique construction features found in no other metal doors. The doors consist of a box-type center panel which interlocks with two similar stile panels along the entire height of the door. Internal spot welding at frequent intervals along the entire joint produces unusual rigidity and flatness. No welding marks are exposed on visible surfaces.

All Frames are mitered at their upper joints and internally electric welded, leaving a clean miter line on the exposed surface with no weld showing. Held firmly in precision jigs and fixtures throughout assembly, assuring uniformity in size, flatness and squareness. See specifications for more complete descriptions.

SPECIFICATIONS

USF

METAL DOORS AND FRAMES
1⅜" AND 1¾" THICK

door specifications

(1) All hollow steel doors for interior and exterior openings shall be as manufactured by United Steel Fabricators' methods and standards. All doors will be 1⅜" no bevel, or 1¾" thick with ⅛" in 2" standard bevel as specified and will be constructed of 20 U.S. gauge prime cold rolled stretcher leveled quality steel. Construction shall be triple-box type consisting of a hinge stile, lock stile and center panel assembled into complete door with close intermittent spot welds made internally throughout the entire vertical length – vertical ribs being a continuous part of the stiles by forming edge inwardly at right angles to the face. Center panel edges formed inwardly and again outwardly to protrude into stile for joining flanges. Channels of 16 U.S. Gauge steel will be spot welded into the top and bottom edges of doors.

(2) Commercial line of doors will be similar in construction except that stiles and center panels shall be made of 18 U.S. gauge steel and furnished 1¾" thick only.

(3) All doors over 3'4" wide will be reinforced with center rib of 24 U.S. gauge, cold rolled steel, "Z" in shape – one flange welded to the interface of each center panel and, in turn, welded to each other internally by spot welding intermittently along the entire vertical length of the doors.

(4) All doors shall be thoroughly clean and free of oil, dirt or dust prior to painting. They shall be given one (1) special coat of best quality synthetic enamel, prime finish, baked at 350°F. for approximately fifteen (15) minutes, color medium grey. Finish color coats to be applied in the field by others. Doors will, when specified, be painted with one (1) coat of best quality synthetic enamel baked the same as above except in a color to be selected by the architect from United Steel Fabricators' standard color chart. The finish is semi-gloss. Photovolt gloss meter reading 17 to 23. Side exposed to weather to be re-painted by others.

(5) STILE widths of doors will be as follows:
6" stiles on doors up to and including 2'6" in width.
8" stiles on doors over 2'6" and through 3'0" in width.
10" stiles on doors over 3'0" in width.

(6) LOUVERS can be furnished stamped into center panel or with United Steel Fabricators' inserted unit type.

(7) EXTERIOR DOORS will, when required, be provided with inverted channel in top for weather sealing at an extra. Required only when not otherwise protected.

(8) Doors will be prepared for glazing in sizes and types as illustrated in catalog. No glass or glazing by United Steel Fabricators. Glass dimensions – See Page 5.

hardware – see pages 8 and 9, also USF hardware bulletin no. 100

(1) HINGES – doors shall be mortised and reinforced, drilled and tapped to receive template butts of the following sizes and types only:

Doors 1⅜" thick prepared for 3½" with leaf .123" thick; 4" with leaf .130" thick. Hinge reinforcements 10 U.S. gauge STEEL. 1½ pr. 4½"x .134" on label doors.

Doors 1¾" thick prepared for 4" min. or 4½" max. with same leaf thickness as above. Hinge reinforcements double thickness of 14 U.S. gauge STEEL.

All doors are prepared for 1 or 1½ pair. Label doors see specification pages 5 and 6.

Doors 1¾" thick to be used in Channel Iron frames will be mortised and reinforced for 4½" half mortised type hinge only, leaf thickness .134" mortised into door; other leaf to be attached on face of channel iron frame by others. Hager No. BB-1129 is adaptable.

Doors can be prepared for Spring Hinges 6" on 1⅜" thick doors and 7" on 1¾" thick single acting doors only. (United Steel Fabricators not responsible for the performance of doors with spring hinges.)

(2) LOCKS – See Page 9 for mortising dimensions. Reinforcements made of 16 U.S. gauge, drilled and tapped for attaching lock front face only; drilling and/or tapping for roses or escutcheons is a field operation by others. See latest USF hardware bulletin number 100 for locks adaptable to standard mortising.

(3) FLUSH BOLTS–See Page 9 for mortising dimensions, and latest hardware bulletin number 100 for adaptable flush bolts. (Frame heads reinforced for flush bolt hole and to be drilled in the field by others.)

(4) DOUBLE ACTING DOORS – United Steel Fabricators can prepare doors for double action. See latest hardware bulletin number 100.

(5) All other hardware will be surface applied only. A universal reinforcement will be provided. Drilling and tapping for attaching is a field operation to be performed by others.

(6) NOTE: No hardware will be furnished or applied by United Steel Fabricators except for sliding closet units (See specification). Templates only and hardware schedule to be furnished.

frame specifications

(1) All frames shall be made by United Steel Fabricators' standard methods and designs from best quality 16 or 14 U.S. gauge sheet steel – contour dimensions as shown in our catalog. Variable section widths in ¼" increments only. Adapted for masonry, stud wall with lath and plaster, stud with dry wall and 2" solid plaster partition. Some types can be made to be used in conjunction with rough bucks or special fastening clips for attaching to concrete openings. All frames will be mitered at their joints, electric arc welded internally, creating a tight, neat miter line on outer surface.

(2) All frames are provided with a 16 U.S. gauge foot clip spot welded for anchoring to floor. Frames for metal or wood stud walls only will be provided with eight (8) fastening clips, four (4) spot welded into each side. All frames will be provided with two (2) punched holes in stop of strike jamb for United Steel Fabricators' standard rubber door silencers installed in the field by others. Two silencers per frame furnished by U.S.F.

(3) Frames for below finished floor mounting will be furnished with extended foot clip, 2" max.

(4) PAINT – Frames are thoroughly cleaned in high-temperature degreasing and paint preparation chemical, immersed completely into an extra high density non-porous, salt spray resisting, air-dry, rust-inhibiting primer.

(5) MAXIMUM OPENING SIZES–Singles 4'0"x 7'0"; Doubles 8'0"x 7'0".

hardware – see USF hardware bulletin no. 100

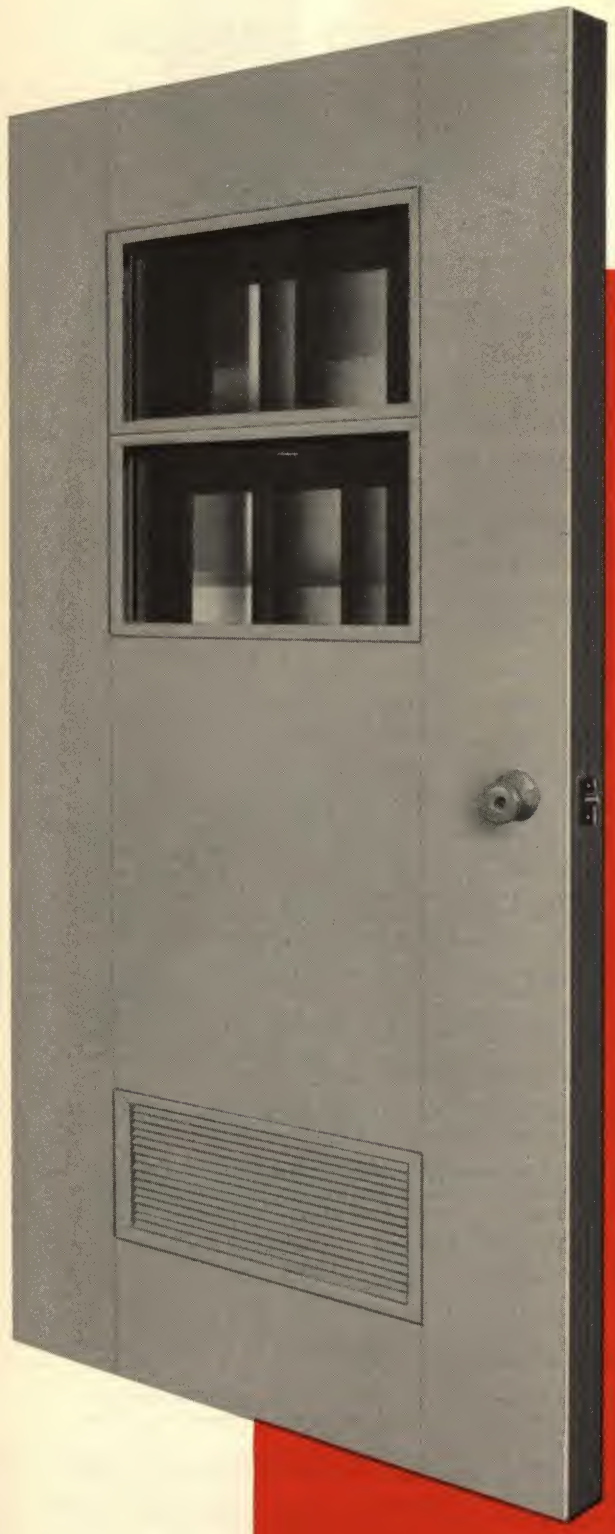
(1) HINGES – All frames will be provided with hinge mortise and reinforcements, drilled and tapped to receive hinges of size ranges the same as covered in Door Specifications under "HINGES."

(2) WELDED HINGES – United Steel Fabricators will provide frames for 1⅜" doors only, when requested, with one (1) pair of 3½"x 3½" assembled butts only, projection welded to the frame; machine screws to be shipped with doors for attaching by others. A center hinge can be furnished at an extra, if required.

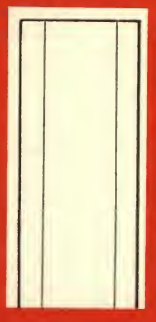
(3) LOCK STRIKES – See Page 9 for mortising dimensions. USF provides for 2 types of strikes, cylindrical lock strike Fed. Spec. No. 160 and No. 161. Mortise type lock strike Fed. Spec. No. 86. All reinforcements will be projection welded to the frames by electronically timed welding equipment assuring uniformity. Plaster covers under all mortises.

(4) Preparation for additional hardware will be made in frames only to the extent as covered in the Door Specifications, making the door and frame a functional unit.

USF

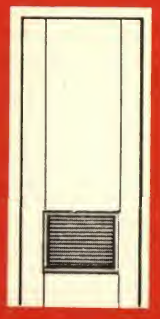


STANDARD DESIGN
furnished 1⅜" or 1¾" thick
either right or left hand
swing

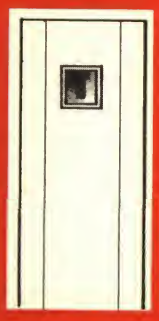


FP
PLAIN

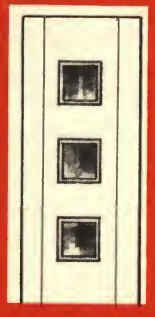
FP1
STAMPED LOUVER



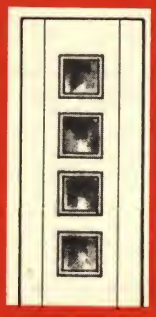
FP2
INSERTED LOUVER



FP3
VISION LIGHT
10 x 10

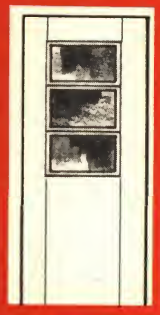


FP3 V3
3 LIGHT



FP3 V4
4 LIGHT

FP4
2 LIGHT
SINGLE MUNTIN



FP5
3 LIGHT
TWO MUNTIN

FP6
HALF LIGHT

FP0
OFFSET LIGHT

FP7
FULL LIGHT

FP7 M2
FULL LIGHT
TWO MUNTIN

For ordering various combinations of door types, select basic type number such as "FP," "FP5," or "FP0" and add the suffix number of the added feature to be included, such as "FP1-3" which combines a stamped louver and a 10 x 10 vision light.

DOORS

DOOR WIDTH	DOOR THICKNESS	STILE WIDTH	NET DOOR HEIGHT	STAMPED LOUVER	INVERTED "V" TYPE LOUVERS FREE AIR DIMENSIONS WIDTH	HEIGHT	EXPOSED LIGHT WIDTH	DOOR WIDTH
1'6"		6"	79-1/4" for			7-1/2" MIN. LOUVER		1'6"
2'0"		6"	6'8" Opg.	8" wide	10-1/4"	Additional free air opening in 7" increments only	10-1/4"	2'0"
2'2"		6"	——	1-1/8"	12-1/4"		12-1/4"	2'2"
2'4"		6"	83-1/4" for	vertical	14-1/4"		14-1/4"	2'4"
2'6"		6"	7'0" Opg.	spacing	16-1/4"		16-1/4"	2'6"
2'8"	1-3/8"	8"			14-1/4"	Max. in 6'8" Doors 58½"	14-1/4"	2'8"
2'10"	or	8"		Standard	16-1/4"		16-1/4"	2'10"
3'0"	1-3/4"	8"		Stamping	18-1/4"	Max. in 7'0" Doors 62½"	18-1/4"	3'0"
3'4"		10"	Door Floor	9 Louvers	18-1/4"		18-1/4"	3'4"
3'6"		10"	Clearance	Varies in	20-1/4"	UNLESS OTHERWISE SPECIFIED USF WILL FURNISH 14" HIGH LOUVER	20-1/4"	3'6"
4'0"		10"	3/4"	increments of 8 Slots	26-1/4"		26-1/4"	4'0"

Pairs—Maximum Size 8'0" wide by 7'0" high

	For 6'8" Doors	7'0" Doors
FP4 Exposed Light Height	2 at 10-1/2"	2 at 11-3/4"
FP5 Exposed Light Height	3 at 10-1/2"	3 at 11-3/4"
FP6 Exposed Light Height	1 at 34-1/2"	1 at 38-1/2"
FP7 Exposed Light Height	1 at 58-1/2"	1 at 62-1/2"
FP7M2 Exposed Light Height	3 at 18-1/2"	3 at 19-3/4"
FP0 Exposed Light Height	1 at 6x36"	1 at 6x40"

(1) LABELED DOORS

USF Doors can be furnished with Labels for 1½ Hr. Underwriters' "B" or New York City Ratings both with 650° F. Max. 30 Min. Temp. Rise. This also covers the rating "D". No heat transmission test required on rating "C" because of glass. Rating "E" is covered by "C" with limited glass – see below.

(2) LIGHTS — per opening

"B" openings 100 sq. in. max.
"C" openings 1,296 sq. in. max. with neither dimension exceeding 54 in.
"D" openings — no light allowed.
"E" openings 720 sq. in. max. with neither dimensions exceeding 54 in.

(3) SIZE LIMITATIONS

1⅜" thick label doors are furnished for single openings only, 3' 0"x 7' 0" max. opening size.

1¾" thick label doors are furnished for single openings, max. 4' 0"x 7' 0" and in pairs for double openings, max. 8' 0"x 7' 0" high.

16 and 14 gauge openings – 16 gauge labeled frames permissable in sizes up to and including 3' 6". 14 gauge required single frames over 3' 6", double frames over 5' 0".

(4) HARDWARE PREPARATIONS — (No Hdwe. by USF)

Door leaves will be provided with reinforcements (see specifications) for 1½ pr. steel butts 4½" in height, leaf thickness .134". Doors 5 ft. high and 30" wide or less can be provided with reinforcement for 1 pr. steel butts 4" in height, leaf thickness .130". All label doors must have latch with minimum ½" throw for single openings and minimum ¾" throw in pairs of doors. Flush bolts top and bottom on inactive leaf and an astragal welded to one door leaf.

All labeled door leaves are provided with reinforcements only for surface-applied closers.

USF LABELED DOORS

1⅜" CLASS "B" UNDERWRITERS' LABEL FIRE DOORS

1⅜" – 20 ga. 6'8" or 7'0" Single Swing Only

FP	2'0" thru 3'0"	FP3	2'2" thru 3'0"

NOTE: – FP can also be used for "D" rating.
NOTE: – FP3 can also be used for "E" rating.
See page 5 for details.

1⅜" CLASS "C" UNDERWRITERS' LABEL FIRE DOORS

1⅜" – 20 ga. 6'8" or 7'0" Single Swing Only

FPO	2'0" thru 3'0"	FP4	2'0" thru 3'0"
FP3V3	2'2" thru 3'0"	FP5	2'0" thru 3'0"
FP3V4	2'2" thru 3'0"	FP6	2'0" thru 3'0"

NOTE: – These doors can also be used for "E" Ratings – see page 5 for details.

1¾" CLASS "B" UNDERWRITERS' LABEL FIRE DOORS

1¾" – 20 ga. or 18 ga. 6'8" or 7'0"

FP	2'0" thru 3'0"	FP	3'4" thru 4'0"
FP3	2'2" thru 3'0"	FP3	3'4" thru 4'0"

NOTE: – FP can also be used for "D" Rating and FP3 for "E" Ratings. See page 5 for details.

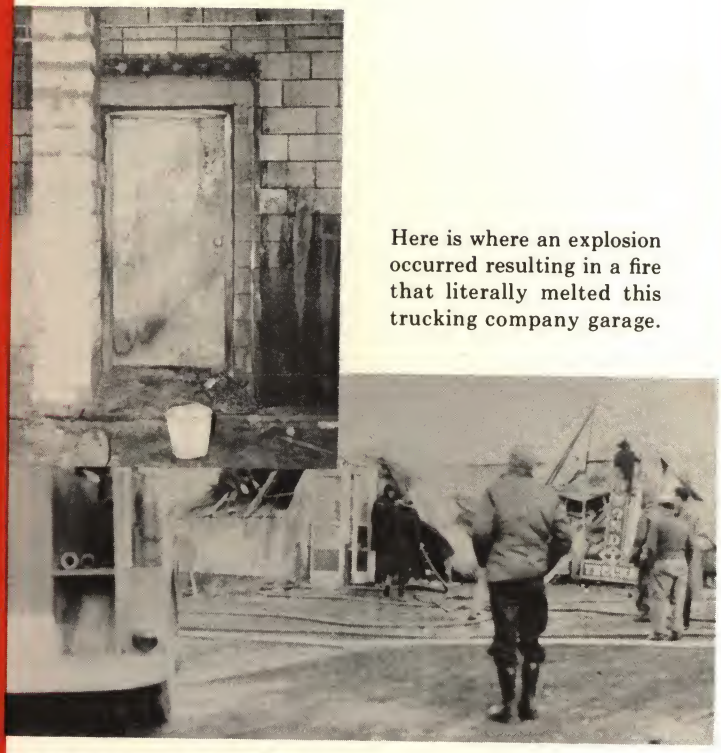
1¾" CLASS "C" UNDERWRITERS' LABEL FIRE DOORS

1¾" – 20 ga. or 18 ga. 6'8" or 7'0"

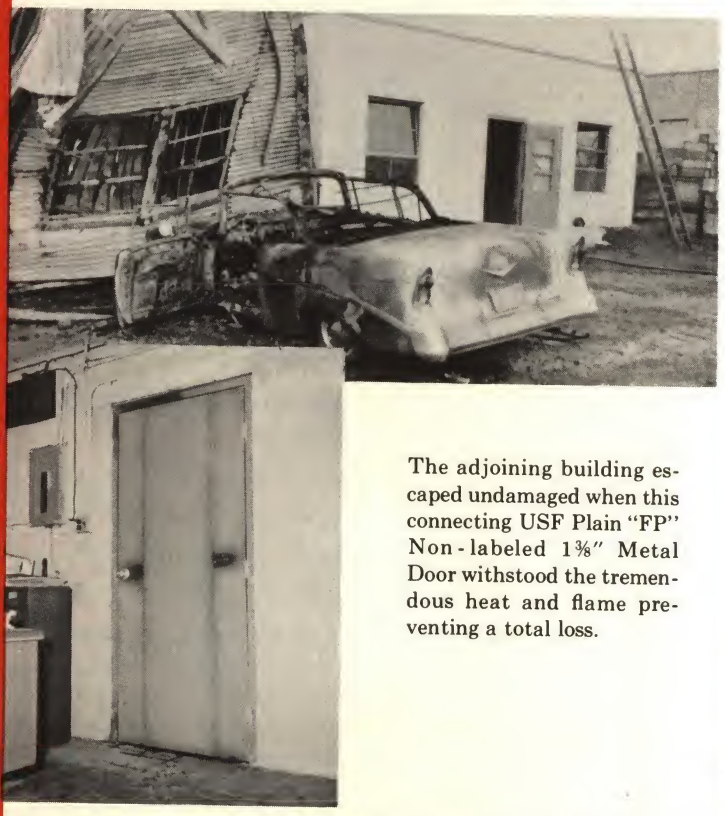
FP0	2'0" thru 3'0"	FP0	3'4" thru 4'0"
FP3V3	2'2" thru 3'0"	FP3V3	3'4" thru 4'0"
FP3V4	2'2" thru 3'0"	FP3V4	3'4" thru 4'0"
FP4	2'0" thru 3'0"	FP4	3'4" thru 4'0"
FP5	2'0" thru 3'0"	FP5	3'4" thru 4'0"
FP6	2'0" thru 3'0"	FP6	3'4" thru 4'0"

NOTE: EPO, FP3V3, FP3V4, and FP4 can also be used for "E" Ratings. See page 5 for details. FP5 and FP6 3' 0"x 7' 0" max. for "E" Ratings.

GENERAL NOTE – All doors on this sheet are standard heights. For 6'8" opening net door height 79¼". For 7'0" opening net door height 83¼". All doors must have a latch – Underwriters' requirement. Standard floor clearance ¾". NO GLAZING BY USF. ALL BAKED PRIME.



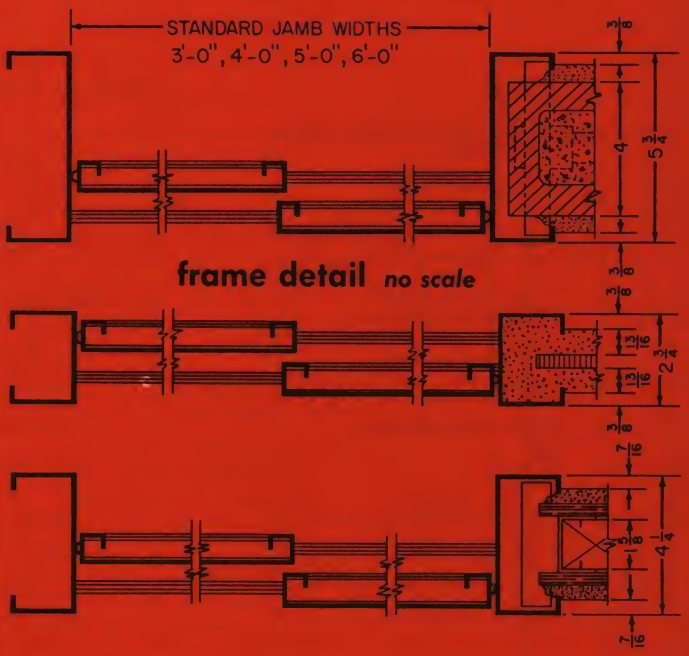
Here is where an explosion occurred resulting in a fire that literally melted this trucking company garage.



The adjoining building escaped undamaged when this connecting USF Plain "FP" Non-labeled 1⅜" Metal Door withstood the tremendous heat and flame preventing a total loss.

All Label Doors are mortised, reinforced, drilled and tapped for 1½ pair 4½" regular weight butts only. Doors reinforced for closers, surface applied only, not drilled and tapped by USF. Astragal and mortise for flush bolts included with doors in pairs.

USF SLIDING DOORS



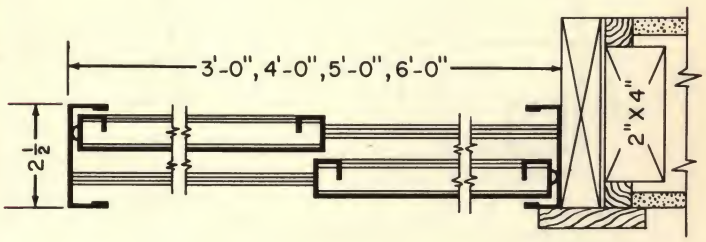
type "SCU" (door and frame)

Properly designed for best service in areas where space is at a premium, this unit features by-passing doors of single face, flush panel design. For accuracy of dimension, plumbness and squareness, the components are formed on precision tools.

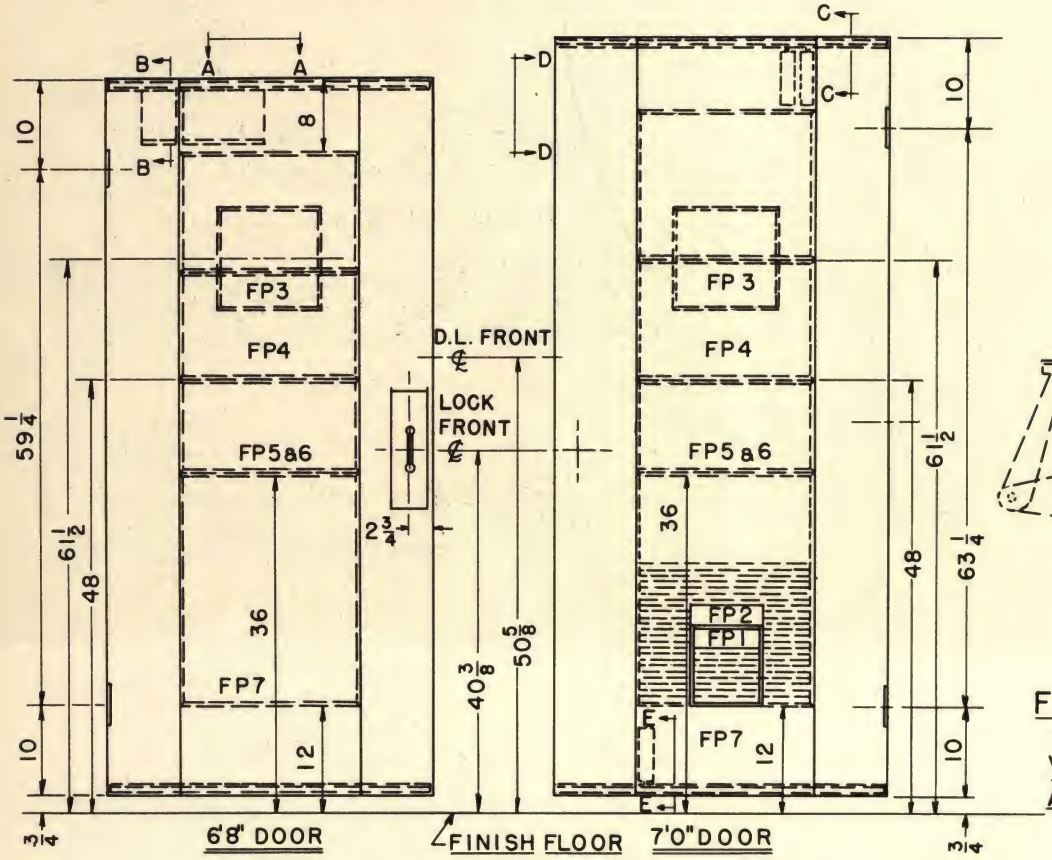
A unique method of concealed welding eliminates indentation or high lights on the door face. The doors are furnished with white nylon pulls and nylon rollers and felt guide blocks at top for silent operation. Rollers and guides are mounted on heavy gauge steel channels. A steel track is furnished to be fastened to the floor, and a channel top guide welded to the frame head. All necessary clips are welded to the frames for use in walls of masonry, wood stud or two-inch solid plaster partition. The sliding closet doors are designed to match our swing type FP doors. Doors are furnished in baked grey prime, the frames with a dipped prime coat. Ask for USF standard color chart of finish colors. All hardware furnished to be applied by others.

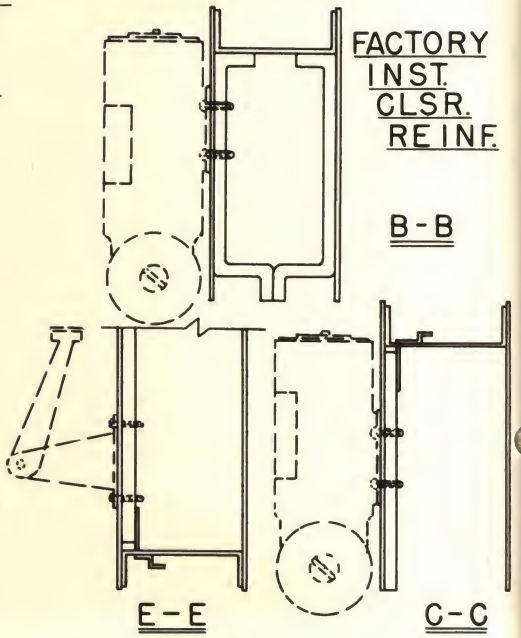
type "SCP" package unit (without frame)

This is the same as the Type "SCU" except the metal frame is not supplied. Included in the package are two by-passing, flush-panel doors, top channel guide and floor track, silent nylon rollers and felt guide blocks, stop rails for sides, and recessed nylon pulls. The unit is packaged in a single carton, and is available in four widths. Doors are finished with baked prime grey.

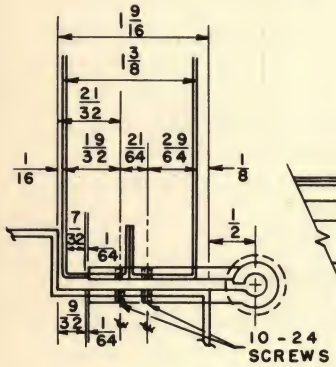


USF DOORS AND FRAMES

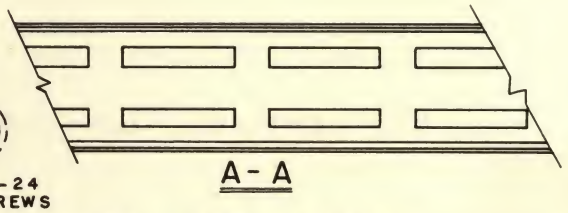




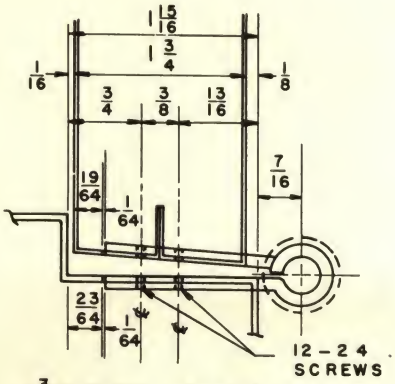
FIELD INST. REINF. FOR CLOSER, FL. STOP, VERT. ROD PANIC DEVICE AND OTHER SPECIAL HARDWARE



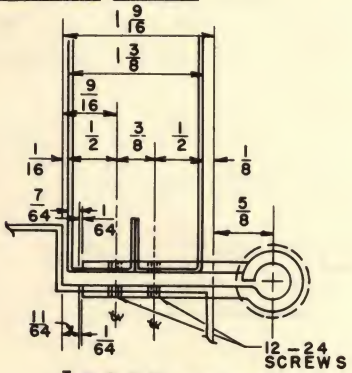
1 3/8 DOOR 3 1/2 x 3 1/2 HINGE PREP.



STD. END CHANNEL



1 3/4 DOOR 4 x 4 HINGE PREP.



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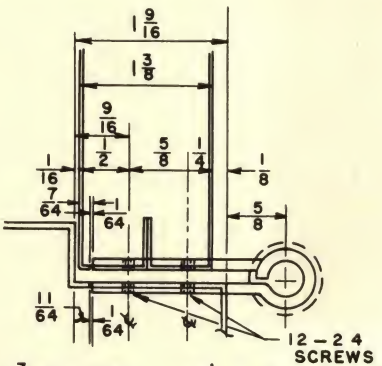
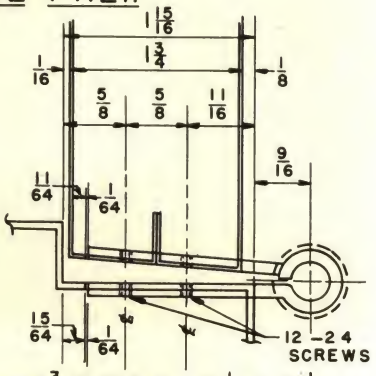
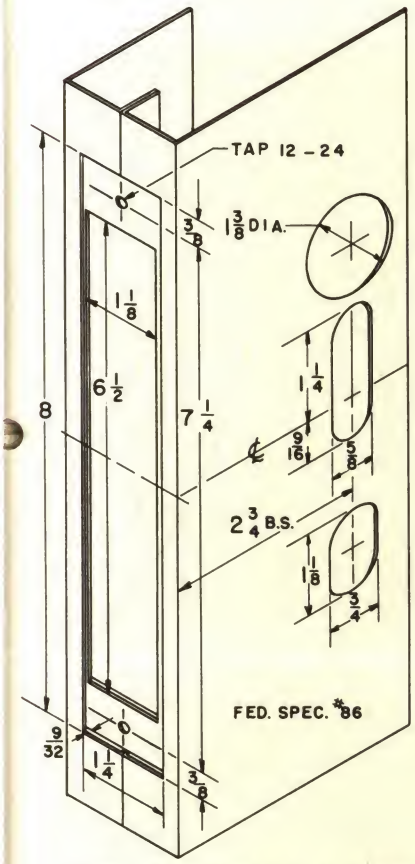


1 3/8 DOOR 4 1/2 x 4 HINGE PREP.

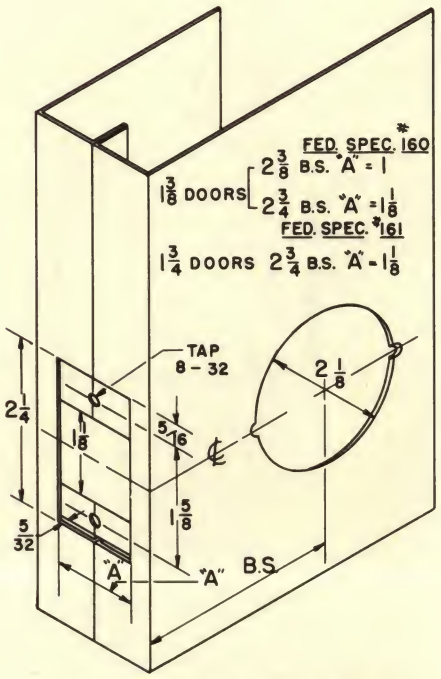


1 3/4 DOOR 4 1/2 x 4 1/2 HINGE PREP.

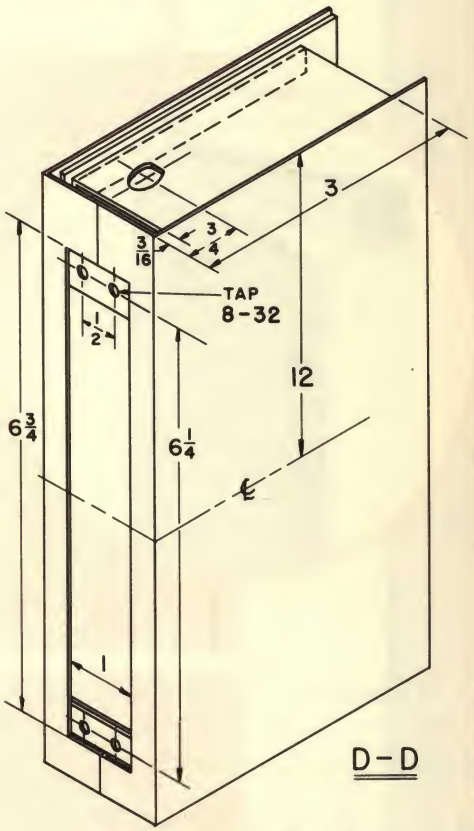
STANDARD HARDWARE PREPARATION



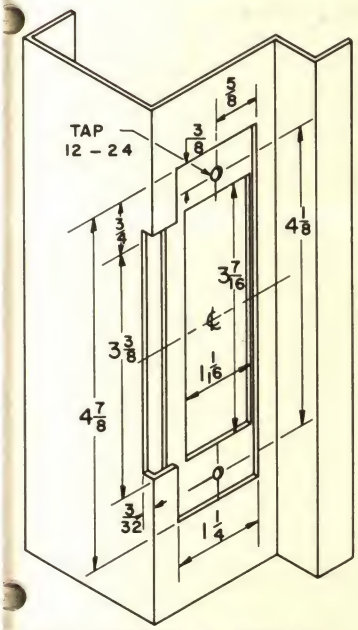
STD. MORTISE LOCKSET
1 3/4 ONLY FED. SPEC. *86
(SEE STRIKE BELOW)



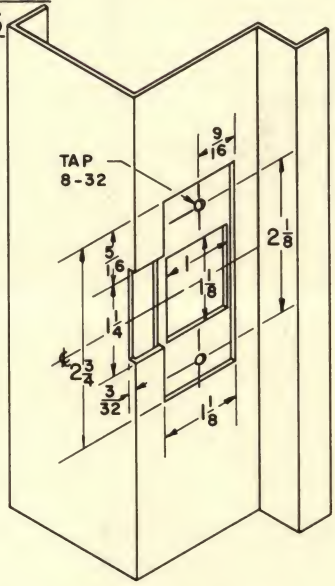
STD. CYL. LOCKSET
1 3/8 & 1 3/4 DOORS
(SEE STRIKE BELOW)



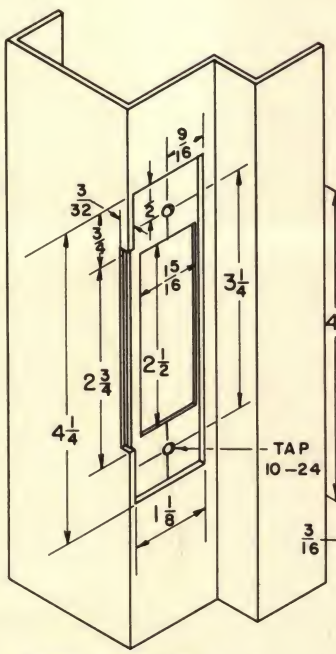
STD. FLUSH BOLT
1 3/8 & 1 3/4 DOORS



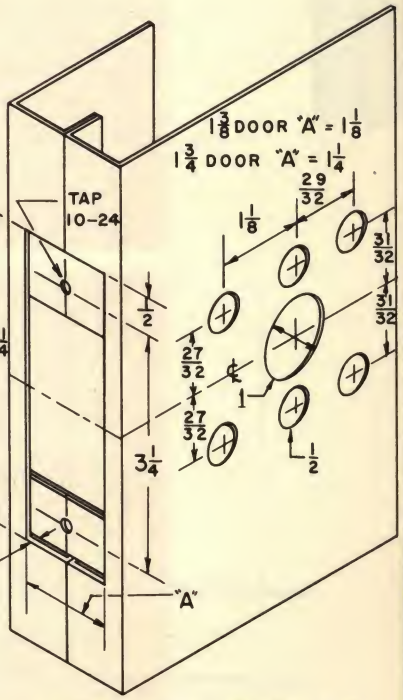
STD. STRIKE PREP.
FRAMES FOR 1 3/4 DOORS
FED. SPEC. *86



STD. STRIKE PREP.
FRAMES FOR 1 3/8 DOORS
FED. SPEC. *160 AND *161

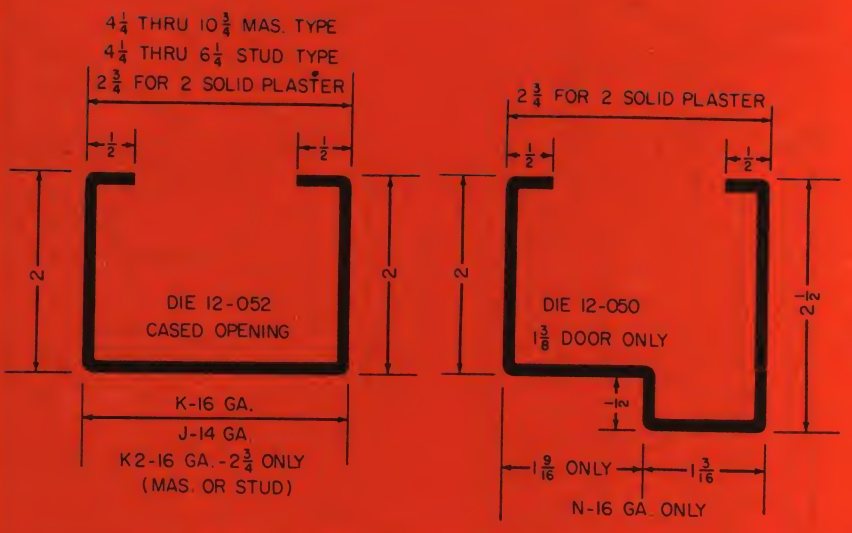


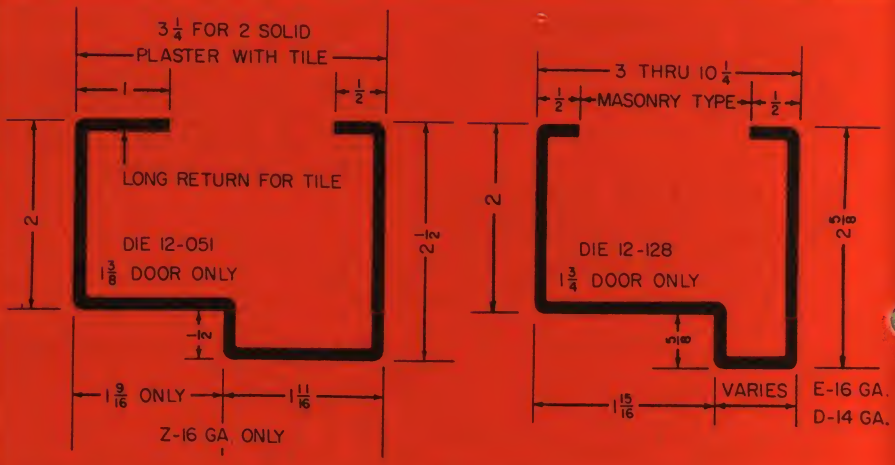
STD. PREP. FOR
11-7600 STRIKE
1 3/8 DOORS ONLY



INTEGRA-LOCKSET
1 3/8 & 1 3/4 DOORS

USF

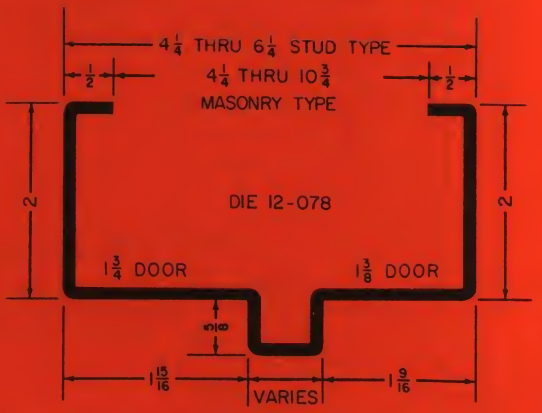




Standard Frame Designs

NOTES

1. **Variable Cross Section. Frames E-D-U-T vary in ¼" increments only.**
2. **Jambs 1 9/16" are for 1⅜" thick Doors and 1 15/16" are for 1¾" thick Doors.**



U. AND T. FURNISHED K. D.

U-16 GA. (MAS. OR STUD)
T-14 GA. (MAS. ONLY)

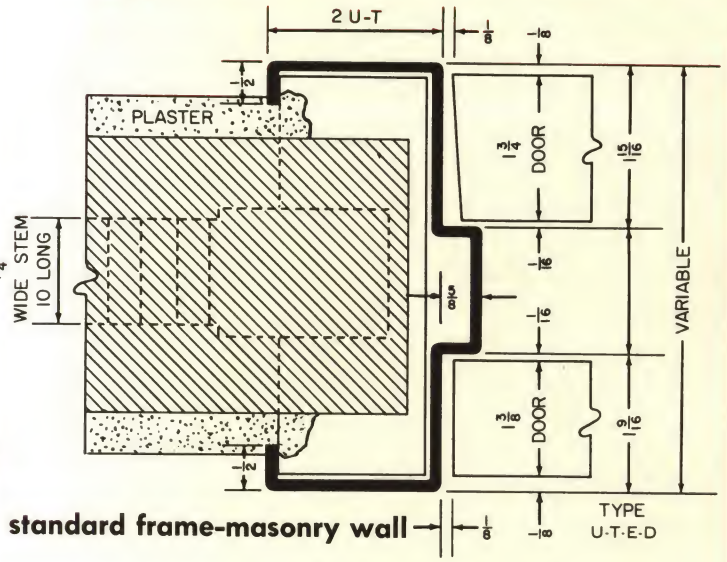
FRAMES

FRAME DESCRIPTION

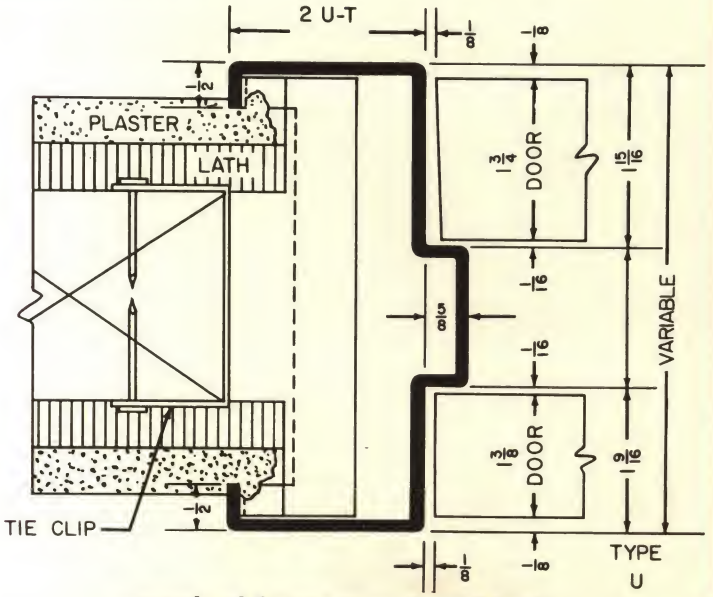
Unit type welded miter frames of 16 gauge steel are standard for metal doors. Best quality sheet steel is used for these frames, with precision welding jigs assuring accuracy in size. They are mortised for template lock strikes and hinges, see pages 8 and 9, with heavy gauge steel reinforcements. Plaster covers on all mortises. Corners are precision die mitered and assembled by internal welding. KD or knocked-down frames are mitered and provided with extra long corner brackets for exceptional strength and squareness.

All frames have two 16 U.S. gauge foot clips spot welded for anchoring to floor. Frames for metal or wood stud walls only will be provided with eight fastening clips, 4 spot welded to each rail, and knee angles for anchoring to floor. Frames for use with 2″ thick plaster walls are furnished with welded clips for attaching wire mesh or gypsum plaster board and are designed for two adjustable height struts for ceiling anchorage.

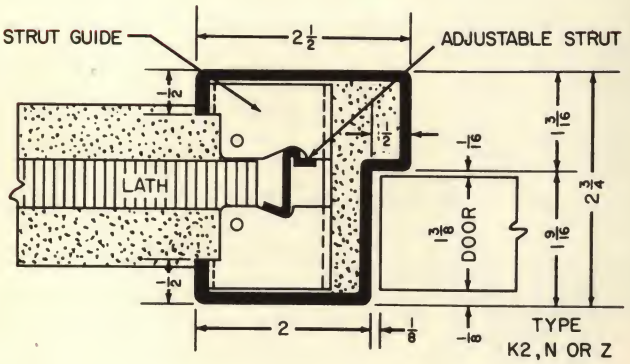
typical frame installations



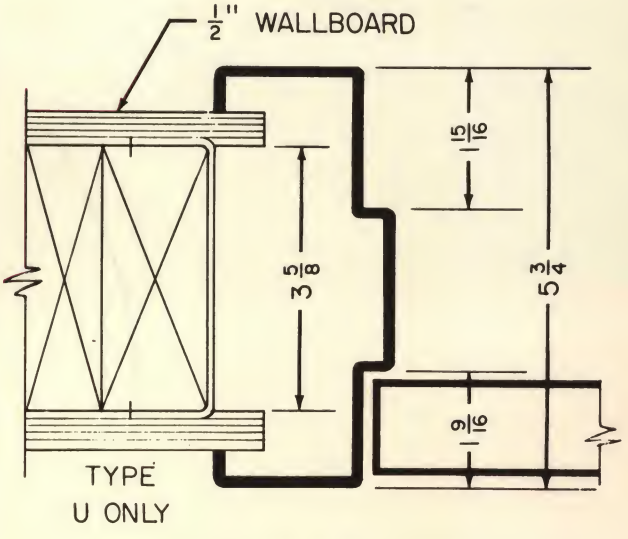
standard frame-masonry wall



standard frame-wood stud wall



two-inch solid plaster wall



wood stud-dry wall

USF

ENGINEERING SERVICE

USF exclusive design reflects the beauty and quality of custom doors – yet assures the economy of standardized production and uniformity. This is possible only through the maintenance of our complete professional engineering department. Their services are available to our customers for expert help in the standardizing of what would ordinarily be expensive custom fabrication – or in developing special applications from our standard designs.

USF Metal Doors with their unique design assure long life service. Exclusive triple-box construction, welded internally with intermittent spot welds the entire length of the door, insures rigidity and beauty of finish free from spot blemishes.

UNITED STEEL FABRICATORS, INC.

METAL DOOR AND FRAME DIVISION • WOOSTER, OHIO

Manufacturers of Metal Doors and Frames • Prefabricated Metal Buildings • Corrugated Metal Window Wells • Highway Guard Rail • Structural Plate Bridge Flooring • Corrugated Metal Pipe

Litho in U.S.A. 1059ALS

VARIETY

ARCHITECTURAL METAL PRODUCTS

CUSTOM

and

STANDARD

— Since 1892

hollow metal	pages 2-7
aluminum counter doors	page 8
metal-clad fire doors	pages 9-10
partitions — toilet, hospital, office	page 11
double-acting heavy duty doors	page 12

VARIETY FIRE DOOR CO., INC.
2958 WEST CARROLL AVENUE

CHICAGO 12
ILLINOIS

since 1892

Variety Fire Door Company has specialized in the manufacture of fine quality, custom built steel doors since 1892. As early as 1905 it began testing its doors at the Underwriters Laboratories for fire resistance, and has pioneered in this field for almost half a century. Today, as the result of many years of experience in the construction industry it offers to Architects, engineers and building owners an unexcelled engineering, manufacturing, and consultation service in the design and production of labeled fire doors.

COMPLETE CUSTOM SERVICE

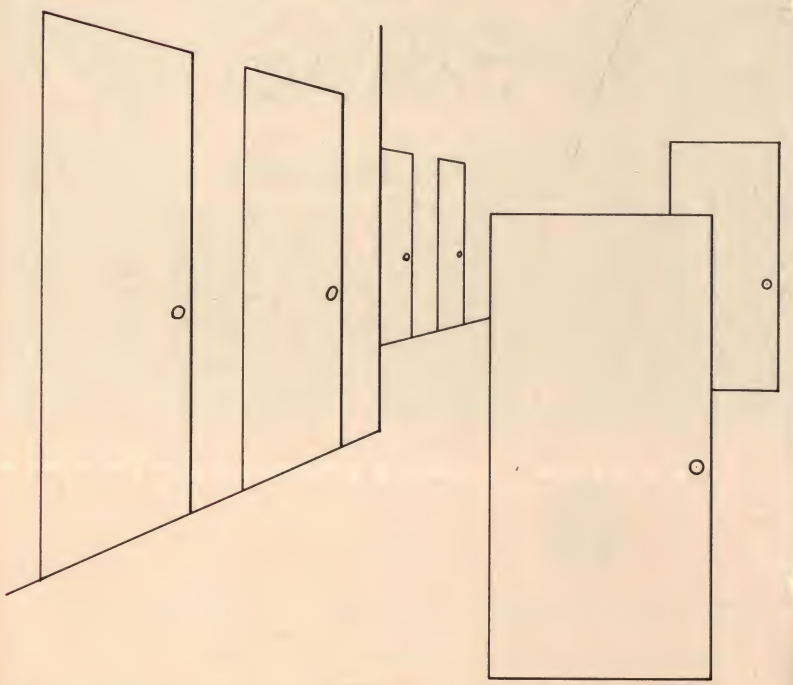
Variety built doors are the product of years of research and new design. All products sold under Variety name are manufactured exclusively on the company premises, and specialized departments devote their entire time to each type of product listed in this catalogue.

Pressed Steel Frames

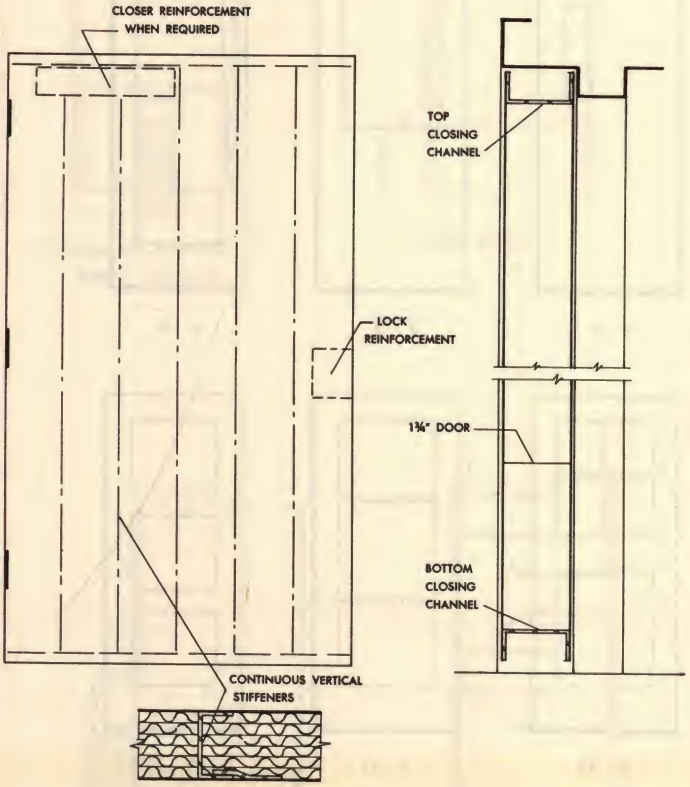
a few of many outstanding VARIETY door installations

PROJECT	LOCATION
1. Commonwealth Edison Co. Electric Generating Stations	Will County, Joliet, Illinois
2. Ford Motor Company Aircraft Engine Division	Chicago, Illinois
3. Hinsdale High School	Hinsdale, Illinois
4. National Biscuit Co.	Chicago, Illinois
5. Studebaker Corporation Aircraft Jet Test Cells	South Bend, Indiana
6. Wheaton Community High School	Wheaton, Illinois
7. Sears, Roebuck & Co.	Boston, Massachusetts
8. Sears, Roebuck & Co.	Denver, Colorado
9. Sears, Roebuck & Co.	Ft. Wayne, Indiana
10. Sears, Roebuck & Co.	Elizabeth, New Jersey
11. Sears, Roebuck & Co.	Highland Park, Michigan
12. Sears, Roebuck & Co.	Madison, Wisconsin
13. Sears, Roebuck & Co.	Memphis, Tennessee
14. Sears, Roebuck & Co.	Pittsburgh, Pa.
15. Sears, Roebuck & Co.	Philadelphia, Pa.

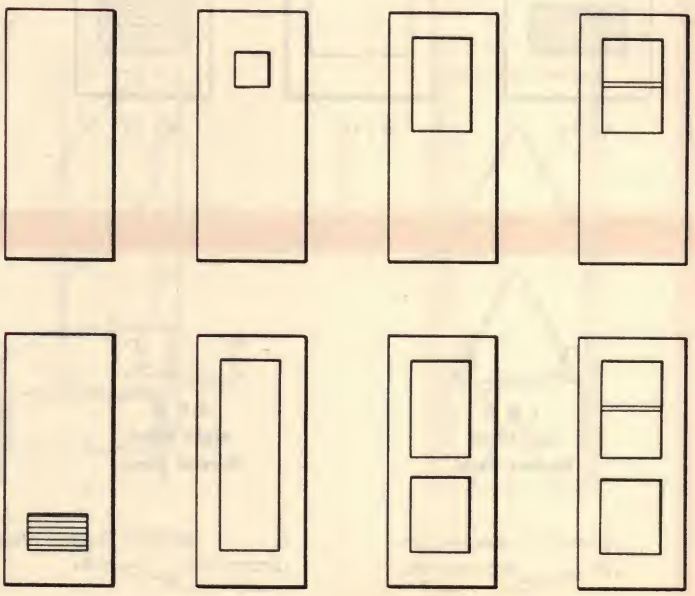
Hollow Metal Doors



Construction Details



Typical Door Designs

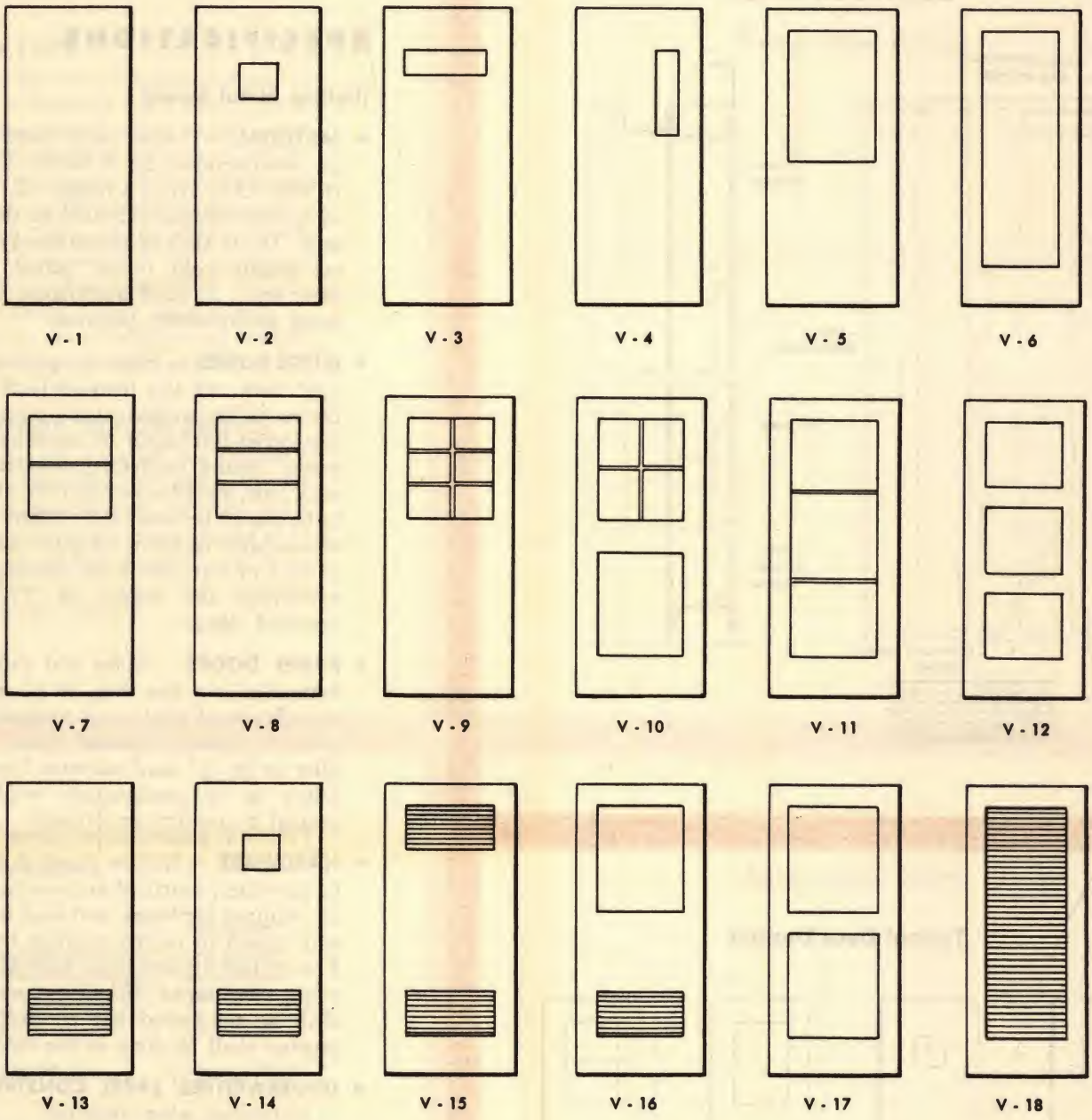


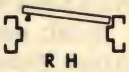
SPECIFICATIONS

(Hollow Metal Doors)

- **MATERIAL** — Hollow metal doors shall be as manufactured by VARIETY FIRE DOOR CO., INC., Chicago 12, Illinois, of specific designs indicated on the drawings. Doors shall be constructed of highest quality cold rolled, patent leveled, sheet steel, in strict accordance with the finest workmanship practises.
- **FLUSH DOORS** — Flush design both sides, 1¾" thick, not less than 18 U. S. gauge. Doors to be welded at all corners and reinforced full height by continuous stiffeners. Sound deadening material (rock wool bats, aircell asbestos, cork or equal) to be placed between each stiffener. Provisions shall be made for glass panels and louvers of size shown on drawings, with mouldings and shapes of VARIETY standard design.
- **PANEL DOORS** — Stiles and rails to be formed of not less than 18 U. S. gauge stretcher level steel, with composition inserts to deaden metallic sound. Panel filler to be ¼" hard asbestos board. All joints to be continuously welded and ground to perfect smoothness.
- **HARDWARE** — Hollow metal doors shall be accurately mortised and reinforced for all required hardware, and shall be drilled and tapped to receive mortise hardware. For surface applied items such as closers, stops, escutcheons, kick-plates, etc., doors shall be reinforced but all drilling and tapping shall be done in the field.
- **UNDERWRITERS' LABEL CONSTRUCTION** — Furnished when required.
- **FINISH** — All materials shall be given a degreasing and rust inhibiting (phosphoric) wash followed by a mineral fill baked on and sanded. Metal primer shall consist of two coats of baked on rust resisting paint. (ALTERNATE—Where specified, hollow metal doors shall be given a baked enamel finish, each coat baked on and sanded smooth. Final coat to be rubbed to an eggshell gloss finish.)

VARIETY – standard door details

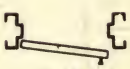




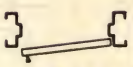
R H
Right Hand

HANDS OF DOORS
The hand of a door is determined by the exterior or key side

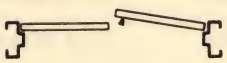
L H
Left Hand



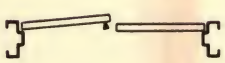
L H R
Left Hand
Reverse Bevel



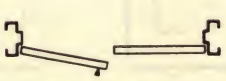
R H R
Right Hand
Reverse Bevel



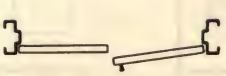
R H - ACTIVE



L H - ACTIVE

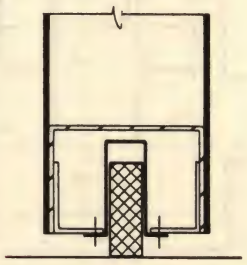


L H R - ACTIVE

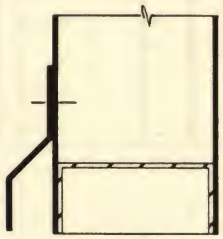


R H R - ACTIVE

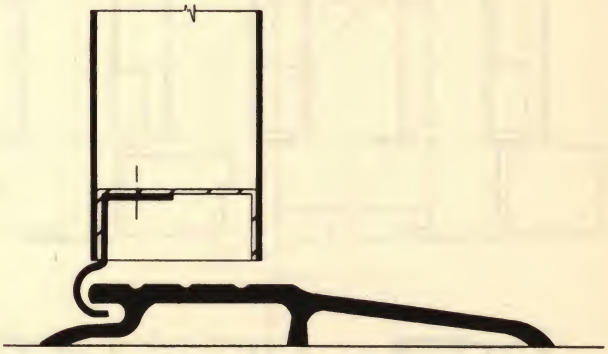
▲ DENOTES KEY SIDE



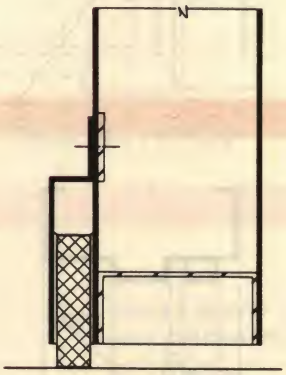
CONCEALED AUTOMATIC DOOR BOTTOM



DRIP MOLD

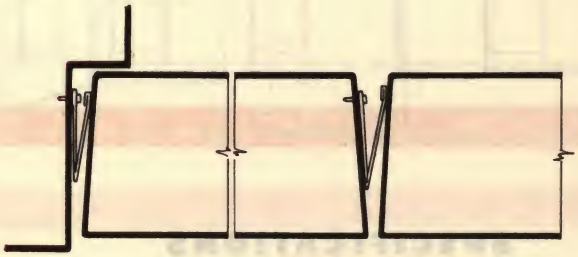


WEATHER STRIP THRESHOLD

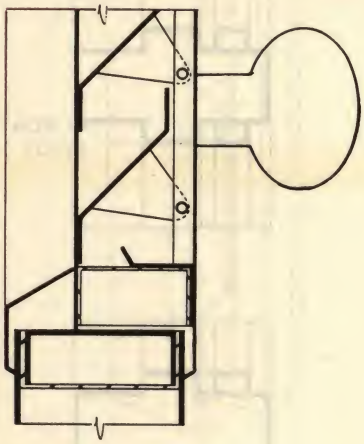


SURFACE AUTOMATIC DOOR BOTTOM

LIGHT-PROOF LOUVRE

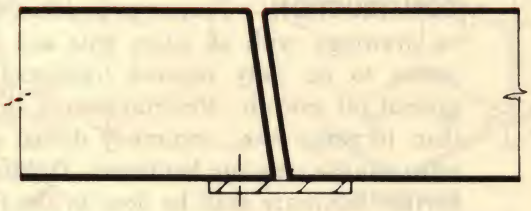


SPRING BRONZE WEATHER-STRIPPING

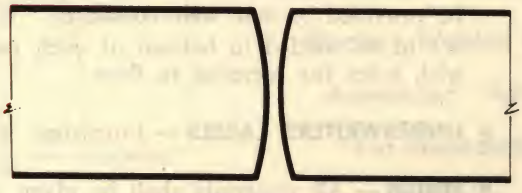


ADJUSTABLE LOUVRE

STATIONARY LOUVRE

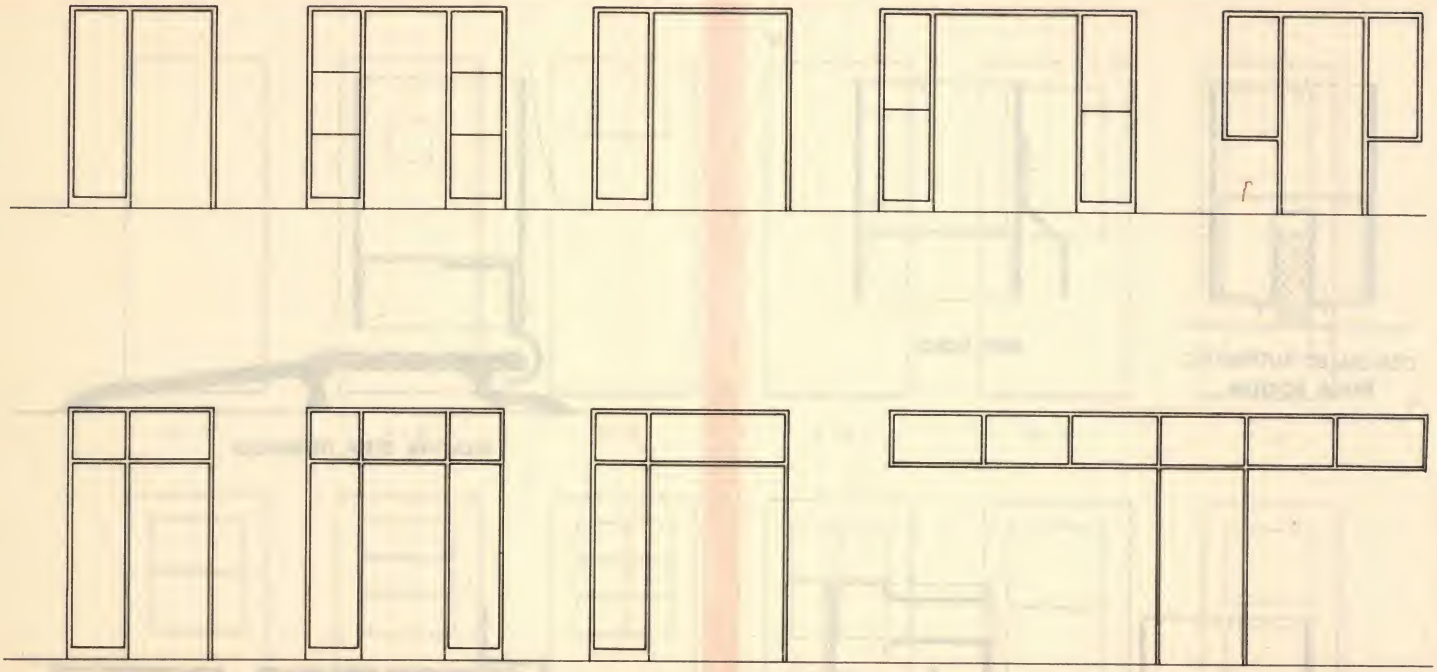


STANDARD ASTRAGAL



DOUBLE ACTING MEETING STILES

VARIETY – pressed steel frames



SPECIFICATIONS

(Pressed Steel Frames & Trim)

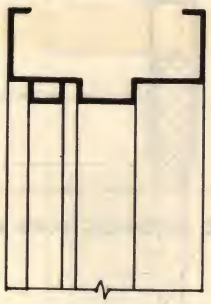
- **MATERIAL** — Combination steel door frames and trim to be as manufactured by VARIETY FIRE DOOR CO., INC., Chicago 12, Illinois. Material to be of prime quality, 12, 14 and 16 U. S. gauge cold rolled sheet steel.

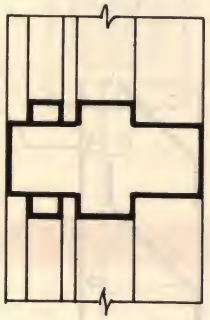
- **CONSTRUCTION** — Frames to be formed in profiles shown on drawings, with all edges true and sharp. Head and jambs to be fully mitered, continuously welded, and ground off smooth. Reinforcements shall be of not less than 10 gauge steel, accurately drilled and tapped to receive mortise template hardware. Drilling and tapping for surface hardware shall be done in the field.
  Removable steel spreaders are to be welded to the bottom of the jambs to insure safe shipment and perfect alignment.

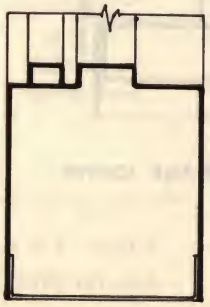
- **ANCHORS** — Not less than 3 anchors for each jamb shall be provided to suit wall conditions. Floor anchor clips are to be welded to bottom of each jamb and provided with holes for securing to floor.

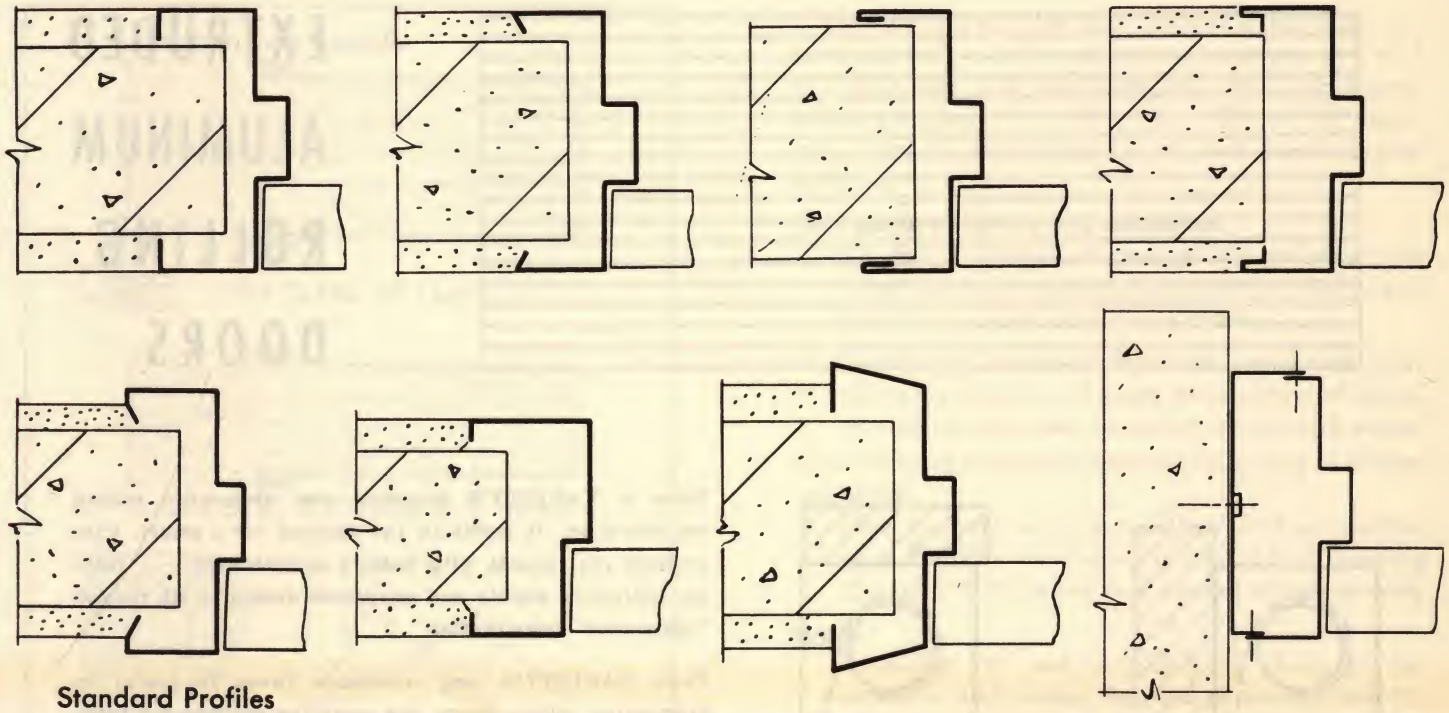
- **UNDERWRITERS LABELS** — Furnished when required.

- **FINISH** — All materials shall be given a degreasing and rust inhibitive (phosphoric) wash and given a coat of rust inhibitive primer baked on.

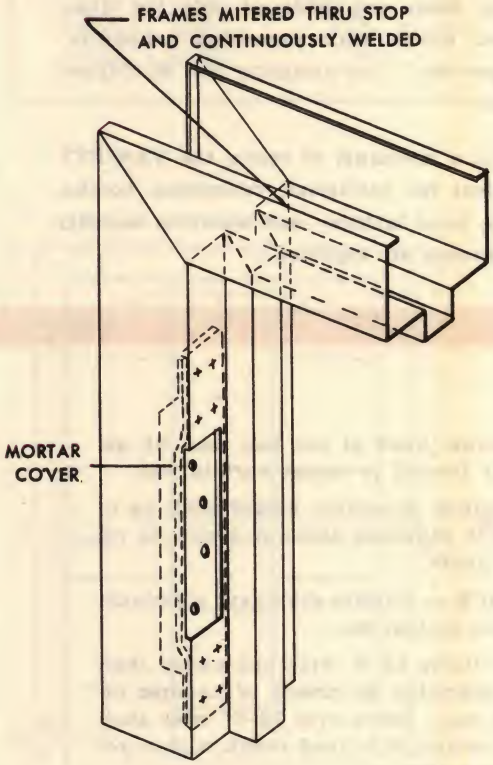


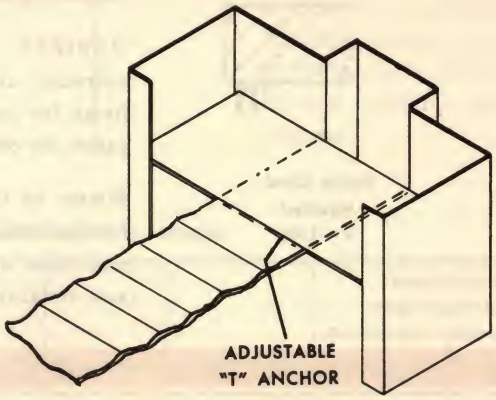


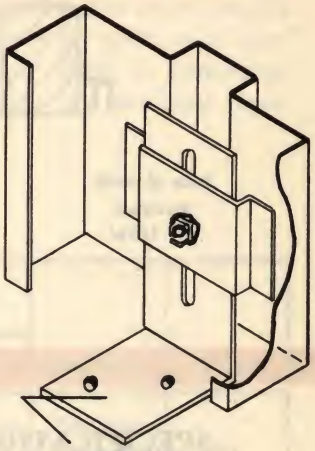


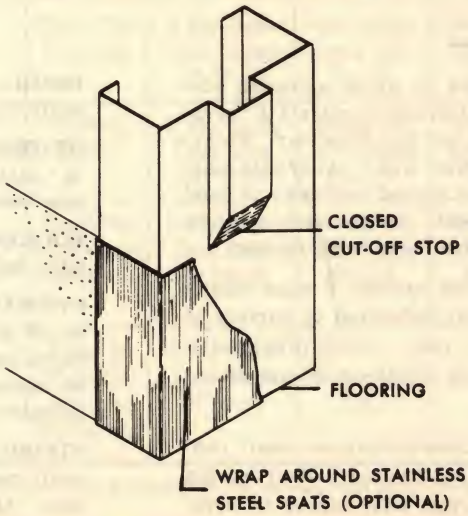


Standard Profiles

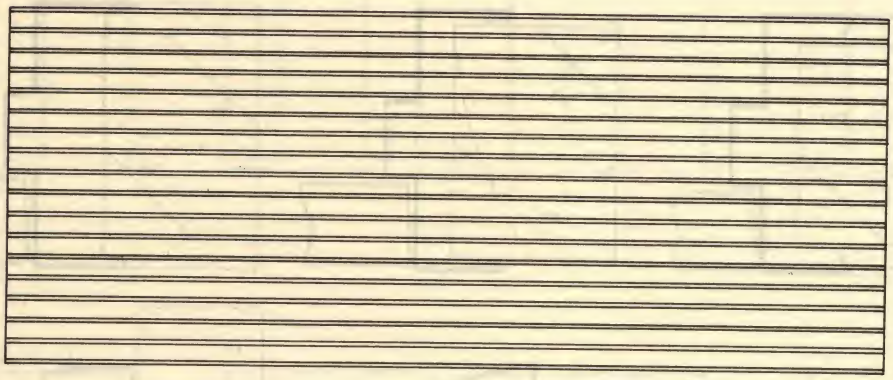




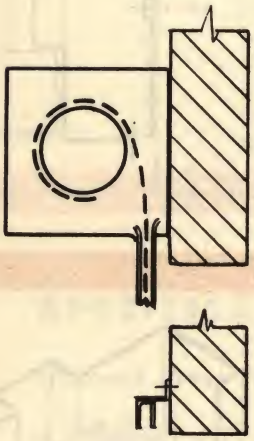




All VARIETY Frames Are Factory Welded And Assembled - Ready For Immediate Installation.



EXTRUDED ALUMINUM ROLLING DOORS



Face of Wall Mounted V – 100W

Under Lintel Mounted V – 150L

Here is VARIETY'S dramatic new aluminum rolling counter door. It meets all the demand for a smart, trim product that blends with today's architecture . . . from its distinctive beauty and adaptable design to its rugged "inner-core" construction.

From VARIETY'S long experience (over 60 years) in fabricating rolling doors, has come the engineering technique to create the counter door that insures flawless opening and closing . . . year after year . . . without maintenance worries.

VARIETY counter doors are made of only the finest extruded aluminum alloys, with unexcelled "alumilite" finish for lasting service . . . no unsightly rust or chipped paint, no corrosion.

Simple to install in a minimum of space, the VARIETY rolling door is ideal for cafeterias, concession booths, postoffice windows, hotel lobbies—and wherever security and striking appearance are expected.

SPECIFICATIONS —

CURTAIN — To be formed of finest extruded aluminum alloy, flat faced interlocking slats 1¼" wide with a depth of crown of not less than ⅜". Thickness of material not less than .048". Alternate slats to be fitted with cadmium plated endlocks to hold curtain in perfect alignment. Bottom bar shall be extruded aluminum to harmonize with curtain.

BARREL — Curtain to coil around a steel casing of sufficient size to prevent deflection of curtain in excess of .03 inches per foot. Counterbalancing unit to be enclosed and to rotate on grease-sealed ball bearing units.

COUNTERBALANCE — Counterbalance shall consist of oil tempered and heat treated helical torsion springs housed in steel pipe, shop-tested to overload.

HOOD — Aluminum hood of not less than 22 ga. shall be expertly formed to encase curtain roll.

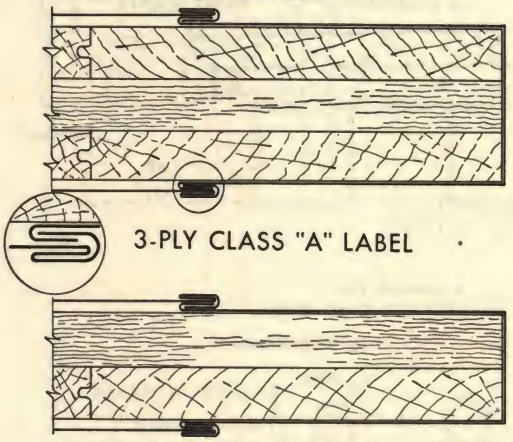
GUIDES — Extruded aluminum guides shall be of ⅛" material, with sufficient depth of groove to retain curtain in guide.

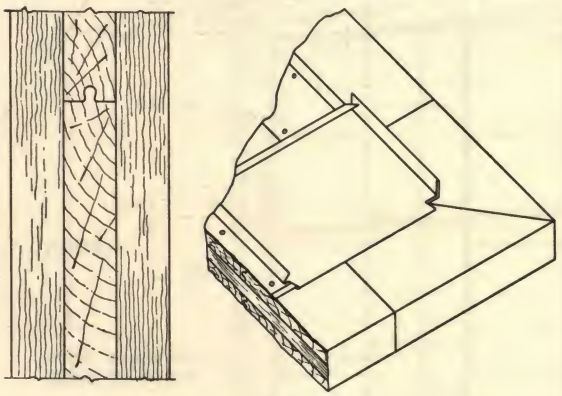
LOCKING DEVICE — Curtain shall have aluminum slide bolts on the bottom bar.

OPERATION — Doors 12'-0' wide and under shall be of push-up operation by means of handles located on bottom bar. Doors over 12'-0" wide shall be operated by means of a hand crank with a removable operating arm.

FINISH — Curtain, guides, bottom bar and hood shall receive a satin alumilite finish after fabrication. All other parts shall be given a shop coat of aluminum paint.

construction details





Variety labeled tin clad and metal clad fire doors are furnished with complete automatic hardware, in 2 or 3 ply, white pine or fir wood cores, and bear Underwriters' Labels for Class "A"—"B"—"C"—"D" or "E" openings. They are economical in cost, and an all-purpose fire door.

Two general Series are available:

Eureka "A" Series—A standard Tin clad door with metal covering secured to wood core by vertical and horizontal, nailed outside lock Seams.

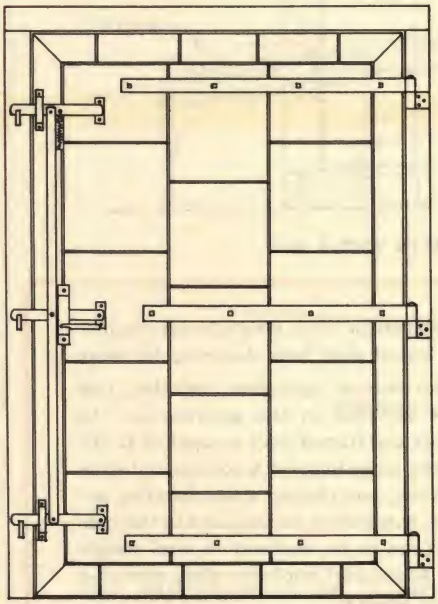
Eureka "G" Series—A flush type metal clad door, with a covering No. 24 gauge galvanized steel sheets, secured to wood core by nailed vertical lock seams.

Both series are furnished for the following class of labeled openings:

Class A—3 ply wood core, tin clad or flush covering
Class B—2 ply wood core, tin clad or flush covering
Class C-D-E 2 ply wood core, tin clad or flush covering

types

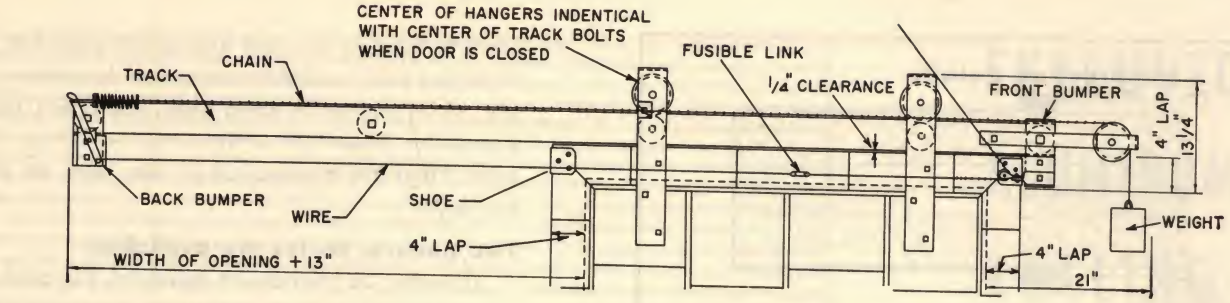
EUREKA "A" and EUREKA "G" doors are designed to slide along the wall or swing from the jamb. Swing doors are available in singles or pairs with Labeled structural frames. Horizontal sliding doors equipped with level or inclined track, are available as single sliding units and as center parting (double) sliding doors. Details for doors to be used in locations requiring either single or compound vertical slide-up installations are available upon request.

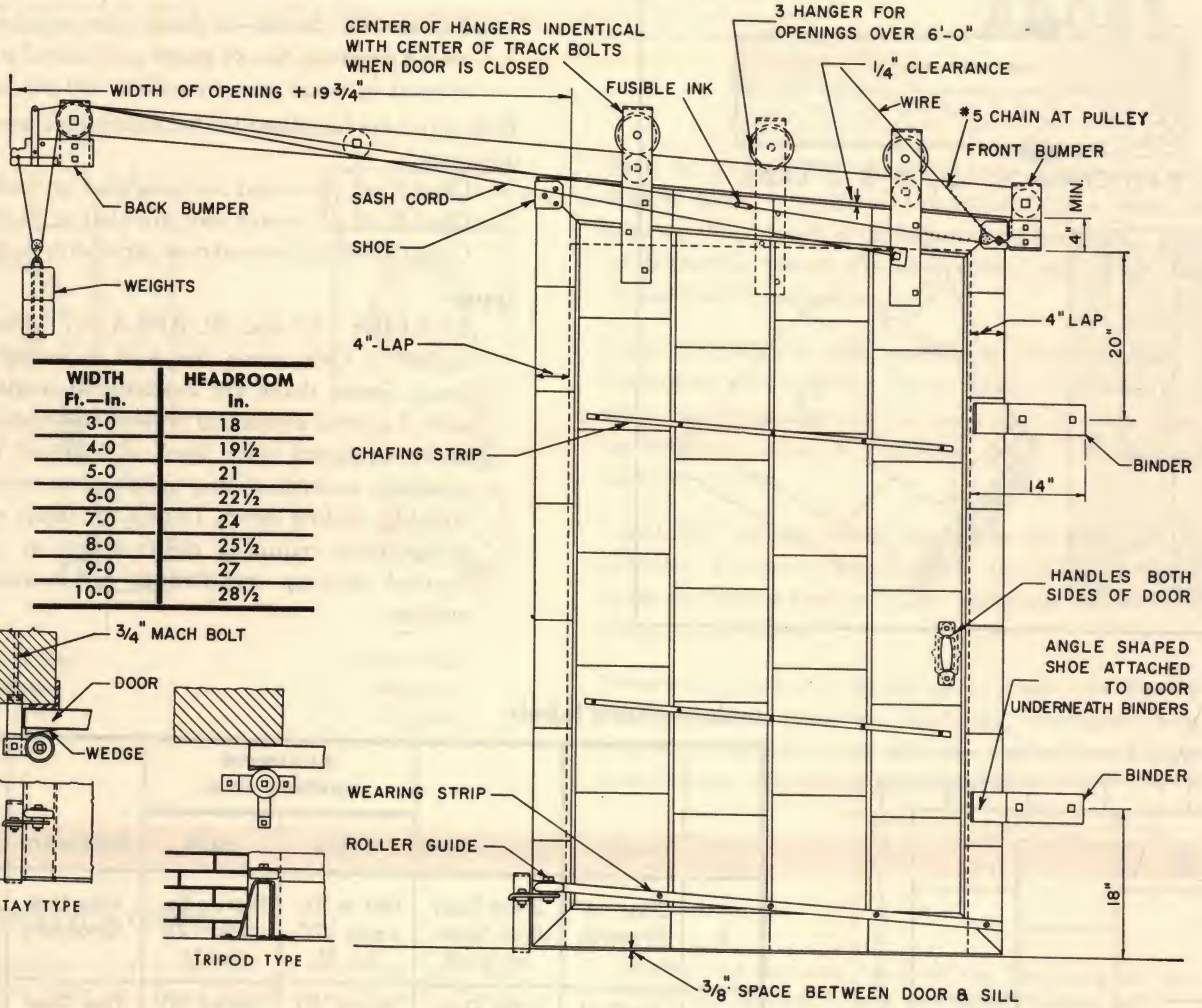


underwriter's labels

class	location	type of door	maximum opening sizes		hardware	glass
			single	pairs		
A	Class "A" Firewalls	3 Ply Door Both Sides of Wall	Not to Exceed 120 Sq. Ft.	Not to Exceed 120 Sq. Ft.	Fuse Link Automatic	No
B	Vertical Shafts	2 Ply Door One Side of Wall	Swing 60 S.F.; Slide 80 S.F.	Swing 80 S.F.; Slide 80 S.F.	Fire Door Hdw. Auto. Closing Opt.	100 Sq. In.
C	Corridor and Room Partitions	2 Ply Door One Side of Wall	Swing 60 S.F.; Slide 80 S.F.	Swing 80 S.F.; Slide 80 S.F.	Same as Class "B"	Each Light Not to Exceed 1296 Sq. In.
D	Exterior Walls Severe and Moderate	2 Ply Door One Side of Wall	Swing 40 S.F.	Swing 60 S.F.	Same as Class "B"	Each Light Not to Exceed 500 Sq. In.

NOTES: *Fire doors exceeding above opening sizes carry special oversize labels.*





WIDTH Ft.—In.	HEADROOM In.
3-0	18
4-0	19½
5-0	21
6-0	22½
7-0	24
8-0	25½
9-0	27
10-0	28½

architect's specifications

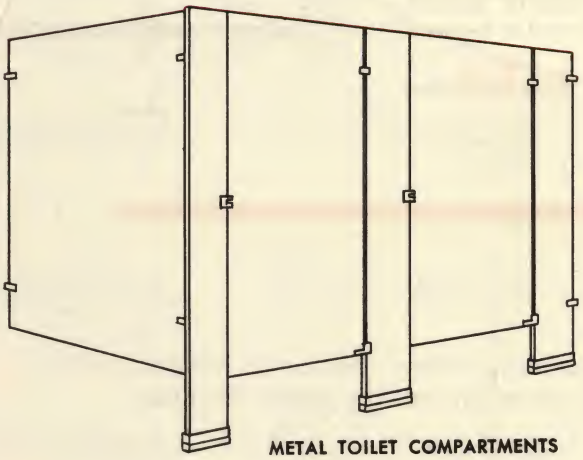
Tinclad or Metalclad doors shall be of Eureka "A" or Eureka "G" series as manufactured by Variety Fire Door Company, Chicago, Illinois, as indicated on the plans in the door schedule showing size, slide or swing and thickness.

Doors shall consist of wood cores, covered by metal as required by the Underwriters' Laboratories and shall bear their label. The type of label furnished shall be determined by the ruling of the National Board of Fire Underwriters for the situation in which the doors occur.

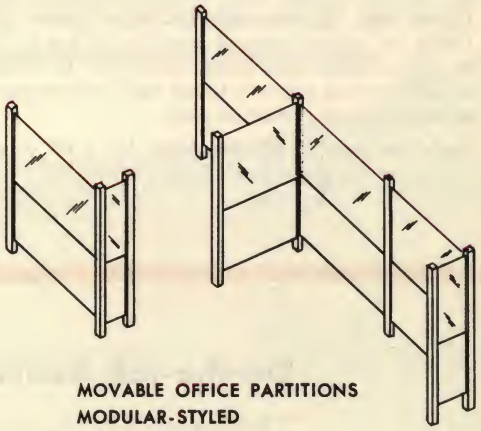
Frames of type and size as called for in the door schedule shall be furnished, swinging door frames shall have door stop ¾" deep.

All hardware necessary for manual operation, including fuse link automatics, is to be included in this specification. All hardware attached to doors and frames shall be applied in the factory. This includes latches, hinge lugs, latch nosings, and automatic sheaves for swing doors; and chafing strips, handles, etc. for sliding doors. Fuse link automatics are included in this contract. All counter weights are to be enclosed in steel weight boxes. All doors, frames, tracks and hardware shall receive a prime shop coat of paint in factory.

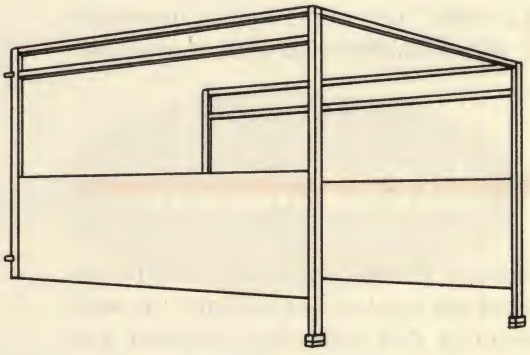
A NEW DIMENSION IN METAL PARTITIONS



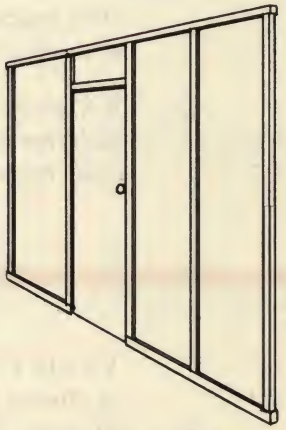
METAL TOILET COMPARTMENTS



MOVABLE OFFICE PARTITIONS
MODULAR-STYLED



HOSPITAL CUBICLES

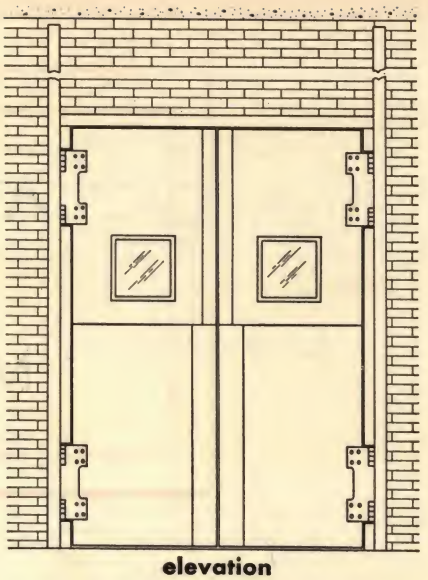


MODERNLINE FULL-HEIGHT
PARTITIONS-MOVABLE-
ECONOMICAL-PERMANENT

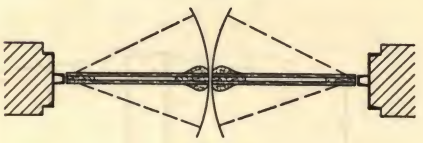
For information on VARIETY'S full line of contemporary-styled metal partitions write to Main Office.

Variety bumper doors

This light weight, easy swinging door is furnished complete with hardware and channel frame in sizes from 6′0″ x 7′0″ to 8′0″ x 10′0″. It is especially adaptable for use in loading dock areas where heat loss from outside exposure is an appreciable factor. The door panels are constructed of laminated plywood, 1¾″ thick, adequately reinforced at stiles and rails, cut out and prepared for vision panels and protected by 4′0″ high kick plates both sides. Bull nosings or rubber nosings at meeting rails provide weather protection. Heavy duty spring hinges attach door panels to channel frame, insuring simple installation, easy action and rigid construction.



elevation



plan

specifications for bumper doors

Doors, frames and hardware shall be furnished as a unit to insure proper fit and operation. Doors shall be 1¾″ thick and constructed of two sheets of plywood and reinforcing strips as detailed. Each face of door shall be covered to a height of 4′0″ with 16 Gauge steel over entire width.

In addition to above, each face of door shall have 12 Gauge steel kick plates 1′10″ high over entire width. Meeting rails of doors shall be protected by bull nose metal bumper rails, backed by hardwood to a height of 4′0″, and by metal and rubber nosings for remaining height of door.

Hinges shall be "Chicago" type, high duty spring hinges C.S.1, one pair to each leaf shall be applied to all openings not exceeding 7′0″ in width and 8′0″ in height, and 1½ pairs to each leaf on openings of greater dimensions.

Frames shall be constructed of channel jambs and head, with a minimum width of 6″, 1½″ x 1½″ spacer channels and 2″ x ¼″ bar for hinge reinforcement running full height of door. Frames shall extend from floor to ceiling on tile walls and shall be anchored securely at these points to insure rigid door support. Adjustable anchors shall be furnished at jambs for attachment to wall.

Each door shall be provided with 12″ x 10″ wire glass vision panels. Doors and frames shall receive a prime coat of paint in factory.

On-the-job Assistance

Through the services of its engineering department, Variety offers to the Architect, Engineer, and Builder an on-the-job assistance on any building project from planning-stage to completion.

Door engineers of thorough training and experience with all types of door applications are on call to consult with architects.

A Variety—"Hand Book of Standard Door Details," covering solutions to special problems of clearance and installation, not shown in this catalogue is available upon request.

VARIETY FIRE DOOR CO., INC. — pioneers in the design and construction of labeled fire doors — has continuously served the construction industry for over 60 years. Practical experience and manufacturing skill assure the *Architect* and *Builder* a product of high quality and reliability.

Write For The Sales Representative In Your State —

To **VARIETY FIRE DOOR CO., INC.** — 2958 W. Carroll Ave. — Chicago 12, Ill.

Williamsburg

HOLLOW METAL

doors

frames

specialties

1960

Williamsburg

over 30 years of dependable service to the building industry

facilities With over 450,000 square feet of manufacturing space devoted to the efficient production of hollow metal and kalamein material, Williamsburg Steel Products Company has become the by-word in the construction industry. The very latest in machinery, methods and materials, coupled with a background of over 30 years of experience in servicing the building trades, has earned for Williamsburg nationwide acceptance as a standard for quality and service. A continuing program of expansion and research is designed to maintain Williamsburg's leadership in the hollow metal field.

Partial View of Plant

special services

Available to Architects, Engineers and Contractors, without cost or obligation, Williamsburg offers its completely staffed Engineering Department for consultation in the design, layout, and installation of all types of hollow metal and kalamein material. Experienced designers with the advantages of skilled craftsmanship and complete modern production facilities are able to vary standard specifications to meet special Architectural requirements. The submission of shop drawings for approval is expedited by Williamsburg's own blueprinting and photo-copying facilities, another instance of the constant endeavor to provide the best possible service to the customer.

representatives

A thoroughly trained staff of competent and experienced agents in various parts of the country is available for prompt quotations on all types of hollow metal and kalamein material. Their technical background and knowledge of the construction difficulties often encountered are of considerable value to the Architect and designer in the planning stage; more complex problems are referred to the factory for Engineering consideration.

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- UNDERWRITER REQUIREMENTS PAGE 11
- ELEVATOR CABS & ENTRANCES WRITE FOR BROCHURE
- SOUNDPROOF WRITE FOR BROCHURE

specifications

Furnish and install unit steel frames at all openings where shown on plans or as specified herein. Frames are to be fabricated of . . . gauge cold rolled steel in accordance with the best accepted practices of the hollow metal industry. Heads and jambs are to be mitered, welded and finished to present a smooth surface for painting. Not less than three anchors are to be provided at each jamb for anchoring of frame to partition; type of anchor to be determined by wall construction and as recommended by frame manufacturer. Clip angles with 2 holes for anchorage to floor are to be welded at bottom of all door jambs. All three-sided frames shall have removable angle spreaders securely fastened to bottom of jambs for rigidity during shipping and handling operations.

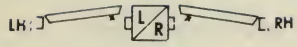
Frames shall be prepared at factory from paper templates furnished by hardware supplier for all hardware: mortise, reinforce, drill and tap for all mortise type hardware; reinforce for surface applied hardware, the drilling and tapping for which is to be done in field by door erection contractor. All hardware cutouts shall have ⅛" minimum plate reinforcements welded to frame and tapped holes shall be protected in masonry partitions by steel plaster boxes welded behind reinforcements.

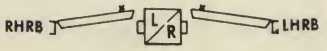
After fabrication, all frames are to be factory painted inside and out with rust inhibitive primer. Frames shall be as manufactured by Williamsburg Steel Products Company, Brooklyn 22, N. Y.

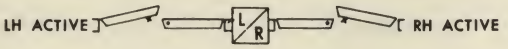
In addition to the finishing described above, frames can also be furnished in baked prime, baked enamel and baked grained finish to match wood. With some modifications in fabrication, frames are also available in stainless steel, bronze, aluminum, copper-bearing, zinc coated and "Paint-Lok" steels, etc. Complete details upon request.

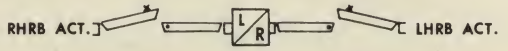
standard swing designations

x CYLINDER
● FLUSH BOLT

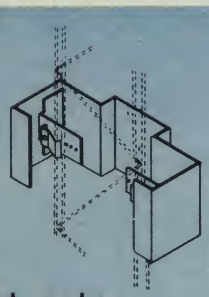




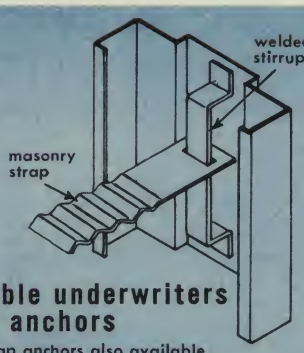




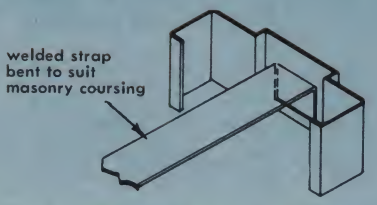
construction features



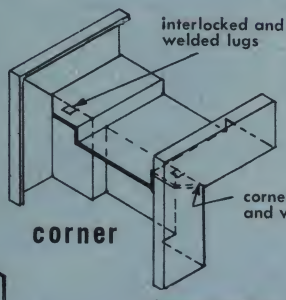
steel stud anchor
(patent applied for)



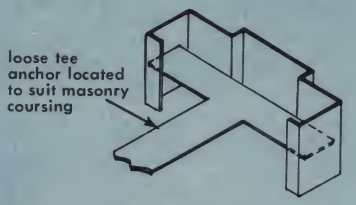
adjustable underwriters labeled anchors
Fixed strap anchors also available



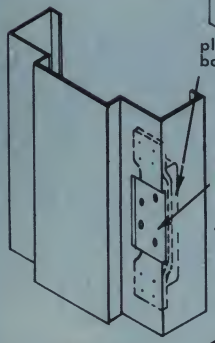
welded strap anchor



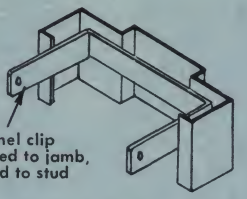
corner



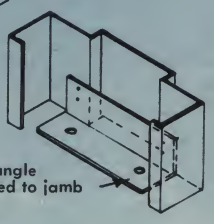
adjustable Tee anchor



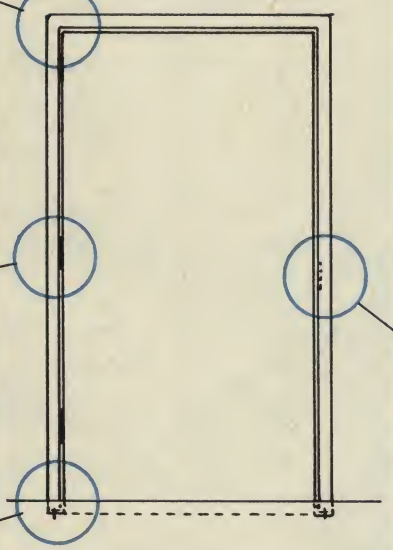
hinge



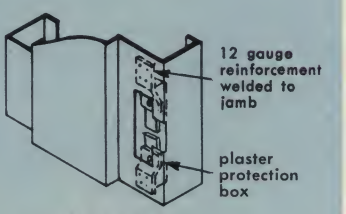
standard stud anchor



floor knee



typical elevation
for selection of trims available see pages 6 & 7



lock strike

• "A" label H.M. doors
with single point lock preparations

advantages

- Up to 40% saving in cost
- Faster delivery. Delays due to lack of hardware information minimized
- Faster and less expensive field erection
- Package price available with or without hardware
- See "stock engineered frames" for class "A" frames carried in stock

NOTE — physical locks and flush bolts must be factory installed

single swing

max. 3'-6" x 7'-0"

Minimum Hardware Requirements
Single point U.L. listed ¾" throw latch.
4½" regular weight steel hinges (doors over 3'-0" wide require extra heavy hinges)

pair swing

max. size 6'-0" x 7'-0"

Minimum Hardware Requirements
Single point U.L. listed ¾" throw latch.
Top and bottom flush bolts 4½" regular weight steel hinges.

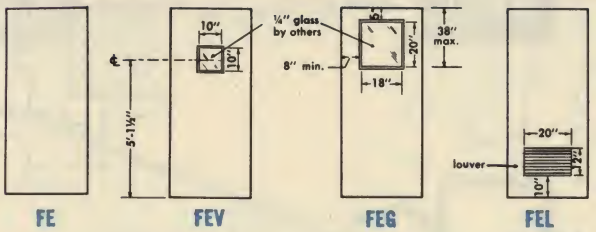
(For complete information on Underwriter label service see page 11)

• "ECONOMY" type doors

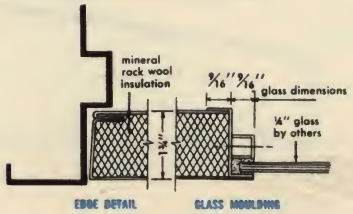
description

MAX. SIZE UND. LABELED 3' x 6" x 7'-0"

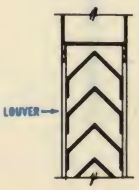
- 1¾" thick flush construction
- #20 gauge steel
- Rust-inhibiting prime finish
- Underwriter and New York City Label Service
- Sound and heat insulated with mineral rockwool
- Available in all standard sizes
- Factory-prepared for hardware: Cut-outs made for hinges, locks & standard flush bolts; Reinforcements provided at these cut-outs and for surface-applied hardware as scheduled.
  Hinges—4"—4½"—5"—6" bommer—7" bommer
  Tubular type locks: Schlage A-C-D series—2⅜" & 2¾" backset; Corbin 800 series; Russwin 400 series; Yale & Towne 5400 series; Lockwood 110-130-140-160-180
  Cylinder locks: Sargent 6700 series; Chesler 97; Lockwood 5200, 5044; National 6200; Corbin 6143; Russell & Erwin 1148.



FE | FEV | FEG | FEL no label



EDGE DETAIL | GLASS MOULDING



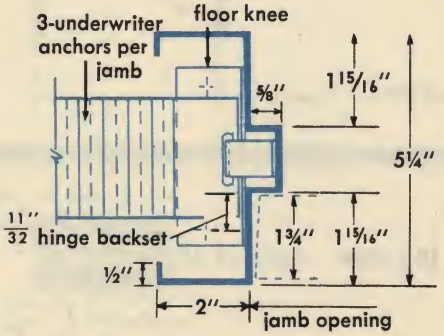
• stock engineered frames
(for immediate shipment)

description

- #16 gauge steel
- Rust inhibiting prime coats
- Full welded construction
- Comply with all Underwriter requirements
- Mortised and reinforced for (3) 4½" template butts. Regular Weight.
- Mortised and reinforced for choice of standard strikes
- Pairs reinforced for flushbolts
- All frames reinforced for closers and corner brackets
- Available with anchors for wood stud partitions
- Request booklet for further details

STRIKE PREPARATION for
234 cylindrical locksets
534 mortised case locksets

2'-8" / 3'-0" / 3'-4" } x 7'-0" AVAILABLE WITH "A" LABEL



jamb openings

■ single swing width	height
2'-0"	6'-8" and 7'-0"
2'-4"	
2'-6"	
2'-8"	
3'-0"	
3'-4"	
3'-6"	
* 3'-8"	7'-0"
■ pair swing width	height
5'-0"	6'-8" and 7'-0"
* 6'-0"	

*not labeled

• stock engineered doors
(for prompt shipment)

description

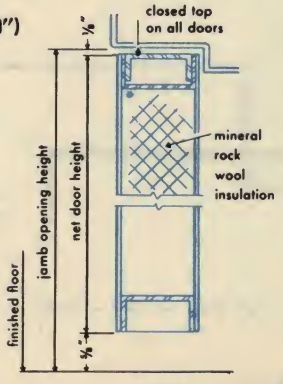
LOCK PREPARATION for
234 cylindrical locksets FED. SPECS. 161
534 mortised case locksets FED. SPECS. 86

- can be used with stock engineered frames
- #18 gauge steel—1¾" thick
- standard quality construction
- baked prime finish
- mortised for (3) 4½" F.M. template butts. Regular weight
- reinforced for checks, brackets and kick plates
- brochure on specific lock information available on request
- Full Label Service available
- Complete details in booklet upon request

SF | SFG | SFL no label | SFV | SFG2

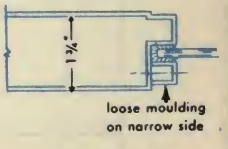
details (3" = 1'-0")

louver



section

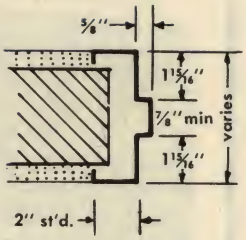
width	height
2'-0"	6'-8" 7'-0"
2'-6"	
2'-8"	
3'-0"	
3'-4"	

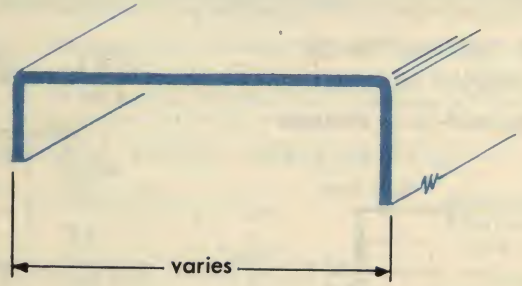


glass moulding

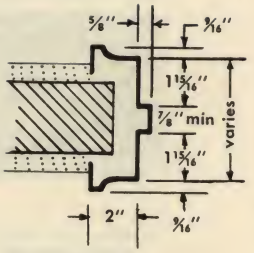
scales: 1½″=1′-0″ and full size

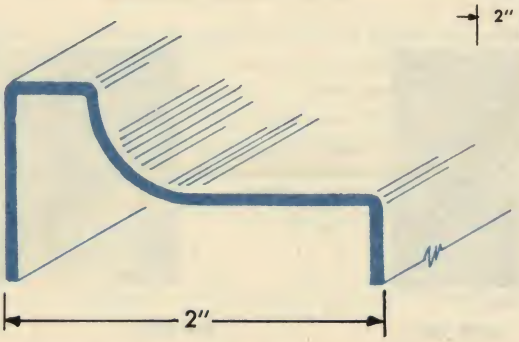
WB-1 18-16-14-12 gauge



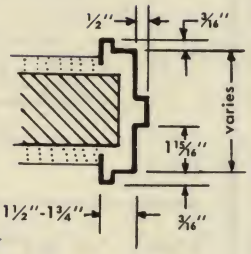


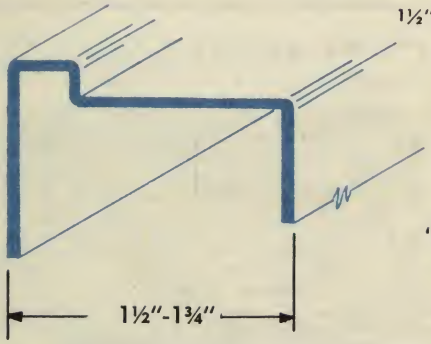
WB-2 18-16-14 gauge





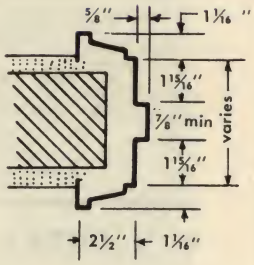
WB-5 18 gauge

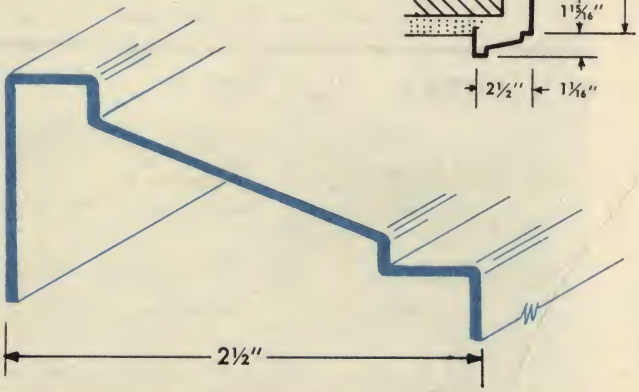




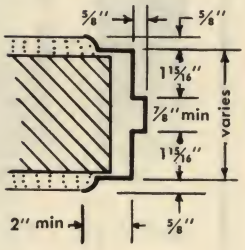
"Special Purpose" economy frame (see page 14)

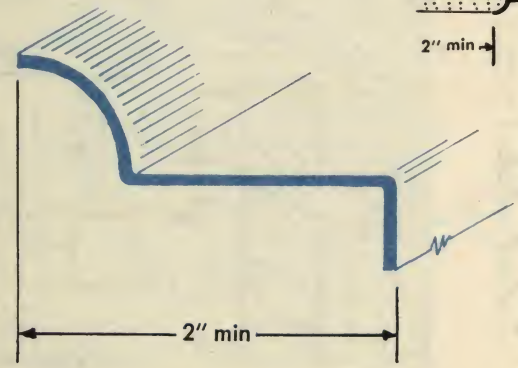
WB-6 16-14 gauge



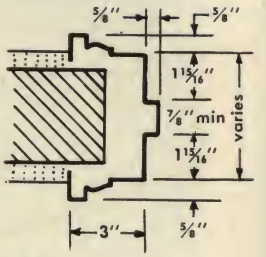


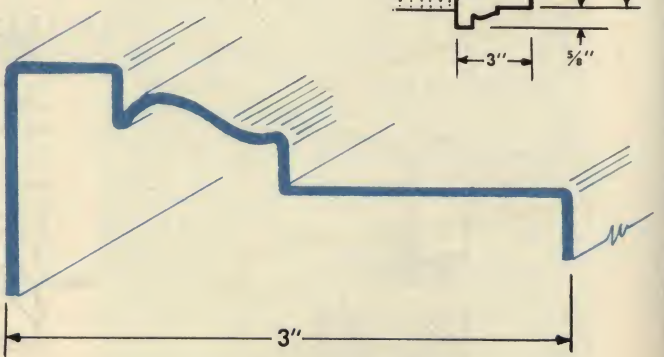
WB-9 16-14 gauge



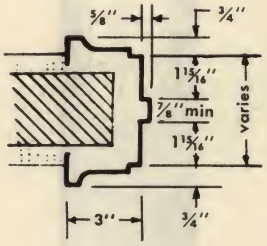


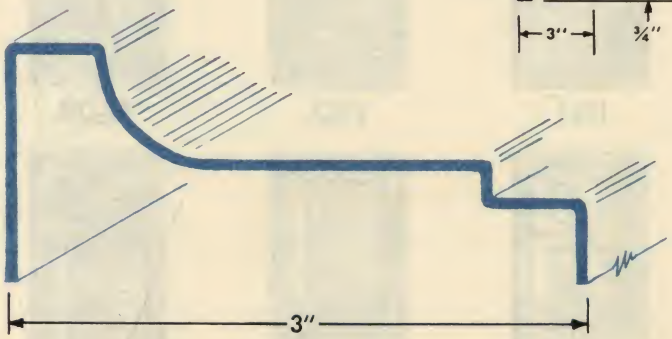
WB-10 16-14 gauge



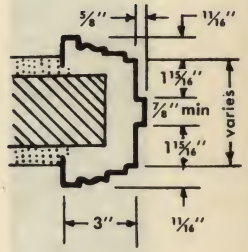


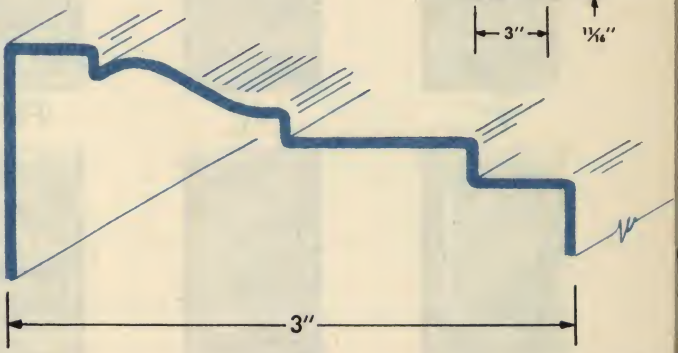
WB-3 16-14 gauge



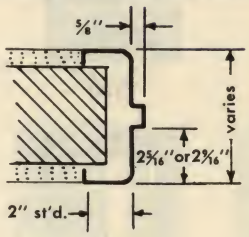


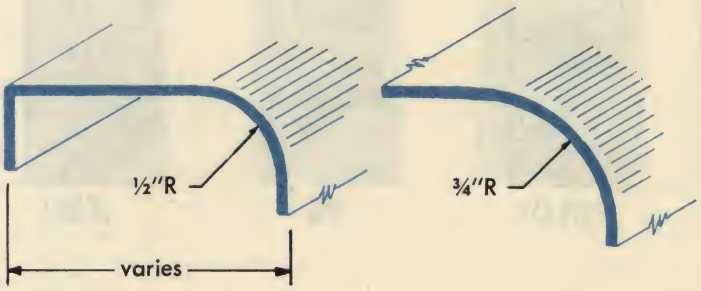
WB-4 16 gauge



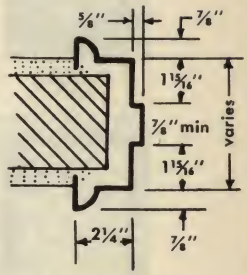


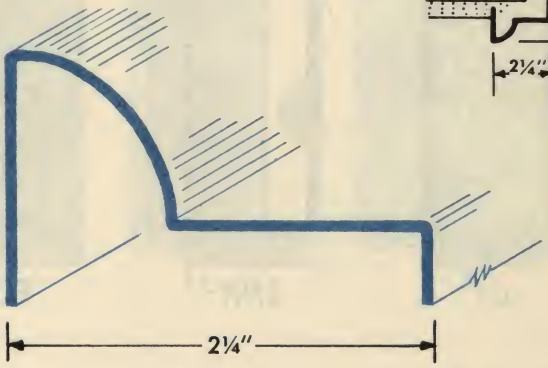
WB-7 16-14 gauge



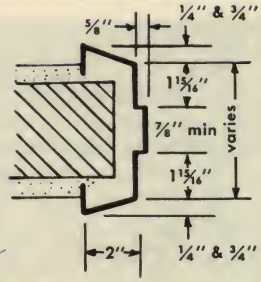


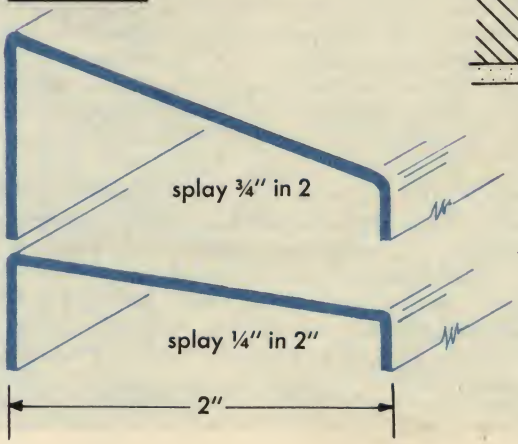
WB-8 16-14 gauge



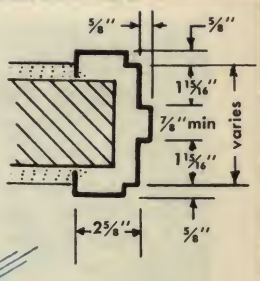


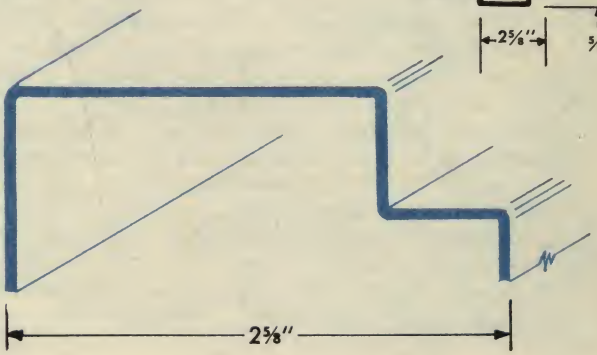
WB-11 18-16-14 gauge

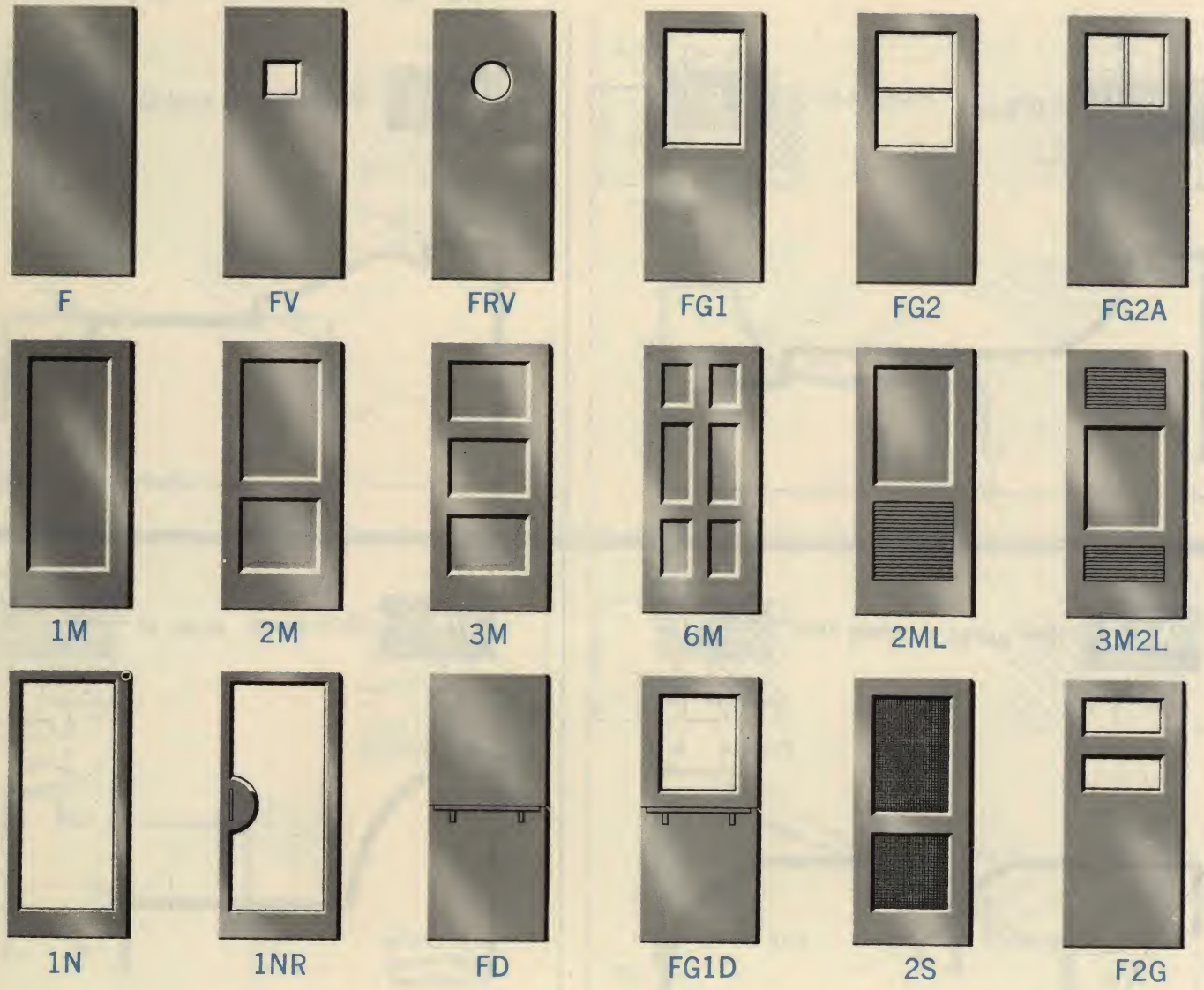




WB-12 16-14 gauge







specifications

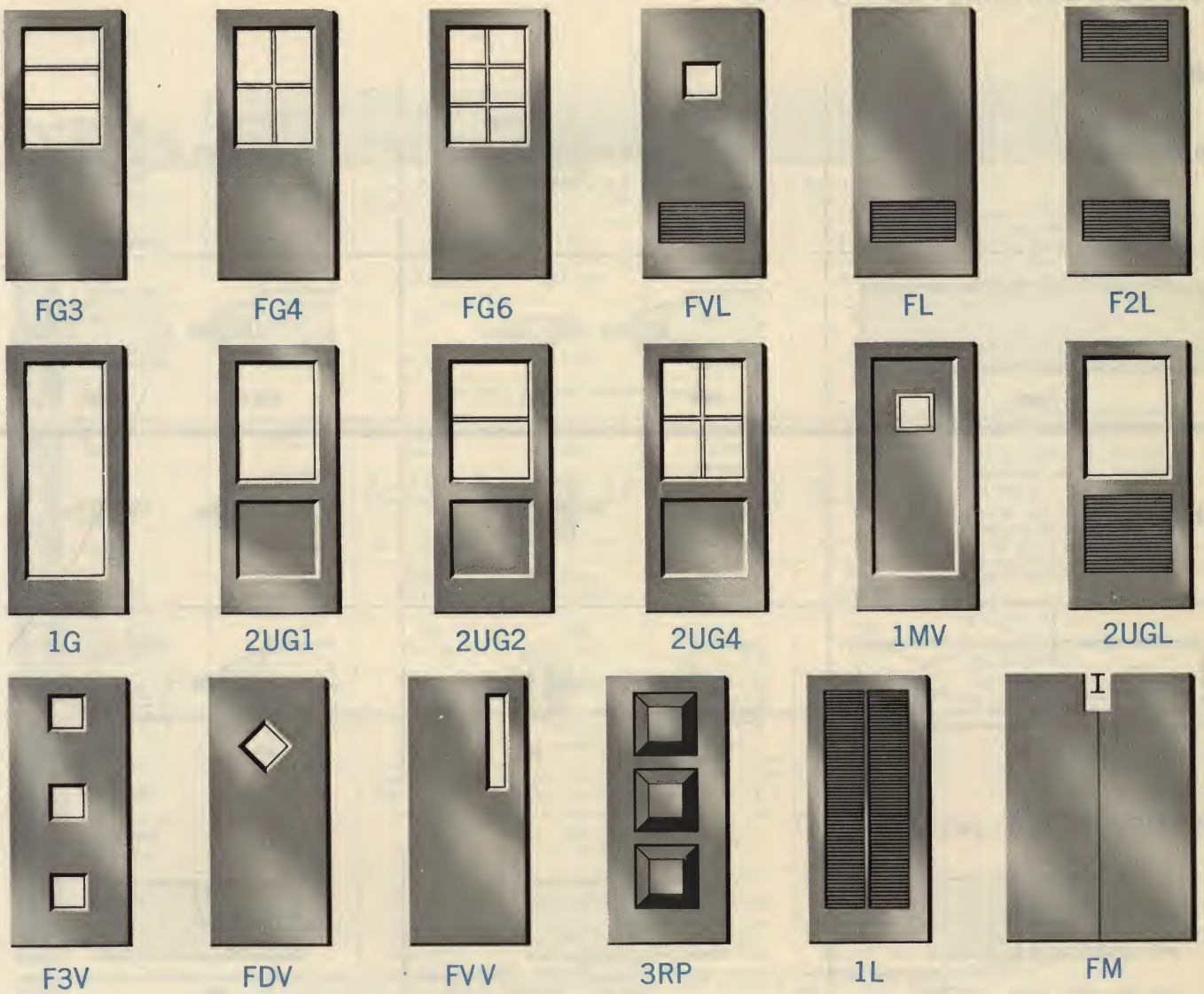
see page 10 and 13 for details

hollow metal doors

Doors shall be made of the finest commercial quality 18 gauge cold rolled or pickled steel. Flush type doors shall be fabricated of two sheets of 18 gauge steel with continuous interlocking vertical steel stiffeners spaced no more than 6" on centers. Space between stiffeners shall be filled with mineral rock wool insulation or other suitable, approved sound deadening material. Panel type doors shall have 18 gauge stiles and rails with 20 gauge panels and mouldings; panel filler is to be not less than ¼" thick approved, solid insulating material. Miters of panel mouldings as well as joints between stiles and rails shall be continuously welded and ground smooth and invisible. Continuous 16 gauge channels extending full width of door are to be spot welded to each face at top and bottom. The tops of all exterior doors are to be closed flush to prevent accumulation of moisture and rain water.

Doors shall be mortised, reinforced, drilled and tapped at the factory from templates for all mortise hardware listed in the hardware schedule except arm of floor hinges, such as Rixson and Shelby. They shall be reinforced only for surface—applied hardware such as checks, escutcheons and kickplates, the drilling and tapping for which is to be done in field by door erection contractor.

All doors are to be thoroughly cleaned, primed and filled to present a smooth surface and given sufficient coats of baked-on rust inhibiting primer to receive finish painting in field. Baked enamel finish, where specified, shall consist of sufficient coats of enamel in addition to prime, each coat to be baked on and rubbed smooth; final coat is to be rubbed to an eggshell gloss. Doors shall be as manufactured by Williamsburg Steel Products Company, Brooklyn 22, New York.



see page 10 and 13 for details

kalamein doors

Doors shall be of selected, dried white pine, covered with 24 gauge steel sheets. Seams on all doors are to be finished with solder, filled and ground smooth. Flush type doors are to be fabricated with both faces completely flush. Cores for stiles and rails are to be joined and mortised and tenoned in an approved manner. Stile and rail metal covering shall be locked together at all joints to insure flat surfaces. Where specified, kalamein doors are to be provided with integral hollow metal moulding attached to doors by locking action; no screws or nails to be used. Panel core shall consist of approved insulating material covered with 24 gauge steel. Doors shall be given shop coat of red rust-inhibiting zinc chromate primer. Doors shall be as manufactured by Williamsburg Steel Products Company, Brooklyn 22, New York.

Mortising and reinforcing for hardware at the factory can be performed when specified. Cutouts are accurately and neatly made to receive mortise hinges and locks. Underwriter labeled kalamein doors are prepared for mortise hardware at the factory in accordance with Underwriter requirements.

special material

Both hollow metal and kalamein doors can be faced with stainless steel, bronze, aluminum, rigidized stainless, galvanized steel, copper, and other special materials. Complete information upon request.

label services

- New York City Board of Standards and Appeals
- New York State Board of Standards and Appeals
- Building Officials Conference of America (BOCA)
- National Board of Fire Underwriters

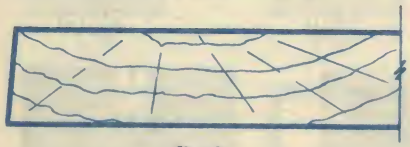
standard sections scale: 3″ = 1′-0″

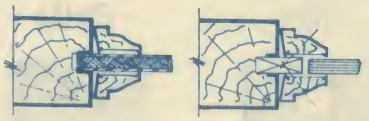
• doors

hollow metal

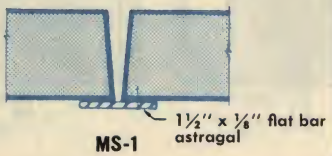
flush

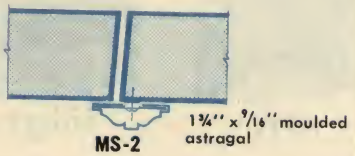
kalamein


flush



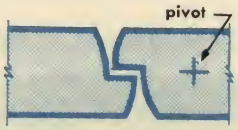
• meeting stiles - pairs of doors





MS-3

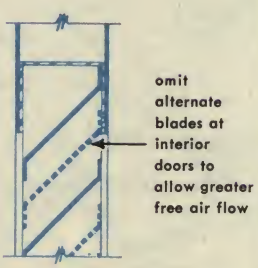
MS-4



• louvers and screens

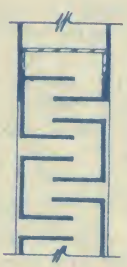
HL

interior louver



ZL

exterior louver


LTL

light proof louver

SC

screen doors

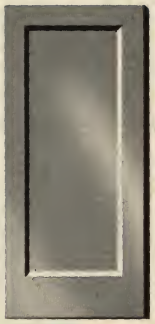
description		A FIREWALL	B STAIR TOWER	C CORRIDOR & ROOM WALLS	D EXTERIOR	E EXTERIOR FIRE ESCAPE	notes
hollow metal frames	Max. Size	S/sw 4'-0" x 10'-0" Pr/sw 8'-0" x 10'-0"	S/sw 4'-0" x 10'-0" Pr/sw 8'-0" x 10'-0"	S/sw 4'-0" x 10'-0" Pr/sw 8'-0" x 10'-0"	S/sw 4'-0" x 10'-0" Pr/sw 8'-0" x 10'-0"	S/sw 4'-0" x 10'-0" Pr/sw 8'-0" x 10'-0"	Transoms, Mullions, Removable Stops, Expansion Bolt Anchors, Metal or Wood Stud Anchors, Stainless Steel, Bronze and Aluminum are ineligible for Labels.
	Jamb Width	4" MIN.	4" MIN.	4" MIN.	4" MIN.	4" MIN.	
	Trim	1¼" MIN.	1¼" MIN.	1¼" MIN.	1¼" MIN.	1¼" MIN.	
	Stop	¾"	⅝"	⅝"	⅝"	⅝"	
	Gauge	14 GA.	16 GA.*	16 GA.*	16 GA.*	16 GA.*	* 14 GA. for S/sw over 3'-6"x7'-6" Pr/sw Over 5'-6" x 7'-6".
	Anchors	APPROVED MASONRY ANCHORS ONLY					
hollow metal doors	Type	FLUSH	Flush or Panel*	Flush or Panel*	Flush or Panel*	Flush or Panel*	▲20 ga. doors of "Economy" construction can be furnished (see page 5).
	Max. Size	S/sw 4'-0" x 10'-0" Pr/sw 8'-0" x 10'-0"	S/sw 4'-0" x 10'-0" Pr/sw 8'-0" x 10'-0"	S/sw 4'-0" x 10'-0" Pr/sw 8'-0" x 10'-0"	S/sw 4'-0" x 10'-0" Pr/sw 8'-0" x 10'-0"	S/sw 4'-0" x 10'-0" Pr/sw 8'-0" x 10'-0"	Glass in Pairs of B Label Drs. is Limited to 50 Sq. In. per Leaf (or 100 Sq. In. in one leaf Only) Maximum Glass Dimension 12" in Width or Height.
	Gauge	18 GA. MIN.	▲18 GA. MIN.	▲18 GA. MIN.	▲18 GA. MIN.	▲18 GA. MIN.	C & E Label Drs., Maximum Height of each Lite 54 In.
	Insulation	Mineral Rock Wool	Mineral Rock Wool	Mineral Rock Wool	Mineral Rock Wool	Mineral Rock Wool	No Rabbeted or rounded Meeting Stiles Permitted.
	Glass Area (Sq. In.)	NONE	100 Per Opg.	1296 Per Light	NONE	720 Per Light	* 4½" Min. Stiles on Panel Doors.
	Thickness	1¾" MIN.	1¾"	1¾"	1¾"	1¾"	
kalamein doors	Type	NONE	Flush or Panel*	Flush or Panel*	Flush or Panel*	Flush or Panel*	
	Max. Size	NONE	S/sw 3'-9" x 7'-6" Pr/sw 7'-6" x 7'-6"	S/sw 3'-9" x 7'-6" Pr/sw 7'-6" x 7'-6"	S/sw 3'-9" x 7'-6" Pr/sw 7'-6" x 7'-6"	S/sw 3'-9" x 7'-6" Pr/sw 7'-6" x 7'-6"	
	Glass Area (Sq. In.)	NONE	100 Per Opg.	1296 Per Light	NONE	720 Per Light	
	Gauge	NONE	24 GA. Galv. Covering	24 GA. Galv. Covering	24 GA. Galv. Covering	24 GA. Galv. Covering	
	Thickness	NONE	Flush 1¾" Panel 1¾" Min.	Flush 1¾" Panel 1¾" Min.	Flush 1¾" Panel 1¾" Min.	Flush 1¾" Panel 1¾" Min	
hardware	Class A	4½" EXTRA HEAVY STEEL BUTTS AND LABELLED 3-POINT LOCK (INACTIVE LEAF OF PAIRS REQUIRES LABELLED 2-POINT LOCK). ¾" THROW SINGLE POINT LATCH OR LOCK MAY BE USED ON SINGLE SWING DOORS UP TO 3'-6" x 7'-0" AND ON PAIR SWING DOORS UP TO 6'-0" x 7'-0". (FOR COMPLETE INFORMATION SEE PAGE 5.)					At least 1 hinge is required for each 2'-6" of door height. Hinges must be Mortised on Class "A" doors. Doors Using Pushes and Pulls Without Locks or Latches cannot bear Labels. Surface Applied Panic Hardware is Permissible Only at Class E Fire Escape Doors.
	Class B, C, D, E	4½" STEEL BUTTS AND LATCH OR LOCK (OR PANIC HARDWARE). (INACTIVE LEAF OF PAIR REQUIRES TOP & BOTTOM BOLTS OR PANIC HARDWARE) DOORS OVER 8'-0" HIGH REQUIRE 3-POINT LOCK (PLUS FLUSH BOLTS FOR INACTIVE LEAF OF PAIR).					

fire doors	Class A	3-PLY METAL CLAD (24 GA. GALV. WITH VERTICAL SEAMS)	SINGLE OR PAIR SLIDE (INCLINE OR LEVEL HEAD) AND VERTICAL SLIDE. SINGLE SWING AND PAIR SWING.	2⅝" THICK
	Class B, C, D, E	2-PLY TIN CLAD (30 GA. TERNE PLATE WITH VERT. & HORIZ. SEAMS).	SINGLE OR PAIR SLIDE (INCLINE OR LEVEL HEAD). SINGLE SWING AND PAIR SWING.	1¾" THICK

A-B-C-D-E LABEL

B-C-E LABEL

B-C-E LABEL



B-C-D-E LABEL

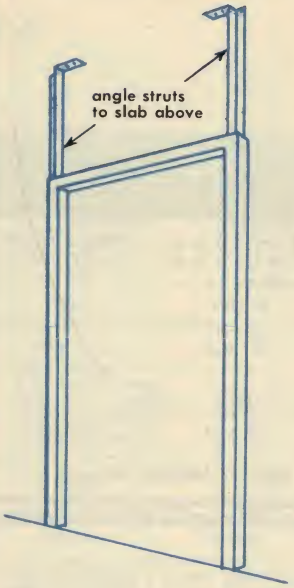
C-E LABEL

C-E LABEL

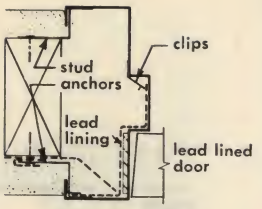
special details

Williamsburg offers a complete line of special hollow metal designs for Architectural use. Due to the multiplicity of designs and materials available, only the more common situations encountered are shown. Detailed information on slideup pass windows, partition ends and fins, closet units, window stools, and other pressed metal building products will be sent upon request. Where Architectural requirements cannot be met by the standard conditions shown, Williamsburg's experienced Design Department is readily available for consultation.

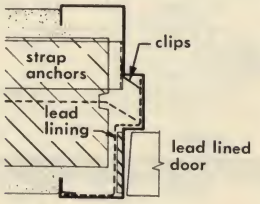
• lead lined frames (not to scale)



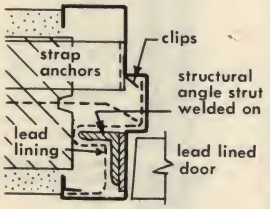
Lead lining furnished by X-Ray contractor can be shop installed at head and jambs of door frames. Used in conjunction with lead-lined doors, this insures complete X-Ray protection. Where specified, struts can be welded to jambs and extended to slab above for more rigid anchoring.



stud partitions



masonry partitions

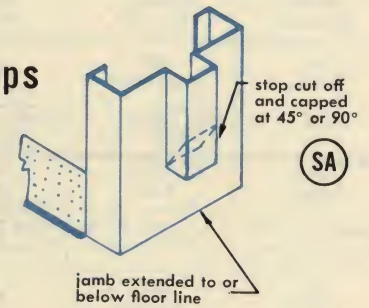


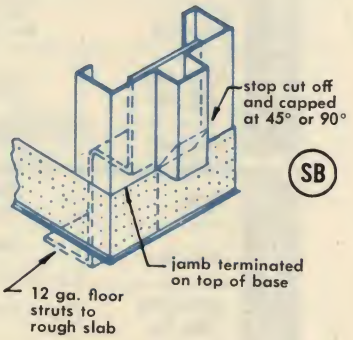
masonry partitions and struts

• stainless steel spats—cut-off stops (not to scale)

In hospitals and other institutions where sanitary conditions are important, frames can be furnished with stainless steel bottom jambs to same height as wall base. The most common sanitary condition entails a cut-off stop only with jambs extending to or below floor. If desired, frames can also be made with full cut-offs so that wall base runs completely under and around jambs.

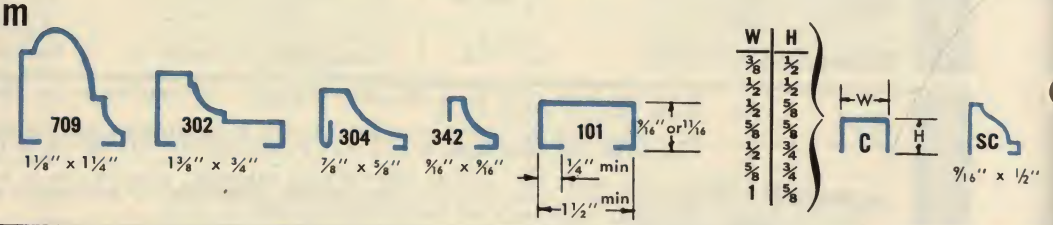
NOTE: full height stop required for light-proof, lead-lined and exterior doors





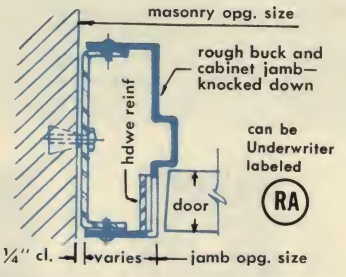
• scribe moulding and trim (half full size)

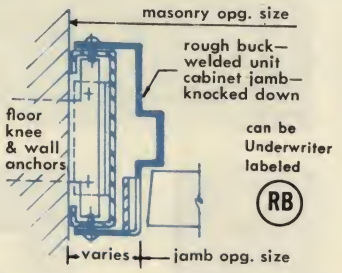
Used with rough buck cabinet jamb designs shown, they are shipped knocked down with one end mitered. They are secured with #6 sheet metal screws thru holes drilled in field by erection contractor. On special order, 101, 201, 301, 401 and 601 furnished with concealed clip fastening.



• rough buck cabinet jamb designs (not to scale)

When required, rough buck cabinet jamb frames can be furnished for existing masonry openings, concrete walls, or locations where it is desired to complete brickwork before installing finished door frames. The rough bucks are shipped knocked down or welded into sub-frames, as shown, and anchored by expansion bolts or built-in anchors. Cabinet jambs are shipped knocked down or welded into slip frames, as shown, and secured to rough buck with #6 binder head sheet metal screws through holes field-drilled by erection contractor to suit.

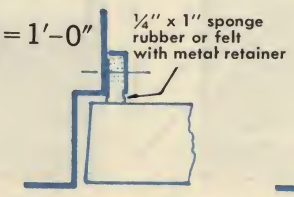




• weatherproofing and gasketing

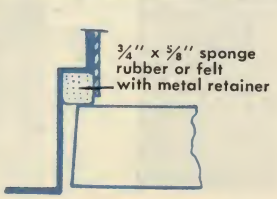
3" = 1'-0"

Strips or gasketing are provided continuously at head and jambs to seal off space between door and frame. Saddles or automatic door bottoms complete sealing at door sills. Types shown offer a selection to suit virtually all sealed-off conditions.

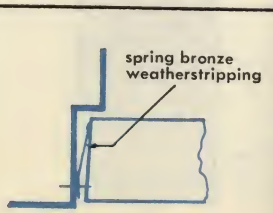


WS 1

WS 2

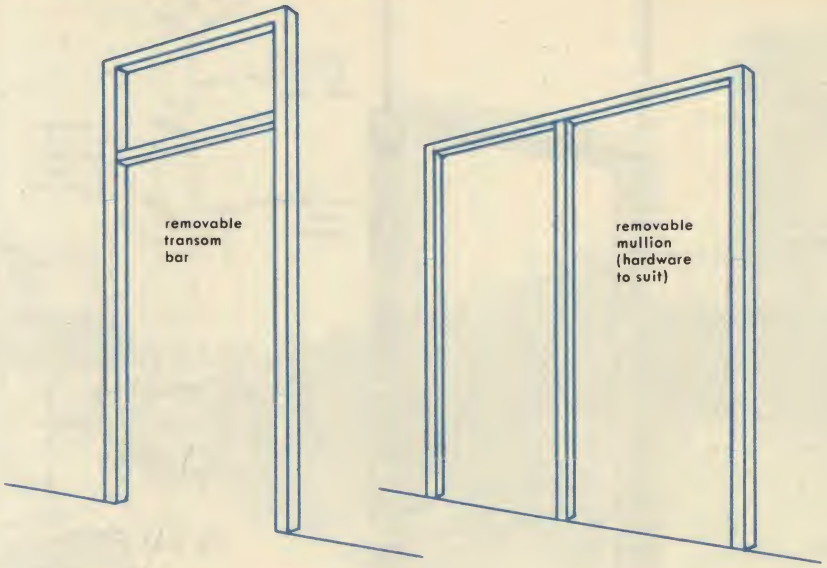


WS 3

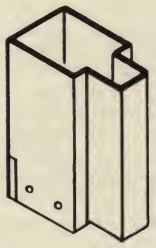


WS 4

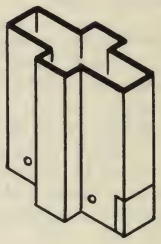
• removable mullions and transom bars (not to scale)

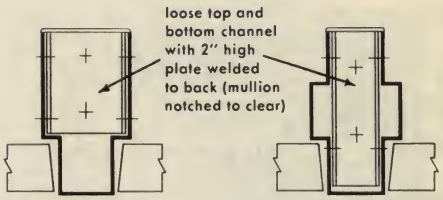


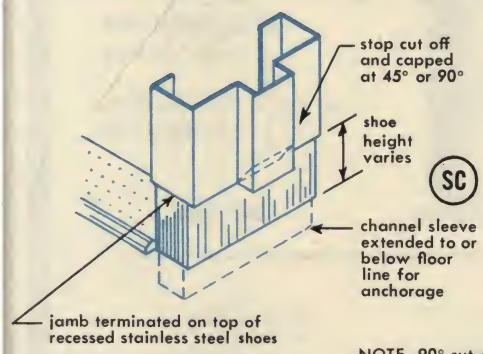
single rabbet

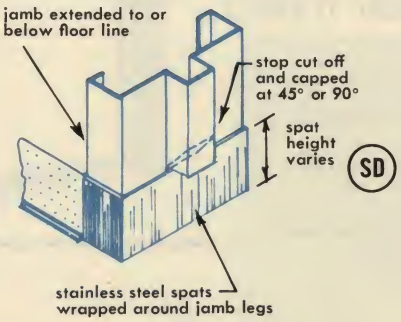


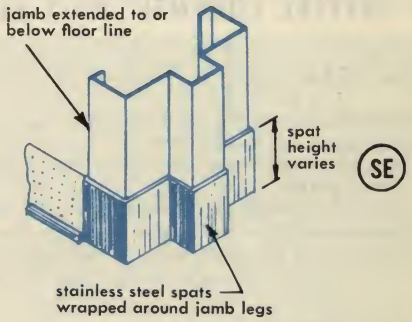
double rabbet



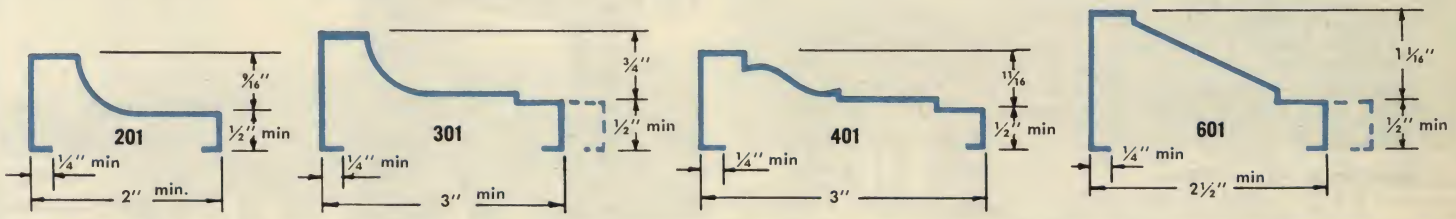


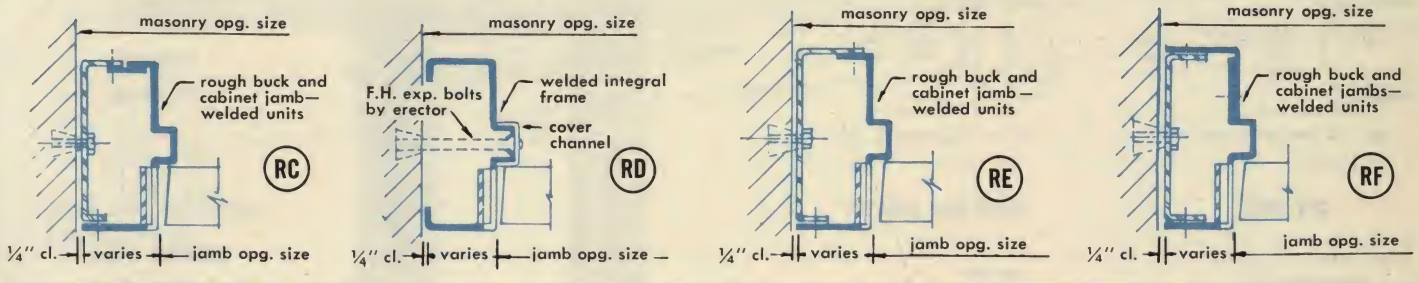

stop cut off and capped at 45° or 90°
shoe height varies
SC
channel sleeve extended to or below floor line for anchorage
jamb terminated on top of recessed stainless steel shoes

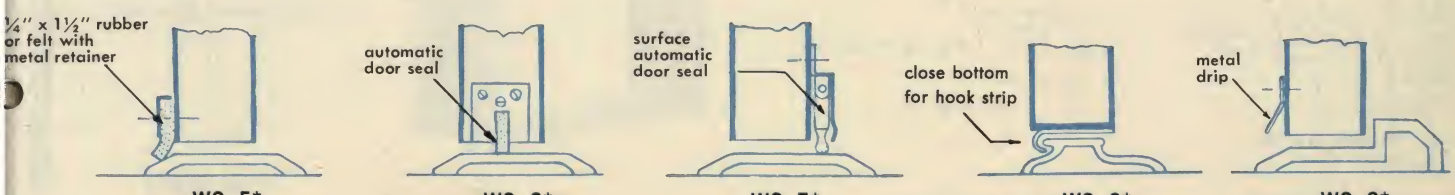

jamb extended to or below floor line
stop cut off and capped at 45° or 90°
spat height varies
SD
stainless steel spats wrapped around jamb legs



NOTE—90° cut-off standard, 45° cut-off on special order







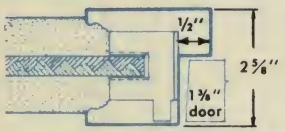
* All saddles by others

• plaster partition frames

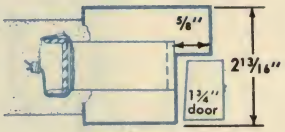
description

Designed for the popular 2" solid plaster partition, these frames are extensively used in NYC Housing Authority Apartment dwellings. Available in most of the profiles on pages 4 and 5, their most common form is the flat trim. Frames are provided with suitable jamb anchors. Flat bar struts can be furnished for rigid overhead anchoring. Floor knees are welded to each jamb for securing to the floor with nails or rawl drives. These frames can be provided with welded-on 3½" x 3½" butt hinges and strikes instead of normal cutouts and reinforcements.

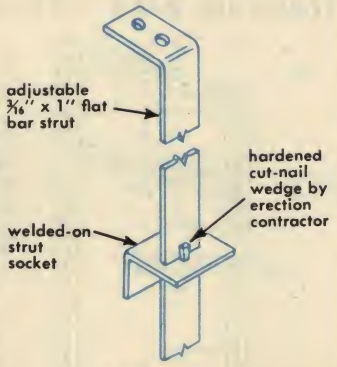
details (3" = 1'-0")



gypsum board construction

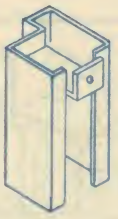


channel construction



flat bar strut and socket

dry wall clips



zee clips

• "SPECIAL PURPOSE" unit steel door frames

features

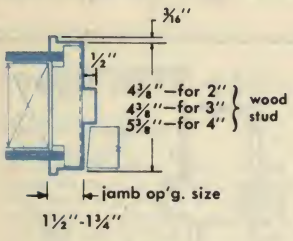
These frames are designed for rapid shipment and installation in housing projects at minimum cost.

- Shipped either knocked down or in one piece all-welded steel construction.
- Carried in stock in standard sizes.
- Modern design, used extensively by leading Architects and contractors for projects in various parts of the country.
- All dimensions shown are fixed and can not be varied.

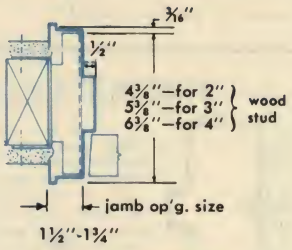
description

- Fabricated of 18 gauge steel.
- Supplied with two 3½" x 3½" steel butts welded to frame.
- Provided with Williamsburg Universal brass plated strike.
- Surfaces protected by immersion in red zinc chromate primer.
- Furnished with jamb anchors to suit all wall conditions: masonry; solid plaster; stud (plaster or dry wall) partitions.

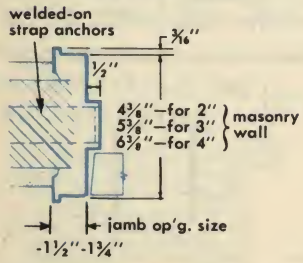
details (scale: 1½" = 1'-0")



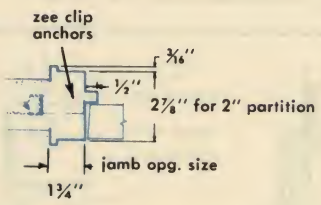
dry wall



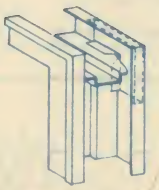
stud and plaster



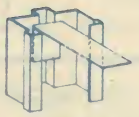
masonry partitions



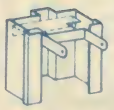
plaster partitions



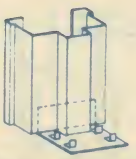
welded reinf. at corners



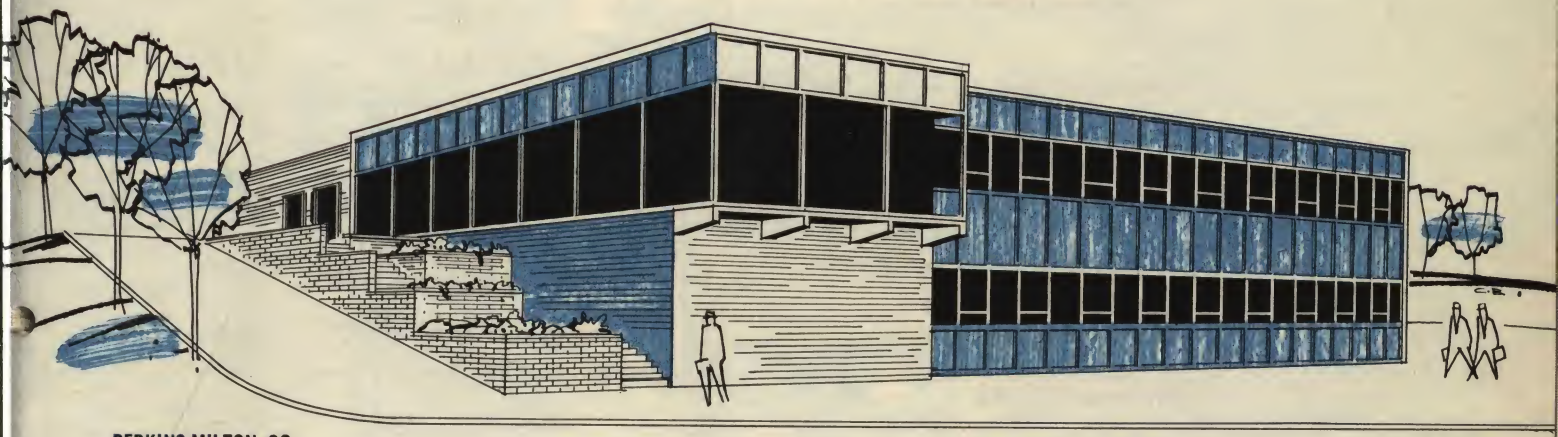
masonry anchors



welded stud anchor clips

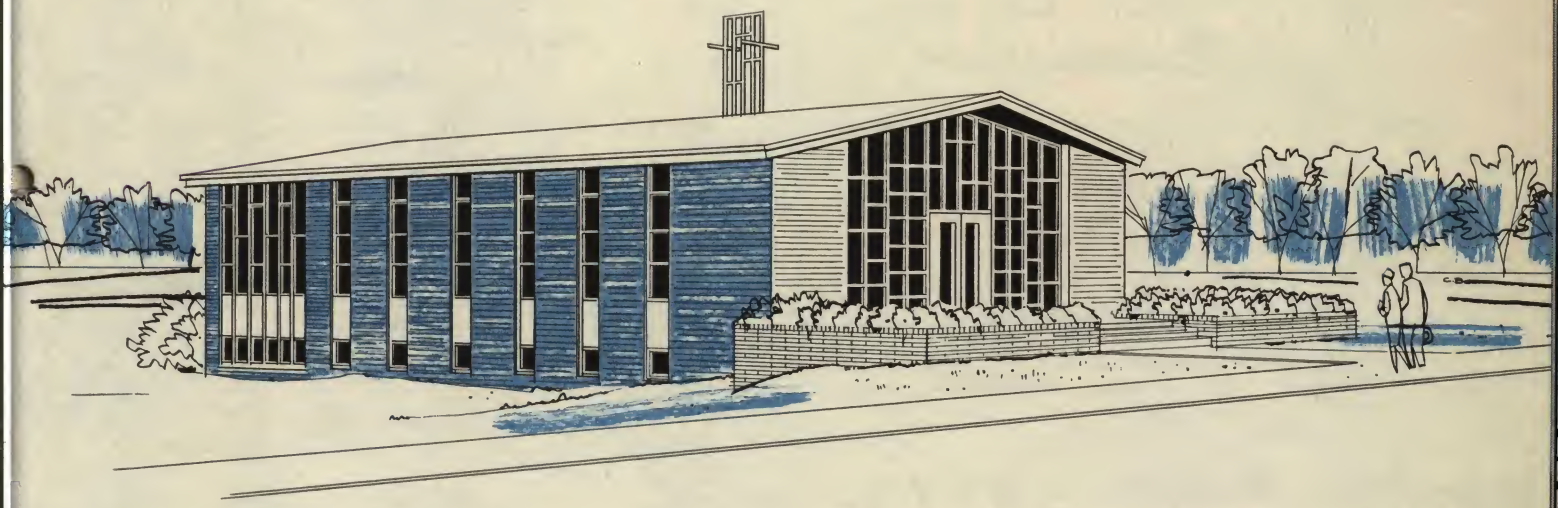


floor knees



PERKINS-MILTON CO.
Needham, Mass.

Architect: Vappi & Symmes
Contractor: Vappi & Co.



SAINT JOHN CAPISTRAN
Amherst, Nebraska

Architect: Hinde & Laurinat
Contractor: William Britton Sr.

The wide acceptability of Williamsburg as a standard of quality hollow metal work is attested by the following partial listing of leading architects on whose projects Williamsburg material has been furnished over a period of many years.

Austin, Field and Fry
Welton Becket and Assoc.
Bennett and Crittenden
Bennet and Straight
Black and West

•

Marcel Breuer
Fred Buford and Assoc.
Geo. Watts Carr
Carroll and Dean

•

Leon Chatelain, Jr.
Carson and Lundin
Celli-Flynn
Childs and Smith

•

Coffey and Olson
George L. Dahl
Leo A. Daly Co.
Archie Royal Davis

•

Desmond and Lord
DeWitt and Swank
Durrant and Berquist
Eggers and Higgins
John J. Flad and Assocs.

Giffels & Vallet Inc. & L. Rossetti
Frank Grad and Sons
Victor Gruen and Assoc.
Haarstick Lundgren and Assocs.
Harley, Ellington and Day, Inc.

•

Harrison and Abramovitz
Wm. B. Ittner, Inc.
Holabird and Root and Burgee
Albert Kahn Assoc.

•

Kahn and Jacobs
Kelly and Gruzen
Ketchum, Gina and Sharp
Vincent G. Kling

•

Jens Frederick Larson
Leinweber, Yamasaki and Hellmuth
Mark Lemmon
Lashmit, James, Brown & Pollock

•

Duane Lyman and Assoc.
Maginnis and Walsh
Maguolo and Quick
Marshall and Brown
Charles H. McCauley
McKim, Mead and White

Douglas Wm. Orr
I. M. Pei and Assoc.
Pereira and Luckman
Perkins and Will
Emery Roth and Sons

•

Eero Saarinen and Assocs.
Shepley, Bulfinch, Richardson & Abbott
Emil A. Schmidlin
Shreve, Lamb and Harmon Assocs.

•

Skidmore, Owings and Merrill
Eberle M. Smith Assoc., Inc.
Smith, Hinchman and Grylls, Inc.
Smithey and Boynton

•

Steward and Skinner
Strong, Strong and Strong
William B. Tabler
Voorhees, Walker, Smith and Smith

•

Robert Law Weed and Assoc.
Frederic P. Wiedersum
Woodburn and O'Neil
Frank Lloyd Wright
York and Sawyer

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Architectural Formica Clad Doors are designed and constructed, to combine all the best qualities of solid wood core construction, Plus! The decorative and protective Formica Laminate that insures the following features:

- Provides the greatest possible amount of impact resistance and dimensional stability available in door construction.
- Permanent beauty that resists wear or staining for the life of the building.
- Requires minimum maintenance.
- Decorative colors, different or matching, as selected for each side.
- No armor, kick, mop or push plates required.
- Pre-fitted to openings for every type of door frame.
- Competitive in cost compared with other solid core door types and hollow metal doors as no painted finishes and/or protective plates required.
- Integral laminate facings available for louvers and mail slots.
- Available factory mortised for quick installation of hardware as specified to be furnished by others OR if specified complete with hardware manufactured by nationally known manufacturers including Stanley, Schlage, Russell-Erwin, Rixon and Glynn Johnson.

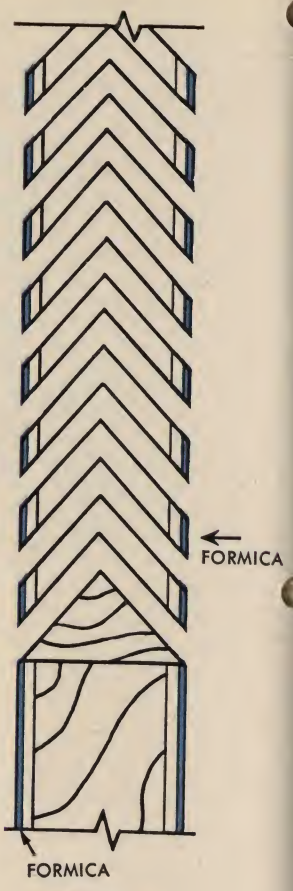


Illustration above and the half scale detail section at right shows how Integral type louvers* in Architectural Formica Clad Doors "HAVE THE EDGE" covered with Formica facing; eliminating all flanges, joints, and/or moulding necessary with other types of louvers. Hardwood core of louver available in natural, stain, or color finish

INTEGRAL TYPE LOUVER **SECTION**

(50% free area for passage of return air)

*PATENT PENDING

specifications

(These specifications should be in a SEPARATE SECTION and NOT incorporated with millwork or any other section)

general

All doors as indicated on the plans or as described in these specifications shall be pre-fitted and pre-finished Architectural Formica Clad Doors as manufactured by The Architectural Products Manufacturing Company of Shreveport, Louisiana or an approved equal.

1. scope of work

The work specified under this heading includes the furnishing of all labor, materials, and equipment necessary to make the door cores and the application of Formica plastic thermosetting high pressure decorative laminate to the door cores.

2. materials

(A) Cores shall be manufactured in accordance with standard practices for dimensional stability and in accordance with detail requirements as established by Commercial Standard CS171-58. (Par. 4.1 for solid core flush veneered doors). Cores also may be made of stabilized particle board.

(B) Surfacing materials shall be 1/16" standard decorative Formica and shall meet all specifications and tolerances as set forth for high pressure decorative laminates by the National Electrical Manufactures Association. The surface shall be brought to one of the finishes known in the trade as Satin or Furniture.

(C) All door faces shall bear the Formica Wash-Off identification Safeguard.

3. construction

(A) Solid core flush doors shall be constructed in accordance with Par. 3.14 of Commercial Standard CS171-58.

(B) Pre-fitting shall comply with Par. 311 A and Par. 3.11 B of Commercial Standard CS171-58, all doors shall be profit to 1/16" less in width (to give 1/16" clearance at hinge edge and 1/8" clearance at lock edge) and 1/2" less in height (to give 1/8" top clearance and 3/8" bottom clearance) than the nominal door size unless otherwise so specified or indicated on the plans.

(C) Both stile edges and top and bottom rail edges shall be sealed with Formica to minimize moisture content changes.

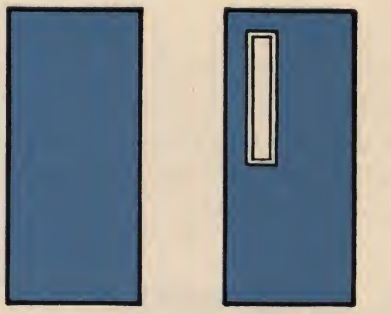
4. louvers

(A) Open specification

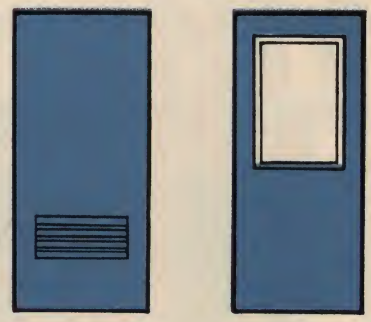
Louvers shall be as specified under Section .... of the specifications cutouts for louvers will be made by the door manufacturer in accordance with the approved shop drawing but the louvers will be furnished by others.

(B) Closed Specification

Louvers where required shall be of the integral face

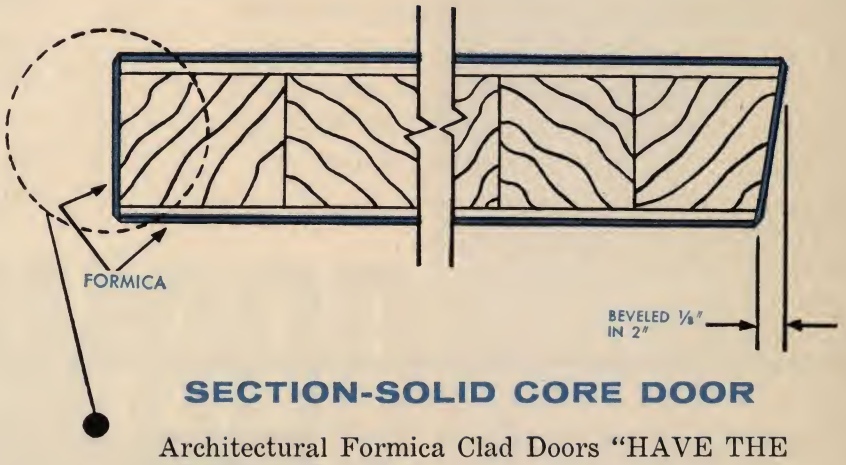


FLUSH VERTICAL LITE



LOUVRE HALF LITE

Architectural Formica Clad doors are custom built to Architect's design for any louver or light panel arrangement.



SECTION-SOLID CORE DOOR

Architectural Formica Clad Doors "HAVE THE EDGE" applied last—

- For better appearance—emphasizes slab appearance by eliminating face lines on edges—places bevel in shadow line of jamb.
- For greater protection to face edges when doors are open—eliminates the need for metal angles in most cases.
- Provides protection to door face should some hard object be caught between door and frame jamb as door is closing.
- Allows edges to be readily removed and new edges installed when adjustments to door size are necessary to correct occasional job errors—when frames are installed slightly out of square.

type and shall be machined in such a manner that the portion of the louver slat which falls in the plane of the Formica face shall actually be machined from the Formica face. Louvers shall be of the inverted "V" type.

architectural suggestion:

ALWAYS SPECIFY ARCHITECTURAL FORMICA CLAD INTEGRAL LOUVER DOORS AS AN ALTERNATE TO OTHER PLASTIC FACED DOORS (including Architectural doors with standard louvers). The addition in cost will be SMALL in proportion to the overall contract and gives you an opportunity to choose this added design feature and insures your choice of a GENUINE FORMICA clad door.

5. glass and glazing

(A) Cutouts for light openings shall comply with Par. 3.9 of CS171-58. Glass to be furnished and installed by others under the Glass and Glazing section of the Specifications. Cut outs and hardwood stops to be by door manufacturer unless otherwise specified.

6. preparation for finish hardware

(A) When so specified, all doors shall be mortised for butt hinges, locks, exit bolts, flush bolts, etc., at the point of manufacture to prevent damage to the door, and to insure high quality workmanship. Schedules of hardware, approved shop drawings of frames, and the necessary template information to be supplied by others as required.

7. colors

(A) Standard patterns grade of Formica currently available shall be as selected by the Architect. (If solid color or white is desired, so specify).

8. packaging

(A) Door leaves shall be packaged and shall be marked for opening identification.

9. guarantee

(A) The doors as manufactured in accordance with the above specifications shall carry a TWO year guarantee against defects in material and workmanship. Warp or twist will be considered a defect only when exceeding the tolerances of ¼" and under the limitations as set forth in Par. 3.8 (Warp or Twist Tolerances) of CS171-58.

Due to the fact the dimensions of the Formica sheet vary with differences in atmospheric conditions, we do not recommend the use of this door, nor guarantee it in conditions where there is an appreciable difference in the average atmospheric conditions or equilibrium on the two sides of the door. (Short periods of change i.e., a few hours will not cause dimensions to vary.)

Copies of pertinent paragraphs referred to from Commercial Standard CS171-58, by U. S. Department of Commerce, Office of Technical Service, will be furnished upon request.

"The Door With The Edge"

Architects are invited to write Architectural Products Manufacturing Company for door estimates on projects in the design stage. We can prove the economy of specifying Formica Clad Doors with a lifetime finish in lieu of other type doors requiring continual maintenance.

guarantee

Architectural Formica Clad Doors are guaranteed for a two year period against defects in material and workmanship; in installations where door has been subjected to normal use.

Other products of Architectural Products Manufacturing Company include:

- **Architectural Formica Clad Kitchens and Casework.**
- **Architectural Formica Clad Toilet Partitions.**
- **Adapta-Cove Formica Counter Tops*** with feather edge Set-on coved end splash which enables turning a corner out of square, and cutting tops to length easily in the field.
- **Coved Formica Sheets** with a "built in back-bone"* to provide low-cost on the job application of Formica.

**U.S. Pat. No. 2,895,778 and others Pending.*

Always Specify Architectural Clad Doors . . . "The Door With The Edge"

Architectural Products Manufacturing Company

1046 Murphy Street • Shreveport, La. • phone 3-7100

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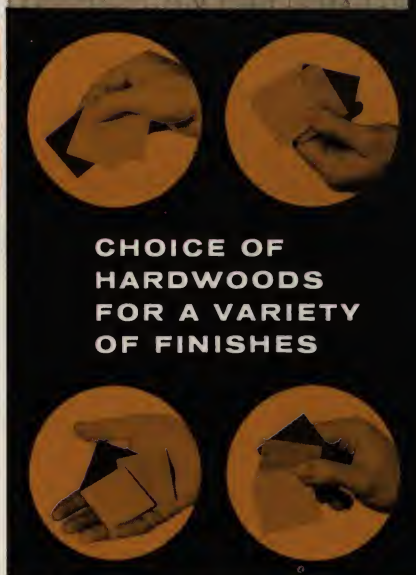
BELLWOOD DELUXE DOORS



CHOICE OF HARDWOODS FOR A VARIETY OF FINISHES

MADE IN CALIFORNIA BY A DIVISION OF *Packard-Bell*

16c
Be

BELLWOOD QUALITY DOORS • HOLLOW CORE AND SOLID CORE • AIA FILE NO. 19E

MADE IN CALIFORNIA

with the pride of manufacture characteristic of all *Packard-Bell* products

BELLWOOD DELUXE DOORS

BELLWOOD DOORS are perfection in design, precision and quality. Experienced manufacture and the use of the finest available domestic and imported hardwoods assure you of the highest quality in design and production.

HARDWOOD VENEERS of Birch, Rotary Lauan, Sen (Ash), Rotary Red Oak, and Shina are especially selected for beauty of grain and superb finishing qualities.

HARDBOARD VENEERS of Masonite "Dorlux" or Swedish hardboard.

ALL-POSITION DESIGN. Bellwood Doors are easy to hang because of their all-position design. Locks and door pulls may be mounted right or left. Doors may be shortened 2" by removing equal amounts from top and bottom.

AVAILABLE IN STOCK SIZES 1'6" through 4'0" widths, in any length to 8'. Special sizes manufactured to specification. Doors available in following thicknesses: 1⅛", 1⅜", 1¾", 2", 2¼", in both hollow core and solid core construction.

EXCLUSIVE WITH BELLWOOD !!!

Doors and panels—perfectly matched in tone and grain pattern. Pre-grained and pre-finished at Bellwood in a wide variety of grains and colors. Write for complete information.

FOLDING DOORS

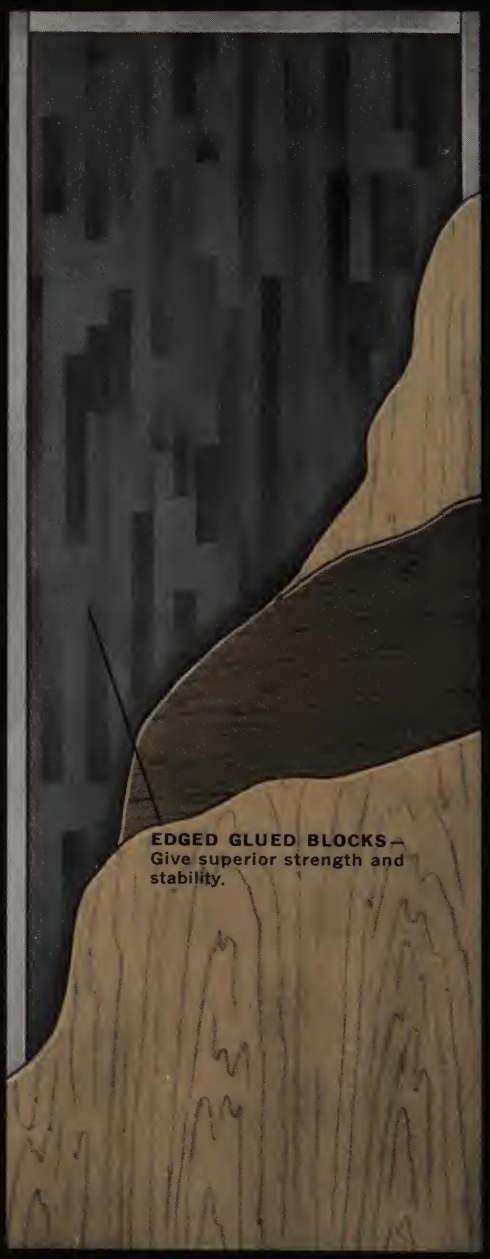
MINERAL CORE DOOR

B-LABEL FIRE DOOR
as approved by Underwriters' Laboratories, Inc.

LEAD-LINED X-RAY DOOR
Write for specifications on these other special doors.

GUARANTEE

Bellwood Doors are fully guaranteed by the Bellwood Company of California, as set forth in the Standard Door Guarantee of the National Woodwork Manufacturers Association. They meet or exceed the specifications set forth in Commercial Standard CS 171-58 for Solid-core and Hollow-core doors.



BELLWOOD DELUXE SOLID CORE DOOR

STRUCTURAL SPECIFICATIONS

CORE CONSTRUCTION—Wood blocks, wood strips or combinations of wood blocks and strips manufactured from kiln-dried, low density soft wood. Blocks shall be of smooth and uniform thickness laid up with grain running vertically and parallel. Blocks to be edge glued.

STILE & RAIL—Edges of door finished with soft wood edge strips at least ¾" wide. Hardwood edge strips to match face veneers will be supplied when specified.

FACES—Core shall be faced with plywood panels ⅛" thick before sanding. Both faces to be smoothly sanded before leaving factory. Choice of unfinished or pre-finished doors.

ADHESIVES—Hot plate, Type II, water resistant bond, or Type I, waterproof bond, conforming to Commercial Standard CS 35-56 unless otherwise specified.

BELLWOOD STANDARD HOLLOW CORE DOOR

STRUCTURAL SPECIFICATIONS

Frame, stiles, rails and lock blocks precision manufactured from kiln dried Douglas Fir or equal specie. Core of wood derivation insulation board, Douglas Fir or equal specie at manufacturer's option.

STILES—1⅛" minimum.

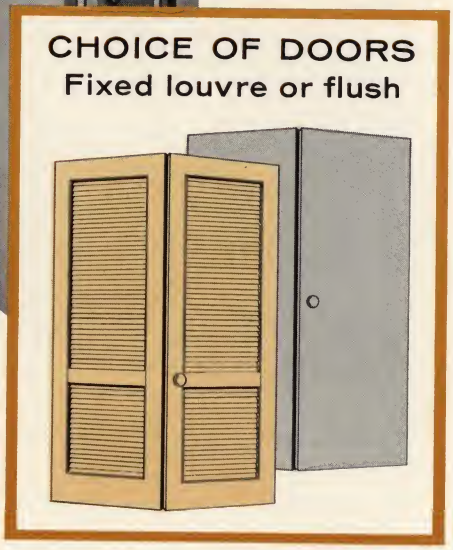
RAILS—2½".

LOCK BLOCKS—both sides of door—20" long centered midway of door, 4" minimum depth from outside edge of stile.

ADHESIVE—Doors pressed under high pressure with water resistant glue which conforms to Commercial Standard CS 35-56 Type II—unless otherwise specified.

FACES—Composed of 3 ply plywood ⅛" thick before sanding. Choice of unfinished or pre-finished doors.

BELLWOOD FOLDING DOOR UNITS



A COMPLETE PACKAGE READY FOR QUICK, EASY INSTALLATION

Bellwood Folding Door Units are handsome in everything but the price. Our vast experience in door manufacturing assures you of the highest quality in design and production.

PRE-DRILLED WITH HINGES APPLIED. Bellwood Folding Door Units are economical and trouble-free to install. They're ready for quick, easy installation—important when multiple installations are planned.

And Bellwood Folding Door Units provide more storage space—ideal where floor space is at a premium. Remember, when you specify Bellwood Folding Door Units you specify precision, design and quality.

SPECIFICATIONS

OPENING	PANELS	WIDTH	HEIGHT
3'0"	2	17¾"	Bellwood Doors are cut 6'7" to be used in a standard finished opening of 6'8½". This allows ¾" clearance between bottom of door and finished floor.
4'0"	4	11¾"	
5'0"	4	14¾"	
6'0"	4	17¾"	
8'0"	4	23¾"	

Hinges installed, pre-drilled for hangers. Complete hardware supplied.

FLUSH DOORS. 1⅜" thickness HC. Available in mahogany, shina, ash, birch or hardboard.

LOUVRE DOORS. 1⅛" thickness. Sugar pine only.

BELLWOOD COMPANY
of California

533 WEST COLLINS AVENUE
ORANGE, CALIFORNIA
P.O. BOX 231, ORANGE, CALIF.
Telephone: KEllog 8-8821
MAdison 9-1637

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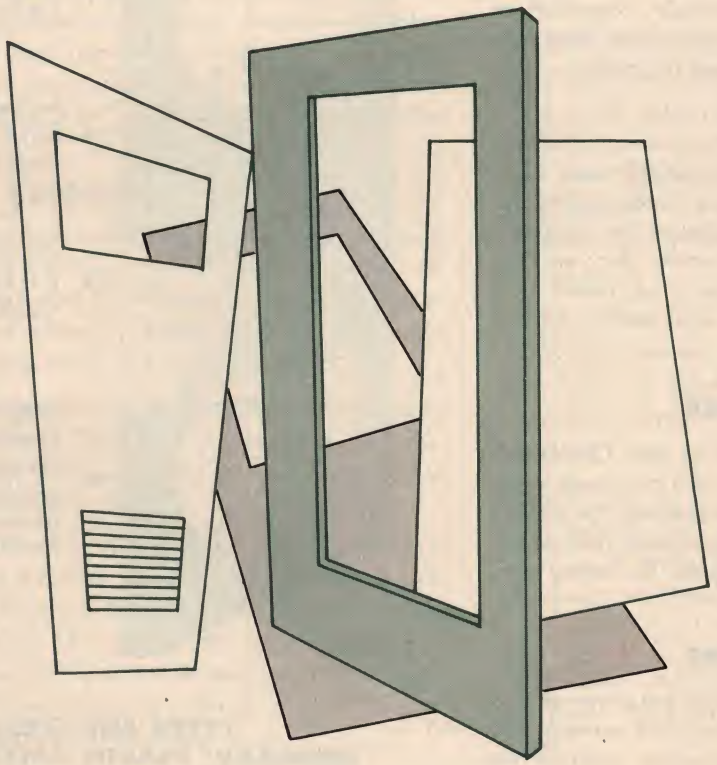
CHEMCLAD® Doors

with plastic laminate faces



HOLLOW CORE

SOLID CORE

MINERAL CORE

"B" LABEL

LEAD LINED

TOILET STALL

BOURNE MANUFACTURING COMPANY

1573 E. LARNED DETROIT 7, MICH.

CHEMCLAD*

CUSTOM MADE FLUSH DOORS employ the principle of stressed skin construction. The plastic laminate faces manufactured by Bourne Manufacturing Company for greater impact resistance are applied in the hot press to kiln dried hardwood frames which surround the various scientifically selected core materials and result in doors with unusual dimensional stability. The stiles are edge banded under heat and pressure with CHEMCLAD laminate and the top and bottom rails are treated with mercury oleate sealer to provide an effective barrier to termites, dry rot, and mildew. Wood blocking is provided for the installation of all hardware specified. If specified, the doors are delivered factory mortised for hardware and with louvers installed. Your nearby CHEMCLAD* representative whose name and address appears on the back page will be happy to furnish you with additional information on CHEMCLAD Doors and Partitions. Ask him to show you CHEMCLAD's greatly expanded range of colors.

"B" LABEL

CHEMCLAD COMPOSITE TYPE FIRE DOORS have been awarded the "B" label by Underwriters' Laboratories, Inc. They are made with CHEMCLAD faces of the architect's pattern selection and with KAYLO* cores. They may be mortised for Underwriters' Laboratories approved locks and hinges and are approved for "C" locations as well as "B".

MINERAL CORE

CHEMCLAD's Mineral Core Door faced with CHEMCLAD laminate utilizes KAYLO*, the same core as is used in the "B" label door, thus offering an excellent fire barrier combined with outstanding stability, and sound retardance. Mineral Core Doors are recommended for heavy duty locations.

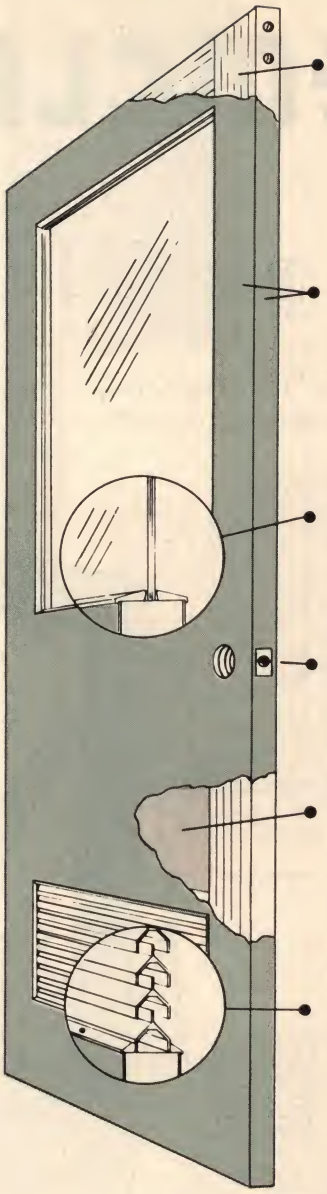
HOLLOW CORE

CHEMCLAD* Hollow Core Doors employ hot press applied CHEMCLAD plastic faces and phenolic resin impregnated honeycomb core. Their light weight makes practical the use of lighter hardware, thus affording additional economy. CHEMCLAD Hollow Core Doors have been proved in use to be suitable for most openings.

SOLID CORE

CHEMCLAD Solid Core Doors are faced with CHEMCLAD plastic laminate applied under heat and pressure over CHEMCORE*. This composite core has been selected for great dimensional stability and is an excellent sound barrier. These doors are recommended for heavy duty locations.

SPECIAL PURPOSE DOORS such as lead lined and toilet stall doors, and transoms and panels are available faced with CHEMCLAD laminate for a complete CHEMCLAD installation.



All rails and stiles of laminated hardwood electronically glued for stability.

CHEMCLAD Phenolic Laminate surfaces.

CHEMCLAD's Anodized Aluminum Glass Molding for ⅛" or ¼" glass.

Factory mortised for all hardware including closers, flushbolts, etc.

Core: Honeycomb, CHEMCORE*, or KAYLO*.

CHEMCLAD's Anodized Extruded Aluminum Louver available for factory installation only.
Louvers by others may also be factory installed.

TYPES AND SIZES
CHEMCLAD* PLASTIC FACED DOORS

	"B" LABEL	MINERAL CORE	SOLID CORE	HOLLOW CORE	LEAD LINED	TOILET STALL
Maximum Size	4' x 7'	4' x 8'	4' x 8'	4' x 8'	4' x 7'	4' x 6'
Thickness	1¾"	1¾"-2¼"	1¾"-2¼"	1¾"-2¼"	1¾"-2¼"	1⅛"-1¾"
Core	KAYLO*	KAYLO*	CHEM-CORE*	Honey-comb	Lami-nated wood and lead	Honey-comb or CHEM-CORE*
Glass Openings	Yes	Yes	Yes	Yes	Yes	
Louver Openings	None	Yes	Yes	Yes	Yes	

*Trade Mark.

BOURNE MANUFACTURING COMPANY 1573 E. Larned St, Detroit 7, Mich.

CHEMCLAD
FEATURES

PLASTIC LAMINATE FACES

CHEMCLAD* faces are manufactured by Bourne Manufacturing Company to afford greater impact resistance. Their tough surface is resistant to stains and scratches. They are available in a variety of standard colors and patterns for the architect's selection. Opposite sides of a door may be of different patterns to fit the decor.

LOW MAINTENANCE

CHEMCLAD Doors compare favorably with other quality doors in initial cost. They require little or no maintenance. Their great dimensional stability eliminates the need for seasonal refitting and their tough, prefinished, mar-resistant surfaces never require refinishing—they need only to be cleaned with soap and water to regain their original appearance. CHEMCLAD Doors are more economical in the long run.

CONSTRUCTION

CHEMCLAD Doors all employ the stressed skin method of construction. The rugged plastic laminate faces are bonded to the core and frames under heat and pressure with waterproofed adhesive. CHEMCLAD Doors have been proven in use not to warp or rack.

OPENINGS are provided for the installation of the glass and louvers specified. Glass and glazing is to be done by others. Louvers may be furnished and installed by others or by Bourne Mfg. Co.

MOLDING: Bourne Mfg. Co. will furnish an anodized aluminum glazing molding for glass openings. They will also furnish their standard ⅜" anodized aluminum molding for the installation of all 1" thick metal louvers centered in the opening. An anodized aluminum molding is also available for use with louvers having a flange on one side and calling for ¾" molding on the other.

HARDWARE

ALL CHEMCLAD* Doors have frames which accommodate closers and conventional butts and locks. Wood blocking for other items of hardware specified is provided at the time of manufacture. Mortising for hardware may be done at our plant or on the job, for application of hardware by others.

SCUFFPLATES

CHEMCLAD offers exclusively a wear resistant scuff plate where specified. It is flush with the face of the door and has a smooth dark brown finish. There are no seams or through joints. The scuff plate extends the full width of the door and is available in any height. It is not intended to replace metal kick or armor plates if their use is indicated.

CHEMCLAD
SPECIFICATIONS

DOORS—Shall be plastic faced 1¾" thick prefitted and prefinished CHEMCLAD* HOLLOW, MINERAL, or SOLID core as indicated, as manufactured by Bourne Manufacturing Company, Detroit 7, Michigan. (Other thickness where specified.) All doors shall be trimmed square at factory to the dimensions shown; side and top clearances of ⅛" and bottom clearance of not less than ⅜" shall be provided. (If necessary doors can be further fitted as to length at installation.) Lock and hinge stiles shall be hot press banded with CHEMCLAD* laminate to match the faces. Lock edge only shall be beveled ⅛" in 2".

FRAMES—Plain flush doors and those with small openings shall have stiles 1½" wide, top and bottom rails 4½" wide of kiln dried wood. An added 24" x 3½" lock block shall be provided on lock edge only, equi-distant between top and bottom rails unless otherwise shown on shop drawings. Doors having larger openings shall have frame members of appropriate dimensions.

CORE—All Hollow Core doors shall have standard CHEMCLAD honeycomb kraft core impregnated with phenolic resin. All Solid Core doors shall have CHEMCORE* or Minéral as noted.

FACES—Door faces shall be glued under heat and pressure with waterproofed adhesive. Faces of doors shall be prefinished CHEMCLAD phenolic plastic laminate of a standard CHEMCLAD pattern of the architect's selection.

MORTISING—All doors shall be factory mortised for hardware. Templates to be furnished by hardware contractor.

GLASS AND LOUVERS—Openings for the installation of the glass and louvers specified shall be provided. Bourne Mfg. Co. shall furnish their standard anodized aluminum glazing molding for glass openings. Glass and glazing to be by others. Bourne Mfg. Co. shall furnish their standard ⅜" anodized aluminum louver stops for doors calling for 1" thick metal louvers centered in the opening, (louvers furnished and installed by others) or (furnished and installed by Bourne Mfg. Co.).

SCUFF PLATES—Where called for, door manufacturer shall furnish chocolate brown integral scuff plate (") high at bottom of (narrow side) or (both sides) of the door.

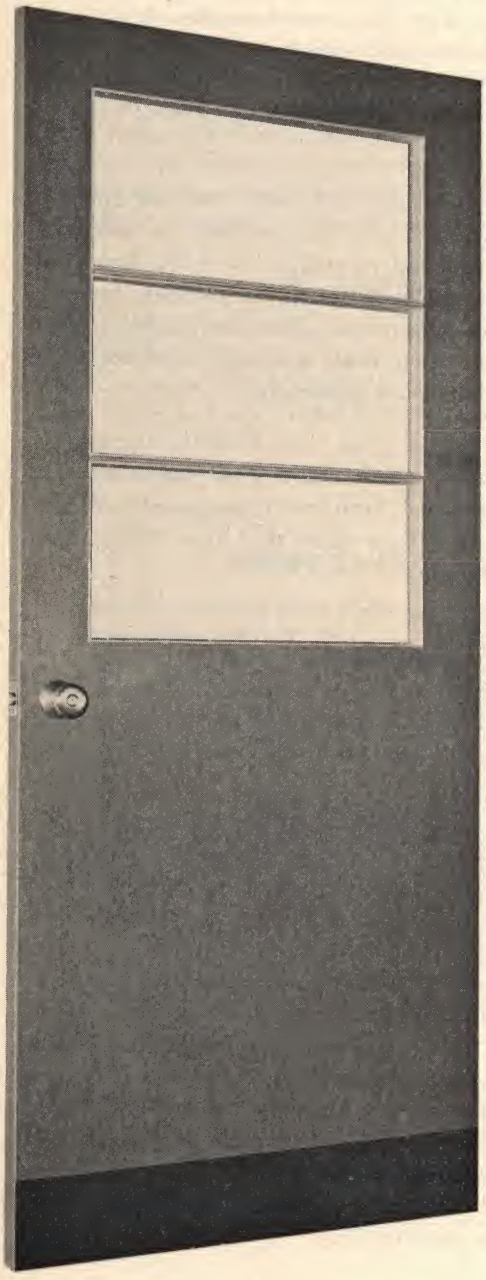
*Trade Mark

BOURNE MANUFACTURING COMPANY 1573 E. Larned St, Detroit 7, Mich.

CHEMCLAD

WARRANTY

Doors of Bourne manufacture are warranted to be of good material and workmanship, free from defects that render them unserviceable or unfit for the use for which they are selected. The Bourne Mfg. Co. will replace at no cost to the owner any CHEMCLAD* Door found to be defective in normal use within two years.

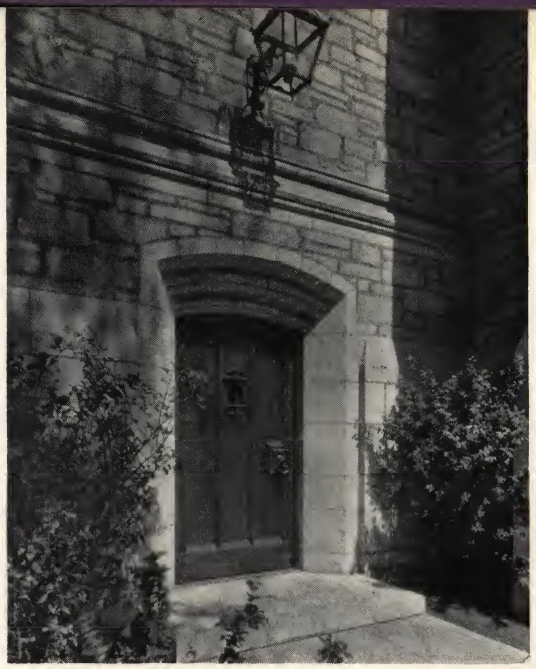


The CHEMCLAD door shown above illustrates CHEMCLAD's aluminum finish muntin bars and standard anodized aluminum glass molding and integral scuffplate.

REPRESENTATIVES

BOURNE MANUFACTURING COMPANY

ALABAMA	Mobile—Brabner Bldg. Spec. Inc., Box 366, Crichton Station
ARIZONA	Phoenix—Maurice B. Liddell, 906 W. Campus Dr.
ARKANSAS	Little Rock—Bush Caldwell Company, 123 Main Street
CALIFORNIA	Los Angeles—L. D. Reeder Co., 2900 Rowena Ave.
COLORADO	Denver 4—Builders' Service Bureau, Inc., 1221 Bannock Street
CONNECTICUT	Orange—Fox Steel Company, Boston Post Road
FLORIDA	Jacksonville—Aichel Steel & Supply Co., 2205 Edison Ave.
	Miami 38—Associated Elevator & Supply Co., 501 N. W. 54th Street
	St. Petersburg 33—Building Specialties, Inc., P. O. Box 10969
	Tallahassee—W. S. Lee Co., Mill Ave.
GEORGIA	Atlanta—LaRowe Associates, P. O. Box 260
ILLINOIS	Chicago 26—Brodt Building Specialties, 7001 North Clark Street
	Decatur—Hugh J. Baker & Company, 560 Citizens' Building
INDIANA	Hugh J. Baker & Company:
	Evansville—P. O. Box 505
	Fort Wayne—1028 South Barr Street
	Indianapolis 6—P. O. Box 892, 602 West McCarty Street
KANSAS	Topeka—Bldg. Spec. & Equip't. Co. P. O. Box 1014
	Wichita—Bldg. Spec. & Equip't. Co. P. O. Box 523
KENTUCKY	Lexington—Faulkner-Clark, 234 N. Upper St., P. O. Box 295
	Louisville—Faulkner-Clark, 9210 Earlham Dr.—Anchorage
LOUISIANA	New Orleans 25—McDougall-Parsons Co., 909 S. White St.
	Shreveport—Ideal Building Materials, 1730 Claiborne Avenue
MAINE	Auburn—The Bader Co., Inc., 431 Turner Street
MASSACHUSETTS	Needham—The Bader Co., Inc., 317 Dedham Avenue
MICHIGAN	Detroit 7—Bourne Manufacturing Co., 1573 East Larned St.
	Grand Rapids 4—Powell-Modernfold Co., 2213 Alpine Ave., N.W.
MINNESOTA	Minneapolis 8—W. L. Hall Company, 2186 Dupont Avenue South
MISSISSIPPI	Jackson—Thrasher Co., P. O. Box 4477
MISSOURI	Kansas City 9—The Houston Co., 3221 Troost Ave.—Room 201
	St. Louis—The Carlin Co., 117 Helfenstein St., Webster Groves 19
NEBRASKA	Omaha 2—Earl S. Lewis & Company, 708 Woodmen of the World Building
NEW HAMPSHIRE	Concord—The Bader Co., Inc., Route #8 Beck Road
NEW MEXICO	Albuquerque—S. W. Avery Co. Inc., Box 3154
NEW YORK	Albany 10—Everett S. Glines & Co., 372 Hudson Avenue
	Rochester 8—Carberry Building Specialties, 135 Spring Street
	Syracuse 5—B. R. Johnson & Son, Inc., 5900 South Salina St.
	Watertown—B. R. Johnson & Son, Inc., P. O. Box 312
NORTH CAROLINA	Charlotte—Delph Hdwe. & Specialty Co., 2109 Hutchison Ave.
	Raleigh—Delph Hdwe. & Specialty Co., 207 Bickette Blvd.
OHIO	Cincinnati 10—Fred M. Cole Corporation, 1726 Young Street
	Cleveland 9—R. E. Sage & Company, 1810 West Schaaf Road
	Columbus 15—Fred M. Cole Corporation, 545 North High Street
	Toledo—Adam Loos Company, 145 South Erie Street
OKLAHOMA	Oklahoma City—McAlister Materials, Inc., P. O. Box 224
PENNSYLVANIA	Harrisburg—Harry E. Mason Company, P. O. Box 852
	Philadelphia 3—Victor C. Smith, 1717 Sansom Street
	Pittsburgh 35—James Hood Miller, Inc., P. O. Box 10568
SOUTH CAROLINA	Columbia—Delph Hdwe. & Specialty Co., 502 Beltline Blvd.
TENNESSEE	Chattanooga—The Currin Company, 1208 Carter Street
	Knoxville 19—Conner Tate Inc., P. O. Box 10085
	Memphis—Overhead Door Company, 2080 South Bellevue
	Nashville 3—Englert Engineering Company, 805 North Sixth Street
TEXAS	Austin 3—L. B. Shefflett Company, 407 Lamar Boulevard
	Corpus Christi—W. G. Gower Company, 223 North Port Avenue
	Dallas 22—Sam A. Ellsberry Company, 3136 Routh Street
	Fort Worth—Sam A. Ellsberry Company, 2831 Crocket Street
	Houston—Corrugated Asbestos Cont., 6730 Peerless Ave.
	Lubbock—Duo Distributors, Inc., 116 Seventh Avenue
	San Antonio 5—Jno. A. Williamson Co., 1727 Broadway
UTAH	Salt Lake City 1—S. A. Roberts Co., 109 West Second South Street
VERMONT	Burlington—The Bader Co., Inc., 699 Pine Street
	Rutland—The Bader Co., Inc., P. O. Box 709
WEST VIRGINIA	Charleston—Ira F. Kuhn Company, 1724 East Washington Street
WISCONSIN	Architectural Bldg. Prod. Inc.
	Green Bay—443 Laura Street
	Madison 5—2416 Fiedler Lane
	Milwaukee—4609 W. Woolworth Ave.
ONTARIO (CANADA)	Windsor—G. G. McKeough, Ltd., 1534 Windsor Avenue



CROOKS DOORS 1886

74 years experience

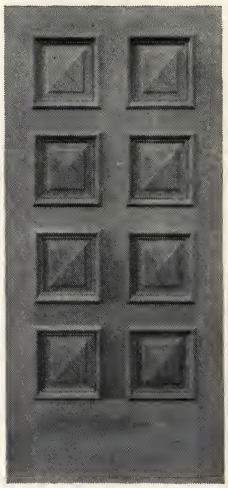
MANUFACTURERS OF:

Hardwood Veneered Doors
Flush Doors
Paneled Doors
Doors to Architects Detail
Auditorium Folding Doors
Sound Insulating Doors
Lead Center X-Ray Doors
Grounded Doors

GUARANTEE

W. D. CROOKS & SONS guarantee to replace in the white any Crooks door which proves defective due to material or workmanship.
We expect the usual care to protect doors from moisture absorption.

special doors to architects design



C-1040 Sp.

C-1044 Sp.

C-1052 Sp.

C-1053 Sp.

C-1043 Sp.

CONFIDENCE by the Architect is a reward W. D. Crooks & Sons has striven for throughout their 74 years manufacturing Veneered Doors. Over a half century ago Architects specified us by our trademark then used—"The Pioneer Veneered Door." The name came from the fact our founder, W. D. Crooks, was a Pioneer in the Veneered Door field.

It is with a feeling of pride that the second and third generations who carry on, see Crooks Doors still being specified by Architects' offices of the old "Pioneer" days, while gaining scores of Architect friends whose confidence has been won and held. Our doors have been specified and furnished on countless Public buildings—Government, Colleges, Schools, Hospitals, Churches, including many outstanding Monumental structures.

You will continue to find the consulting services of our organization offered to all Architects without obligation. We gladly extend our facilities.

description of veneers

SAWED VENEER—First preference for excellence in quality—being produced from lumber. It is firm in texture and natural in appearance. There is less chance of blistering, checking, and it much better withstands continuous hard usage. Because of its 1/8" to 1/4" thickness will take any finish, also can be sanded and refinished.

ROTARY CUT VENEER—Is produced in a continuous strip by rotating a log against the edge of a knife in a lathe after the log has been softened by a steaming process. This method enlarges the grain, giving an artificial appearance, while increasing the tendency for checking—thickness generally 1/28" to 1/16".

SLICED VENEER—Is made by moving a log, bolt or flitch against a large knife after the log has been processed by steaming to soften. It is more porous, enhancing the possibility of checking, and being only 1/20" and thinner has limitations in finishing and withstanding hard usage. It should be remembered veneer thicknesses given are before sanding.

A.I.A. File 19-E-1

CROOKS NON-WARPING FLUSH DOORS

Construction Specifications

Core—To be white pine, to contain not more than 5% moisture. Stile core to be built up of blocks not more than 1⅜ in. by thickness of core, rails and panels to be built up of blocks or pieces, glued with highest quality water-resistant glue under heavy pressure.

Frame—Core of stiles, rails and panels to be **framed** to make five cross panel flush surface. All members well glued and door assembled under heavy pressure.

Core Door—Core door to be sanded smooth, ready for face veneer.

Face Veneer—Face veneer to be **sawed** (not rotary cut) standard ¼ in. thick, not less than $\frac{8}{16}$ in. when sanded, and to be matched book-leaf. All joints in face veneer to be parallel with edges of door and well glued. Vertical edges same wood as face veneer and ¾ in. thick. (Note: 1⅜-in. or thinner doors standard ⅛-in. **sawed** veneer before sanding.)

Gluing—Face veneer to be glued to core with highest quality water-resistant glue under heavy hydraulic pressure and held in retainers until glue is set.

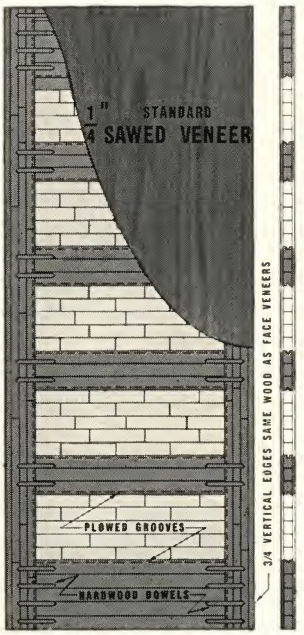
Redrying—Doors to be redried after veneering to remove all moisture contained in glue.

Sanding—Face of door to be sanded in such a manner that when varnish is applied, machine or sander marks will not show through finish.

Flush Doors to be Crooks Non-warping Construction as manufactured by **W. D. CROOKS & SONS, of Williamsport, Pa.**

Interior—Standard sizes of Flush Doors should be at least 1¾ in. thick.

Exterior—Sizes 3'0" and wider and over 7'0" high we recommend be 2¼ in. thick.



FIVE CROSS PANEL FRAMED-UP CORE

Advantages

Built-up Solid FRAMED Core Provides—more strength and rigidity, less warping, permanent good fitting of door and installation of lights, louvres, and hardware. Lessens sound passage and greatly increases fire-resistance.

Standard ¼" SAWED Veneers Eliminates—sunken faces, blistering, checking, and much better withstands hard usage. Plus the everlasting charm and natural appearance of matched sawed veneers.

Lead Center X-Ray (Flush) Door

It is manufactured similar to Crooks Non-warping Flush Door excepting two entirely separate cross banded core doors are made and a single sheet of lead covering the full inner surface is placed between these sections, securing them together with bolts, washers and nuts. Bolts are countersunk and covered with lead—all concealed by ⅛-in. **sawed** face veneer. The thickness of finished door should be not less than 2 in. Full specifications with detail mailed on request.

Sound Insulating (Flush) Door

Built 2½ in. thick to give flush appearance and veneered in any wood. A superior laminated construction using the best sound deadening material in the hollow section, resulting in a high degree of sound insulation. Detail showing section through door with specifications sent to any architect on request.

Types and details—Crooks Flush Doors

C-680

C-627

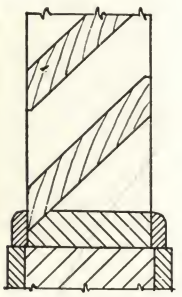
C-663

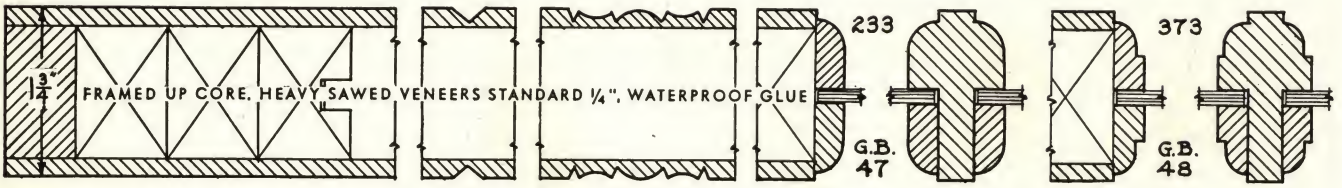
C-675

C-690

C-694

C-693


Wood Louvre
C-627



(ALL SECTIONS ARE ONE-HALF FULL SIZE)

V AND MOULDED CUT FACES

SINGLE AND DIVIDED LIGHTS

C-622

C-620

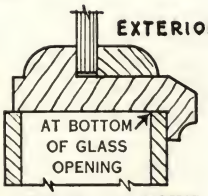
C-632

C-633

C-683

C-611

C-699



CROOKS LIP MOULD

Furnished extra on Exterior Flush Doors with glass opening if specified by Architect—keeps water from penetrating the core and recommended where door is exposed to weather. Regular construction includes plain glass beads two sides as sections 233 and 373.

CROOKS PANEL DOORS

Construction Specifications

To apply on Heavy Duty Interior Doors—for all public buildings and residences where quality and not stock doors are required. Standard sizes should be at least 1¾ in. thick.

Kiln Drying—Core and Veneers dried to a moisture content not to exceed 5%.

Core—To be White Pine and to be built up of strips with square joints. Stile Core not over 1⅜ in. by thickness of core. Rail and Mullion Core pieces full length of each member.

Face Veneers—Sawed veneers are always preferable in all woods to rotary cut.

1st Preference—Sawed to finish $\frac{3}{16}$ in. when sanded on Stiles and Rails, ⅛ in. before sanding on panels, all joints matched book-leaf.
(Note: 1⅜-in. or thinner doors standard ⅛-in. Sawed veneer before sanding on Stiles and Rails.)

2nd Preference—Sawed ⅛ in. thick before sanding on Stiles, Rails, and Panels. All Panels Joints matched book-leaf.

Panels—Whether flat or raised to be laminated 3 or 5 ply. If flat, not less than ⅜ in. thick for 1¾ in. doors and $\frac{5}{16}$ in. thick for 1⅜ in. doors. All laminated panels shall go in plow. (Not put in on fillet).

Framing—Shall be blind mortise and tenon. Tenons on rails to be not less than 2½ in. long, and on mullions 1½ in. long, mortised into rails.

Assembling—In assembling doors apply glue to full surface of both mortise and tenon. Door to be kept under pressure until glue is set.

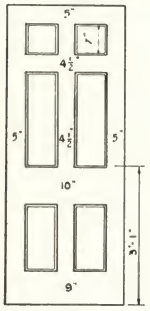
The Finished Door—Must have tight joints. Mouldings must be sharp and clean cut. Faces to be free of all machine marks which will show through finish.

All wood doors to be manufactured by W. D. CROOKS & SONS, Williamsport, Pa., or equal to be approved in writing by architect.

Types and details—Crooks Panel Doors—interior designs

C-387

C-389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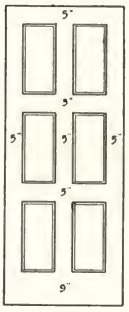
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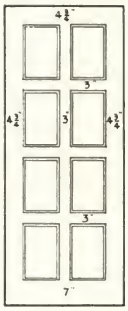
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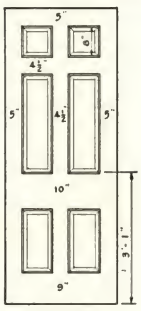
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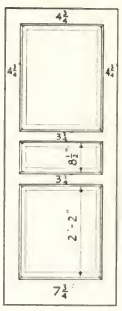
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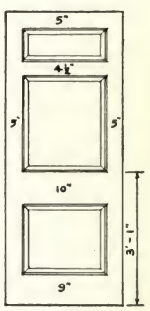
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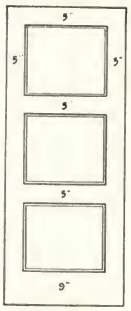
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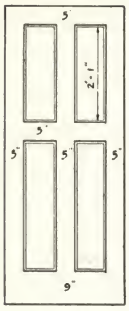
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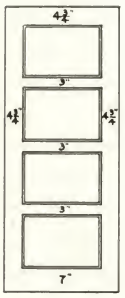
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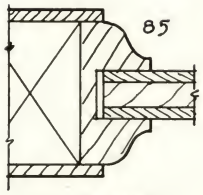
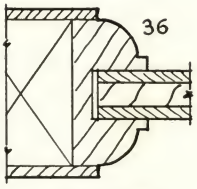
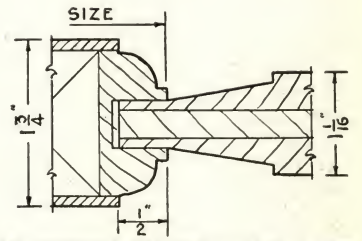


½-in. Reverse O.G.



½-in. Ovolo

All sections with ⅛-in. Veneers



ALL SECTIONS ARE ONE-HALF FULL SIZE

Early American Flush Surface Panel Designs—interior

SPECIFICATIONS—Doors shall be Crooks Flush Surface Panel Design. White Pine core and Face veneers dried to 5% moisture content. Veneered construction throughout using SAWED veneers [insert specie(s)] finishing $\frac{3}{16}$" when sanded, and ¾" vertical edges of same wood as face veneers. Built-up Stiles, Rails (or Mullions) and Panels 3 Ply, with shallow "V" around 4 edges of panels. All members same thickness and FRAMED doweled construction 3 (or 4) Flush Panel type as detailed. Doors with openings—single, or divided lights, or louver, shall have stock bars and beads. (If) Wood louvers stock design. Faces of doors sanded to remove machine or sander marks.

C-740

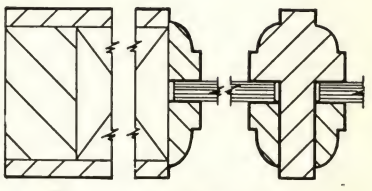
C-741

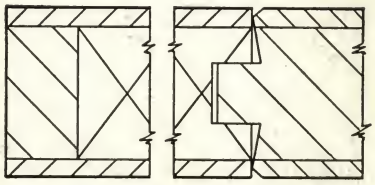
C-746

C-730

C-731

C-732


Single and Divided Lights

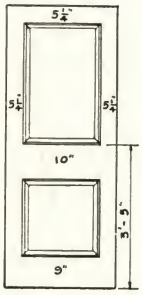

At Panel

SEE PAGE 4 →

EXTERIOR AND INTERIOR DESIGNS
and miscellaneous details

Note: FOR EXTERIOR DOORS specify standard ¼-in. SAWED veneers on stiles and rails. Panels laminated 3 ply with SAWED face veneers (flat panels ⅛-in. thick SAWED veneer, raised panels, sufficient thickness to provide for profile of raise.) Highest quality waterproof resin glue.

Exterior Doors should have coverage, but when directly exposed to weather, Solid Stiles and Rails or Veneered Construction as above is suitable. African Mahogany is a good substitute (for either Solid or Veneered) in place of Genuine White Pine in very short supply.



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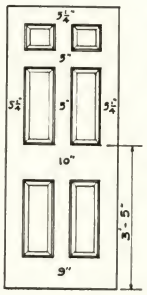

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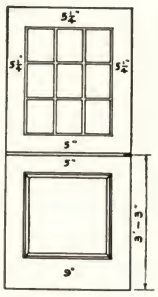

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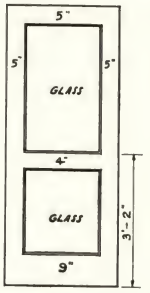

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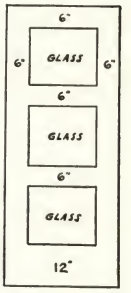

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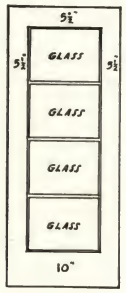

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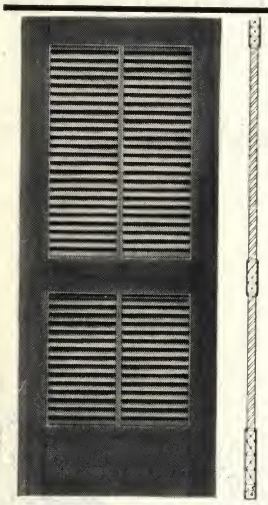
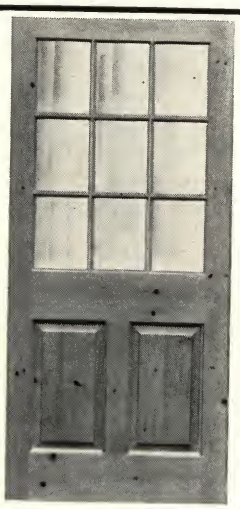

C-287
VENEERED BIRCH

C-700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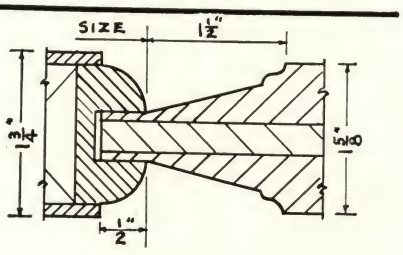
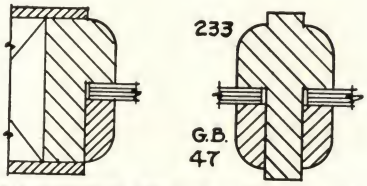
KNOTTY WHITE PINE—IDAHO

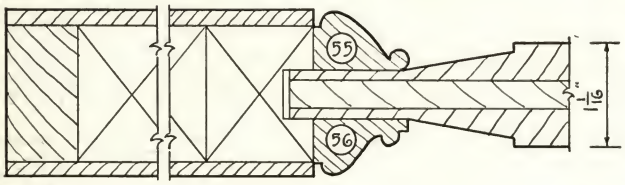




ALL SECTIONS ARE ONE-HALF FULL SIZE

Any of the suggested Panel Sections below can be furnished in the designs shown on this and previous page in place of the Typical Flat and Raised Panel Sections. Specify Section Number and Mould preferred. (Sections show Standard ¼-in. Veneers, can be ⅛-in. if interior doors.)

No. 1



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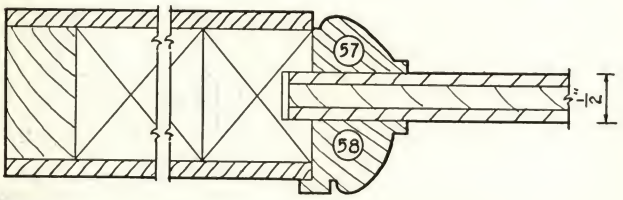

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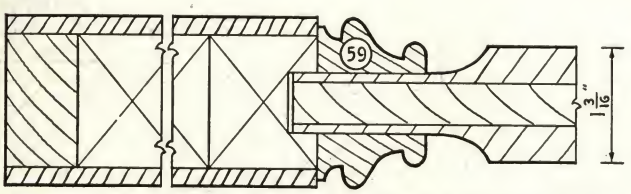
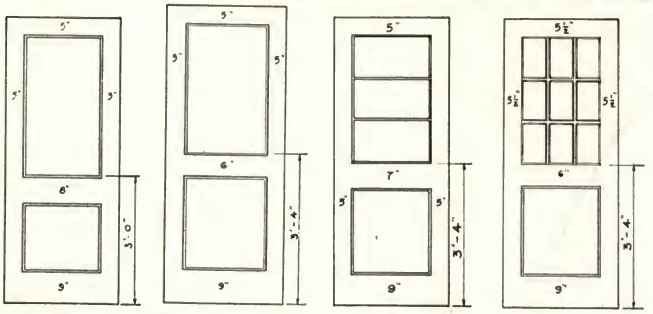
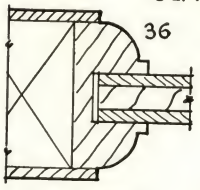
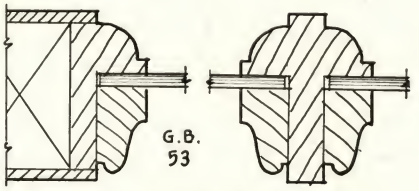


All Panels, raised or flat, are laminated to eliminate swelling and shrinking, (Using water-resistant glue) producing a door far superior to one having solid panels.

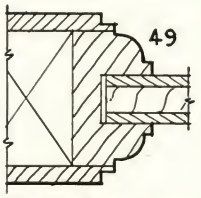




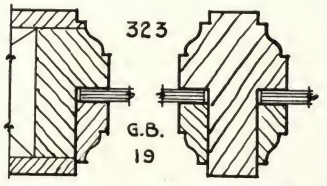
½-in. Ovolo



Single and Divided Lights



Double Quirk Ovolo
Std. ¼" Sawed Veneer



EXTERIOR GLASS DOOR STICKING AND BAR

W. D. CROOKS & SONS • WILLIAMSPORT, PA.

A.I.A. File No. 16-E-1

16c
Cu

CURTIS®

Flush Doors

- Interior
- Exterior

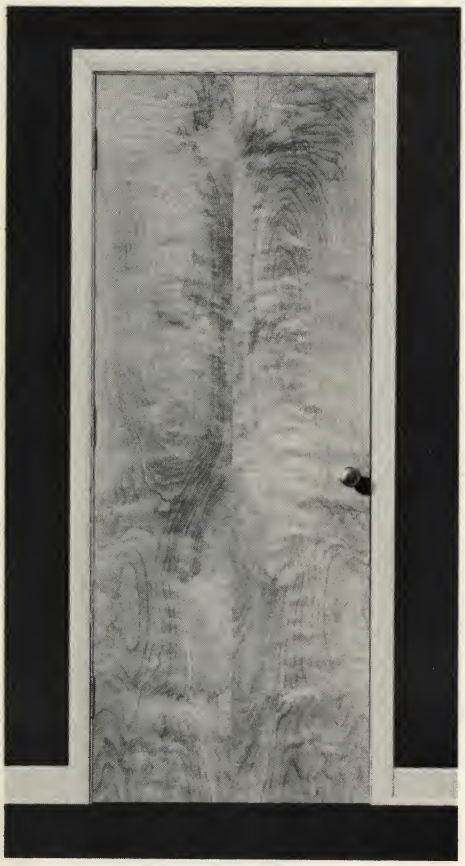
Individuality and Quality in Windows, Doors and Cabinets

CURTIS COMPANIES INCORPORATED CLINTON, IOWA

SECTION NUMBER 3

AIA FILE 16-C-1

Why It Pays To Insist On Curtis Flush Doors . . .



- **Fewer call backs and less maintenance costs due to warping or twisting of doors, peeling or splitting of veneers.**
- **Natural beauty door faces of matched wood grain.**
- **Wide selection of designs for individuality.**
- **Curtis quality and reputation backs every product with a written guarantee.**

Natural wood beauty . . .

Nature's richest wood grain patterns in carefully selected veneers of birch, maple, red oak, lauan and other fine woods. Each Curtis flush door has beauty of finest furniture.

Lifetime service . . .

Curtis flush doors are all wood. Built with "locked in" strength needed to give a lifetime of service with no peeling of veneers or warping.

Guaranteed quality . . .

Curtis New Londoner and American flush doors are backed by the most complete door guarantee available today. The Curtis Plyoneer, Golden Maple and Lauan flush doors are covered by the Curtis standard guarantee as set up by National Woodwork Manufacturers Association. These guarantees are backed by the Curtis reputation, established over 93 years, for superior workmanship and dependable service.

Special manufacture . . .

(For New Londoner and American doors only)
Special rotary cut and sliced veneers on order. Glass openings made to specifications. All popular sizes available for both residential and institutional uses. Individually wrapped. Matching edge strips. Louvre cut-outs.

SSS SUPER SATIN SURFACE

*Satin Surfaces, Inc., is the Licensing Agent for the "Super Satin Surface" and "Triple S" or "SSS" trademarks which are used on products having a Supersealed or Super Microsealed surface that satisfies the quality standards of the trademark owner.

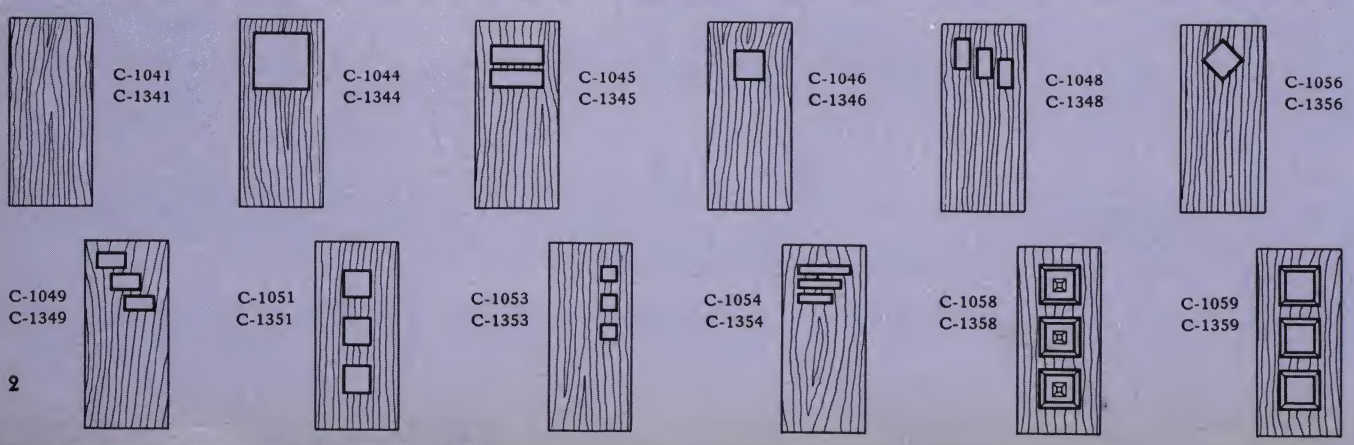
PLUS Special pre-sealing . . .

New eye-appealing beauty, plus economy in finishing, available with Super Satin Surface. This Super Microseal Process is a combination of burnishing and resin additives that actually changes the surface composition of the wood to a smooth, hard-pressed surface.

Super Satin Surface reduces finishing costs 80%. Interior doors need only addition of single coat of wax, lacquer or stain for complete finishing job.
Super Satin Surface enhances natural beauty of wood and is available on all Curtis Flush Doors.

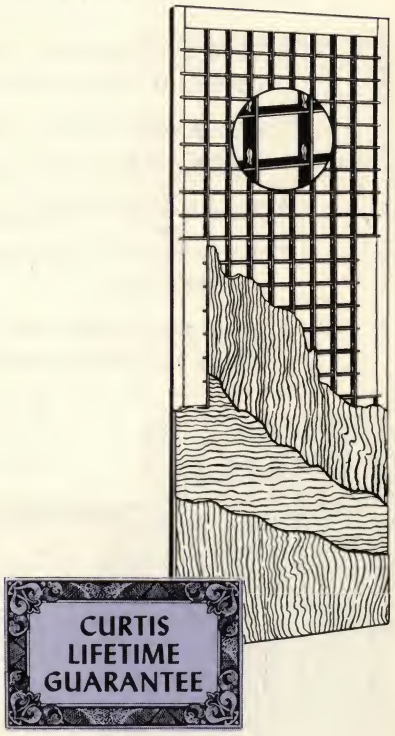
Stock Exterior Door Designs

C-1040 Series – solid core, see page 6. C-1340 Series – hollow-core, see page 3.



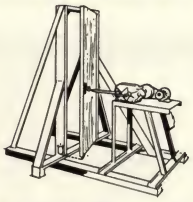
Selected For Beauty . . . Built For A Lifetime . . .

- **All face veneers are hand-matched to highlight the beauty of color and texture that nature creates in fine wood.**
- **Designed for true balance to prevent twisting and warping.**
- **Lifetime service of all-wood construction.**
- **All-wood grid core interlocked into stiles for "solid" lightweight strength.**
- **Specially bonded 3-ply veneer door faces securely glued to frame and core under pressure to form one strong 7-ply unit.**
- **Most complete guarantee – New Londoner Lifetime Guarantee covers replacing, refinishing and rehanging if door is properly finished, installed and cared for.**

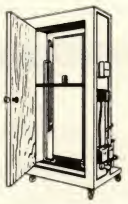


Torture tested for proof!

35-pound weight banged against a Curtis New Londoner hollow-core door 38 times per minute. After 529,879 bangs, door was good as new.



Slammed 72 times per minute – 642,934 slams – a lifetime of door slamming. The New Londoner door came through this test unscarred – unmarred.



Subjected to 166 cycles of temperatures ranging from 110° to 0° F., a Curtis New Londoner door showed no peeling of face veneers or changes in dimensional stability.

Construction Features

Rails . . . Clear pine 2¾″ wide, interior doors — 3¾″ wide, exterior doors.

Stiles . . . Clear pine slotted ½″ to hold horizontal strips of interlocking grid. 1¼″ wide, interior doors — 2″ wide, exterior doors.

Core . . . All-wood 3″ grid is interlocked into the frame to form one completely joined unit. No "floating" parts. Interlocked grid strips provide great strength, light weight, uniform support to door faces and eliminate "show through" of core.

Lock Blocks . . . Pine lock blocks each side. Total lock area, each side including stiles 4⅛″ x 21″ interior doors — 4⅞″ x 21″ exterior doors.

3-Ply Veneers . . . Bonded to each side of core under pressure. Minimum thickness of each 3-ply face ⅛″ before sanding.

Bonding . . . New Londoner interior hollow-core doors bonding meets or exceeds tests described in Par. 3.3 CS 171-58 for water resistant bonds. Tests for fully waterproof bonds described in Par. 3.3 CS 171-58 are met or exceeded in exterior New Londoner hollow-core doors.

Wrapping . . . Specify wrapped with heavy paper to protect finished surfaces against soiling, scratching and moisture staining during shipment and storage. Wrapping eliminates on-the-job cleaning costs.

Door sizes . . . Interior — all sizes available up to 4′-0″ x 8′-0″ x 1¾″. Exterior — all sizes available up to 4′-0″ x 8′-0″ x 1¾″.

Designs . . . C-1300 Series – exterior (see page 2). C-3541 – interior.

Stock . . . Rotary cut veneers. Birch, maple, oak.

Optional Features

Veneers— Special rotary cut and sliced veneers available on order.

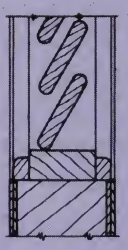
Glass opening designs —. made to specifications.

All popular sizes and thicknesses — available for both residential and institutional buildings.

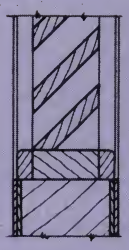
Individually wrapped.

Matching edge strips.

Louvre cut-outs as shown below.

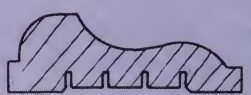


Rounded Slat

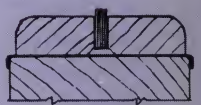


Beveled Slat

Chevron Slat



C-5985 for doors
C-1058 and C-1358
C-1059 and C-1359

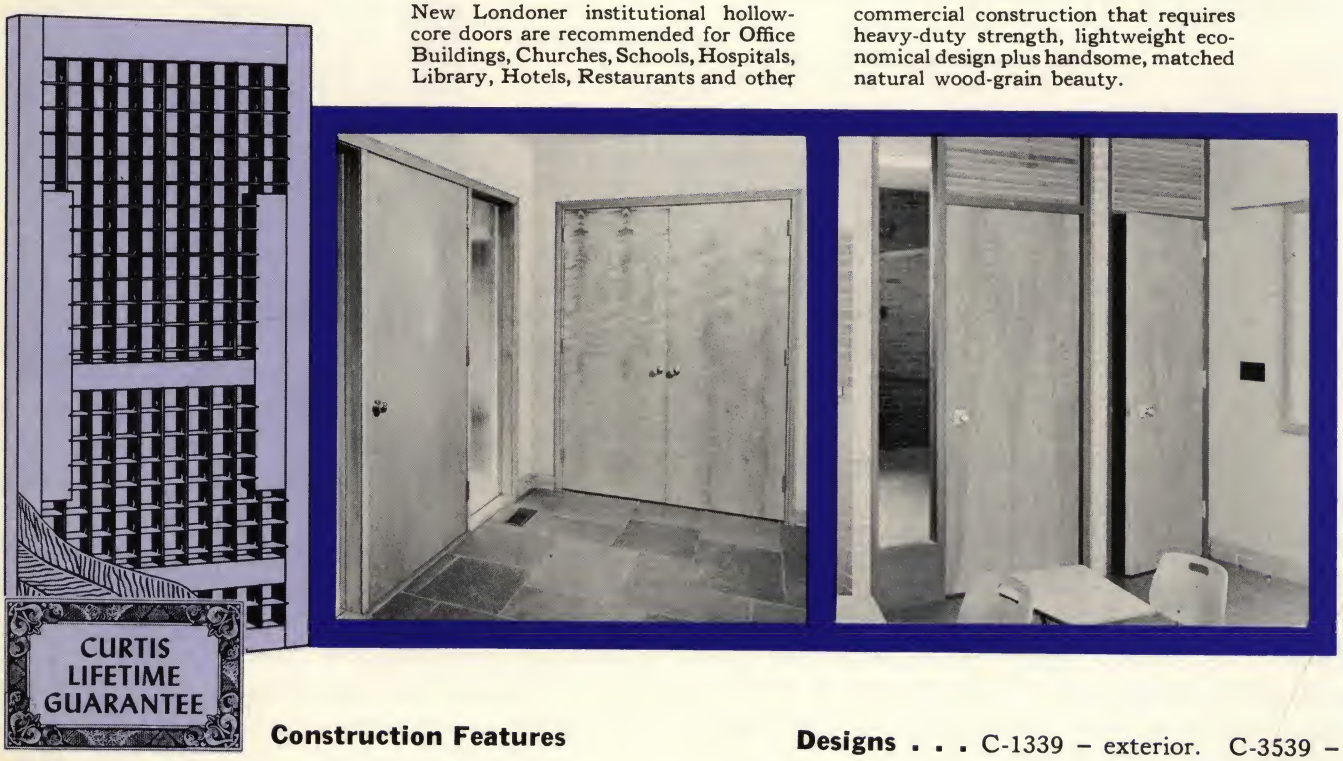


MetaLane flashing installed on all factory glazed doors

Extra Heavy-Duty Construction, Lightweight Design . . . At 1/4 Less The Cost Of Average Solid-Core Doors

- **Grid core securely interlocked into stiles of frame, for lightweight strength. All-wood core and frame for long life.**
- **Extra wide stiles, rails and lock blocks. Addition of crash rail and kick plate.**
- **Designed to withstand heavy duty use while giving lifetime service.**
- **New Londoner beauty of carefully selected and matched wood-grain veneers.**
- **3-ply veneers securely bonded to interlocked grid core and frame for extra strong 7-ply construction.**
- **Guaranteed by same complete lifetime guarantee that covers New Londoner residential doors — rehang, refinish, replace!**

New Londoner institutional hollow-core doors are recommended for Office Buildings, Churches, Schools, Hospitals, Library, Hotels, Restaurants and other commercial construction that requires heavy-duty strength, lightweight economical design plus handsome, matched natural wood-grain beauty.



CURTIS LIFETIME GUARANTEE

Construction Features

Stiles and rails . . .
3″ wide stiles and bottom rails. 5″ wide top rail. 3¼″ wide crash and kick plate cross rails.

Core . . .
Precision milled grid core interlocked into door frame. 3″ grid offers lightweight strength, uniform support to door faces and eliminates "show through" of core.

Lock blocks . . .
39″ x 3¾″ giving 6¾″ wide lock surface each side including stiles.

3-Plies of veneers . . .
Bonded to each other and to each side of core under pressure. Minimum thickness of veneer panel ⅛″ before sanding.

Bonding . . .
Meets or exceeds tests in Par. 3.3 CS 171-58 for water resistant (interior) and waterproof (exterior) bonding.

Designs . . . C-1339 – exterior. C-3539 – interior.

Door sizes . . . Interior and exterior. All sizes available up to 4′-0″ x 8′-0″ x 1¾″.

Stock veneers . . . Birch, maple, oak. Other wood veneers available upon request.

Optional Features

Veneers– Special rotary cut and sliced veneers available on order.

Glass opening designs – made to specifications.

All popular sizes and thicknesses – available for both residential and institutional buildings.

Individually wrapped.

Matching edge strips.

Louvre cut-outs as shown on page 3.

Plyoneer Hollow-Core Flush Doors . . .

Your choice of two popular wood-grains — birch or oak — in Plyoneer quality.

The distinctive beauty of matched natural wood-grains.

Design . . . C-3542.
Door sizes . . . Interior only – all sizes available up to 3′-0″ x 6′-8″ x 1⅜″.
Stock . . . Rotary cut veneers of natural birch or oak faces.

Golden Maple Hollow-Core Flush Doors . . .

Uniform, light-colored hard maple faces in premium quality veneers.

A furniture quality door styled for today's market.

Design . . . C-3546.
Door sizes . . . Interior only – all sizes available up to 4′-0″ x 8′-0″ x 1⅜″.
Stock . . . Rotary cut veneers of New Londoner quality hard maple.

Curtis Lauan Hollow-Core Flush Doors . . .

Curtis quality throughout in selected lauan flush doors.

Design . . . C-3543.
Door sizes . . . Interior only – all sizes available up to 3′-0″ x 6′-8″ x 1⅜″.
Stock . . . Rotary cut veneers of imported lauan faces.

Construction Features
For Plyoneer, Golden Maple and Lauan Flush Doors

- All-wood construction, including faces, frames and cores.
- Balanced construction, controlled moisture content and balanced veneers prevent warping and twisting.
- Lifetime strength of 7-ply construction. 3-ply veneer faces bonded to core.
- Natural beauty of matched wood-grains for pleasing effect.

Stiles and rails . . .
1⅜₁₆″ stiles and 2⅝″ rails of soft wood.

Core . . .
All-wood ladder core firmly anchored into stiles of frame.

Greater lock block area . . .
Including stiles total lock area in each side of 4⅛″ x 21″.

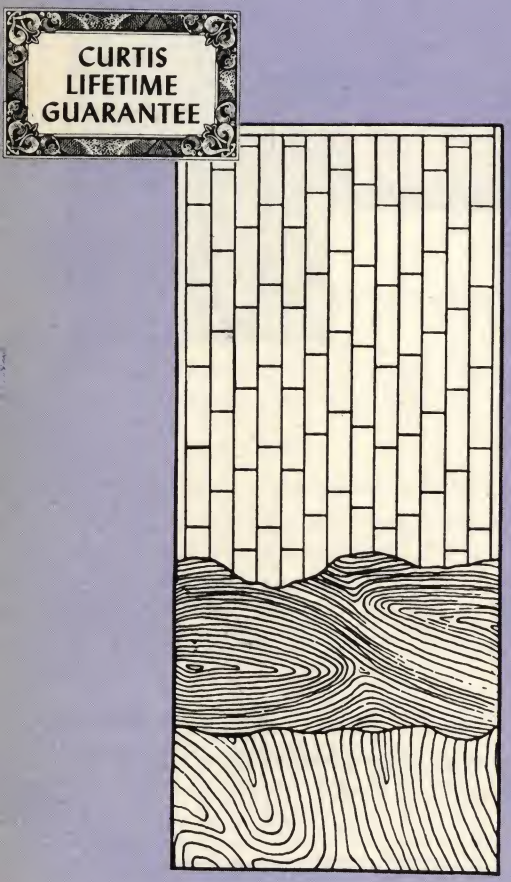
3-Plies of veneers . . .
Bonded to each other and to core under pressure.

Bonding . . .
Water resistant bonding, meets tests of Type II under 3.3 CS 171-58 Commercial Door Standards.

Guaranteed . . .
By Curtis as set forth in the Standard Door Guarantee of the National Woodwork Manufacturers Association.

Guaranteed Highest Quality, Most Durable Curtis Door With "Beauty Matched" Face Veneers

- **Backed by most complete door guarantee offered by any door manufacturer. Curtis American lifetime guarantee covers all replacing, refinishing and rehanging costs if the door is properly finished, installed and cared for.**
- **Selected wood-grain of face veneers carefully matched for greatest beauty with harmonizing edge strips. Selected hardwood crossband and face veneers are bonded together with core using resin by hot plate process. 5-ply construction for lifetime service.**
- **Solid-core of staved softwood blocks bonded together securely with glue under pressure to form solid all-wood core for greatest strength and durability.**
- **Door faces bonded to solid-core over 100% of both surfaces to prevent bubbles or blisters.**
- **Meets tests for Type I Fully Waterproof under Par. 3.3.2 CS 171-58 for hardwood plywood.**
- **Longlife construction meets all tests described in Par. 4.1.1 and 4.1.4 of CS 171-58.**



Construction Features

The two long edges of core are bonded with $\frac{7}{8}$″ hardwood strips before trimming. Top and bottom edges bonded with $1\frac{15}{16}$″ pine edge strip. $1\frac{1}{2}$″ can be trimmed off top and bottom of door without exposing core. $\frac{9}{16}$″ hardwood top and bottom edge strips bonded to $1\frac{3}{8}$″ pine inner rails is available if desired.

Optional Features

Veneers— Special rotary cut and sliced veneers available on order.

Glass opening designs — made to specifications.

Matching edge strips.

Popular sizes and thicknesses — available for both residential and institutional buildings.

Individually wrapped.

Louvre cut-outs as shown on page 3 under New Londoner hollow-core doors.

Designs . . .

C-1040 Series – interior and exterior. (See page 2.)

Door sizes . . .

Interior and exterior – all sizes available up to 4′-0″ x 8′-0″ x $1\frac{3}{4}$″.

Stock . . .

Rotary cut veneers. Birch, maple, oak.

Distinctive Styling For Decorator Touch In Storage Areas And Passageways

- **Smart design – warmth and beauty of wood.**
- **Full width access to storage areas.**
- **Fingertip closing action.**
- **No exposed hardware. No bottom track.**
- **Doors easily adjusted, won't slip off track.**
- **Ideal for passage sets, closets, room dividers.**

CURTIS LIFETIME GUARANTEE

Louvre Folding Doors

Chevron louvres permits circulation of air while giving privacy. Ideal for bedrooms. Made of select pine for long service. Chevron slats make painting easy.

Flush Folding Doors

New Londoner quality matched birch, maple or oak.
Balanced construction to prevent warping and twisting.
All wood interlocked grid core.
Curtis lifetime New Londoner guarantee.

Construction Features

C-3433 Louvre Door Units

Slats . . . Chevron type with select pine.

Doors . . . 1 1/16" thick (8'-0" x 6'-8" units have 1 3/8" thick doors), stiles 1 29/64", top rail 3 1/4", cross rail 3 7/8", bottom rail 8 5/8". Made of select pine.

C-3435 Flush Door Units

Face veneers . . . 3-ply premium birch, maple, oak.

Doors . . . 1 3/8" thick. 7-ply construction.

Core . . . Pine, 3" interlocked grid core.

Stiles and Rails . . . New Londoner specifications.

Bonding . . . Meets or exceeds tests in Par. 3.3 of CS 171-58 for water resistant bonds.

Hardware for C-3433 and C-3435

Hinges – Polished brass, factory applied.
Track – Heavy extruded aluminum.
Aligners – Concealed nylon and metal with flex action.
Pivots – Nylon, self-lubricating for smooth operation.
Tension springs – Snubbing action – Factory installed.
Adjustable – Easy, four-way adjustment.
Pulls – Pressed steel with brushed brass finish.

Carton packed as complete unit — doors, top track, hinges, hangers, screws and pulls.

Sizes . . .

Size	Finished Opening Size	Number Doors	C-3433 Louvre Doors	C-3435 Flush Doors	
				Birch Maple	Oak
2-0x6-8	2-0x6- 8 1/2	2	★	★	◆
2-6x6-8	2-6x6- 8 1/2	2	★	★	◆
3-0x6-8	3-0x6- 8 1/2	2	★	★	◆
4-0x6-8	4-0x6- 8 1/2	4	★	★	★
5-0x6-8	5-0x6- 8 1/2	4	★	★	★
6-0x6-8	6-0x6- 8 1/2	4	★	★	★
8-0x6-8	8-0x6- 8 1/2	4	★	◆	◆
2-0x8-0	2-0x7-10 5/8	2	◆	◆	◆
2-6x8-0	2-6x7-10 5/8	2	◆	◆	◆
3-0x8-0	3-0x7-10 5/8	2	◆	◆	◆
4-0x8-0	4-0x7-10 5/8	4	★	◆	◆
5-0x8-0	5-0x7-10 5/8	4	★	◆	◆
6-0x8-0	6-0x7-10 5/8	4	★	◆	◆

Items marked (★) are stock sizes.
Items marked (◆) are made on order only.

SPECIFICATIONS

Curtis New Londoner Hollow-Core Flush Doors

Interior . . .

All interior doors shall be Curtis New Londoner hollow-core flush doors as manufactured by Curtis Companies Incorporated, New London, Wis. Stiles not less than 1¼" in width, top and bottom rails not less than 2¾" in width. Interlocking strips to form a 3" x 3" mesh. Lock blocks to be placed on both sides of door and to be 21" in length and, with stiles, to give a 4⅛" lock surface. Three plies of veneer to be applied to each side of core under pressure. All bonds to meet tests described in paragraph 3.3 of CS 171-58 for water resistant bonds. Minimum thickness of each 3-ply panel to be not less than ⅛" before sanding.

Exterior . . .

All exterior doors shall be Curtis New Londoner hollow-core flush doors as manufactured by Curtis Companies Incorporated, New London, Wis. Same as interior except stiles are 2" wide and top and bottom rails are 3¾" wide (⅝" hardwood edges if specified). All bonds to meet the tests described in paragraph 3.3 of CS 171-58 for waterproof bonds. Special light openings, wood louvres, routings, preparation for mirrors to be specified and prepared at the factory.

Curtis New Londoner Institutional Flush Doors

C-3539 – Interior – All doors shall be Curtis institutional doors as manufactured by Curtis Companies Incorporated, New London, Wis. Stiles not less than 3" in width, Top rails not less than 5" in width. Bottom rail not less than 3" in width. Crash and kick plate cross rails not less than 3¼" in width. Interlocking strips to form 3" x 3" mesh. Lock blocks to be placed equidistant from each end on both sides of door and to be not less than 38" in length and 3¾" in width – providing 6¾" of lock surface. Doors to be 7-ply with 3-ply face panels, applied to each side of core under pressure. All bonds to meet test described in paragraph 3.3 of CS 171-58 for water-resistant bonds. Minimum thickness of each 3-ply panel to be not less than ⅛" before sanding. Minimum thickness of each door to be not less than 1¾" before sanding.

C-1339 – Exterior – Same as above except all bonds to meet test described in paragraph 3.3 CS 171-58 for fully waterproof bonds.

Curtis Plyoneer, Golden Maple, or Lauan Hollow-Core Flush Doors

All interior doors shall be Curtis Plyoneer (insert Golden Maple or Lauan when applicable) hollow-core birch (insert oak, maple or Lauan when applicable) flush doors as manufactured by Curtis Companies Incorporated, New London, Wis. Stiles not less than 1³⁄₁₆" in width, top and bottom rails not less than 2⅝" in width. Cores shall be ladder type, core strips to be made from wood and uniformly spaced 3" apart.

Lock blocks to be placed on both sides of door and to be 21" in length and, with stiles, to give a 4⅛" lock surface. Three plies of veneer to be applied to each side of core under pressure. All bonds to meet tests described in paragraph 3.3 CS 171-58 for water resistant bonds. Minimum thickness of each 3-ply panel to be not less than ⅛" before sanding.

Curtis American Solid-Core Flush Doors

All interior and exterior doors shall be Curtis American solid core flush doors as manufactured by Curtis Companies Incorporated, New London, Wis. The core shall be constructed of staved softwood core blocks with ⅞" hardwood side edge strips before trimming (may be same species as face veneers, if specified). Two ends banded with 1¹⁵⁄₁₆" pine edge strips to provide for trimming without exposing the core. (⁹⁄₁₆" hardwood top and bottom edge strips bonded to 1⅜" pine inner rails available, if desired.) Crossbands shall be any suitable hardwood not less than 1⁄16" thick. Face veneers to be standard rotary cut 1/24" or standard sliced cut 1/28". All face veneers to be tapeless spliced and stroke sanded. Plies to be bonded with resin by hot plate process to meet tests for Type I (fully waterproof) under CS 171-58 for hardwood plywood.

The availability of items in this catalog section are determined by Curtis Factory Stock List.

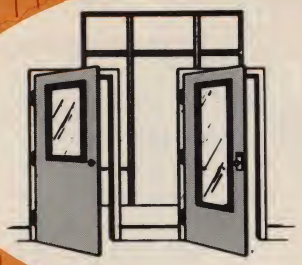
Other architecturally designed products made by Curtis . . .

- **Silentite double-hung, casement, convertible and basement windows.**
- **Style-Trend double-hung and sliding windows.**
- **Curtis Pine (panelled, louvred or Dutch) doors for exterior and interior use.**
- **Curtis door frames and entrance frames.**
- **Mitertite trim, door and window blinds, and moldings.**
- **Curtis storm and screen goods.**

For further information, write . . .

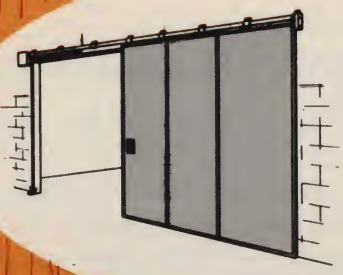
CURTIS COMPANIES INCORPORATED/CLINTON, IOWA

D-H "The Complete Door Line"



PyroDor

INTEGRAL METAL DOOR and FRAME UNITS
(See Sweet's Architectural File 16b/Du)

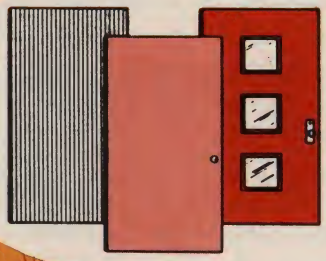


PyroDor®

SLIDING
UL Class "A"
Flush Design
(See Sweet's Architectural File 16b/Dus)

D-H DécorDor

WOOD DOORS



ALUMINUM and VINYL-ON-STEEL FLUSH DOORS
(See Sweet's Architectural File 16a/Dus)

FLUSH DESIGN

MINERAL CORE

CHOICE OF VENEERS

Available with Underwriters' Labels

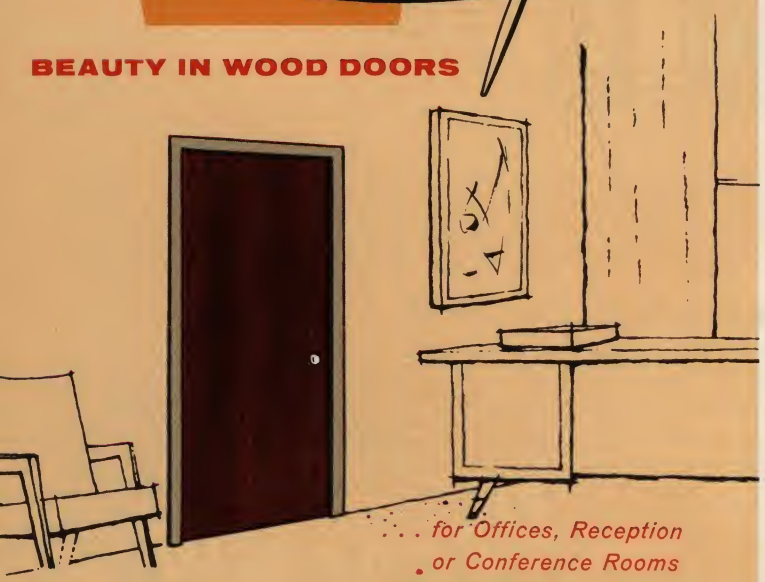
A. I. A. FILE NO. 19E-1

A. I. A. FILE NO. 19E-1

DUSING and HUNT, INC., LE ROY, N. Y.

D&H DécorDor

BEAUTY IN WOOD DOORS



. . . for Offices, Reception or Conference Rooms

. . . for Schools, Study Rooms, Libraries

. . . for Restaurants, Lounges, Meeting Rooms

"Lifetime" MINERAL CORE

- *Guaranteed for Life*
- *Wide Selection of Wood Veneers*
- *Inorganic Incombustible Mineral Core*
- *No Warping, Twisting, Swelling, Shrinking*
- *Prefit for Opening Size*
- *Prepared for Standard Hardware*
- *Prefinished*
- *Available in Standard Wood Door Sizes*

Qualities never before available in wood face doors, are now an integral part of all DécorDor WOOD DOORS. Most important of all is the introduction of the calcium silicate mineral core used in D & H PyroDor . . . proved in thousands of buildings over the years.

DécorDors arrive on the job ready to hang — and prefinished . . . a savings of costly "on-the-job" operations which can be performed more economically and efficiently at the factory. Why settle for less than the best when you can afford DécorDor?

CHOICE OF VENEERS

Standard veneers are Birch, Korina, Mahogany, Rift Oak and Walnut. Other fine hardwood faces are available on special order.

SIZES — Available in all standard wood door sizes.

STANDARD DOOR TYPES — "DW" and "DWL"

Type 30 Flush	Type 31 Vision Light	Type 34 Upper Glass Light	Type 35 Two Upper Glass Lights	Type 35A Three Upper Glass Lights

FRAMES — *D&H Standard Pressed Steel recommended for wood doors. See pages 8-9, D&H General Catalog No. DHS-2060.*

PREFINISHED WOOD DOORS

Factory finished DécorDor doors assure the highest quality at the lowest possible cost. These ever-smooth finishes cannot be duplicated in the field with real consistency.

Finishes available —

- *Conversion Varnish*
- *Lacquer*

Ask your Dusing and Hunt distributor for samples and details.

© 1959 - Dusing and Hunt, Inc.

MODEL DWL

DécorDor "Lifetime" WOOD FIRE DOOR

DécorDor Model "DWL" has been tested and rated by Underwriters' Laboratories, Inc. for one hour (Class B) with a maximum temperature rise in 30 minutes of 250°F, maximum glass area of 100 sq. in. Also available for ¾ hour (Class C) maximum glass area 1200 sq. in. DécorDor "DWL" provides much greater protection of life and property . . . with the beauty of wood.

A – SOLID MINERAL CORE – Every DécorDor has incorporated into its basic construction a hydrous, calcium silicate core with asbestos binder . . . solid throughout. Yet, it's light in weight, remarkable in insulating properties, strength and completely incombustible.

B – HARDWOOD CROSS BANDING – Hardwood 1/16" thick veneer is bonded to mineral core with waterproof phenolic resin adhesive.

C – HARDWOOD VENEER FACE – Beautiful finished grain . . . kiln dried hardwood.

D – FIREPROOF WOOD EDGE BONDING – Treated with Class "A" fireproofing agent.

"Lifetime" WOOD DOOR GUARANTEE

Dusing and Hunt, Inc. unconditionally guarantee the "Lifetime" Wood Door against warping, twisting or manufacturing defects for the Life of the Installation, when accorded treatment which is considered good practice, as far as storage, installation and maintenance is concerned.

MODEL DWL

SUGGESTED SPECIFICATIONS

WORK REQUIRED

Furnish Dusing and Hunt "Lifetime" Wood Fire Doors 1-¾" thick - DécorDor Model "DWL" - or approved equal as called for on drawings and in Schedule for 1 Hour Class "B", also "C" locations.

FACE VENEERS

Shall be kiln dried hardwood, laid with grain at right angles to the grain of the cross bands. Standard thickness sliced or rotary cut woods. Species to be .....
Both faces shall be smoothly belt sanded.
(NOTE TO ARCHITECT – Birch, Walnut, Rift Oak, Mahogany and Korina are standard.)

CORE

Core to be constructed of incombustible solid hydrous calcium silicate with fibrous binder with sections joined together as approved by Underwriters' Laboratories and shall have an Underwriter approved rating for heat transmission of 250° F in 30 minutes.

EDGE BANDING

Shall be of hardwood treated Class "A" fireproofing agent. Banding thickness shall be ½" at top, ¾" at sides and 1½" at bottom.

CROSS BANDS

Shall be kiln dried hardwood, 1/16" thick extending the full width of the door.

ADHESIVES

The core and edge banding shall be bonded together with a waterproof resin adhesive.
The entire core shall be sized on two sides for perfect adhesive bond between core and cross bands. The core, cross band and face veneer shall be bonded with waterproof phenolic adhesive by the hot plate process.

VISION PANEL

Where shown on schedule provide steel vision panel (10" x 10" or 8" x 12" as indicated) with baked finish of light brown paint. Glazing with ¼" wire glass by others.

PRE-FITTING

Doors to be cut at factory to provide proper clearances and bevelled for swing. Allowance to be made for ½" high thresholds as required.

HARDWARE

Doors to be prepared at factory for 1½ pair of 4½" x 4½" steel template hinges, standard weight, and heavy duty cylindrical (Gov't. No. 161) or mortise (Gov't. No. 86) lockset. Hardware to be field-installed. Attach hinges with Number 12 x 1¼" self-tapping sheet metal screws – do not drill pilot holes more than ¾". Closers must be attached with thru-bolts.

FINISHING (Optional)

Doors shall be finished at factory and properly packaged for protection in transit. It shall be the responsibility of the contractor to protect doors on job until contract is completed. Edges and faces shall be finished with Relvar or Lacquer (specify which) and shall have 2 coat finish or 3 coat finish (specify which).
(NOTE TO ARCHITECT – 3 coat finish is necessary for coarser grained woods such as oak whereas a 2 coat finish may be considered adequate for such close grained woods as birch and maple. A 2nd top coat may be specified if desired.)

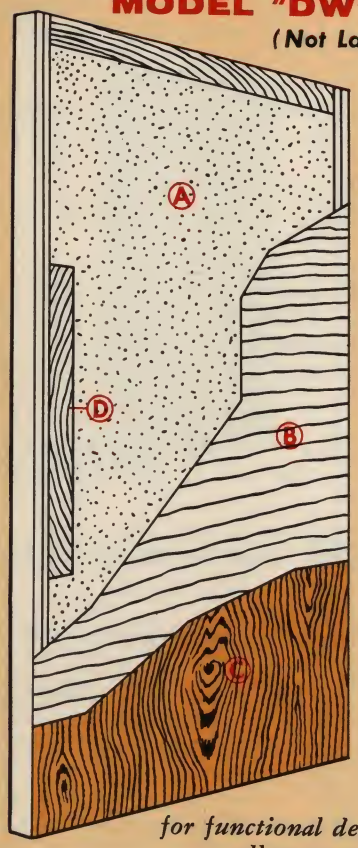
GUARANTEE

Doors shall be guaranteed for the life of the building in which they are installed against warping or twisting or manufacturing defects.

MINERAL CORE WOOD FLUSH DOORS

D-H DécorDor

MODEL "DW"
(Not Labelled)



Guaranteed for Life

DécorDor "Lifetime" WOOD DOORS

for functional decoration in all types of buildings

DécorDor Model "DW," the economical flush Wood Veneer Door, answers the need where the beauty of wood is desired and UL labels are not required. The Model "DW" has the same dimensionally stable calcium silicate core that's absolutely warp-proof.

A — *SOLID MINERAL CORE* — Every DécorDor has incorporated into its basic construction a hydrous, calcium silicate core with asbestos binder . . . solid throughout. Yet, it's light in weight, remarkable in insulating properties, strength and completely incombustible.

B — *HARDWOOD CROSS BANDING* — Hardwood 1/16" thick veneer is bonded to mineral core with waterproof phenolic resin adhesive.

C — *HARDWOOD VENEER FACE* — Beautiful finished grain . . . kiln dried hardwood.

D — *LOCK BLOCKS* — Gives extra strength for hardware installation.

SUGGESTED SPECIFICATIONS MODEL "DW"

Furnish Dusing and Hunt, "LIFETIME" Wood Doors — DécorDor Model "DW" — or approved equal as called for on drawings and in schedule openings where Underwriters' Labels are not required.

FACE VENEERS
Shall be kiln dried hardwood, laid with grain at right angles to the grain of the cross bands. Standard thickness sliced or rotary cut woods. Species to be ..... Both faces shall be smoothly belt sanded.
(NOTE TO ARCHITECT — Birch, Walnut, Rift Oak, Mahogany and Korina are standard.)

CORE
Core to be constructed of incombustible solid hydrous calcium silicate core.

CROSS BANDS
Shall be kiln dried hardwood, 1/16" thick extending the full width of the door.

EDGE BANDS
Top and bottom rails shall be thoroughly kiln dried hardwood, total width 4 3/8". Exposed vertical edges shall be of same species as face veneer.

ADHESIVES
Crossbandings and faces shall be laminated to core with waterproof phenolic adhesive by the hot plate process.

LIGHT OPENINGS
Where and as indicated in door schedule glass light openings shall be prepared at factory. Glass beads, as detailed, shall be temporarily installed for field glazing by others.

LOCK BLOCKS
Lock blocks 3 13/16" x 3 5/8" shall be provided on each side of core assembly.

LOUVER OPENINGS
Where indicated in door schedule louver openings shall be provided of sizes shown. Where wood louvers are shown they shall be of matching species.

PRE-FITTING
Doors to be cut at factory to provide proper clearances and bevelled for swing. Allowance to be made for 1/2" high thresholds as required.

HARDWARE
Doors to be prepared at factory for 1 1/2 pair of 4 1/2" x 4 1/2" steel template hinges, standard weight, and heavy duty cylindrical (Gov't. No. 161) or mortise (Gov't. No. 86) lockset. Hardware to be field-installed.

FINISHING (Optional)
Doors shall be finished at factory and properly packaged for protection in transit. It shall be the responsibility of the contractor to protect doors on job until contract is completed.
Edges and faces shall be finished with Relvar or Lacquer (specify which) and shall have 2 coat finish or 3 coat finish (specify which).
(NOTE TO ARCHITECT — 3 coat finish is necessary for coarser grained woods such as oak whereas a 2 coat finish may be considered adequate for such close grained woods as birch and maple. A 2nd top coat may be specified if desired.)

GUARANTEE
Doors shall be guaranteed for the life of the building in which they are installed against warping or twisting or manufacturing defects.

Distributors in Principal Cities. Consult the Yellow Pages, or Sweet's Architect File or write direct.

DUSING and HUNT, Inc.

Over 50 years Manufacturing Fireproof Doors and Metal Trim

LE ROY, N. Y.

Form No. DHSW-60

Litho in U.S.A.

EGGERS

Custom Made

SOLID CORE WOOD DOORS

and

PLYWOOD

Grove State Bank
Otto Coerver Co., Inc., Dallas, Texas—Millwork

Dallas, Texas

F. Eggers Plywood and Veneer Company was established in 1884, and has long been noted for its quality manufacture of plywood and doors. Over 70 years of experience, development, and faithful service to the building industry, lie behind every Eggers product.

EGGERS

EGGERS

Mount Sinai Hospital Minneapolis, Minn.
Liebenberg & Kaplan—Architects

First National Bank Aberdeen, S.D.
Herges-Kirchgasler & Associates—Architects
Dakota Sash & Door Company—Millwork

Burton Abstract & Title Co. Detroit, Mich.
Smith, Hinchman & Grylls, Inc.—Architects
James A. Moynes & Co.—Millwork

SPECIFICATIONS

CORE: To be of kiln-dried ponderosa pine strips with joints well staggered.

BANDING: Side bands to be 5/8" thick and to be of same species of wood as face. Top and bottom to be of any wood approximately 1¼" wide.

CROSSBANDING: To be of kiln-dried hardwood, 1/10" thick, extending full width of door and laid at right angles to core and face veneers.

ADHESIVE: All doors to be resin bonded by the hot plate press method.

VENEERS: To be of standard thickness for kind of wood specified (generally 1/28" thick). Face veneers to be dried to proper moisture content and carefully matched for color and grain.

SANDING: Both faces to be belt polished to a smooth finish for paint or natural finishes.

CONSTRUCTION

EGGERS

SIZES

2'-0"x6'-8"x1⅜" or 1¾"	2'-0"x7'-0"x1⅜" or 1¾"
2'-4"x6'-8"x1⅜" or 1¾"	2'-4"x7'-0"x1⅜" or 1¾"
2'-6"x6'-8"x1⅜" or 1¾"	2'-6"x7'-0"x1⅜" or 1¾"
2'-8"x6'-8"x1⅜" or 1¾"	2'-8"x7'-0"x1⅜" or 1¾"
3'-0"x6'-8"x1¾"	3'-0"x7'-0"x1¾"
3'-4"x6'-8"x1¾"	3'-4"x7'-0"x1¾"
3'-6"x6'-8"x1¾"	3'-6"x7'-0"x1¾"
4'-0"x6'-8"x1¾"	4'-0"x7'-0"x1¾"

SPECIAL SIZES

Eggers is prepared to supply Custom Made Doors in all the stock sizes shown above and almost any special or odd size door to the architect's specifications. Besides the thicknesses listed, we can furnish thicknesses of 1½", 2", and 2¼".

On oversize doors we can furnish almost any width or length, depending on species of wood desired. We suggest that on oversize doors you consult us as to lengths of veneer available.

1. Core built up of narrow strips of ponderosa pine glued together, with joints well staggered.

2. All doors are banded at top and bottom with hardwood bands, specie to be at mill option unless otherwise specified.

3. Side edge strips are of same species as face. Edge strips are ⅝" thick.

4. Crossbanding is of properly dried hardwood, $\frac{1}{10}$" thick.

5. Face veneer is of wood specified. Standard thickness is generally $\frac{1}{28}$". We can supply doors with faces of any domestic and practically any foreign wood.

GUARANTEE

Eggers Custom Made Doors are guaranteed against defective material and workmanship for a period of 24 months from the date of their delivery to the purchaser.

In the event that any door should develop warp or other structural faults during the guarantee period, it will be replaced free of charge by F. Eggers Plywood & Veneer Company. The replacement of any such door by F. Eggers Plywood & Veneer Company shall constitute complete fulfillment of the company's obligation, and the cost of installation and finishing is not included.

CUSTOM MADE

Eggers Custom Made Solid Core Doors are custom made for use in any building where the finest quality and best construction are demanded. They are ideal for schools, hospitals, public buildings, commercial structures, churches and residential construction.

Eggers Custom Made Doors are designed and built to withstand abuse. They stand up sturdily under constant use in even the most difficult conditions.

FLAME RESISTANCE

They incorporate the fire-resistant qualities needed in so many different types of construction.

SOUND INSULATING

Their solid core construction provides the sound retardment required in public, educational, and institutional buildings.

MATCHING PLYWOOD

Eggers Custom Made Doors are made to match Eggers Custom Made Plywoods whenever such matching is desired.

INQUIRIES INVITED

Whether your needs are large or small, we will be happy to quote you on your requirements. Address your inquiry to your nearest Eggers distributor, or send it directly to our Two Rivers, Wisconsin, office.

EGGERS *Custom Made* PLYWOOD

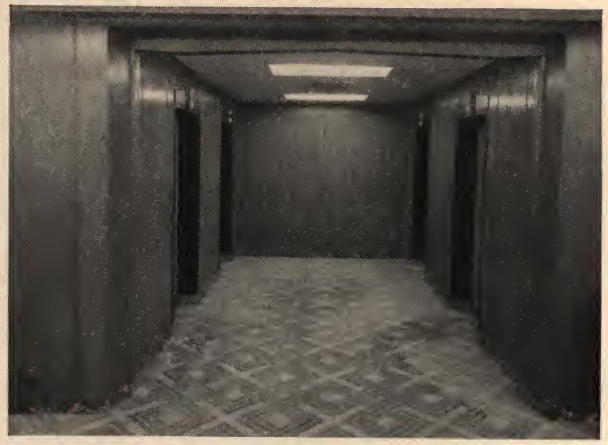
Eggers plywood is custom made to meet the special requirements of individual installations. Where other manufacturers have concentrated on the production of standard woods in stock size panels, Eggers has developed the necessary techniques and installed the needed equipment to produce custom plywood to the user's own specifications.

SIZES

Eggers plywood is manufactured in all the standard thicknesses and panel sizes normally carried by plywood distributors in their warehouse stock. These standard panels are widely used for the manufacture of furniture, fixtures, and millwork items. They are also quite commonly used for wall paneling where the continuity of the grain is not considered essential and where immediate availability is an important factor.

Eggers Custom Made Panels are also produced in special sizes and thicknesses to meet the particular requirements of individual installations. These specially made panels are chosen for architectural installations wherever the finest quality is demanded and a special selection of face veneers is desired.

Eggers Custom Made Panels can be furnished to the customer's specifications of size and thickness. Whenever design requirements permit, panel sizes should be held to not more than 48 inches by 144 inches. Larger sizes can, however, be furnished when required.



Irving Trust Company **1 Wall Street, New York City**
Qt. Teak Wood
Shreve Lamb Harmon—Architects
D. Kramer & Sons—Cabinet Maker

VENEERS

Eggers offers veneers in any obtainable domestic or foreign wood. We carry substantial stocks of all woods that are regularly used, and we have ready access to special imported woods. Samples of any obtainable veneer wood will be furnished on request.

Eggers has long made a practice of buying outstanding flitches of veneers whenever they are available, even though we may have no immediate need for them. Thus, when the need does arise, we have them on hand, ready for use.

SPECIFICATIONS

Plywood to be manufactured by F. Eggers Plywood & Veneer Company, Two Rivers, Wisconsin. We recommend the use of Plywood of 5-ply lumber core construction, with an overall thickness of ¾ inch. However, any thickness desired can be furnished. Lumber core shall consist of Basswood of proper width strips and edge glued with Resin glue.

Face veneer shall be from flitches especially selected for color, figure, grain character, or other special features. Actual flitch samples of the face veneer shall be submitted for architectural approval.

Faces shall be of one or more pieces of veneer matched for color and grain at the joint to produce balance and continuity of grain. In matching sliced or sawn veneers, unless otherwise specified, veneer shall be book matched and of corresponding width on each side of the center joint or adjacent panels. Good 1 side panels shall have back veneers of species to properly balance face.

Crossbands shall be of northern hardwood veneers unless otherwise specified. They are to be of sound veneer, uniform in thickness, random widths with edges joined and glued.

Plywood shall be glued with a Resin glue and bonded in a hot plate press. Panels shall be sanded on both sides and belt sanded on the face side suitable for finishing.

INFORMATION TO FURNISH ON ORDERS AND INQUIRIES

In making inquiries or placing order for Eggers Custom Made Plywood, please furnish the following information, to help us meet your needs promptly and accurately.

Number of pieces..... number of plies.....thickness..... width across the grain..... length with the grain.....species of face ply.

Supply also, any special information pertaining to face veneers, whether good one side or good two sides; and, if available, send blueprints showing elevation layout.

Your inquiries will be answered promptly and fully. Your orders will be filled as quickly as possible, with painstaking care.

F. EGGERS PLYWOOD & VENEER COMPANY

Two Rivers, Wisconsin
Telephone-378 **Teletype-Two Rivers, Wisconsin 8166**

16c
Fa

HOLLOW CORE
AND
SOLID CORE

FLUSH DOORS

SSS*
TRADEMARK
SUPER SATIN-SURFACE*

Now available on all QUALITYBILT Flush Doors

*Trademarks "Super Satin Surface" and "Triple S" or "SSS" — Use licensed on products having a Super-sealed or Super Microsealed surface that satisfies the quality standards of the trademark owner.

A.I.A. File No. 19-E-1

Qualitybilt WOODWORK®

FARLEY & LOETSCHER MFG. CO.
DUBUQUE, IOWA

SSS*

TRADEMARK

SUPER SATIN-SURFACE*

*Trademarks ''Super Satin Surface'' and ''Triple S'' or ''SSS'' — Use licensed on products having a Super-sealed or Super Microsealed surface that satisfies the quality standards of the trademark owner.

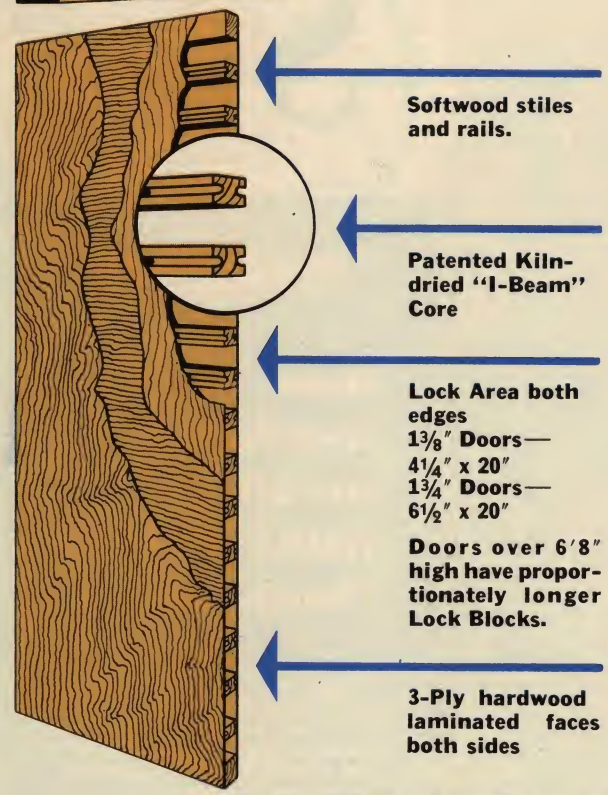
The **FARLEY & LOETSCHER MFG. CO.** produce, under license from the trademark owner, Super Satin Surface doors as an option in all sizes and styles of flush doors they manufacture.

Qualitybilt Super Satin Surface Flush Doors

are surfaced at our plant in Dubuque, Iowa by the patented Super Microseal process.

This process fuses, under simultaneous heat and pressure, the natural wood lignins or resins and similar synthetics, which are added. These resins, after they have been allowed to cool, form a tough hard surface of measurable thickness. The surface thus created is a finish in itself. Qualitybilt Super Satin Surface doors resist soiling and scuffing, eliminate fiber and grain raising, and have a smooth, uniform textured surface. To preserve this fine finish merely apply paste wax and buff.

I-BEAM


Softwood stiles and rails.
Patented Kiln-dried "I-Beam" Core
Lock Area both edges
1⅜" Doors— 4¼" x 20"
1¾" Doors— 6½" x 20"
Doors over 6'8" high have proportionately longer Lock Blocks.
3-Ply hardwood laminated faces both sides

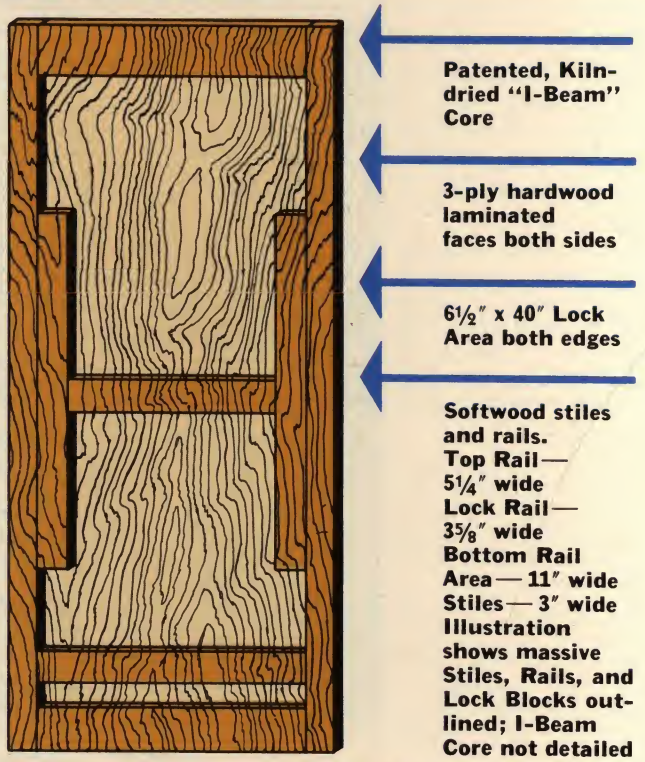
— Pat. No. 2725604 and other Pat. applied for.

Unique wood core construction provides strong, rigid, true-surface doors. Vented wood core allows continuous air circulation. 7-ply construction, high quality 3-ply faces resin bonded to rigid I-Beam core members set horizontally with highly water-resistant resin adhesive. Ample size lock blocks and hinge anchorage on both edges. Top and bottom rails of sufficient widths to permit trimming 1" off each end.

Furnished in Premium Birch, No. 1 Birch, Plain Red Oak, Philippine Mahogany (Lauan), Natural Gum, and paint-grade Birch. Matching vertical edge strips also available.

Furnished in all standard sizes from 1-6 x 6-6 to 3-0 x 7-0, 1⅜" or 1¾" thick.

I-BEAM INSTITUTIONAL


Patented, Kiln-dried "I-Beam" Core
3-ply hardwood laminated faces both sides
6½" x 40" Lock Area both edges
Softwood stiles and rails.
Top Rail— 5¼" wide
Lock Rail— 3⅝" wide
Bottom Rail Area— 11" wide
Stiles— 3" wide
Illustration shows massive Stiles, Rails, and Lock Blocks outlined; I-Beam Core not detailed

— Pat. No. 2725604 and other Pat. applied for.

Ideal for Commercial, Hospital, Hotel, School and Industrial Installations. Designed to combine the light weight and economy of Hollow Core Doors with the sturdy framework of conventional panel doors and the strength and rigidity of solid flush doors.

Unique I-Beam cores are kiln-dried for utmost stability. Heavy stiles and rails will accommodate most types of industrial and institutional hardware. Made with highly water-resistant resin adhesive.

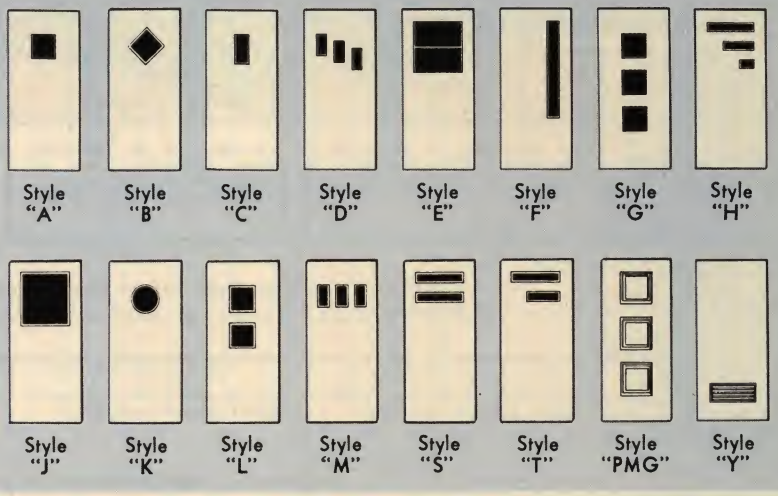
Furnished in Premium Birch, No. 1 Birch, Plain Red Oak, Philippine Mahogany (Lauan), Natural Gum, or paint-grade Birch. Matching vertical edge strips also available.

Standard sizes to 4' 0" x 8' 0", both 1⅜" or 1¾" thick.

FLUSH DOORS

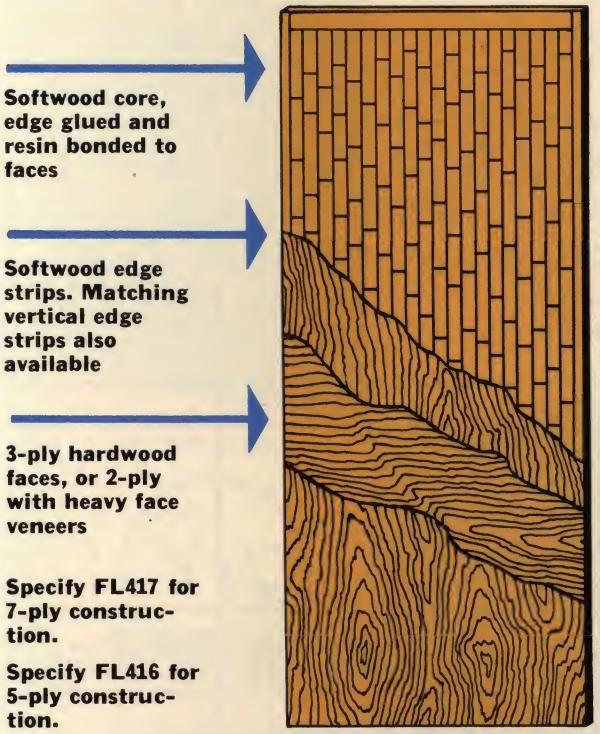
When conventional finishes are desired, one coat of shellac, varnish, lacquer, or a coat of oil or alcohol soluble stain with a coat of shellac, varnish or lacquer may be applied. NO SANDING is required before applying finishing material.

Since Qualitybilt Super Satin Surface flush doors cost very little more than unprocessed Qualitybilt flush doors, the savings in finishing costs (usually 75% or more) are all yours. With painted doors it's the same story — similar drastic savings.



FARLO-DOR

HIGHEST QUALITY SOLID FLUSH DOOR


Softwood core, edge glued and resin bonded to faces
Softwood edge strips. Matching vertical edge strips also available
3-ply hardwood faces, or 2-ply with heavy face veneers
Specify FL417 for 7-ply construction.
Specify FL416 for 5-ply construction.

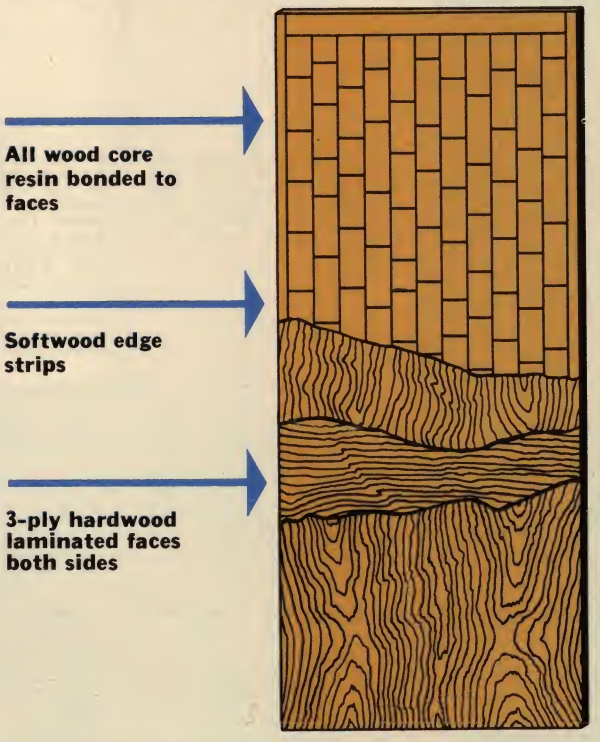
Softwood core consists of kiln-dried pieces glued up firmly with staggered joints into a solid slab. Highly water-resistant resin bonded faces. Sound and fire resistant. Lights and louvers may be cut as desired.

7-ply construction with 3-ply selected faces. Furnished in Premium Birch, No. 1 Birch, Plain Red Oak, Philippine Mahogany (Lauan), Natural Gum, or paint-grade Birch. Matching vertical edge strips also available.

5-ply construction with heavy face veneers over cross banding resin bonded to the core, furnished in Natural Birch, Plain Red Oak, and W.P. Pine. Matching vertical edge strips also available. Both types furnished in all standard sizes 1 3/8" or 1 3/4" thick.

SOLIDOR

FOR RESIDENCES, APARTMENTS, OFFICES, HOTELS, SCHOOLS, HOSPITALS, INSTITUTIONS.



The economy solid core flush door. For use anywhere a solid flush door is required. Made with highly water-resistant resin adhesive. 7-ply construction made up of 3-ply hardwood faces and solid stabilized softwood core. Softwood stiles and rails of sufficient width to permit trimming 1" from each end of door. Mouldings, kick plates, and mirrors easily applied anywhere. Lights and louvers may be cut anywhere.

Furnished in Premium Birch, No. 1 Birch, Plain Red Oak, Philippine Mahogany (Lauan), Natural Gum, paint-grade Birch. Matching vertical edge strips available. Standard sizes 1-6 x 6-6 to 3-0 x 7-0, 1 3/8" or 1 3/4" thick.

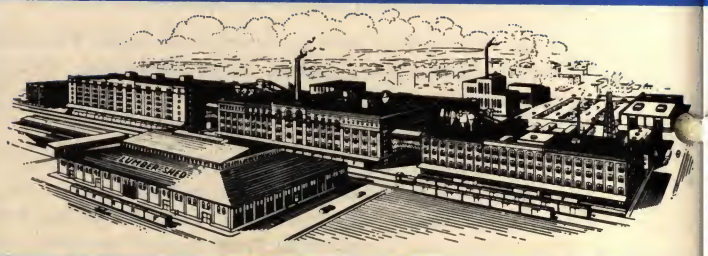
Qualitybilt WOODWORK® FLUSH DOORS

GUARANTEE ALL QUALITYBILT Flush Doors are fully guaranteed against manufacturing defects in accordance with the requirements of the National Woodwork Manufacturers' Standard Door guarantee.

SPECIFICATIONS	I-BEAM	I-BEAM INSTITUTIONAL	SOLIDOR	FARLODOR
GENERAL	All doors shall be Qualitybilt I-Beam doors as manufactured by the Farley & Loetscher Mfg. Co., Dubuque, Iowa	All doors shall be Qualitybilt I-Beam Institutional doors, as manufactured by the Farley & Loetscher Mfg. Co., Dubuque, Iowa.	All doors shall be Qualitybilt Solidors as manufactured by the Farley & Loetscher Mfg. Co., Dubuque, Iowa.	All doors shall be Qualitybilt Farlodors as manufactured by the Farley & Loetscher Mfg. Co., Dubuque, Iowa.
SUPER SATIN SURFACE (Optional)	All doors shall be Super Satin Surface (Triple S or "SSS") Doors with both flat faces treated with SUPER MICROSEAL process as manufactured by the Farley & Loetscher Mfg. Co., Dubuque, Iowa.			
CORE	Shall consist of Patented wood I-Beams arranged horizontally.	Shall consist of Patented wood I-Beams arranged horizontally.	Shall consist of soft wood blocks arranged with grain running vertically and with end joints staggered.	Shall consist of softwood blocks glued together with grain running vertically and with end joints staggered.
VENEERS	Shall be 3-Ply Hardwood. Plies bonded together with highly water-resistant resin and these 3-ply skins resin bonded to core and edge strips with highly water-resistant resin adhesive. Face Veneers furnished in Premium Birch, No. 1 Birch, Plain Red Oak, Philippine Mahogany (Lauan), Natural Gum and Paint Grade Birch.	Shall be 3-Ply Hardwood. Plies bonded together with highly water-resistant resin and these 3-ply skins resin bonded to core and edge strips with highly water-resistant resin adhesive. Face Veneers furnished in Premium Birch, No. 1 Birch, Plain Red Oak, Philippine Mahogany (Lauan), Natural Gum and Paint Grade Birch.	Shall be 3-Ply Hardwood. Plies bonded together with highly water-resistant resin and these 3-ply skins resin bonded to core and edge strips with highly water-resistant resin adhesive. Face Veneers furnished in Premium Birch, No. 1 Birch, Plain Red Oak, Philippine Mahogany (Lauan), Natural Gum and Paint Grade Birch.	Shall be 3-Ply Hardwood. Plies bonded together with highly water-resistant resin and these 3-ply skins resin bonded to core and edge strips with highly water-resistant resin adhesive. Face Veneers furnished in Premium Birch, No. 1 Birch, Plain Red Oak, Philippine Mahogany (Lauan), Natural Gum and Paint Grade Birch. 5-ply doors with heavy face veneers (2-ply) available when desired. Face veneers 1/4" thick before sanding. Available with Natural Birch, Plain Red Oak, and W. P. Pine face Veneers.
STILES AND RAILS	Shall be soft wood of sufficient width to permit trimming 1" from each end of door. Vertical hard wood edge strips to match door faces also available. Rails grooved to help equalize pressure and moisture.	Shall be soft wood of the following sizes before trimming. Top rail 5 1/4" width. Bottom rail, 2 pieces consisting of 4 1/2" at bottom, 2 7/8" air space and 3 5/8", making 11" total bottom rail area. Lockrail 3 5/8", centered 39 1/2" from bottom of door. 7/8" vertical hardwood edge strip to match face veneers, laminated to softwood edge strip available. Rails grooved to help equalize pressure and moisture.	Shall be soft wood of sufficient width to permit trimming 1" from each end of door. Vertical hard wood edge strips to match door faces also available.	Shall be soft wood of sufficient width to permit trimming 1" from each end of door. Vertical hard wood edge strips to match door faces also available.
LOCK AREA	Shall be 6 1/2" x 20" centered on each edge of doors 6'8" or less, 1 3/4" thick; shall be 6 1/2" x 24" centered on each edge of doors over 6'8" high, 1 3/4" thick; shall be 4 1/4" x 20" centered on each edge of doors 6'8" high or less, 1 3/8" thick; shall be 4 1/4" x 24" centered on each edge of doors over 6'8" high, 1 3/8" thick.	Shall be 6 1/2" x 40" centered on each edge of door.	Attach locks anywhere. Solid wood core.	Attach locks anywhere. Solid wood core.
SIZE	Shall be furnished trimmed square and to exact listed sizes and 1 3/8" or 1 3/4" thick within accepted industry tolerance. Scuff shoes applied.	Shall be furnished trimmed square and to exact listed sizes and 1 3/8" or 1 3/4" thick within accepted industry tolerance. Scuff shoes applied.	Shall be furnished trimmed square and to exact listed sizes and 1 3/8" or 1 3/4" thick within accepted industry tolerance. Scuff shoes applied.	Shall be furnished trimmed square and to exact listed sizes and 1 3/4" thick within accepted industry tolerance. Scuff shoes applied.
LIGHTS AND LOUVERS	Will be furnished in standard styles (pgs. 2 and 3) or to specifications.	Will be furnished in standard styles (pgs. 2 and 3) or to specifications.	Will be furnished in standard styles (pgs. 2 and 3) or to specifications.	Will be furnished in standard styles (pgs. 2 and 3) or to specifications.

For over 80 years, QUALITYBILT woodwork has stood for the highest quality woodwork possible to produce. Continuous research and development has enabled QUALITYBILT products to maintain leadership in the woodworking industry. When you specify QUALITYBILT flush doors, you can be sure of doors backed not only with the N.W.M.A. standard door guarantee, but also with the experience and integrity of this thoroughly established name.

Folder No. 2063—Litho in U.S.A.



FARLEY & LOETSCHER MFG. CO.
DUBUQUE, IOWA

THE ULTIMATE

IN FINE

FLUSH DOORS

FINISHED

THE *Natural*

MICROSEAL WAY

SSS

SUPER SATIN-SURFACE*

GENERAL FLUSH DOORS

AIA File No. 19-E-1

SSS
SUPER SATIN-SURFACE

GENERAL
FLUSH DOORS

General's SUPER SATIN SURFACE flush doors are surface sealed by the patented Super Microseal process, a new method which has revolutionized wood finishing techniques. Briefly stated, the process – through intense frictional heat and pressure – softens and flows the wood's natural adhesive . . . lignin . . . uniting it with a penetrating additive to seal the wood's surface. Simultaneously a chemical reaction occurs between the gases evolved from the additive that strike into the wood structure and combine with the sub-surface lignin. This stabilizes the basic wood structure.

The surface is beautiful, brilliant and durable, reflecting in depth the wood's natural grain pattern.

The treated surfaces of General's doors are permanently set in a depth normally extending through the decorative face ply . . . it's **in** the wood and is not a film or overlay. Accidental surface damage can be readily remedied by a light application of 3/0 steel wool to the affected area. Grain and fiber raising are eliminated and variations in surface textures are made uniform.

Such costly steps as on-the-job sanding and sealing are **eliminated.** Additional finishing steps are substantially reduced. Think of the tremendous savings in finishing costs!

Exclusive Construction Features

Every GENERAL flush door bespeaks its own quality in its appearance and is guaranteed by General Plywood Corporation against any defects of material or workmanship. GENERAL'S seven-ply construction, provides 2 balanced panels for maximum dimensional stability and full utilization of the stressed skin principle developed and used by the aircraft industry. Seven-ply construction also gives the door two extra glue lines which are stronger than wood itself and provides extra barriers against moisture penetration.

All GENERAL doors are hot-plate pressed and manufactured under the most careful controls, providing a permanent bond which equals and exceeds commercial plywood standards.

"Super Satin Surface" and "Triple S" or "SSS" are trademarks owned by GPC (General Plywood Corporation) and used by GPC and Licensees on products having a Super sealed or Super Micro-sealed surface that satisfies the quality standards established by GPC.

INSTITUTIONAL HOLLOW CORE FLUSH DOORS

For institutional or commercial use. Designed to combine the economy of hollow core construction with extra heavy stiles, rails and center rail. Extra heavy frame construction accommodates virtually all types of institutional hardware. Ideal for Schools, Hotels, Hospitals and Institutions.

10-INCH RAILS TOP AND BOTTOM: Ample anchoring space for heavy door closers, kick plates and other top and bottom hardware. Added stability plus reversibility — eliminates chances of hanging error.

TWO 40-INCH LOCK BLOCKS: Three-inch-wide lock blocks, combined with three-inch stiles, provide six inches of width over forty inches of length on both sides of door frame — ample lock block area and no chance of hanging error.

EXTRA CENTER CROSS RAIL: Centered, three-inch cross rail on 6'8" door and six-inch rail on 7' door allow for easy installation of panic bars and other special hardware.

COLUMN-CORE CONSTRUCTION: Cylindrical fibre columns — strongest light weight structural form known — are used to insure combined lightness and strength.

3-PLY BALANCED PANELS: Balanced panels assure utmost rigidity and resistance to warpage. Each panel, on the back, carries a complete film of resin which prevents moisture penetration and maintains balance after doors are finished.

HOT PLATE PRESSED: Hot plate pressing under extreme pressures drive glues deep into panels, cores and frame, gives absolute assurance of a permanent bond.

SPECIFICATIONS

Doors shall be flush type, hollow core, veneered wood doors as manufactured by General Plywood Corporation. Construction of the doors shall be as follows:
Rails for top and bottom shall be 10" wide.
Stiles for each side shall be 3" wide.
Lock-blocks shall be 3" wide by 40" long centered in each side of door.
Center rail shall be 3" wide, centered in 6'8" door and 6" wide centered in 7' door.
Cores shall consist of rigid fibre hollow cylindrical columns 3" in diameter, spaced to give uniform support and maximum strength to door faces.
Glue shall comply with U. S. Commercial Standard CS 171-58 Type I waterproof boil test bond or Type II water resistant bond.
Plywood faces shall be built up of 3 plies of veneer with the center ply crossbanded at 90° to outside plies, bonded together by hot-plate press method. Plywood faces shall be belt sanded to produce a smooth surface. Doors shall be guaranteed in accordance with the National Woodwork Manufacturers Association standard door guarantee.

SPECIFY SUPER SATIN SURFACE FLUSH DOORS

STANDARD HOLLOW CORE FLUSH DOORS

Ideal for fine homes, cottages, multiple dwelling units and institutions where lightness, beauty and practical economy are first considerations.

SPECIFICATIONS

All hollow core doors shall be flush type veneered doors, of 3-ply faces, bonded under heat and pressure by the hot-plate press method, as manufactured by the General Plywood Corporation. The two faces shall be bonded to cylindrical fibre cores 3" in diameter and spaced to provide core to face bonding within 1½" spacing. Rails 2½" in width top and bottom. Stiles for each side 1$^{3}/_{16}$" in width.

Glue bonds shall conform with CS 171-58.

Doors shall be guaranteed in accordance with the National Woodwork Manufacturers Association standard door guarantee.

COLUMN CORE CONSTRUCTION: Cylindrical fibre columns — strongest lightweight structural form known — are used to insure combined lightness and strength.

TWO LOCK BLOCKS: Each door shall have two lock blocks, 3" in width and 20" long on doors of 6'8" in length or under, and 24" long on 7' doors and over. The wide lock blocks on both sides provide ample space for lockset — eliminates possibility of handling error.

3-PLY BALANCED PANELS: Balanced panels assure utmost rigidity and resistance to warpage. Each panel, on the back, carries a complete film of resin which prevents moisture penetration and maintains balance after doors are finished.

SPECIFY SUPER SATIN SURFACE FLUSH DOORS

SOLID CORE FLUSH DOORS

For heavy duty institutional, commercial and residential service. Designed for installation in schools, hospitals, hotels and institutions where maximum strength and durability is required. Offers resistance to fire, sound, and extreme abuse.

MATCHING EDGE BANDS: Three-quarter inch matching hardwood edge bands on both vertical edges provide ample trim area.

EDGE-GLUED CORE BLOCKS: Three dimensional stability is obtained through the use of core blocks of varying length, edge-glued to each other in a staggered pattern, and to the frame, under extreme heat and pressure.

SEVEN-PLY CONSTRUCTION: Absolute flatness of surface is incurred through the use of heavy 3-ply panels bonded to rigid edge-grain blocks that have been selected for uniformity, and dried evenly.

SPECIFICATIONS

All solid core doors shall be flush type, veneered doors, of 3-ply faces, bonded under heat and pressure by the hot-plate press method, as manufactured by the General Plywood Corporation. The two faces shall be bonded to the core which shall consist of rigid edge-grain blocks of Ponderosa Pine or other Conifers, of varying lengths, glued to each other in a staggered pattern to provide true dimensional stability. No core shall contain more than one specie of wood.

Doors shall be railed top and bottom with softwood 2¾" wide and edge-glued to core. Vertical edges to be banded with ¾" hardwood edge strips to match face veneer, edge-glued to core.

Glue shall comply with U. S. Commercial Standard CS 171-58 Type I waterproof boil test bond or Type II water resistant bond.

Doors shall be guaranteed in accordance with the National Woodwork Manufacturers Association standard door guarantee.

SPECIFY SUPER SATIN SURFACE FLUSH DOORS

Finishing Instructions

IMPORTANT: Do not sand General SSS doors. Do not seal the face veneers, only the edges. Do not use pigmented or water-soluble stains. Wipe all surfaces clean with cloth.

*Interior Finishes**

Clear Natural Finish: Apply one or more coats of clear finish or wax depending on the surface build desired.

Stain Finish: Apply alcohol-soluble, wax or oil stain evenly on the surface and wipe off with cloth. Allow somewhat longer surface drying time than ordinary when finishing a conventionally sanded surface. Apply top coat of your choice. When oil or alcohol stains are used, lacquer, varnish or some other hard top coat should be applied. When wax stain is used, apply top coat of clear paste wax and buff after drying.

Paint or Enamel: Apply one or two coats to suit your requirements. For open-grained woods, apply split coat (half undercoat and half enamel or paint.) Then apply final coat of paint or enamel.

Color Toning Finish: Apply colored wax, dry and buff.

*Exterior Finishes**

Clear Natural Finish: Apply one coat spar varnish thin (one pint pure turpentine to one gallon spar varnish). Then apply second coat full-strength spar varnish.

Stain Finish: Apply oil stain. Then finish as shown above.

Paint or Enamel: Apply split coat (half undercoat, half exterior paint or enamel). Then apply second coat of exterior paint.

Color Toning Finish: Apply color toner. Allow to dry. Then follow with two coats as shown under "Clear Natural Finish."

*NOTE: When finishing open-grained woods such as lauan, walnut, oak, etc., a filler may be used if desired for a custom finish. Then apply finish coats as shown above.

SIZES AND WEIGHTS

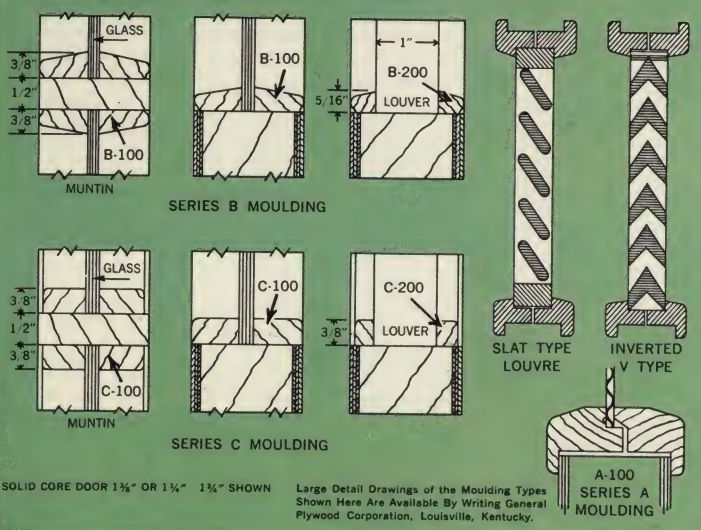
DOOR SIZES	STANDARD HOLLOW CORE 1⅜" THICKNESS				STANDARD HOLLOW CORE 1¾" THICKNESS				INSTITUTIONAL HOLLOW CORE 1¾" THICKNESS		SOLID CORE 1¾" THICK	
	6/0	6/6	6/8	7/0	6/0	6/6	6/8	7/0	6/8	7/0	6/8	7/0
1/6	14	15	16	17	17	19	19	20	23	25	43	45
1/8	15	16	17	18	19	21	21	22	26	28	47	50
1/10	17	18	19	20	21	23	23	24	29	30	52	55
2/0	19	20	21	22	23	25	25	27	32	33	57	60
2/2	20	21	22	23	25	27	27	29	34	36	61	65
2/4	22	23	24	25	27	29	29	31	37	38	66	70
2/6	24	25	26	27	29	31	32	33	39	41	71	75
2/8	25	27	28	29	31	33	34	36	42	44	76	80
2/10	27	28	29	31	33	35	36	38	44	47	80	85
3/0	28	30	31	33	35	37	38	40	47	49	85	90
3/2							40	42	50	52	90	95
3/4							42	44	52	55	95	100
3/6							44	47	55	58	99	104
3/8							46	49	58	60	104	109
3/10							49	51	60	63	109	114
4/0							51	53	63	66	113	119

COST COMPARISON

3/0x6/8x1¾ Interior Door With Soft Wood Edges	Natural Birch	Select Red or White Birch	African Mahogany	Sliced Lauan	Plain Sliced Red Oak	Plain Sliced White Oak	Rift Sliced White Oak	American Walnut	Natural Gum	Select White or Red Gum	Rotary Cut Red Oak	Rotary C Lauan
Solid Core	100%	108%	105%	100%	105%	105%	115%	115%		106%	102%	
Institutional Hollow Core	74%	83%	79%	74%	79%	79%	94%	94%	69%	81%	76%	69%
Standard Hollow Core	61%	72%	65%	61%	65%	76%	90%	90%	46%	58%	62%	46%
Fire Door	291%	302%	297%	291%	297%	297%	314%	314%	291%	297%	291%	291%
Lead Lined	755%	767%	762%	755%	762%	762%	779%	779%	755%	762%	755%	755%

SPECIAL DETAIL WORK

General Plywood Standard Mouldings For Light and Louvre Openings



SOLID CORE DOOR 1⅜" OR 1¾" 1¾" SHOWN

Large Detail Drawings of the Moulding Types Shown Here Are Available By Writing General Plywood Corporation, Louisville, Kentucky.

ILLUSTRATED HERE ARE JUST A FEW OF THE LIGHT AND LOUVRE OPENINGS POSSIBLE

General core construction, both hollow and solid, permits the installation of an almost limitless variety of light and louvre openings and other detail work. This can be done either at the factory or in any local millwork plant.

Solid core doors can be cut without requiring additional blocking and protection against voids.

The **General** hollow core door can be cut into at any point without injuring or breaking more than one ring and thereby destroying the support for uncut faces.

SSS SUPER SATIN-SURFACE*

GENERAL PLYWOOD CORPORATION

Louisville 1, Kentucky

16c
Ha

Architectural

SOLID CORE WOOD

DOORS

- INTERIOR and EXTERIOR DOORS
- SOUND INSULATING DOORS
- SPECIAL PURPOSE DOORS

HARDWOOD PRODUCTS CORPORATION

NEENAH • WISCONSIN

Manufacturers of Architectural Doors

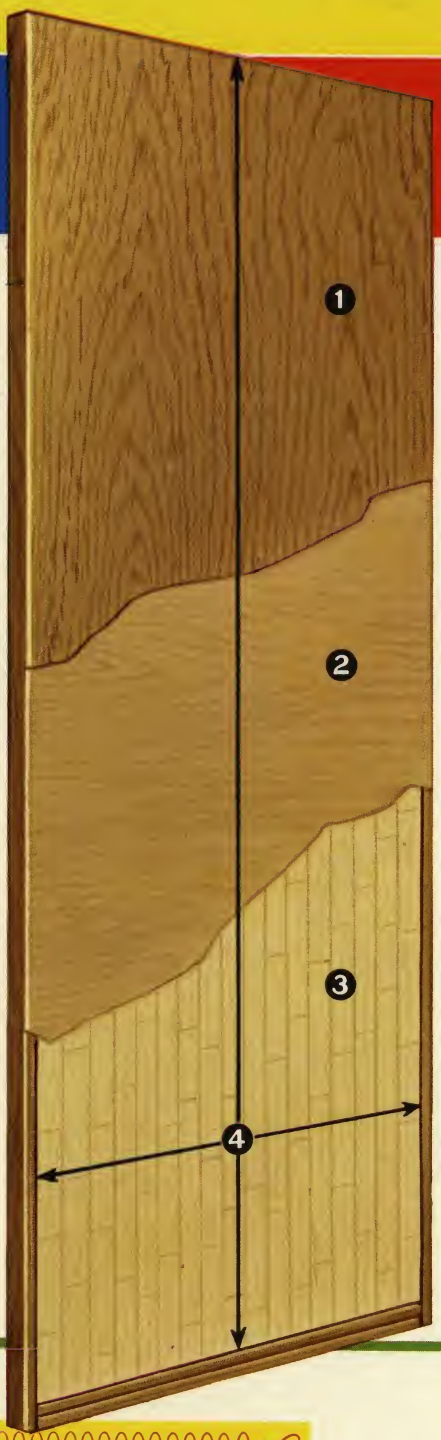
A.I.A. FILE No. 19-E-1 and 19-E-14

Solid Core Flush Doors

DOORS OF LASTING BEAUTY

...for Schools, Hospitals, Hotels, Institutions, Clubs, Churches, Business and Industry

Hardwood Products Corporation Doors exemplify the finest in advanced solid core construction. They are sturdily strong, most permanent and have no superior for the functional, heavy-duty type of performance required in school, hospital, institution and public building installations. Hardwood's doors provide privacy, last the lifetime of the building, have excellent fire-retarding qualities and provide more satisfactory service all around. Being of *solid core* construction they withstand hard knocks and bumps without damage — thus, cost less to maintain and refinish. In addition, their *solid core* wood construction permits installations of kick plates, hidden door closures and special hardware—as well as window lights on louvers without costly and special prefabrications.



Red Oak

CONSTRUCTION
Master-Flush and Standard-Flush Doors

1 Hardwood Products Corporation MASTER-FLUSH solid wood core doors are faced with 1/8" thick sawn veneers of solid wood.

2 Veneer cross-banding of 1/12" thickness between finish face and core provides additional strength — makes a completely glued-up strong and stable 5-ply solid core door.

3 Random length vertical wood staves, glued and permanently press-bonded together make up a solid mass core of exceptional strength and dimensional stability.

4 Edge strips on all four sides are tongue and grooved into the core and into each other on all four edges—strips are doubled top and bottom. See Architectural Specifications, page 3.

Master-Flush Door Lifetime Guarantee

The Hardwood Products Corporation unconditionally guarantees its MASTER-FLUSH doors against delamination, warping, twisting or manufacturing defects for the life of the installation if properly stored, installed, finished and maintained. If any MASTER-FLUSH door fails to meet these standards, such door will be replaced without charge, including all labor costs of rehanging and refinishing by Hardwood Products Corporation, Neenah, Wisconsin.

Custom-made to Individual Job Orders

Hardwood Products Corp. Doors are *custom-made* for your job — and you can specify any type with full confidence that they will meet your specifications. All veneers for each job are carefully chosen for *matching* wood grain. Standard doors as well as special sizes and styles are all *custom-made* to individual job orders.

HARDWOOD PRODUCTS CORPORATION

MASTER-FLUSH

Solid Core Flush Doors

FOR INTERIOR-EXTERIOR USE

Master-Flush doors are the result of long research and experience. They are made to withstand extraordinary abuse and fulfill the demand for a single construction design that meets all installation requirements for both interior and exterior use. Master-Flush doors are guaranteed equal or superior to any other wood door, regardless of cost or competitive claims. They are manufactured in accordance with "Type C" solid core doors contained in AWI Brochure No. 5 (Revised).

FACE VENEERS

Face veneers of Master-Flush Doors are 1/8" in thickness before sanding and are available in: —

- Natural Birch
- Natural Gum
- Selected Red Gum
- Plain Red Oak
- Plain Philippine Mahogany
- Plain African Mahogany
- Northern White Pine
- Ponderosa Pine

Other veneers are available upon request. Please refer to page 9 for additional data on veneers for door facings that are carried in stock for prompt door manufacture, order fulfillment and delivery. Write us for information on availability of any veneer faces not listed.

ARCHITECTURAL SPECIFICATIONS

All doors shall be MASTER-FLUSH construction, 5-ply glued-up random length vertical stave core, 1/12" exposed cross band, 1/8" sawn face veneers of ___ (indicate wood type), hot plate press bonded. Vertical edge strips shall be one piece and of specie to match face veneer. Top and bottom edge strips shall be double thickness hardwood with all four edge strips tongue and grooved into the core and into each other, as manufactured by Hardwood Products Corporation of Neenah, Wisconsin — or equal, as approved in writing by the architect.

EXTERIOR DOOR SPECIFICATIONS

Exterior doors shall be MASTER-FLUSH doors as manufactured by Hardwood Products Corporation, with five-ply glued-up vertical stave core, 1/12" exposed waterproof glued crossbanding, and 1/8" waterproof glued sawn face veneers, hardwood edge strips all four edges, or equal, as approved in writing by the architect. The bottom of all light openings shall have copper flashing installed by the manufacturer. Copper Cap for the top of the doors shall be furnished flat by the manufacturer and installed by the hanging carpenter after the doors have been fitted to the opening. Flashing at the bottom of doors shall not be permitted. The door manufacturer shall preservative and water repellent treat all exterior doors by complete immersion in Woodlife or equal product, and:

a. On doors to be painted, the face veneer shall be 1/8" Sawn Wisconsin Maple, Northern White Pine, or African Mahogany. The door manufacturer shall apply one coat of exterior aluminum primer for wood (if African Mahogany is furnished a filler coat shall be applied in addition), and one coat of exterior trim paint of the color selected by the architect.* Finish shall be further completed by the painting contractor by applying not less than two coats of exterior trim paint on both faces and all four edges.

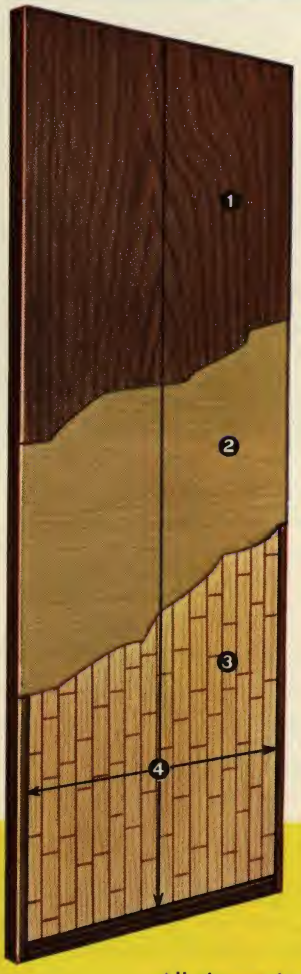
b. On doors for stain or natural finish, the face veneer shall be 1/8" sawn, the door manufacturer shall be furnished suitable samples and shall fill and/or stain, as may be required. Door manufacturer will apply coat of sealer and coat of spar varnish, sanding between coats. The final coat shall be for exterior use and applied by the painting contractor to both faces, and two coats to all four edges, after the doors are fitted and prepared for hardware.

*It is suggested that the architect furnish the door manufacturer a color sample slightly off the final desired color to facilitate inspection of further finishing at the job.

CONSTRUCTION DETAILS—Page 10

STANDARD-FLUSH

Solid Core Flush Doors



Black Walnut

The STANDARD-FLUSH door embodies the same solid core construction as the MASTER-FLUSH door shown and described on page 2—the only difference being face veneer thicknesses. On STANDARD FLUSH doors they are 1/20" and 1/28" thick as listed at right.

FOR INTERIOR-EXTERIOR USE

Standard-Flush Doors are designed (1) to meet decorative requirements for highly figured cabinet woods which are only available in thin veneers and (2) to furnish the inherent advantages of solid core construction in stock wood veneers where utmost economy is essential. They have the same core construction as the Master-Flush Door but are faced with thinner veneers. Note the specie selections available.

FACE VENEERS

Face veneers of Standard-Flush Doors furnished in several thicknesses dependent upon specie and grain figure.

1/20" FACE VENEERS INCLUDE: —

- Natural Birch
- Selected White or Red Birch
- Natural or Selected Red Gum
- Plain Red Oak (Rotary Cut)
- Natural Hard Maple
- Selected White Hard Maple
- Northern White Pine

1/28" FACE VENEERS INCLUDE: —

- Comb Grain White Oak
- Plain Walnut
- Quartered Walnut
- African Ribbon Stripe Mahogany
- Plain Philippine Mahogany (Lauan)
- Sliced Plain White Oak is available in 1/24" veneer

Other veneers are available upon request.

ARCHITECTURAL SPECIFICATIONS

All doors shall be STANDARD-FLUSH construction, 5-ply glued-up random length vertical stave core, 1/12" exposed cross band,_____(thickness) face veneer of_____(Rotary or Sliced)_____(wood type) face veneer, hot plate press bonded vertical edge strips shall be one piece and of specie to match face veneer. Top and bottom edge strips shall be double thickness hardwood with all four edge strips tongue and grooved into the core and into each other, as manufactured by Hardwood Products Corporation of Neenah, Wisconsin — or equal, as approved in writing by the architect.

CONSTRUCTION DETAILS—Page 10

Finishing Specifications For All Hardwood Products Corporation Doors

FINISHING OF DOOR: Both for control of quality of finish and for protection of the door prior to hanging, it is recommended that architectural specifications require the manufacturer to apply preliminary coats (but not the last coat) at his plant prior to shipment. Final sanding, removal of soiled or abrasion spots etc., occurring in transit and handling, and application of final coat shall be performed by the appropriate contractor after delivery by manufacturer. If doors are shipped unfinished, it should be noted that while they are carefully belt sanded, this does not mean they will be ready for painter's finish on arrival. Specifications should therefore require the appropriate contractor to inspect, retouch, hand clean and spot-sand as may be necessary to remove soiled or abrasion spots occurring in transit and with handling.

PREPARATION FOR LOCKS AND HINGES: Hardwood Products Corporation can prepare the door for locks and hinges, if desired. Application of the hardware by others.

HARDWOOD PRODUCTS CORPORATION

STANDARD/SPECIAL

Solid Core Flush Doors

African Mahogany

STRAIGHT-FLUSH DOORS

FOR INTERIOR AND EXTERIOR USE

1 Standard 1/4" thick face veneers sawn from solid lumber as listed below.

2 Solid core of random length horizontal wood staves are glued and permanently press-bonded together to form panels and cross rails of equal width as illustrated.

3 Built-up vertical stave stiles are tongue and grooved into panels and rails. All rails dowelled and glued into stiles.

4 Vertical edge strips same specie as face veneer. Hardwood top and bottom edge strips on top and bottom rails only.

FACE VENEERS

1/4 FACE VENEERS INCLUDE: —

- Northern White Pine
- Ponderosa Pine
- Plain Red Oak
- Natural Gum
- Selected Red Gum
- Natural Birch
- Plain African Mahogany

Other veneers are available upon request.

In addition to Solid Core Flush and Sound Insulating doors, Hardwood Products Corporation of Neenah, Wisconsin produces many different types of functional purpose doors to meet specific requirements in buildings of every type and description. See page 8.

STURDY-FLUSH DOORS

FOR INTERIOR AND EXTERIOR USE

1 Standard 1/8", 1/20" and 1/28" face veneers as described below.

2 Cross-banding of 1/12" thickness between finish face and core provides additional strength and stability in a completely glued up 5-ply solid core door.

3 Solid, framed core made up of random length wood staves glued and permanently press-bonded and dowelled together. Vertical stave panels and stiles, horizontal stave rails. Panels, stiles and rails dowelled and tongue and grooved as shown.

4 Vertical edge strips same specie as face veneer. Hardwood top and bottom edge strips on top and bottom rails only.

FACE VENEERS

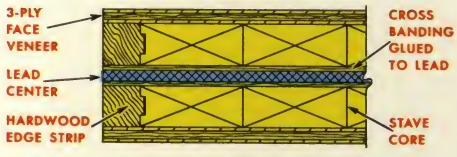
1/8" Face Veneers are available in the same species of wood as those listed for STRAIGHT-FLUSH DOORS in 1/4" veneers.

1/20" and 1/28" Face Veneers are available in the same species of wood as those listed under STANDARD FLUSH DOORS described on page 4.

Red Birch

SPECIAL PURPOSE DOORS

X-RAY LEAD-LINED DOORS X-Ray laboratories, particularly in hospitals, require lead shielded doors to prevent leakage of the rays. This calls for lead lined doors in which



lead sheeting is complete from edge to edge. Hardwood Products research has developed a safer construction which eliminates the need for bolts, thereby making it impossible to leak through, either by by-passing the lead or by angular attack.

GROUNDED DOORS

Other special hospital, laboratory and industrial door needs are met with Hardwood Products "Grounded Doors." For use in operating rooms, laboratories handling highly volatile fluids and explosive gases, and in oil and hydro-carbon refineries, etc., they are an important safety factor. These doors, fitted with flat braided copper wires for grounding to hinges, locks and other hardware reduce the danger of flash fires or explosions resulting from static sparks.

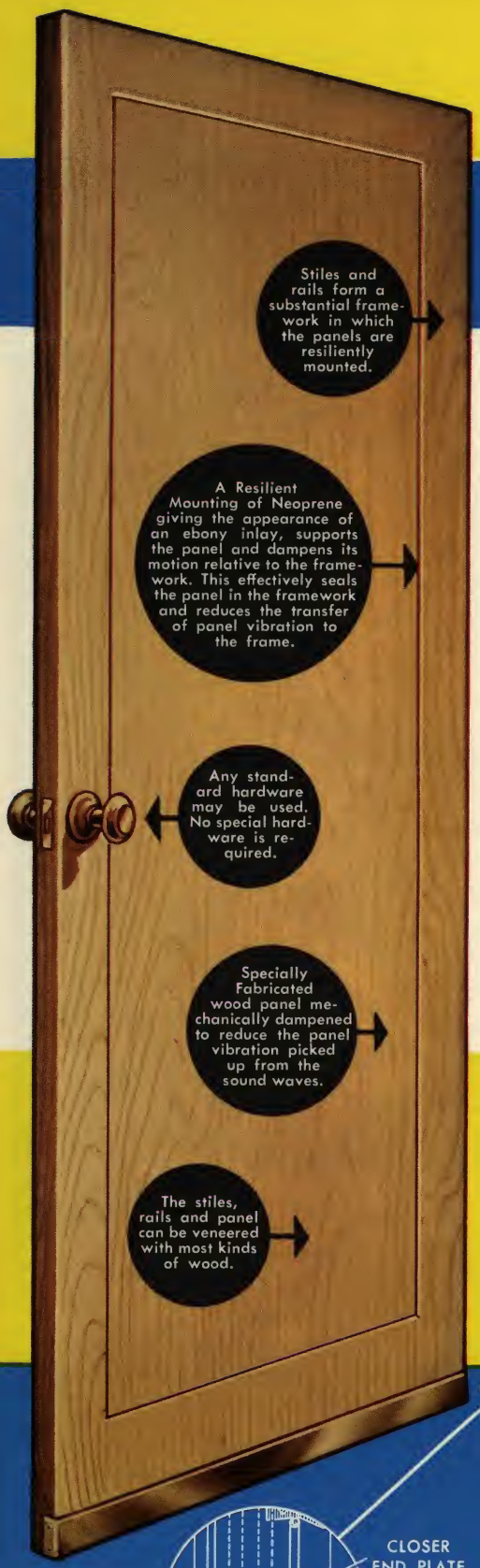
AUDITORIUM DOORS

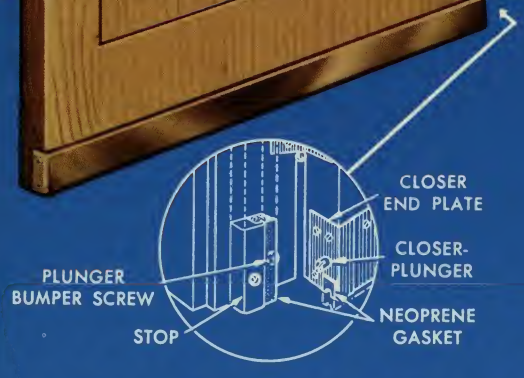
Large size auditorium doors and folding partitions can be built to architect's specifications. These can be up to 5' wide and 25' high. Hardwood Products construction assures a firm, solid door that will withstand many years of service. These doors are built on Special order only.

PANEL DOORS

Although veneered paneled doors are not in great demand today, we can produce them to your needs when the job requires.

SOUND INSULATING


Stiles and rails form a substantial framework in which the panels are resiliently mounted.
A Resilient Mounting of Neoprene giving the appearance of an ebony inlay, supports the panel and dampens its motion relative to the framework. This effectively seals the panel in the framework and reduces the transfer of panel vibration to the frame.
Any standard hardware may be used. No special hardware is required.
Specially Fabricated wood panel mechanically dampened to reduce the panel vibration picked up from the sound waves.
The stiles, rails and panel can be veneered with most kinds of wood.



Automatic surface mounted closing device effectively seals threshold crack when door is closed. (Center mounted closures leave open voids at bottom corners of door). HPC's device releases instantly as door opens without any drag on threshold. Brushed bronze finished, (Color #U.S. 10) it has the appearance of a narrow kick plate — on top side of door only.

Sound volume passage is determined by the insulating value of the weakest acoustic area such as ceilings, walls, floors and duct work. For doorways, scientifically designed and constructed HPC Sound Insulating Doors are unusually high in acoustic insulating value. Sound does not pass through a solid structure but sets up vibrational energy which carries from one side to the other. Because of this, one of the most effective methods for arresting sound transmission is to isolate the two barrier faces with an unfilled air space to prevent opposite surfaces from vibrating in unison. It is this basic structural principle (see detail below) that makes our doors most efficient sound barriers.

Considerable confusion exists in evaluating Sound Insulating Doors. The chart opposite, shows results of tests made on identical doors (HPC No. 40) at three recognized laboratories by qualified professional physicists and acoustical engineers. All tests were conducted in accordance with the standards of ASTM E 90-55 and ASA Z 24.19-1957. None of these tests are invalid, even though they differ — the results vary because of different techniques and facilities used. Therefore, it is essential when comparing Sound Insulating Doors to be certain: —

1 — That test reports of the same laboratory be compared.

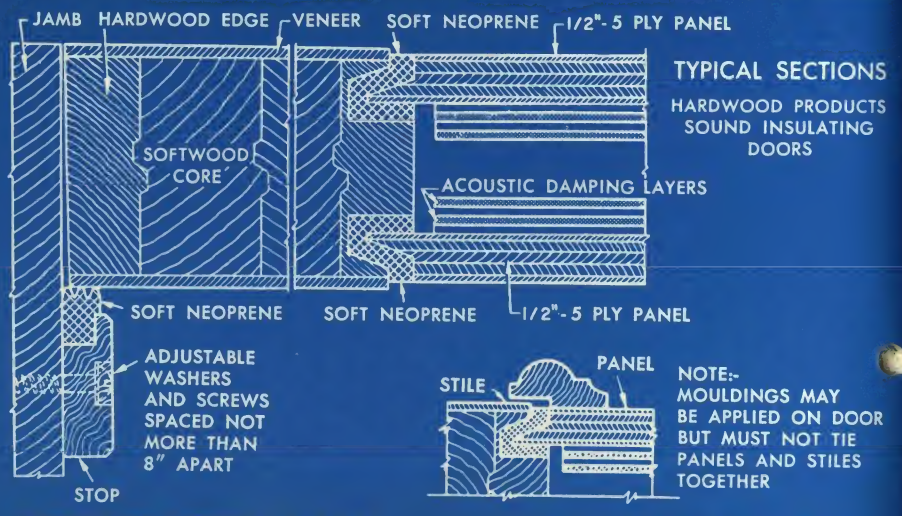
2 — That each door was installed and tested in the same manner as a caulked panel, or as a field installation with manufacturers' own sealing devices only.

3 — That the quality of the door is evaluated to be certain that it, with its own sealing devices, will retain its structural stability and continue to function as laboratory predicted.

DOOR WEIGHTS AND HARDWARE

The weight of 40 Decibel Sound Insulating Doors is approximately 7 lbs. per sq. foot — the 43 decibel doors approximately 8 lbs. per sq. foot and the 35 decibel doors, approximately 4 lbs. per sq. foot.

Hardware to be used should consist of three butts not smaller than 5 in. by 5 in. — ball bearing preferred but not essential. Latch on lock sets can match similar building hardware but should have spindles long enough for the door thickness. Because of the weight of these doors, the four joints where stiles and rails meet are reinforced with dowels. No hardware should be used which requires cutting these dowels or otherwise weakening this area.



TYPICAL SECTIONS
HARDWOOD PRODUCTS SOUND INSULATING DOORS

MOULDINGS APPLIED TO DOOR

NOTE:- MOULDINGS MAY BE APPLIED ON DOOR BUT MUST NOT TIE PANELS AND STILES TOGETHER

SECTION THRU DOOR AND STOP

Solid Core Flush Doors

THE DECIBEL SCALE is a logarithmic one which provides a practicable expression of sound impact on the human ear. The same number of decibels represent a greater and greater range of sound intensity as the sound intensity increases. For practical purposes, a few decibels may represent the margin between tolerable and intolerable noise levels—the difference between success and failure in sound insulation.

LABORATORY TESTS FOR HPC DOOR NO. 40 (2½" thick)

TESTING LABORATORY	SOUND REDUCTION (Panel Tests*)	SOUND REDUCTION (Installation Tests**)
Geiger & Hamme Ann Arbor, Michigan	42 Decibels	40 Decibels
National Bureau of Standards Washington, D. C.	41 Decibels	36 Decibels
Riverbank Laboratories Geneva, Illinois	38 Decibels	34 Decibels

* Perimeter Sealed with caulking compound

** Perimeter Sealed with HPC gasketed stops and automatic threshold closer

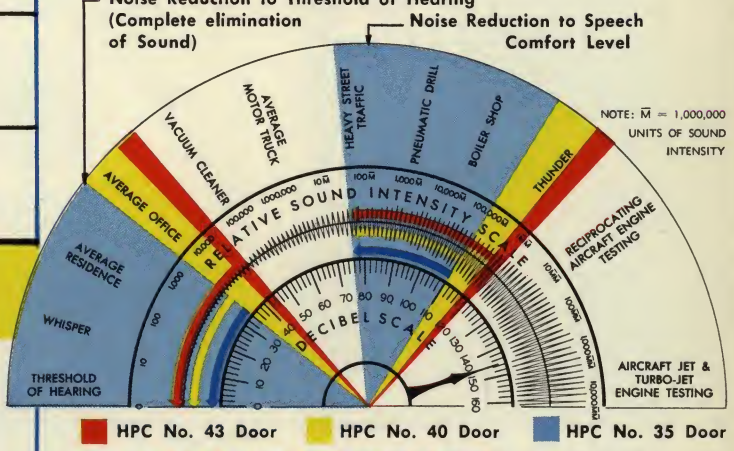
HPC No. 35 Door (1¾" thick) has a sound reduction of 34 decibels.

HPC No. 43 Door (3" thick) has a sound reduction of 44 decibels. Both doors tested as a panel by the National Bureau of Standards.

LIGHT OPENINGS—Recent tests by the Riverbank Laboratories demonstrate that our HPC No. 40 door with a 20" x 24" light opening with glass installed per our detail shown below, has a sound loss of ½ of one decibel over the value of the door itself. For practical purposes, this may be considered as no loss.

EFFECTIVENESS OF HPC DOORS IN SOUND REDUCTION

While HPC Sound Insulating Doors reduce the intensity of all noises, this chart shows areas of maximum effectiveness.



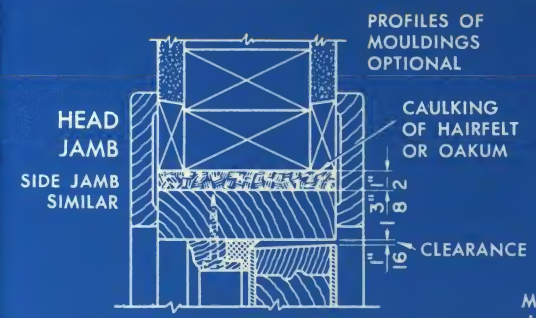
DOORS OF 3 SOUND REDUCTION RATINGS. To meet the wide range of acoustical needs, HPC Sound Insulating Doors are made in three different laboratory certified ratings. Laboratory measurement of sound reduction of each door is the average over a range of sound frequencies from 125 to 4000 cycles with doors hung and sealed as installed on the job.

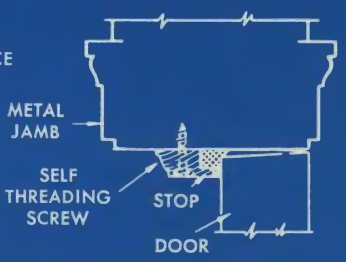
SUGGESTED SPECIFICATIONS

Sound Insulating Doors, as indicated on the plans are to be Hardwood No.____ as furnished by Hardwood Products Corporation, to provide a sound reduction of ____ decibels; or doors of equal sound insulating efficiency as certified by laboratory tests. Doors are to be furnished complete with special stops, stop adjusters, gaskets and automatic threshold-sealing device. Door veneers to correspond with woodwork in adjoining spaces. Jambs, trim and hardware to be furnished by others under separate contracts.

In specifying the proper door, consideration must be given to the sound reduction provided by adjacent wall areas. Write for specific details.

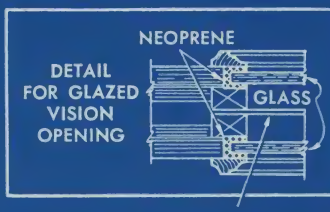
WHEN ORDERING indicate swing of door by sketch as indicated below. Direction of swing is determined by position of hinges when facing door from stop side of opening. Doors are stocked in standard sizes, in natural Birch Veneers. Special veneers and sizes available on order.

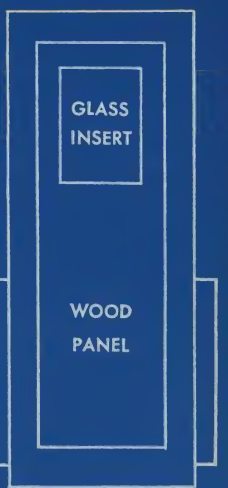




INSTALLING DOOR IN METAL JAMB
(Flush metal jamb should be specified).

RECOMMENDED MAXIMUM LIGHT OPENING IS 24 x 24". MINIMUM DISTANCE FROM EDGE OF LIGHT TO EDGE OF DOOR IS 8"



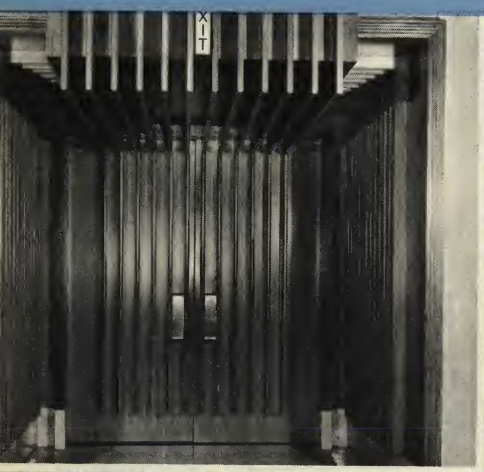


Note complete separation of panels to avoid noise transmission.

ARCHITECTURAL

Special Detail Doors

These photographic illustrations are typical examples of the many "custom-made" decorative doors we make according to architect's design. Many doors of this type are made up from ornamental detail mouldings which we consider as Standard — some of which are shown on page 11.



Veneer DOOR FACING Data

The wood species and veneer thicknesses briefly described below are those that are most popular for door face veneers. All are readily available from us. In addition, we can furnish other veneers such as Butternut, Cherry and the highly figured and decorative cabinet woods not described herein. Standard thicknesses are before sanding.

Solid Core Flush Doors

PINE

The Pines most commonly used in door manufacture are Northern White Pine, Sugar Pine and Ponderosa Pine. Of these, only Northern White and Sugar Pine can be botanically numbered among the true White Pines. Ponderosa Pine is the lightest in color of the Yellow Pines and has very similar texture to the true White Pine. Over the last quarter-century, it has been common understanding in the wood working and lumber trades that Ponderosa Pine is acceptable against specifications calling simply for White Pine. Accordingly, misunderstandings can be avoided by specifying the White Pine species desired in those cases where Ponderosa Pine may not be acceptable. Both Sugar Pine and Ponderosa Pine are available only in 1/8" and 1/4" Sawn veneers. Northern White Pine is available only in 1/20" Rotary Cut and 1/20" Sliced Veneer.

OAK

The Oaks vary more widely in figure and coloring than most other species. The terms "Red Oak" and "White Oak" refer to different kinds of trees rather than being truly descriptive of wood color. White Oaks are white or grayish-brown in color, occasionally with a reddish tinge, while the Red Oaks usually show a reddish tinge, although occasionally they very closely resemble the White Oaks in color. Where evenness of color is desired, red oak is a wiser choice.

RED OAK Plain Red Oak, is available in 1/20" Rotary Cut, 1/24" Sliced, and 1/8" and 1/4" plain Sawn veneers. 1/28" Rift Oak is also available in limited quantities.

WHITE OAK The White Oaks show a close similarity in figure to the Red Oaks. White Oak is available in 1/24" Plain Sliced and in 1/28" Comb grain; the latter having a fine, straight line figure.

WALNUT

American Walnut is usually sliced so as to obtain its highly figured grain in veneers. Both Plain Walnut and Quarter Sliced (straight grain) Walnut are available in 1/28" Sliced veneers

HARD MAPLE

The wood of the Hard Maple is heavy, hard and strong with a uniform texture, and offers excellent resistance to abrasion or indentation. The sapwood of the Hard Maple is white with a slightly reddish-brown tinge, while the heartwood is a light reddish-brown. The Natural Hard Maple exhibits both of these colors, while Selected White Maple is the sapwood only. Both Natural Hard Maple and Selected White Hard Maple are available in 1/20" Rotary Cut and Natural Hard Maple in 1/8" and 1/4" Sawn veneers.

GUM

Both Natural and Selected Gumwood veneers available come from the Red Gum tree. Natural Gumwood veneers are especially desirable for doors which are to be paint finished as their fine grain is readily concealed.

NATURAL GUM 1. Natural gum contains both the reddish-brown heartwood as well as sapwood which varies in color from an off-white, through yellowish-cream, to reddish-brown. Natural Gum is available in 1/20" Rotary Cut, 1/24" Sliced and 1/8" and 1/4" Sawn veneers.

SELECTED GUM 2. Selected Red Gum increases the cost somewhat over the natural wood, and should be recommended only when a natural finish is to be used and the selected color is essential for decorative purposes. It is available in 1/20" Rotary Cut, and 1/4" and 1/8" Sawn veneers.

BIRCH

Nearly all Birch veneer used in quality doors comes from the Yellow Birch tree. Yellow Birch enjoys a wide and deserved, popularity because of its beauty, strength, and even texture. As used for door veneer, there are three classifications of Yellow Birch:

NATURAL BIRCH 1. Natural (sometimes referred to as Unselected) Birch means a mixture of heartwood (Red) and sapwood (White). Natural Birch is selected for quality but not for color. It is available in 1/24" Rotary Cut veneers, 1/28" Sliced veneers, and 1/8" and 1/4" Sawn veneers.

RED BIRCH 2. Red Birch is the heartwood of the Yellow Birch tree, and is selected for both color and quality. Selected Red Birch is available in 1/24" Rotary Cut and 1/28" Sliced veneers.

WHITE BIRCH 3. White Birch is the sapwood of the Yellow Birch tree, and is selected for both color and quality. Selected White Birch is available in 1/24" Rotary Cut and 1/28" Sliced veneers.

The specification "Selected for Color" increases the cost somewhat over Unselected or Natural Birch, and accordingly is recommended only when a light, natural finish is to be used and the selected color is essential for decorative purposes. The pleasing variety of color and figure of Natural Birch enjoys wide popularity and acceptance.

MAHOGANY

The Mahoganies, offer both beauty of figure and excellent structural characteristics.

AFRICAN MAHOGANY 1. Plain African Mahogany with its fine, even figure, is available in 1/28" Sliced, 1/8" and 1/4" Sawn veneers. African Ribbon Stripe Mahogany is available in 1/28" Sliced veneer.

PLAIN PHILIPPINE MAHOGANY 2. Plain Philippine Mahogany is available in 1/28" Sliced, and 1/8" and 1/4" Sawn veneers. Philippine Mahogany is not a true Mahogany, botanically; its correct name is Lauan. It is available in Red Tanguile which approaches very closely the color of African Mahogany, and as White Lauan which is a light tan shade. Both are very similar to the true Mahoganies in other characteristics.

Solid Core Door SECTIONALS

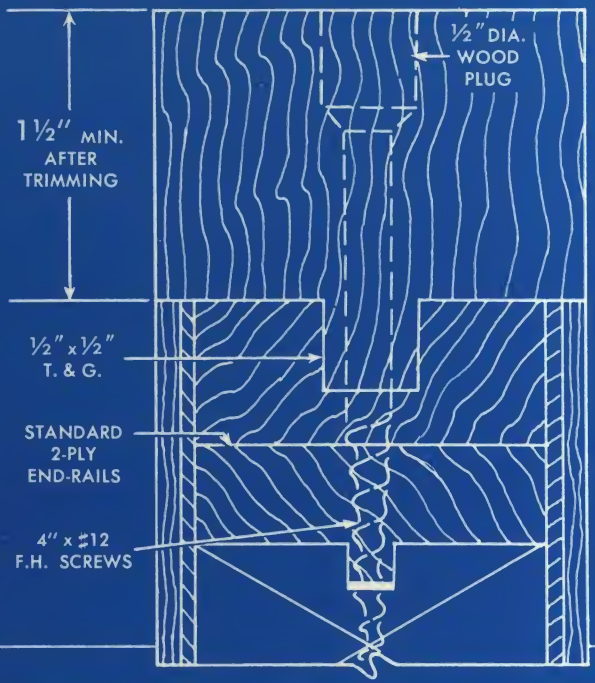
FULL SCALE

SECTIONS • Solid Flush Veneered Doors • 1¾" Thick

1/8" FACES • 1/12" CROSS-BANDING

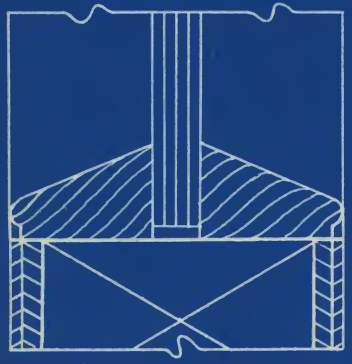
1/20" FACES • 1/12" CROSS-BANDING

SECTION • Exposed Edge Strip • Top and Bottom, Master Flush Exterior Doors

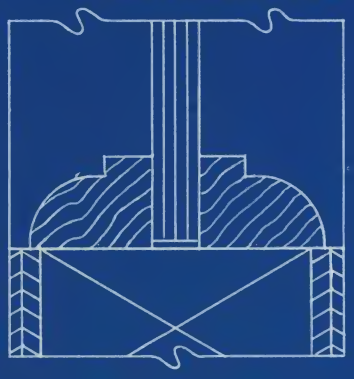


Hardwood Products Corporation highly recommends this top and bottom flush edge strip on doors for exterior use, as a protection from inclement weather. Screws are located 3" from edges of doors and approximately 8" on center to insure a tight glued-up strip. Screws are countersunk and holes wood plugged.

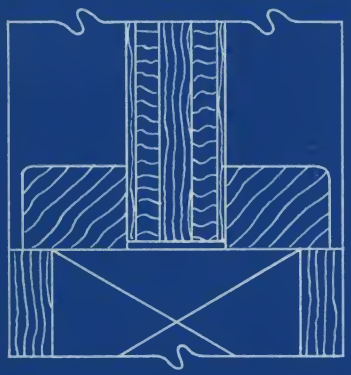
Interior Glass Light Construction



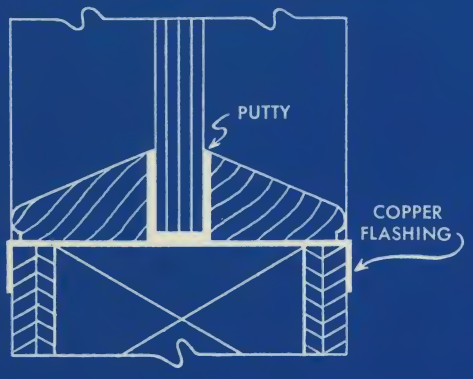
Interior Glass Light Construction



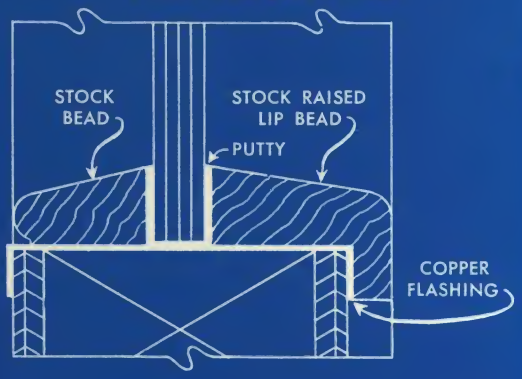
Interior Panel Construction



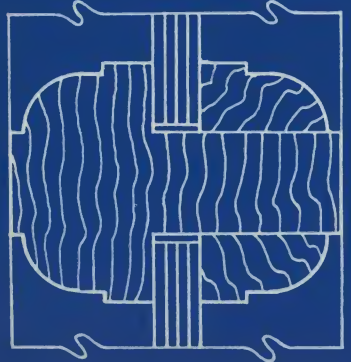
Exterior Glass Light Construction



Exterior Glass Light Construction

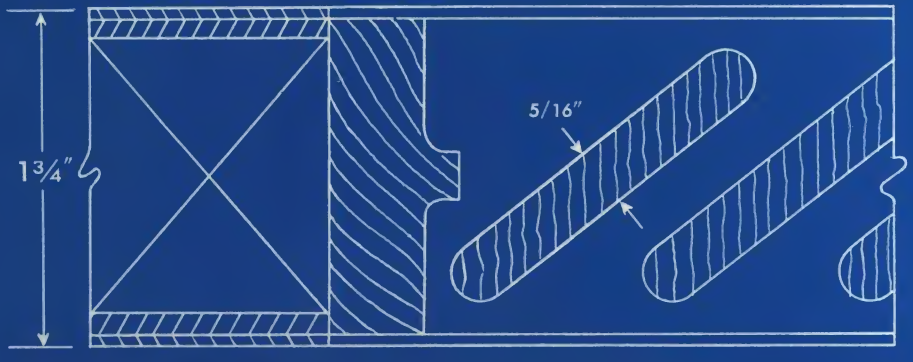


Interior Divided Light Detail



Section • Wood Louvre Construction

1/20" FACES • 1/12" CROSS-BANDING

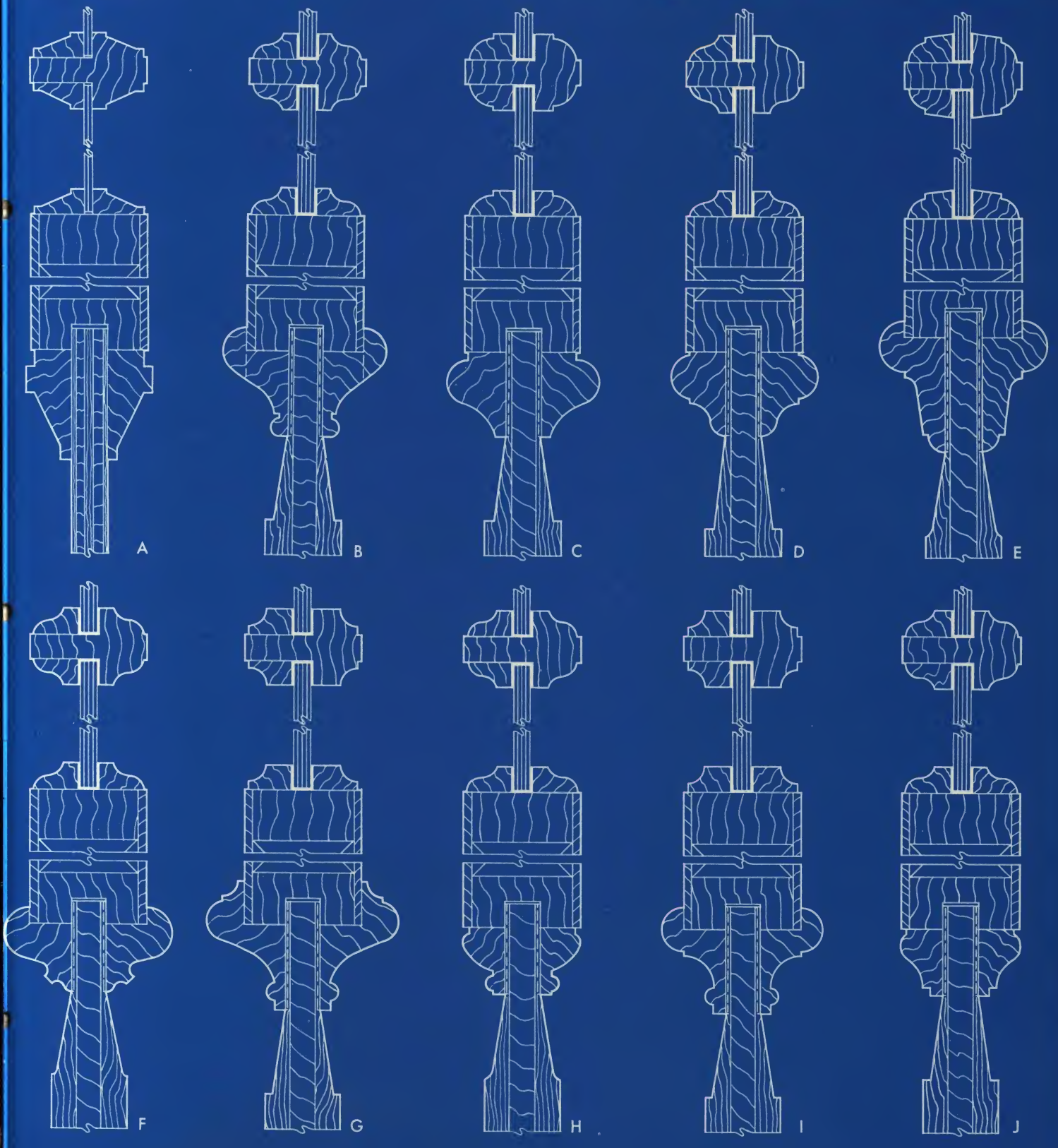


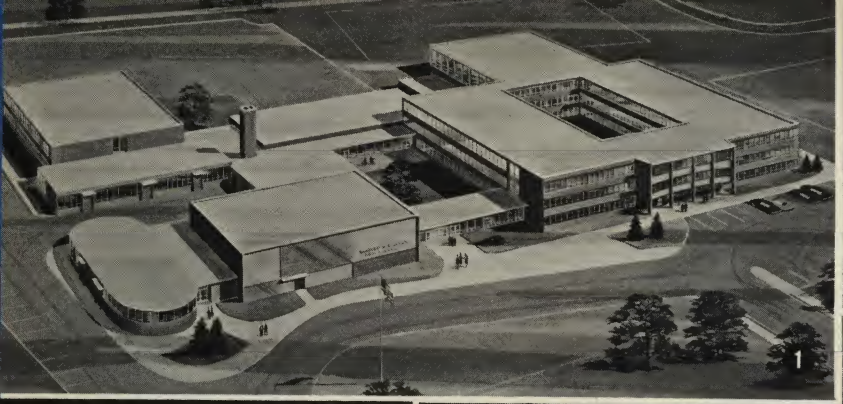
Panel and Moulding SECTIONALS

Suggested designs for Flat Panel, Raised Panel, Divided Lights and Raised Moulding Doors

This group of panel and moulding designs represents those which we consider as Standard Stock Designs. Many doors of the type photographically illustrated on page 8 were made up from these standard patterns. When possible, and for purposes of economy we suggest using these Standard designs in your detailing.

HALF SCALE





Technical Assistance

At Hardwood Products Corporation, doors are manufactured with modern, up-to-date equipment by skilled artisans and workmen. Continual and diligent inspection is made at every phase of manufacture and the most efficient methods consistent with sound workmanship are used.

Hardwood Products doors are offered with pride — specified with confidence. They are not *always* the least expensive but they *are* the finest! Architects are cordially invited to visit our plant and study our methods of door construction at any time. We will be pleased to offer technical assistance on any doorway problems you may have.

ARCHITECT SPECIFIED

1 — Sanford H. Calhoun High School—Merrick, New York
Architect: Frederick P. Wiedersum Associates—Valley Stream, New York

2 — Salvation Army Territorial Headquarters—Chicago
Architect: Skadberg-Olson Company—Chicago

3 — American Fore Insurance Group Building—Chicago
Architect: Loebl, Schlossman & Bennett—Chicago

4 — David S. Ingalls Hockey Rink—Yale University, New Haven, Conn.
Architect: Eero Saarinen and Associates—Birmingham, Michigan

5 — Frontier Center High School—Hamburg, New York
Architect: Earl Martin—Buffalo, New York

6 — Noble Hospital—Westfield, Mass.
Architect: James H. Ritchie and Associates—Boston

7 — Shoregate Elementary School—Willowick, Ohio
Architect: Spahn & Barnes—Cleveland Heights, Ohio

Guarantee

We Unqualifiedly Guarantee every HARDWOOD PRODUCTS CORPORATION Door, made according to our recommendations, to be free from defects of workmanship and materials, and will replace any doors that prove to be defective within the meaning of our specifications and the National Woodwork Mfrs. Assn. guarantee in the Sweet's Architectural File Catalog.

HARDWOOD PRODUCTS CORPORATION

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HASKELITE

MANUFACTURING CORPORATION GRAND RAPIDS, MICHIGAN

Hollow and solid core INSTITUTIONAL DOORS

Designed for American Architects to enhance the beauty of American architecture

HASKELITE

HIGHEST QUALITY WOODS AND WORKMANSHIP ASSURE LASTING CLIENT SATISFACTION

HASKELITE BRICK-BLOCK SOLID CORE DOORS

Haskelite brick-block solid core doors are the quality product of Haskelite's long experience in moisture-controlled manufacturing techniques. Only carefully dried, selected woods are used for the core, frame and faces—resulting in doors of rugged durability with maximum resistance to warping and other defects. Available in a wide variety of standard and special faces (including metals, plastics, and exotic woods) to meet the architectural requirements of any type modern building.

ARCHITECTURAL SPECIFICATIONS: All doors shall be manufactured by Haskelite Manufacturing Corporation. They shall be constructed 5- or 7-ply. Core shall be made up of low density, kiln dried wood block construction not more than 2½ inches wide in various lengths assembled with grain running vertically. Stiles—the vertical edge strips are to be clear and full length with a minimum width of ½" after trimming in species specified. Top and bottom rails are to be softwood, unless otherwise specified, and of a minimum width of 2 inches. Veneers for crossbanding and face species specified shall be tapeless spliced. Faces may be 2- or 3-ply construction with minimum total thickness of ⅛" and shall be machine-polished ready for finishing. Adhesives specified for all glue lines between veneer plies and core unit shall be in accordance with Commercial Standards CS171-58.

HASKELITE HOLLOW CORE DOORS

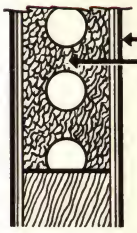
Lightweight Haskelite hollow core doors are precision constructed of the finest materials to combine lightness of weight with outstanding beauty, strength and durability—all at a moderate price. They hang straighter, open and close easier, are easier to install. Seven-ply construction provides peak resistance to distortion—eliminates core and frame show-through. Carefully selected wood-fiber derivative core is spaced 2½" on center to provide greater area of contact between core and faces for extra stability. Specially reinforced frame accommodates most special hardware. Backed by a guarantee against delamination.

ARCHITECTURAL SPECIFICATIONS: All doors shall be manufactured by Haskelite Manufacturing Corporation. They shall be constructed 7-ply. Cores shall be ladder type, wood derivative, spaced 2½" on center. Clear softwood frame with 5" top rail area, 10" bottom rail area, and nominal 2⅛" clear full length stiles. Hardwood edge strips shall be laminated to stiles and shall be ½" wide after trimming. The center crossrail shall be 2⅛" wide. Lock blocks each side 20" long, nominal 6" width including stiles with edge strips. Faces as specified, 3-ply construction, made up of standard thickness veneers, ⅛" thick before machine polishing, tapeless spliced and machine-polished. All adhesives shall conform to Commercial Standards CS171-58.

INSTITUTIONAL DOORS

For over forty years Haskelite has been the recognized leader in laminated construction materials. During World War I Haskelite plywood was used in the construction of 5,500 airplanes. Haskelite plywood was also used in Lindbergh's famed "Spirit of St. Louis" and in Britain's World War II Mosquito bombers, molded PT boats, and land mines. All of which bears testimony to Haskelite's proven product quality and dependability—your assurance that when you specify *Haskelite* institutional doors you specify the finest.

HASKELITE
PARTICLE-BOARD SOLID CORE DOORS



VENEER
Hard, grain-free, wood particle-board, core extruded under high heat and pressure.

Haskelite tubular particle-board core doors are specified for institutional use by leading architects from coast to coast. No other doors offer so many structural advantages at so moderate a price. They combine a substantial, solid appearance with lightness of weight and low sound transmission possible only with this type of construction. Resin-impregnated core has fire-retardant and moisture-repellent characteristics. Like all Haskelite doors, they are fully guaranteed in writing for the protection of your clients.

ARCHITECTURAL SPECIFICATIONS: All doors shall be manufactured by Haskelite Manufacturing Corporation. They shall be constructed 5- or 7-ply. Core—tubular particle board. Stiles, nominal 1⅛" after trimming—½" hardwood-edge strips when specified. Top and bottom rails, minimum 2" width—clear softwood. The extruded tubular particle board core shall be made from wood chips and resin, with lock-block area 6" x 20" each side of door. Veneers for crossbanding and face species specified shall be tapeless spliced. Faces may be 2- or 3-ply construction with minimum total thickness of ⅛" and shall be machine-polished ready for finishing. Adhesives specified for all glue lines between veneer plies and core unit shall be in accordance with Commercial Standards CS171-58.

Advanced THERMO-BONDING PROCESS uses pressure and heat to assure maximum resistance to distortion

QUALITY-CONTROLLED UNITIZED FRAME CONSTRUCTION provides outstanding structural rigidity . . . plus 100% adhesion at all points of contact with face

VELVETIZED SURFACE brings out the full natural beauty of Haskelite face veneers . . . requires less material and labor in finishing

All doors can be factory prefit to specification for fast, easy, more economical installation

Complete factory prefinishing available per architectural specifications

HASKELITE

SPECIES AVAILABLE FOR FACES

Natural Birch, Select White or Red Birch, Plain Sliced Red or White Oak, American Black Walnut, Plain Sliced and Ribbon Stripe Mahogany.

Many other facing materials available upon specification.

STOCK SIZES

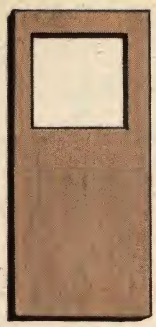
Stock sizes 1' 6" through 4' 0" widths, in lengths to 8' 0" available. Special sizes manufactured to architectural specifications. Available in following thicknesses: 1⅛", 1⅜", 1¾", 2" and 2¼".

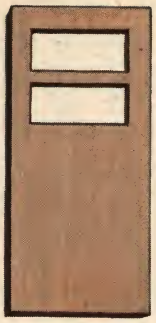
LIFETIME GUARANTEE

1. Haskelite doors are guaranteed to meet or exceed the minimum specifications for hollow-core and solid-core flush doors as set forth in the Commercial Standards of the U.S. Department of Commerce.
2. Haskelite agrees to replace in the white, without charge, any Haskelite door found defective in material or workmanship within the meaning of this warranty.

HASKELITE MANUFACTURING CORPORATION
a subsidiary of Evans Products Company

SEE HASKELITE CURTAIN WALL CATALOG 3e
Ha

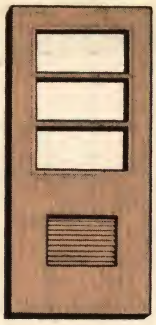


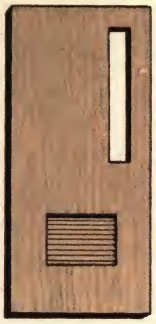


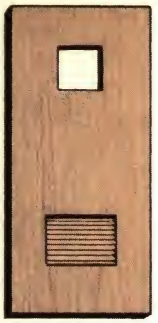
TYPICAL HASKELITE LIGHT DESIGNS

Light openings are provided according to architectural specification or in accordance with Haskelite manufacturing detail list. Constructed weather-tight. Available in solid or hollow core doors.

STANDARD PREFAB GLAZED LITES ALSO AVAILABLE UPON SPECIFICATION

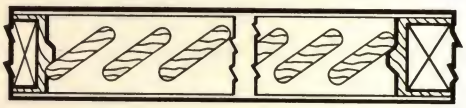






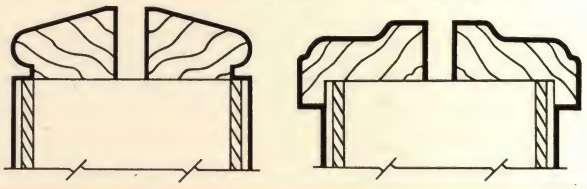
HASKELITE STANDARD LOUVER CONSTRUCTION

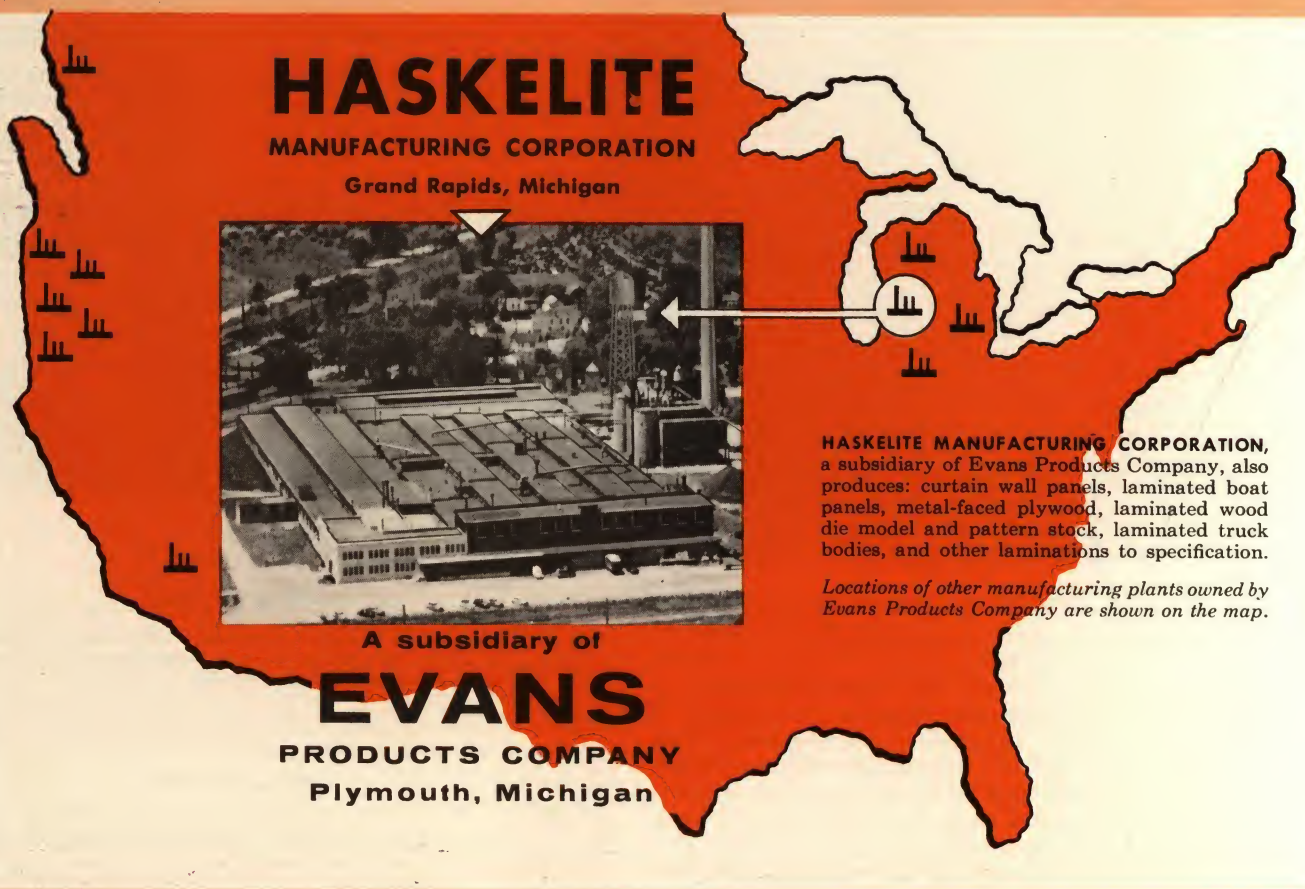
Where specified, doors shall be provided with louver openings conforming to architect's drawing or in accordance with Haskelite manufacturing detail list. Beading when specified will be tacked in.



HASKELITE STOCK DOOR MOLDINGS

Also available with architecturally specified moldings

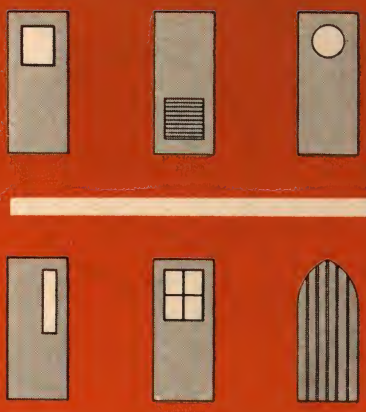




HASKELITE MANUFACTURING CORPORATION, a subsidiary of Evans Products Company, also produces: curtain wall panels, laminated boat panels, metal-faced plywood, laminated wood die model and pattern stock, laminated truck bodies, and other laminations to specification.

Locations of other manufacturing plants owned by Evans Products Company are shown on the map.

16c
Hy



NO-WARP SOLID CORE

FLUSH WOOD DOORS

HYDE MURPHY COMPANY

"Craftsmen in wood since 1866"

Hyde-Murphy wood doors

Hyde-Murphy Company GUARANTEE

Each door we manufacture is guaranteed for the life of the installation to be free from defects affecting its utility or appearance for the use for which it was manufactured. We agree to replace in the white, delivery charges prepaid, and further to pay reasonable rehanging and refinishing costs for any door which does not meet the Standard Door Guarantee of the National Woodwork Manufacturer's Association.

since 1866

Hyde-Murphy has been engaged in wood working. The work is done by craftsmen whose service with the company extends to 52 years—with an average of 19 years of service. One of the very few manufacturers who make both the five-ply slab-core flush door *and* the three-ply framed-core heavy-veneer flush door, Hyde-Murphy is constantly seeking to provide the utmost in wood doors at the lowest prices consistent with a quality product.

job site delivery

Over 90% of our door production is delivered to the project or the dealer's warehouse in our motor vans, saving the customer the cost of crating and eliminating delays incident to commercial freight.

custom services

When required, Hyde-Murphy craftsmanship is available for the following services:

- Doors can be pre-fitted.
- Doors can be machined for locks and butts.
- Doors can be filled and stained, or given a prime coat of finish, before shipment.
- Doors can be completely finished in our modern Finishing Department.
- Door veneers can be sequence-matched with adjoining plywood wainscot, which we also manufacture.

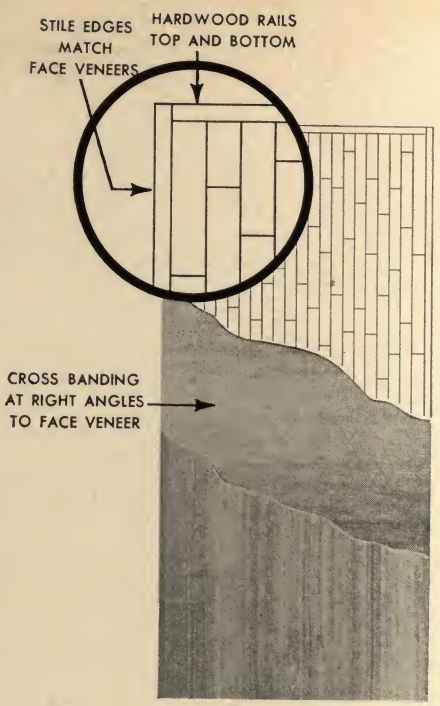
type 1—5 ply

no-warp

solid core

flush

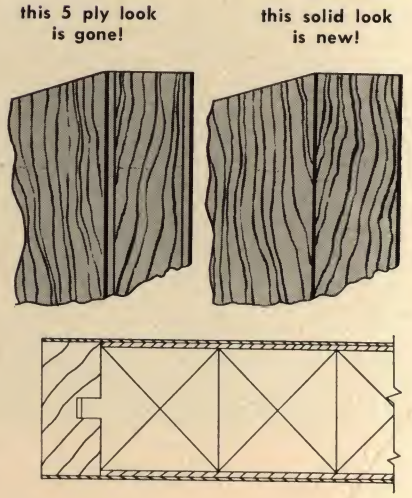
Modern type, "No-Warp," flush doors with staved cores. Simplified cores and thinner face veneers permit selling these guaranteed doors at the lowest prices consistent with a quality product.



the Guild-Edge door

the custom touch of Hyde-Murphy on the standard 5 ply door

The Guild-Edge door features the concealed crossband construction (see detail at right) formerly used only on our fine custom mill work installations, as a standard construction with a price which is only slightly more than the price of a standard 5 ply architectural door. The matching edge strip is color selected to match the face veneer producing a solid vertical edge. Other features of our type 1 doors apply.



type 2—3 ply

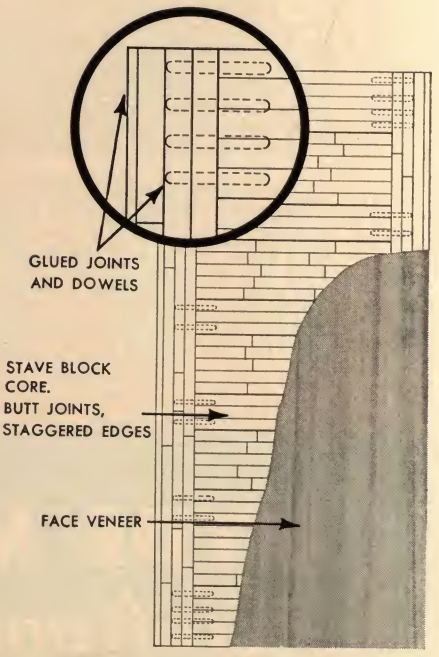
no-warp

solid core

flush

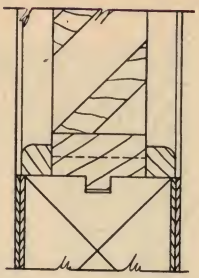
Original "No-Warp" flush doors using typical stile and rail cores and heavy veneers. This superior construction is more expensive than Type 1.

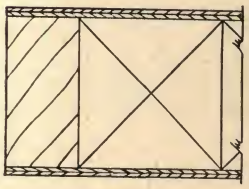
Our guarantee covers both types.

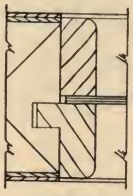


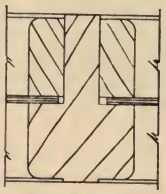
details (1/2 full size)

note: DETAIL E is not shown; deep grooves are impossible because, in this type of door, the face veneer is too thin.


SECTION D


SECTION A


SECTION B


SECTION C

specifications

All doors shall be five-ply, "no-warp" solid core construction, with face veneers and edge strips of ..... (see list of woods in chart below) as manufactured by Hyde-Murphy Company.

High quality resin water-resistant glue shall be used throughout. Cores of doors shall be of properly kiln-dried White Pine, in short strips and not over 1¾" wide, glued together under pressure, with joints staggered in adjacent rows.

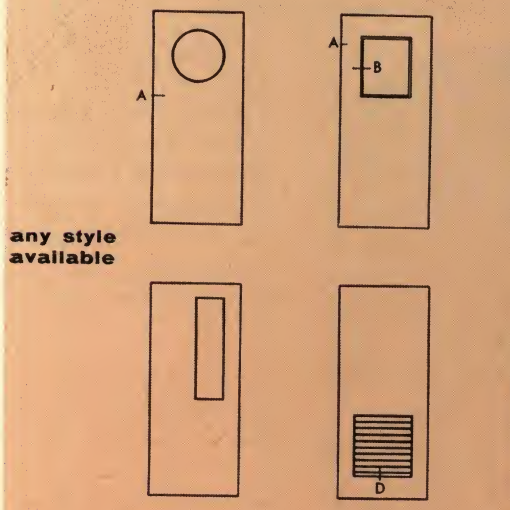
Edge strips, at least ¾" thick, shall be glued under pressure to the edges of core slab. End strips of 1 1/16" hardwood, shall be glued under pressure to the top and bottom ends of the core slab.

Crossbandings of Poplar veneer 1/16" thick shall be glued under pressure to both faces of core slab with grain running at right angles to the grain of the core slab.

Face veneers shall be ..... inches thick (see chart below) free from defects marring the appearance of the finished door, carefully matched for color and figure. Doors indicated in the finish schedule to be painted need not be matched for color and figure. Face veneers shall be glued under pressure.

Faces of doors shall be belt-sanded by the manufacturer using No. 2/0 sandpaper.

Where indicated in the door schedule and as detailed on drawings, doors shall be provided with glass and/or louvre openings, and wood louvres where indicated.



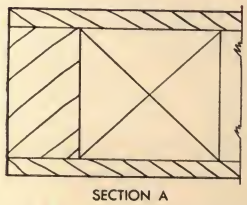
any style available

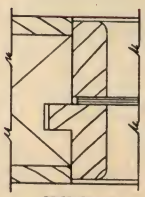
available veneers *

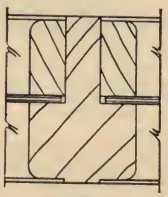
thickness in inches	1/28	1/16	1/8	1/4
Red Oak, Flat Grain	■			■
Red Oak, Rift Sawn (Comb Grain)	■			
Red Oak, Quartered	■			
White Oak, Flat Grain	■	■	■	■
White Oak, Rift Sawn (Comb Grain)	■			
White Oak, Quartered	■			
Walnut, Flat Grain	■			
Walnut, Quartered (straight-grain)	■			
Ash	■	■	■	■
Avodire	■			
Prima Vera	■			
Natural Birch	■	■	■	■
Selected Red Birch	■			
Selected White Birch	■			
Maple, Unselected for Color	■	■	■	■
Selected White Maple	■			
Cherry	■			
Quartered Sap Gum	■			
Plain Red Gum	■			
African Mahogany, Flat Grain	■	■	■	■
African Mahogany, Quartered	■			
Poplar	■	■	■	■
Teak	■			

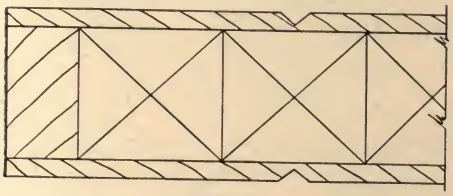
* Note only woods available in ¼" thick veneers may be specified for 3-ply doors.

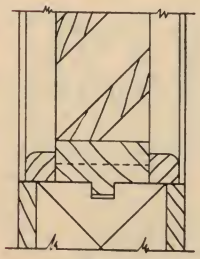
details (1/2 full size)


SECTION A


SECTION B


SECTION C


SECTION E


SECTION D

specifications

All doors shall be of 3-ply "no-warp" stile and rail core construction, with face veneers and edge strips of ..... (see list of woods in ¼" thick veneers in chart above) as manufactured by Hyde-Murphy Company.

High quality resin water-resistant glue shall be used throughout. Core shall be constructed of stile, rail and panel units of properly kiln-dried White Pine strips not over 1¾" wide, in short lengths, with joints staggered in adjacent rows. Pieces shall be machined and assembled into a core slab with rails dowelled to stiles, and panel units tongued into rails and stiles, and all parts glued under pressure into solid units. Wood grain in the assembled slab shall run horizontally, except in the stiles.

Edge strips, ¾" wide, of same species as face veneer, shall be glued under pressure to the stiles.

Face veneers shall be standard ¼" thick, finishing not less than 3/16" thick after sanding, carefully matched for grain and color, and shall be glued to the core slab using heat and pressure.

Faces of doors shall be belt-sanded by the door manufacturer using No. 2/0 sandpaper.

Where indicated in the door schedule and as detailed in the drawings, doors shall be provided with glass and/or louvre openings, and wood louvres where indicated

Hyde-Murphy wood doors

● Hyde-Murphy craftsmen at work

Jointing the edges of veneers makes possible such tight veneer joints that they are almost imperceptible.

Matching veneer faces with the eye of an artist to bring out the full beauty of unusual graining.

Wood louvres do not destroy the aesthetic effect of wood doors and permit flow of air and heat.

Careful inspection of doors before shipping eliminates dissatisfaction after delivery.

● representative installations

Baltimore, Maryland, Northwood Elementary School
Architects: Jamison and Marcks

Clayton, New York, Memorial Library
Architect: Carl W. Clark

Great Neck, New York, Great Neck Junior High School
Architects: Starrett & Van Vleek and Reginald E. Marsh

Irondequoit (Rochester), New York, Junior-Senior High School
Architect: Carl C. Ade

Massena, New York, Hjgh School and three Elementary Schools
Architects: Sargent, Webster, Crenshaw and Folley

New York, New York, Sheepshead Bay High School
Architects: Holden, Egan and Associates

Philadelphia, Pennsylvania, Library Building for American Philosophical Society
Architects: Martin, Stewart and Noble

Pittsburgh, Pennsylvania, Pittsburgh Xenia Theological Seminary
Architect: Press C. Dowler

Washington, D. C., National City Christian Church
Architect: Leon Chatelain, Jr.

Washington D. C., Synagogue for B'nai Israel Congregation
Architects: Brandt and Waronoff

● custom designed doors

If a door is designed in wood and properly engineered, Hyde-Murphy can make it. We are happy to work with the designers on special or unusual designs.

Church doors, doors with Gothic or circular heads, lead-lined doors, doors with carving, and other custom-type doors have been manufactured by Hyde-Murphy for four generations.

HYDE-MURPHY CO.

RIDGWAY, PENNSYLVANIA

SALES OFFICES ...

Main Office and Factory
Ridgway, Pennsylvania
PRospect 3-3135

Washington D. C. Office
818 18th Street, N.W.
Washington 6, D. C.
District 7-8681

Rochester, New York Office
39 Boardman Street
Rochester, N. Y.
GReenfield 3-6684

16c
lp

IPIK

Quality Craftsmanship
AWI
ARCHITECTURAL WOODWORK INSTITUTE

AIA-19-E-1

architectural

SCHOOLS
HOSPITALS
DORMITORIES
OFFICE BLDGS.
HOTELS-MOTELS

IPIK SOLID CORE DOORS

SOLID CORE FLUSH DOORS
TIMEMASTER SOLID CORE FLUSH DOORS
(Lifetime Guarantee)
ARCHITECTURAL PLYWOOD

CIVIC CENTER AND
SURROUNDING BLDGS.
NEW ORLEANS
DOORS BY IPIK

A Product of 20 Years Research & Development

IPIK DOORS

QUALITY CONTROL is the watchword at IPIK. Twenty years of research, development and experience have created a SUPERIOR Solid Core Door, unmatched and unequalled by any other in the industry. IPIK has over 100,000 square feet of plant devoted exclusively to the manufacture of ARCHITECTURAL SOLID CORE doors, plus the newest and most advanced manufacturing facilities and machinery, including some units designed and built especially for IPIK, and having no counterpart anywhere. As a result of this and of IPIK's Guarantee (see back page) Architects nationally specify IPIK architectural Solid Core Flush Doors with complete assurance that they are rigid, non-warping, non-delaminating, completely TROUBLE-FREE doors of exquisite beauty and touch.

FEATURES

Non-Warping: IPIK has recognized the inevitable movement of the wood due to absorption or dryout of moisture and has now provided a safety factor in all IPIK Solid Core Doors—the use of 1/16" expansion joints between core staves. This technique is similar to the asphalt impregnated fibreboard used in concrete joints or the cap and plate in steel work. Rigidity in IPIK Flush Doors is attained by use of sectional construction of long quarter-sawn core staves. This method of construction is vital to the elimination of warping and twisting, controlling troublesome stresses due to moisture and exposure conditions.

2. Waterproof Glue Line: To provide maximum protection for both interior and exterior doors, IPIK uses only waterproof marine glue applied by the hot plate press method under heat and pressure. Glue line is guaranteed against delamination for the life of the door.

3. Five-Ply Construction: IPIK's five-ply construction is recognized as SUPERIOR to all other types of construction by the leading experts in the door industry. Proper stability and satisfactory performance is built into IPIK's five-ply construction, utilizing the maximum full strength of the 1/10" Horizontal Grain Crossband.

4. Edge-banded: To prevent excessive moisture from entering the core through exposed end grain, IPIK bands all doors with kiln-dried, quarter-sawn hardwood edge strips, dovetailed at all four corners. (See insert #1) Top and bottom edges are sealed before leaving the factory to provide protection during shipping and storage period.

5. Adaptability: The solid and rigid construction of IPIK doors eliminates the necessity and additional expense for extra blocking often required by the use of special type hardware as well as light and louver openings. The solid wood core provides the sturdiness, stability, soundproofness and long endurance that only a solid construction makes possible.

100% Waterproof: The new installation of a Williams-White Hot Plate press assures 100% waterproof glue line and allows for doors up to 4'0" x 10'0". This installation complete with automatic loader is one of the vital factors in IPIK's Quality Control. This type of superior equipment is typical of all other high-quality machinery used throughout the plant.

6. Face Veneers: Maximum beauty always desired by architects is assured by IPIK's exclusive use of thin veneers (1/20" or 1/24" thickness for Rotary-cut Birch and Gum; 1/28" for all other woods). Use of thin veneers provides a wider range of selection for matching of color and grain. Only highest quality "A" grade face veneers are used at IPIK; these are carefully hand-matched and belt-sanded to satin smoothness by expert craftsmen. IPIK SOLID CORE Flush Doors are available in ALL hardwood veneers in all sizes.

SOLID CORE CONSTRUCTION: *Engineered for performance*
Proved by performance

GUIDE FOR COST COMPARISON

To provide a basis of cost comparison, some of the more popular types of veneers are listed below by groups in order of cost, least expensive first. All veneers in each group cost about the same.

GROUP 1
- Paint Grade Gum
- Paint Grade Birch
- Rotary "A" Natural Gum

GROUP 2
- Rotary Philippine Mahogany
- Rotary Red Oak

GROUP 3
- Plain Sliced African Mahogany
- Plain Sliced Honduras Mahogany
- Rotary "A" Natural Maple
- Rotary Select White Oak

GROUP 4
- Rotary "A" Natural Birch
- Rotary "A" Natural Brown Ash
- Ribbon Striped Philippine Mahogany
- Ribbon Striped African Mahogany

GROUP 5
- Rotary Select Red Gum
- Plain Sliced Red Oak
- Plain Sliced Pecan

GROUP 6
- Plain Sliced Brown Ash
- Rotary "A" Natural White Ash
- Plain Sliced "A" Natural Birch
- Plain Sliced White Oak
- Rift Red Oak
- Combed Red Oak
- Quartered Red Oak

GROUP 7
- Vertical Grain Fir
- Rotary Select White Maple
- Plain Sliced White Pine

GROUP 8
- Rotary Select Red Birch
- Rotary Select White Birch
- Plain Sliced American Cherry

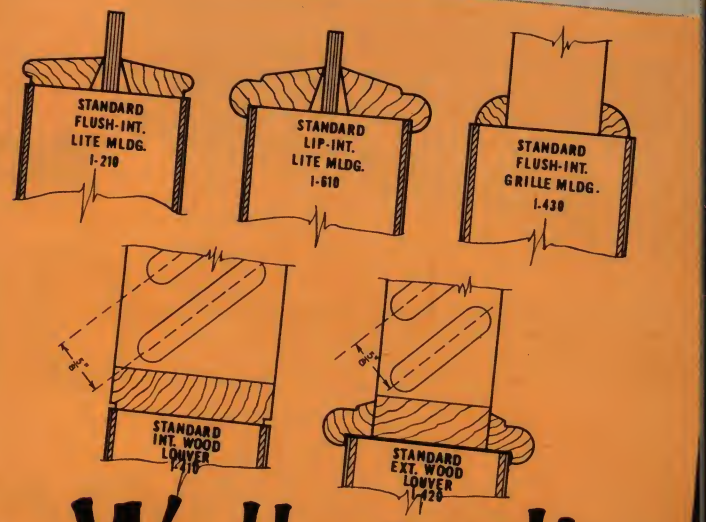
GROUP 9
- Plain Sliced Walnut
- Rift or Combed White Oak
- Quartered White Oak

GROUP 10
- Plain Sliced Select White Ash
- Quartered Walnut.

MOULDINGS

Hold cost down by specifying Standard Moulding.

Exterior doors require special treatment.

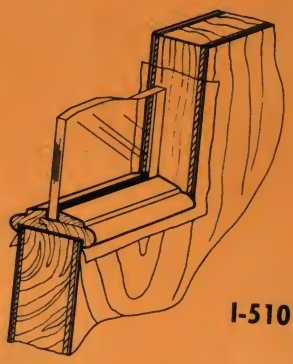

STANDARD FLUSH-INT. LITE MLDG. I-210
STANDARD LIP-INT. LITE MLDG. I-610
STANDARD FLUSH-INT. GRILLE MLDG. I-430
STANDARD INT. WOOD LOUVER I-410
STANDARD EXT. WOOD LOUVER I-420

IPIK Exterior Weatherproofing

Be sure to SPECIFY

1) All exterior openings must be moulded with "straddle or lip" type stops.
2) All exterior openings must be flashed to prevent water or moisture from entering the core.
3) All exterior doors must be dipped in a water-repellent solution.
4) A metal cap must be installed on the top edge of all exterior doors after fitting and sealing.

STANDARD LIP EXTERIOR LIGHT MOULDING: Three piece lip moulding provides tight fit to door. One piece continuous flashing beneath moulding at bottom of lite and turned up along sides.



I-510

SPECIFICATIONS

All doors shall be 5-ply solid core flush, as manufactured by IPIK DOOR CO., INC., Kenner, Louisiana.

CORES shall be IPIK standard, assembled of hardwood staves not more than 1-1/2" in width and dried to 6% moisture content. Expansion joints shall be provided between all staves.

CROSSBANDS shall be 1/10" thick hardwood of first quality—bonded to both sides of core with waterproof adhesive.

FACE VENEERS shall be ..... standard thickness—bonded to crossband with waterproof adhesive—grain running vertical or perpendicular to crossband.

STILE EDGES shall match face veneer when specified.

TOP AND BOTTOM EDGES of hardwood shall be sealed with varnish at the factory.

ADHESIVE: All doors shall be bonded with waterproof adhesive under heat and pressure and guaranteed for life against delamination.

EXTERIOR DOORS:
1) ALL exterior doors shall have straddle or lip stops at all lite and/or louver openings.
2) ALL exterior openings shall be flashed to prevent water and/or moisture from entering the core.
3) ALL exterior doors shall be dipped in a water-repellent solution.
4) A metal cap shall be installed on the top edge of all exterior doors after fitting and sealing.

THICKNESS shall be as required (standard 1-1/8", 1-3/8", 1-3/4", 2-1/4", 2-1/2". Special when specified).

SIZES shall be as indicated.

MOULDINGS shall be IPIK drawing No. ...., or as required.

Architects & Engineers: Welton, Becket, Faia and Associates.
General Contractor: J. W. Bateson Co., Inc.
Millwork: Clem Lumber Company.
Developer & Owner: Southland Life Insurance Co.

ATIONAL ACCEPTANCE

IK installations at the Air Force Academy; Fort Leavenworth eneral Staff Headquarters & Housing; Andrews Air Force Base; nadian Embassy; Grand Forks, North Dakota, Air Force Base; ew Orleans Civic Center; Detroit's Sts. Peter & Paul Church; wrence, Massachusetts, Emanual College; Cincinnati's South ondale School; Classroom & Dormitory Buildings at the Universi- s of Arkansas, Florida, Florida State, Georgia Tech, Auburn, nery, Oklahoma, S.M.U., Rice, Mary Washington, Miami of Ohio, iami of Florida, Texas, Texas A & M, North Carolina, L.S.U., ulane, Kansas, Tennessee, Houston and many others proves IPIK's ational Acceptance by leading architects.

GUARANTEE

IPIK Solid Core Flush Doors, made to our specifications, are guaranteed against warpage and manufacturing defects for a period of two years—the IPIK glue line is guaranteed for life. Doors that prove defective will be replaced in the white in accordance with the Standards of the Industry. All we ask is the usual care to protect IPIK Doors against abuse, careless handling and improper storage.

Architects: International Bureau of Building Products, Dupont Plaza Center, Miami, Florida.
Architects: John E. Peterson AIA, Frank H. Shuflin AIA.
IPIK Solid Core Flush Doors furnished through A. H. Ramsey and Sons, Inc., Miami, Florida.
For Construction Products Co., Inc., Miami, Florida.
Steel frame work in background is First National Bank Office Building which is now another outstanding IPIK installation.

DO'S AND DON'TS FOR DOORS

1. Store doors flat on level supports. Do not stand on edge. Top doors should always be covered.
2. Store in a clean, dry, well-ventilated building, not in moist or freshly plastered areas. A building is not considered "dry" until terrazzo surfaces are polished. All terrazzo surface should be finished before installing doors.
3. Seal all doors, including edges immediately after trimming. If doors are to be stored for more than 30 days, the entire door should be sealed before storing.
4. Outside doors with cut-outs for lites or louvers require lip-type moulding with one piece flashing installed across the bottom and up the sides of the opening, giving water seal against moisture entering core at cut-out corners.
5. Exterior doors should be water-repellent dipped and metal-capped on top to provide protection against water or moisture.
6. On exterior doors with lite openings, the glass should be properly imbedded in putty, inside and out.
7. A painted surface is more practical than a varnish or shellac on exterior doors. Eliminate expensive replacement costs by adhering to light colors.
8. Apply finish as soon as door is fitted and before the door is hung, to assure that all edges as well as surfaces are sealed.
9. The recommended clearance for fitting IPIK Solid Core Doors is 1/10″ on top, bottom and lock side of doors.
10. Doors should not be subjected to abnormal heat, dryness or humidity. Avoid sudden changes such as a forced heat to dry out a building.
11. When it is necessary to trim more than 1/4″ from either dimension, cut should be divided in order that the construction features of the door are not impaired.

COMPARE IPIK SPECIFICATIONS AND GUARANTEE THEN MAKE YOUR DECISION—SPECIFY IPIK

IPIK

DOOR COMPANY, INC.

KENNER, LOUISIANA

PHONE 4-3666

JANUARY 1960

JAMESTOWN
Quality Hardwood
PLYWOOD

SOLID CORE WOOD DOORS

JAMESTOWN VENEER and PLYWOOD CORPORATION

Established 1912

JAMESTOWN · · · Hardwood Plywood specialists since 1912

Jamestown Solid Core Doors are custom-made, not only in size, but in every stage of the manufacturing process from components to the finished, high-quality, individual finished unit.

Skilled experienced craftsmanship, coupled with the use of only the finest, selected, hardwoods, result in a consistent, high-standard, product which has made "Jamestown Quality" a symbol of excellence for over 45 years.

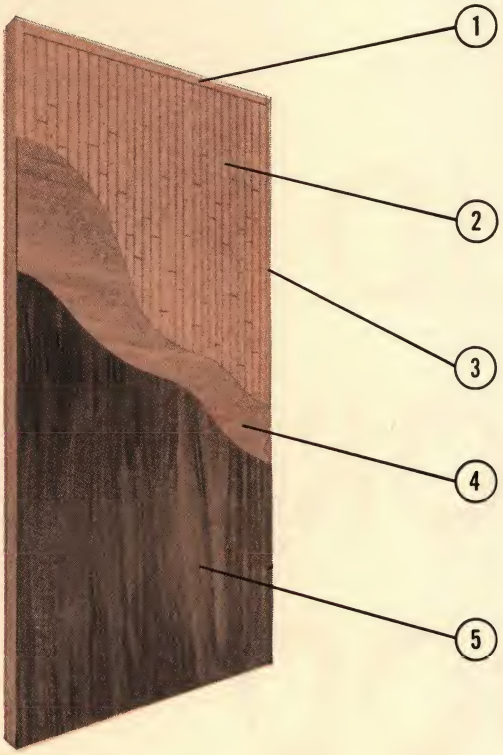
hardwood forests

Modern plants located to provide access to five of the nation's finest Hardwood Forests enable Jamestown to supply the best in veneers and plywood.

Beautiful Adirondack Mountain Birch and New York-Pennsylvania Hard Maple, manufactured at our own plants are a specialty.

construction features

The following features applied with our carefully controlled processes assure the quality of our final product.



1. Double end rails seal the end grain of the inner slab. Double end rails are standard on all Jamestown doors.

2. The kiln dried lumber blocks glued in staggered short lengths prevent development of stresses and minimize any tendency to warpage.

3. Full length side rails to match the face veneer provide harmonious blending of the faces and edges of the door.

4. Hardwood crossbands $\frac{1}{12}$" thick; thin enough to provide proper balance and minimize warpage, yet thick enough to supply cross-grain strength and a suitable base for the face veneers.

5. Faces are carefully selected and individually made to provide balanced beauty on the surface of every door.

selection of veneers

Specializing in the manufacture of only Hardwood Plywood and doors has given us the "know how" to exploit the natural beauty of foreign and domestic veneers producing beautiful architectural effects.

cost comparison (In order of ascending cost)

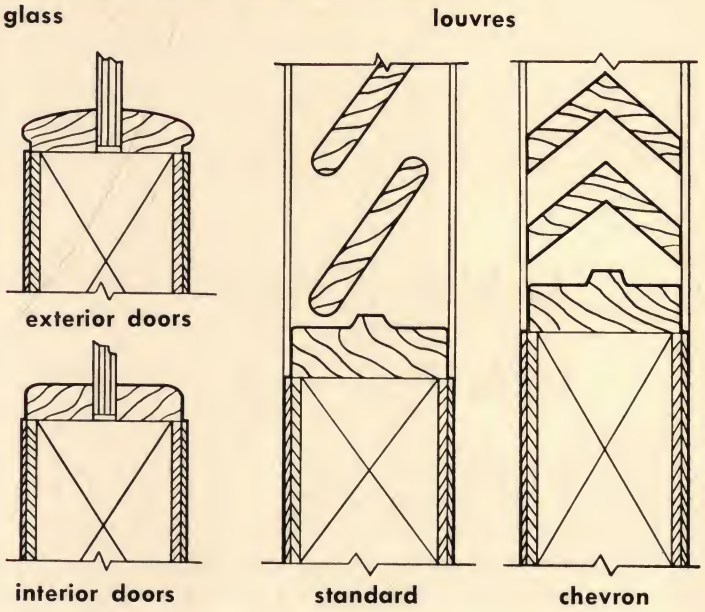
Natural Birch or Maple Rotary Cut
Plain Striped African Mahogany
Rotary Red Oak
Select Birch or Maple Rotary Cut
Plain Sliced Red Oak
Select Sliced Maple
Plain Sliced White Oak
Striped Limba (Korina)
Sliced Cherry
Comb Grained White Oak
Plain Sliced Walnut

flame resistant
Provides adequate flame retardance for normal door usage, which does not demand special underwriter approval.

sound retardant
Doors will provide an effective sound barrier in normal applications.

adaptable
Where architects desire to obtain complete harmony within a room area, they may specify Jamestown wall paneling in matching sequence with Jamestown doors.

Standard Light and Louvre Details



sizes

Doors can be manufactured to any reasonable size that may be desired. The sizes most customarily specfied are as follows:

Length: 6′-8″; 7′-0″
Width: 1′-6″; 2′-0″; 2′-4″; 2′-6″; 2′-8″; 3′-0″
Thickness: 1⅜″; 1¾″-5 ply

guarantee

All Jamestown Solid Core Doors are guaranteed to be free from defects in material and workmanship and to be free from warpage within the limits of utility. Should any door develop excessive warpage or other defects traceable to its manufacture, it will be replaced in the white. Guarantee's covering the life of the installation are available when required.

specifications

core
The core shall be made of random length blocks, of uniform width, glued together with staggered butt joints, and with the grain running from top to bottom of the door.

banding
The cores shall be railed on each side with full length edge strips to match the face specie, of a minimum width of ½″. The end rails shall be of any hardwood specie or face specie and of a minimum width of ½″. Double end rails are supplied as standard. Assembly of bands to the core shall be accomplished under pressure with water resistant glue, and the banded slabs shall be planed smooth and to uniform thickness.

crossbanding
Crossbanding shall be 1/12″ thick, well cut rotary hardwood veneer, properly dried, and laid on the core with the grain at right angles to the grain of the slab and face.

face veneers
Face veneers of all species shall be of standard thickness, and shall be carefully selected and matched in accordance with the best practices and standards of the industry.

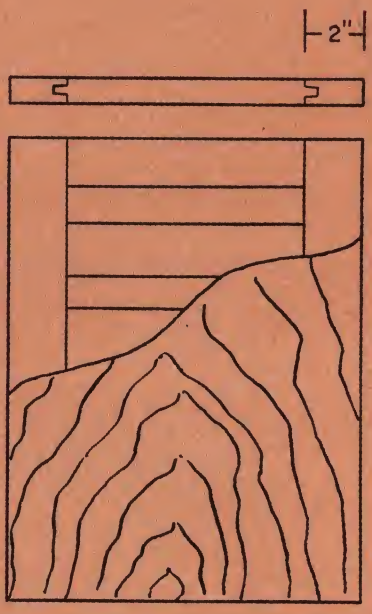
assembly
The door components shall be glued with Resin glue, by the Hot Press method to produce a highly moisture resistant bond. Fully waterproof bond can be supplied.

final machining
After assembly, the doors shall be saw trimmed, jointed and sanded smooth on automatic belt sanders with final sanding using 3/0 grit.

general
Doors shall be manufactured under carefully controlled humidity conditions, so that proper moisture conditions will be maintained throughout all components, insuring the stability of the finished product.

cabinet doors

the JAMESTOWNER • • • features



non-warping—"Jamestowner" cabinet doors are guaranteed to be free from warping within limits of utility, and warped doors will be replaced in the white.

solid lumber throughout with two inch clear tongue and groove bands on each long edge. It has adequate weight to have the right feel and sound.

Faces blend with core when lipped or shaped.

Hot Pressed Resin Bonded—highly moisture resistant.

versatile—may be cut down anywhere on length and as much as two inches on the width, taking 1" for each side, and still remain a fully banded unit.

Excellent for sliding or free hanging problem applications. Available in sizes to accommodate broom closet and wardrobe openings. Especially adaptable in kitchen cabinet applications.

sizes

Available in 60" and 72" lengths and widths in 2" increments from 11" to 25", for stock supply. Also manufactured to custom requirements to any size specification. Thickness ¾".

other cabinet doors

Jamestown manufactures other types of hardwood doors, to meet all of the varied requirements of the woodworking industry. A few of our alternate types are as listed:

5 ply lumber core doors.

5 ply special Balcoply doors for difficult applications where warpage becomes an unusual problem.

5 or 7 ply Hollow core doors, with Honeycomb or strip core fillers.

3 or 5 plied doors with particle board cores.

All of the above constructions can be supplied with or without matching edge banding.

JAMESTOWN VENEER and PLYWOOD CORPORATION

Jamestown, New York

Makers of fine hardwood plywood—doors—curved plywood—metal clad plywood.

The Jamestown Veneer and Plywood Corporation has a staff of trained technical advisors who are available to discuss particular problems with Architects and Builders.

- **Charter members of Hardwood Plywood Institute.**
- **Sustaining members of Architectural Woodwork Institute.**

JAMESTOWN Quality Hardwood PLYWOOD

MENGEL
FLUSH
DOORS

Engineered to Stay Flat

STABILIZED SOLID CORE

INSTITUTIONAL HOLLOW CORE

"700" HOLLOW CORE

RESIDENTIAL HOLLOW CORE

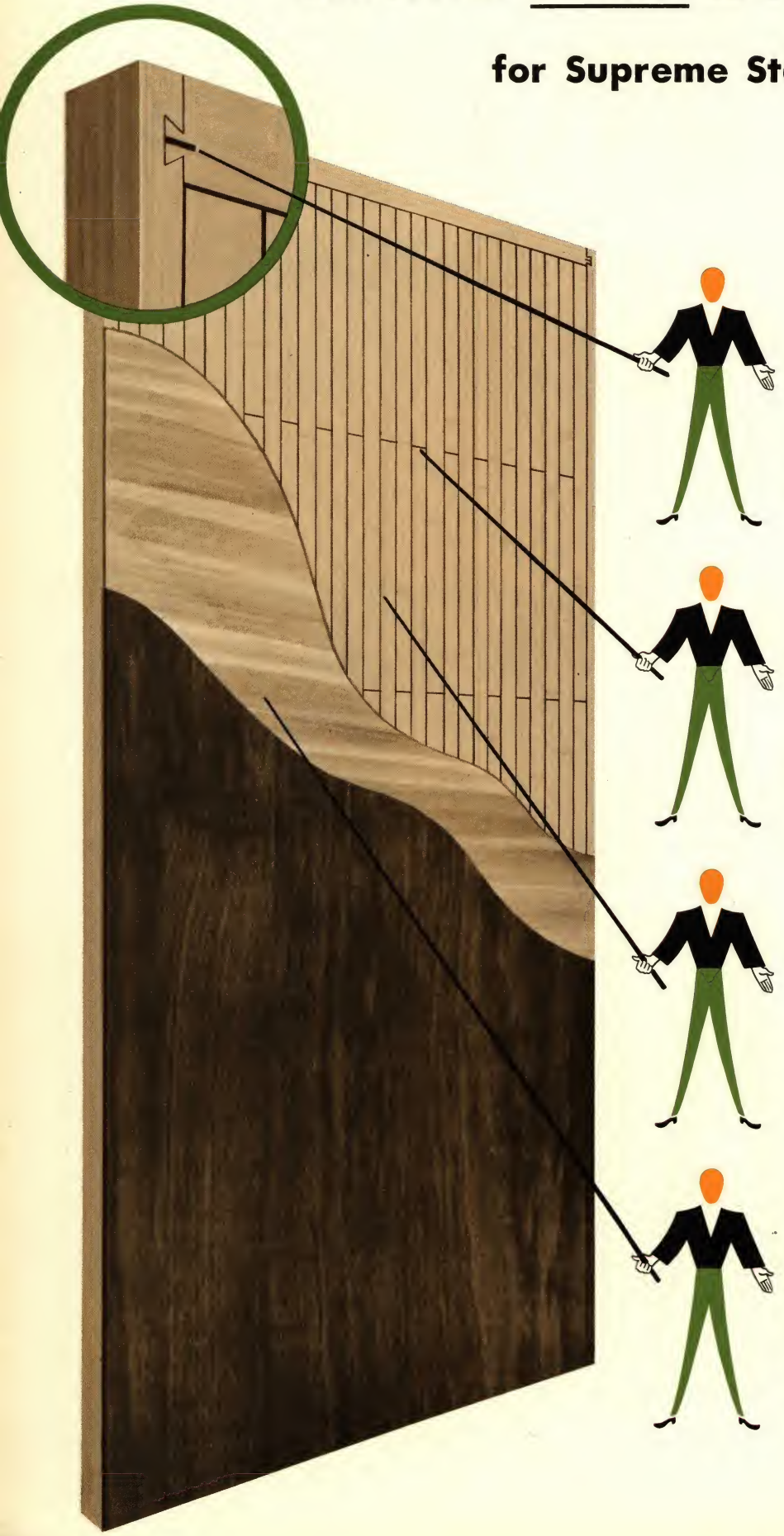
AVAILABLE IN

Birch
Walnut
Gum
Oak
African Mahogany
and Other Species

AIA File No. 19-E-1

The Mengel Company, under its constant product improvement policy, reserves the right to change construction or design without reference to these specifications and illustrations.

Now . . . the Ultimate In Solid-Core Construction, for Supreme Stability and Flatness . . .



Dove-tail joints at all four corners — finest cabinet-type construction — for greatest strength and rigidity.

Core parts are assembled to conform to a standard pattern. All butt joints are staggered.

Core pieces precision-machined to exact dimensions, and assembled with proper tolerance for expansion and contraction. Entire construction is engineered to stay flat.

Finest cross-banding and face veneers, with species of cross-banding selected for compatibility with face veneers.

MENGEL *Stabilized* Solid Core Doors

Precision-balanced framed core

PREVENTS distortion and dimension changes

HERE is the last word in solid-core doors . . . *engineered* for extreme stability and flatness.

Core pieces are precision-machined to exact dimensions—are assembled with the butt joints staggered to a scientific pattern, and with *lateral expansion-space* between the individual pieces. Thus, changes of moisture cannot significantly change the overall dimension of the door.

The frame itself is assembled with dove-tail joints at all four corners—costly *cabinet-work* construction which provides greater rigidity than other methods, and which Mengel pioneered.

The entire assembly, except the *edges* of the core pieces, is then coated with waterproof adhesive, and bonded under heat and pressure. The individual core pieces are not edge-glued, which permits them to expand and contract *within* themselves. Thus no distortion can be passed from one core-member to another, but is offset and absorbed *within* the unit.

In Mengel Solid-Core Doors, cross-bandings and face veneers are chosen, by species and by individual pieces, for compatibility. Nothing is overlooked, to make these the world's *outstanding* solid core flush doors.

Mengel Stabilized Solid Core Doors are manufactured in standard stock sizes up to 4/0 x 8/0—with or without standard light openings and louvers. Special openings quoted on request.

Matching stile edges are supplied automatically unless otherwise specified when so ordered.

Special purpose doors such as lead lined, Dutch Doors, etc., are available and will be quoted on request.

SPECIFICATIONS

- **GENERAL:** All doors shall be five-ply, flush type, Stabilized Solid-Core doors as manufactured by The Mengel Company. Stiles and rails shall have dove-tail joints at all four corners. Doors shall be constructed in strict accordance with Mengel Standard Construction, and shall meet or exceed requirements of Commercial Standard 171-58.

- **CORES:** Cores shall be made up of properly kiln dried wood blocks no wider than 2" and of varying lengths, with grain running vertically. Cores will be of the framed strip type, with core pieces non-edge glued for stability. Hardwood or softwood may be used.

- **CROSSBANDS:** Crossbands shall be thoroughly kiln dried hardwood 1/10" thick, extending the full width of the door and laid with the grain at right angles to the face veneer.

- **FACE VENEERS:** Face veneers shall be made of thoroughly kiln dried hardwoods of standard thickness, and laid with the grain at right angles to the grain of the crossbands. Doors may not be ready for painter's finish if subjected to excess humidity, or rough handling.

- **EDGE BANDS:** The stile edges shall have an over-all width of 1⅛", with laminated matching edges at least ½" wide after trimming. The rails shall be at least 2½" wide to be made of thoroughly kiln dried hardwood or softwood.

- **ADHESIVE:** Crossbands and faces shall be laminated to the cores with 100% waterproof resin glue, by the hot plate process.

- **PREFIT:** All doors shall be trimmed square and factory prefit to standard size.

- **LIGHT AND LOUVER OPENINGS:** Where specified, doors shall be provided with light and louver openings in accordance with Mengel detail list. Beads shall be provided when specified, and shall be tacked in loose.

Top rails are 5″ wide, for installation of door closers. Stiles are 3″ wide. Entire frame is softwood.

Intermediate rail is 3″ wide. Two 40″ softwood lock blocks are used.

Kick plate rail is 3″ wide, located 10″ from bottom of door. Bottom rail also 3″ wide.

Three-ply face panels. Veneers chosen for beautiful appearance — cross-banding for similarity of expansion and contraction (compatibility).

Second Only to Solid-Core Doors for Buildings Other than Residential —

MENGEL *Institutional* DOORS

Built to Accommodate Door Closers, Panic Bars, Kick Plates, Etc.

These super-fine doors are especially recommended for use in public buildings, etc. where the weight of solid core doors, or their higher cost, is not desired.

Mengel Institutional Doors are the nearest possible approach to Mengel Solid-Core Doors in quality and durability. They provide for special hardware such as door closers, kick plates and panic bars. They feature 7-ply construction, with reinforced frames and cores, and an intermediate rail completely across the center, with 40″ lock blocks on both sides.

Core strips are made from Mengel's famous extra-heavy fiber-core material, evenly spaced on 1½″ centers. This construction provides more gluing surface, by which the cores are permanently bonded to the 3-ply face panels. The result is *greater strength.*

Mengel Institutional Doors are light, durable, and immune to sagging, warping or buckling under normal conditions. They are designed, *engineered* and constructed to the highest standards of value, and are *quality-controlled* throughout manufacture.

SPECIFICATIONS

- **GENERAL:** All doors so specified shall be seven-ply, hollow core, flush type, institutional doors as manufactured by The Mengel Company. Institutional doors shall be identified with a dowel centered in each end. Doors will be constructed in strict accordance with Mengel Standard Construction and shall meet or exceed requirements of Commercial Standard CS-58.

- **CORES:** Cores shall be ladder type, core strips to be made from a wood derivative and uniformly spaced 1½″ on center for interior and exterior use. All core parts or members shall be bonded to face panels.

- **FACE PANELS:** Face panels shall be three-ply construction made up of standard thickness veneers, and shall be ⅛″ thick over all before sanding. Face veneers shall be sanded smooth according to Mengel's standards. Doors may not be ready for painter's finish if subjected to excess humidity or rough handling.

- **FRAME:** Stiles and rails shall be made of softwood. The top rail shall be 5″ in width and the bottom rail shall be 5″ in width.

The stiles shall be 3″ wide. When specified, matching hardwood edge strips shall be laminated to the stiles and shall be ½″ wide after trimming.

The center cross rail shall be 3″ wide and the center of the rail shall be 40″ from the bottom of the door. The kick plate reinforced rail shall be 3″ wide and located 10″ from the bottom of the door to the center of the rail.

- **LOCK BLOCKS:** Lock blocks shall be made of softwood and shall be 3″ wide (2″ including veneer) and 40″ long centered on both sides.

- **ADHESIVES:** All adhesives shall conform to Commercial Standard CS-58, Type I or Type II, as specified.

- **SIZES:** Produced in all standard sizes 1⅜″ or 1¾″.

- **PREFIT:** All Mengel Flush Doors are prefit in standard stock sizes.

The Aristocrat of All Hollow-Core Doors for Non-Institutional Usage — The Famous

MENGEL "700" DOORS

Specified by More Architects Than Any Other Mengel Hollow-Core Doors Ever Built

Dove-tail joints at all four corners—finest cabinet-type construction —for greatest strength and rigidity.

Heavy ⅜" fiberboard grid core, spaced 3" on centers, for greater gluing surface, extra strength and durability.

Stiles 1¼" wide, (giving overall lock block and stile width of 4⅛").

Three-ply face panels. Face veneers chosen for beautiful appearance— cross-banding for similarity of expansion and contraction (compatibility).

Even though we have not advertised Mengel "700" Doors in several years, and even though they cost more than conventional hollow-core doors, the demand continues to grow.

Mengel "700" Doors embody several exclusive features which cannot be duplicated elsewhere—dove-tail joints at all four corners of the frame, for greatest strength and rigidity—fine 7-ply construction—heavy fiberboard grid cores, spaced 3" on centers for extremely stable, warp-resistant service.

Mengel "700" Doors are recommended for non-institutional use *where nothing but the very best will do.* Guaranteed for two years. Manufactured with or without standard light openings and louvers. Finished with matching style edges when so ordered.

SPECIFICATIONS

- **GENERAL:** All doors shall be seven-ply, flush type, hollow core doors, specified for interior or exterior use, as manufactured by The Mengel Company. Stiles and rails shall have dove-tail joints at all four corners. Doors shall be constructed in strict accordance with Mengel Standard Construction, and shall meet or exceed minimum requirements of Commercial Standard 171-58.
- **CORES:** Cores shall be grid type, core strips to be made from a wood derivative and spaced 3" on center, both horizontally and vertically. All core parts or members shall be bonded to face panels.
- **FACE PANELS:** Face panels shall be three-ply construction made up of standard thickness veneers, and shall be ⅛" thick over all before sanding. Face veneers shall be sanded smooth according to Mengel standards. Doors may not be ready for painter's finish if subjected to excess humidity, or rough handling.
- **STILES AND RAILS:** Stiles and rails shall be made of softwood. Stiles to be 1¼" wide, rails to be 2½" wide. When specified, matching hardwood edge strips shall be laminated to the stiles and shall be ½" wide after trimming.
- **LOCK BLOCKS:** Lock blocks shall be made of softwood and shall be 2⅞" wide (4⅛" incl. stile) and 20" long centered on both sides.
- **ADHESIVES:** All adhesives shall conform to Commercial Standard 171-58, Type I or Type II, as specified.
- **SIZES:** Produced in all standard sizes 1⅜" or 1¾".
- **PREFIT:** All Mengel Flush Doors are prefit to standard stock sizes.

Excellent Hollow-Core Doors

For Normal Usage—

MENGEL *Residential* DOORS

Engineered and Built Flat

To STAY Flat

Rails are full 2½" wide. Entire frame is softwood, for easiest installation of hardware.

Stiles are full 1⅛" wide, and both lock blocks are 2⅞" x 20".

Heavy fiber-board core with horizontal pieces notched into vertical pieces attached to stiles, to form grid pattern.

Three-ply face panels. Veneers chosen for beautiful appearance — cross-banding for similarity of expansion and contraction (compatibility).

Mengel Hollow-Core Flush Doors are lower-priced, quality doors built in both interior and exterior types. They are constructed of two 3-ply face panels laminated to a sturdy frame. The heavy fiber-board core strips are spaced on equal centers, in ladder-type construction as illustrated. The planned distribution and uniform spacing of this grid assures a great gluing area throughout the door, resulting in a strong bond between the core and the faces. Up-to-the-minute scientific bonding methods, employing pressure and heat, are used.

These are the famous Mengel Doors which have been proved by the years and by millions of installations. They are outstandingly better values. They are sold under exactly the same Guarantee as Mengel Solid Core Flush Doors, and Mengel Institutional Hollow Core Doors.

Manufactured with or without standard light openings and louvers. Furnished with matching stile edges when so ordered.

SPECIFICATIONS

- **GENERAL:** All doors shall be seven-ply, flush type, hollow core doors, specified for interior or exterior use, as manufactured by The Mengel Company. Doors shall be constructed in strict accordance with Mengel Standard Construction, and shall meet or exceed requirements of Commercial Standard 171-58.

- **CORES:** Cores shall be ladder type, core strips to be made from a wood derivative and uniformly spaced 3" on center for interior doors, and 1½" on center for exterior doors, to insure adequate strength and stability for normal usage. All core parts or members shall be bonded to face panels.

- **FACE PANELS:** Face panels shall be three-ply construction made up of standard thickness veneers, and shall be ⅛" thick over all before sanding. Face veneers shall be sanded smooth according to Mengel standards. Doors may not be ready for painter's finish if subjected to excess humidity, or rough handling.

- **STILES AND RAILS:** Stiles and rails shall be made of softwood. Stiles to be 1⅛" wide, rails to be 2½" wide. When specified, matching hardwood edge strips shall be laminated to the stiles and shall be ½" wide after trimming.

- **LOCK BLOCKS:** Lock blocks shall be made of softwood and shall be 2⅞" wide (4" incl. stile) and 20" long centered on both sides.

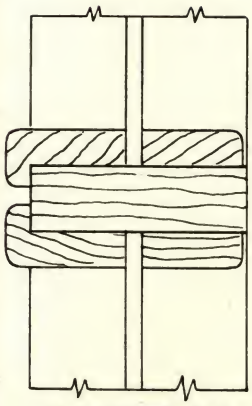
- **ADHESIVES:** All adhesives shall conform to Commercial Standard 171-58, Type I or Type II, as specified.

- **SIZES:** Produced in all standard sizes 1⅜" or 1¾".

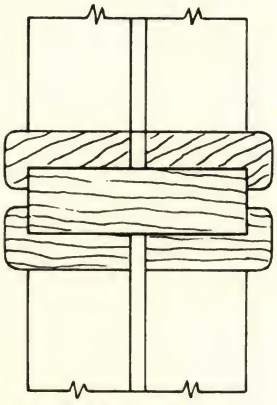
- **PREFIT:** All Mengel Flush Doors are prefit to standard stock sizes.

STANDARD LIGHT DETAILS

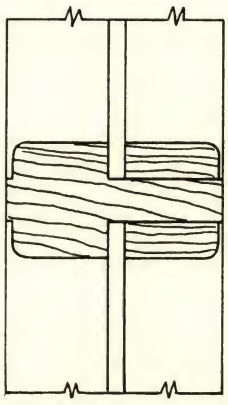
SOLID-CORE DETAILS



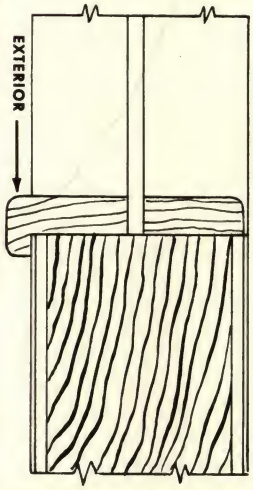
M-1 MUNTIN BAR



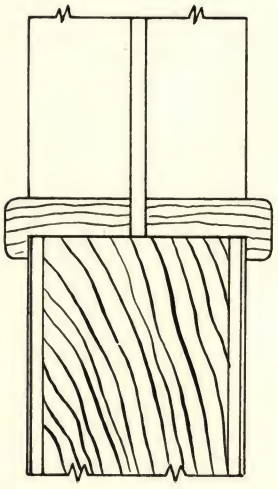
M-2 MUNTIN BAR



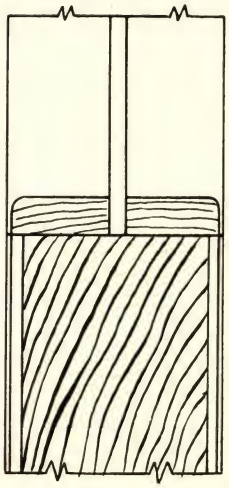
M-3 MUNTIN BAR



M-1 EXTERIOR COMB.

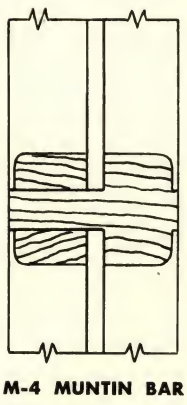


M-2 EXTERIOR LIP

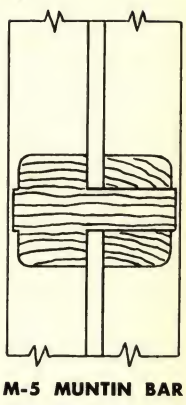


M-3 INTERIOR FLUSH

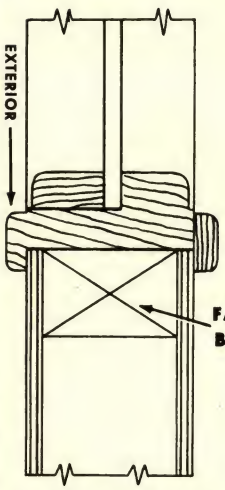
HOLLOW-CORE DETAILS



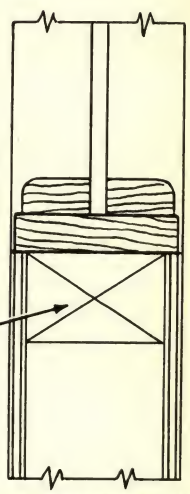
M-4 MUNTIN BAR



M-5 MUNTIN BAR



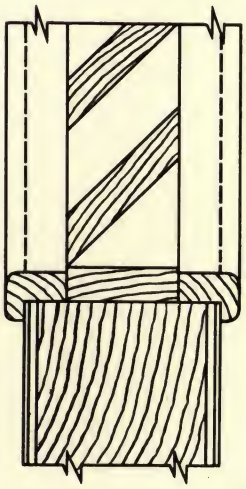
M-4 EXTERIOR LIP



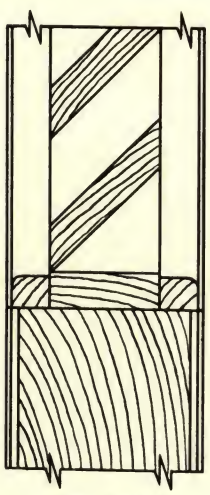
M-5 INTERIOR FLUSH

STANDARD LOUVER DETAILS

SOLID-CORE DETAILS

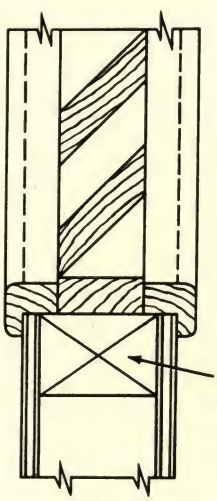


M-6 LIP

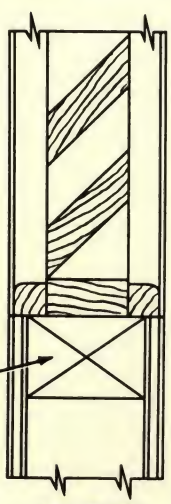


M-7 FLUSH

HOLLOW-CORE DETAILS



M-8 LIP



M-9 FLUSH

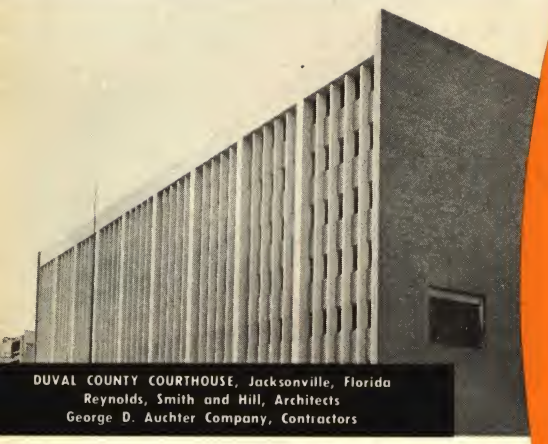
GREATER PITTSBURGH AIRPORT, Pittsburgh, Pa.
Joseph Hoover, Architect
Dick Construction Co., Contractor

METHODIST HOSPITAL OF SOUTHERN CALIFORNIA, Arcadia, California
Neptune & Thomas, Architects
Twaits-Whittenburg Co., Contractors

MICHIGAN STATE UNIVERSITY DORMITORIES AND DINING HALL—
KELLOGG CENTER, East Lansing, Michigan
Ralph C. Calder, Architect • The Christman Co., Contractors

Quality Makes the Difference!

MENGEL DOORS Are Fully Guaranteed for 2 Years!



DUVAL COUNTY COURTHOUSE, Jacksonville, Florida
Reynolds, Smith and Hill, Architects
George D. Auchter Company, Contractors

STATLER HILTON HOTEL, Dallas, Texas
Wm. B. Tabler Assoc., Architects
Robert E. McKee, Contractor

CHETWYND, INC. APARTMENTS, Rosemont, Pa.
Charles Frederick Wise, Architect
Mathew Weinstein, Rosemont Construction Co., Contractors

HUDSON COUNTY ADMINISTRATION BUILDING, Jersey City, N. J.
Joseph Comparetto and Mascolo & Masumian, Architects
Terminal Construction Corp., Contractors

The Mengel Company is a member of the National Woodwork Manufacturers Association, and every Mengel Door is warranted under the provisions of the NWMA standard door guarantee—*except that all Mengel Doors are guaranteed for two years from date of shipment, instead of one year.*

A copy of the complete standard door guarantee of the NWMA will be gladly mailed to you on request. Meanwhile, the following excerpts are respectfully called to your attention:

"Doors must be accorded reasonable treatment by the purchaser. Doors must be stored or hung in dry buildings and never in damp, moist or freshly plastered areas. Doors must not be subjected to abnormal heat, dryness or humidity. The . . . structural strength of the door must not be impaired in the fitting of the door, the application of hardware, or cutting and altering the door for lights, louvers, panels and any other special details. *Immediately after fitting, the entire door including top and bottom edges must receive two coats of paint, varnish or sealer* to prevent undue absorption of moisture.

Doors must be inspected upon arrival for visible defects and all claims or complaints . . . must be filed immediately."

A. I. A. FILE NO. 19-E-1

FLUSH DOORS

A. I. A. FILE NO. 19-E-1

RODDIS PLYWOOD CORPORATION
SUCCESSOR TO
OWENS-ILLINOIS PLYWOOD COMPANY

· Fire Doors (B-Label) · D-S Fire Resistant Doors · B-Label Vision Panel Doors.

The Fire Door with the KAYLO® core . . .

The Owens-Illinois B-Label Fire Door offers a new standard of beauty and stability with a one-hour fire rating from Underwriters' Laboratories, Inc.

DIMENSIONAL STABILITY—Kaylo core fire doors will not warp, swell or shrink, even when subjected to extreme conditions of heat or cold, dampness or dryness.

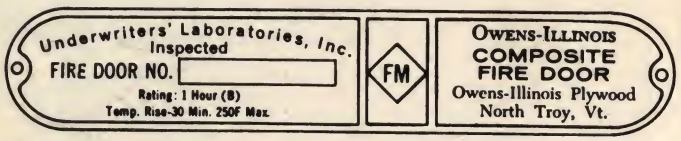
INSULATION VALUE—Weather-stripped Owens-Illinois fire doors insulate more effectively than ordinary doors.

LIGHTWEIGHT, STRONG—A standard Owens-Illinois Fire Door weighs but 78 pounds (3.5 #/sq. ft.) but can support an 8,000-pound distributed load. Deflection is one-half inch when loaded, none when unloaded.

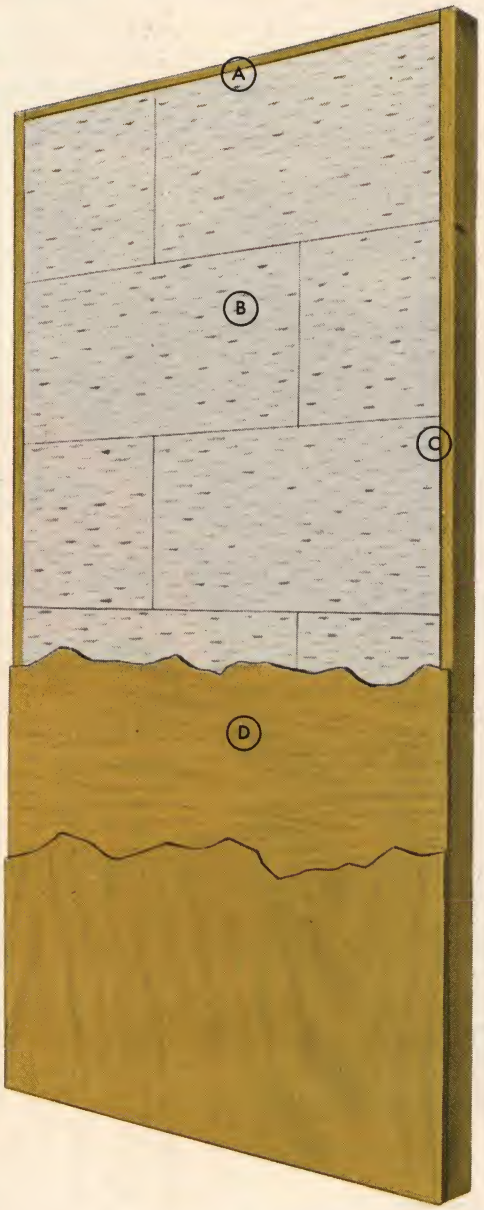
HANDSOME APPEARANCE—Unless otherwise specified, all Owens-Illinois fire doors are faced with birch veneer, combining the richness and durability of birch grain with rated fire protection.

APPLICATIONS—Owens-Illinois Fire Doors are labeled by Underwriters' Laboratories, Inc. for use in B and C openings. They may be installed in stairways, room entrances, fire escape openings, corridor entrances and exits in hospitals, schools, office buildings and commercial establishments. Owens-Illinois Fire Doors are also suitable for private residences, particularly at basement exits and between house and garage.

KAYLO is the trademarked name of Owens-Corning Fiberglas Corporation, for a lightweight calcium silicate, completely inorganic. It does not burn, is rot-proof and vermin-proof; resists water and termites. Kaylo core material has a nominal density of 20 pounds per cubic foot and is sturdy enough to withstand the most severe service including repeated slamming.



The metal label on the hinge side of every Owens-Illinois Fire Door attests to a one-hour fire rating for Class B and C openings by Underwriters' Laboratories, Inc.



A. Rails: birch or maple, top ½" thick. Bottom rail 1½" thick (two laminated pieces).

B. Core: inorganic KAYLO sections, closely fitted.

C. Stiles: ¾" thick, birch or maple.

D. Faces: two-ply standard thickness face veneers.

SIZES

2/6 x 6/8
2/8 x 6/8
3/0 x 6/8
3/2 x 6/8
3/4 x 6/8
3/6 x 6/8
3/8 x 6/8
4/0 x 6/8
2/6 x 7/0
2/8 x 7/0
3/0 x 7/0
3/2 x 7/0
3/4 x 7/0
3/6 x 7/0
3/8 x 7/0
4/0 x 7/0

Owens-Illinois B-Label Fire Doors are available in two grades: Colonial Birch (select red or white) and New Englander (A Grade) Birch. Fancy faces and sound grade are also available.

SPECIFICATIONS:

1. GENERAL—All doors shall be Owens-Illinois B-Label Fire Doors labeled by Underwriters' Laboratories, manufactured by Owens-Illinois Plywood Company, North Troy, Vermont. Doors shall be manufactured to rigid specifications of Underwriters' Laboratories and shall be covered by a lifetime guarantee.

2. CORE—The core shall consist of closely fitted sections of inorganic KAYLO (calcium silicate), assembled with tongue and groove edges as prescribed by Underwriters' Laboratories, Inc.

3. DOOR RAILS—Rails shall consist of birch or maple lumber treated with Protexol Class "A" or Koppers, Inc. "Non-Com" fireproofing agents.

4. STILES—Stiles shall be joined to rails and core with fire resistant glue and shall consist of ¾" strips of birch or similar hardwood specified by Underwriters, treated with Protexol Class "A" or Koppers, Inc. "Non-Com" fireproofing agents.

5. FACE VENEERS—Face veneers shall be standard thickness 1/28" or 1/24" (depending on species) sliced or rotary—cut domestic or foreign woods, thoroughly kiln dried and laid with the grain at right angles to the crossbands.

6. CROSSBANDS—Crossbands shall be thoroughly kiln dried hardwood 1/16" thick extending the full width of the door, and laid with the grain at right angles to the face veneer.

7. ADHESIVES—Crossbands and faces shall be bonded to the core with waterproof glue and the entire core shall be sized on both sides to assure a perfect bond. Stiles and rails shall be bonded together and to the core with water resistant glue.

8. GLAZING—Standard vision panel openings 10" x 10" and 8" x 12" available.

9. PAINTING AND FINISHING—Whenever required, specify factory finishing.

Specifications for installing OWENS-ILLINOIS *Fire Doors*

DOOR FRAMES—All Owens-Illinois B-Label Fire Doors shall be installed in listed and labeled metal frames-14 gauge for openings over 3′6″; 16 gauge for openings 3′6″ and under.

FITTING—Maximum clearance for Owens-Illinois Fire Doors shall be 1/16″ at the sides and top and 3/16″ at the bottom. Never trim top rail. In fitting for height, always trim from bottom edge but never reduce height more than ¾″. Door should not be cut down in height or width to fit a smaller opening than the size for which door was manufactured.

CAUTION—Underwriters' label must remain on door at all times. The label is placed one third (⅓) of total height from top of hinge stile. There shall be no trimming on this edge. Installed door must always have label at the top.

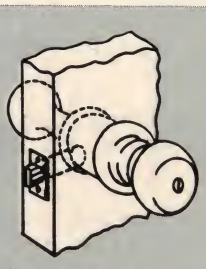
HANGING—Owens-Illinois Fire Doors shall be provided with steel full-mortise butt-type hinges, not less than 4½″ x 4½″ and 0.134 in thickness. Leaf of hinge to be applied to door and secured with 1¼″ x 12-gauge flat head self-tapping sheet metal screws. Holes for screws shall be drilled no deeper than three fourths (¾) of an inch. Steel half-surface hinges are secured by bolting through the door with grommet screws, sleeve nuts, or through bolts (see illustration). Half-surface hinges shall be 4½″ x 4½″ and of 0.134 gauge steel. Doors larger than 5′0″ require three hinges. Doors 5′ and under require two hinges.

LOCKS—The tubular lock set is installed on the lock stile side by boring two (2) holes as illustrated and securing in position. The latch bolt is to have not less than ½″ throw. Schlage Heavy Duty (D51PD-¾″) or equivalent recommended.

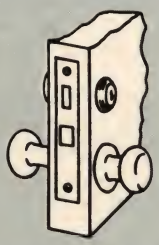
The mortise type of lock set with ¾″ throw on bolt is also listed by Underwriters' Laboratories, Inc. If used, however, great care should be exercised to remove only a minimum of the KAYLO core when installing.

CLOSERS—External door closers must be installed with through-bolts. Closers with through-bolts are standard items with several hardware manufacturers.

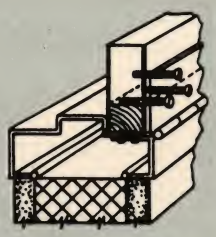
Russwin "400" semi-concealed door closers and LCN No. 303 concealed door closers are also listed by Underwriters' Laboratories, Inc. Consult hardware manufacturers' catalogs for finishes and any additional information.



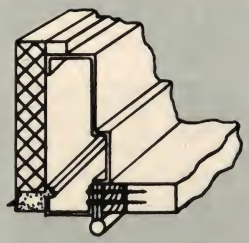
Tubular Lock Set



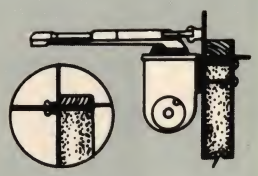
Mortise Lock Set



Half-Surface Hinge



Full-Mortise Hinge



Door Closer

Guaranteed for Life!

OWENS-ILLINOIS
PLYWOOD COMPANY
NORTH TROY, VERMONT

Guarantee

"Owens-Illinois Plywood Company unconditionally guarantees, for the life of the installation, that this door is free from manufacturing defects, and if properly installed and finished according to manufacturer's instructions will not warp or twist. Should this door fail to meet this guarantee, Owens-Illinois Plywood Company will replace it, free of charge, including cost of hanging and refinishing.

DOOR DESCRIPTION

Purchaser_____
Address_____
City and State_____
Door Registration Number (s)_____
Invoice Number and Date_____
Date of Certificate_____

OWENS-ILLINOIS
Plywood Company

A. S. Munsterman
FACTORY MANAGER

OWENS-ILLINOIS *D-S* Fire Resistant Doors with famous KAYLO® core*

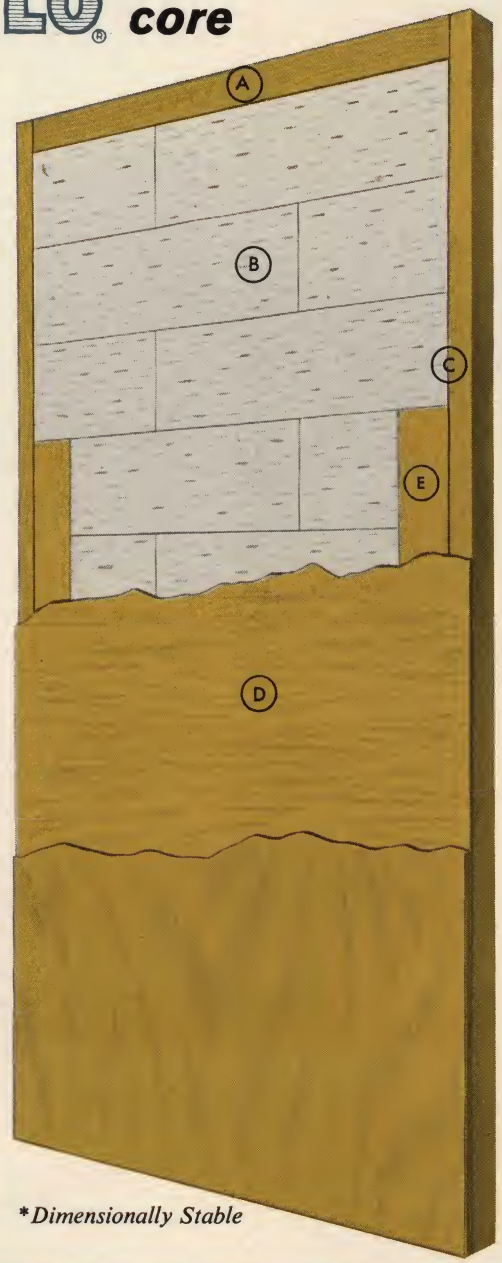
Lightweight . . . Sound Resistant . . .Guaranteed Owens-Illinois D-S* Fire Resistant Door is a lightweight fire and sound resistant door with the same mineral core used in Owens-Illinois B-Label Fire Doors. It carries the same lifetime guarantee.

The inorganic KAYLO core is rot-proof and vermin-proof, permanently resistant to termites and water. In addition to low heat transmission characteristics, the Owens-Illinois D-S door effectively reduces sound transmission when properly installed.

It has greater fire resistance and insulation value than a conventional solid wood core door and is lighter in weight.

Owens-Illinois D-S Doors are suited for use as interior and exterior doors for hospitals, schools, offices, where fire retarding doors are desirable but not specified. They are especially suited for installation in private residences for basements, utility rooms, to contain possible fires and for bedrooms to reduce sound transmission. In residences where the garage is attached to the house, Owens-Illinois D-S doors provide adequate fire protection.

Doors are available factory pre-finished or pre-sealed (see page six for details of pre-finishing and pre-sealing processes).



**Dimensionally Stable*

A. Rails: 3⅞" x 1 37/64" pine, fir, or equal species.

B. Core: inorganic KAYLO sections, closely fitted.

C. Stiles: 1½" x 1 37/64" pine, fir or equal species.

D. Faces: two-ply standard thickness face veneers.

E. Lock Blocks: 36" long, 3" wide.

SIZES

2/6 x 6/8
2/8 x 6/8
3/0 x 6/8
3/2 x 6/8
3/4 x 6/8
3/6 x 6/8
3/8 x 6/8
4/0 x 6/8
2/6 x 7/0
2/8 x 7/0
3/0 x 7/0
3/2 x 7/0
3/4 x 7/0
3/6 x 7/0
3/8 x 7/0
4/0 x 7/0

Owens-Illinois D-S Doors are available in two grades: COLONIAL BIRCH (select red or white) and NEW ENGLANDER ("A" Grade) BIRCH. Fancy faces and sound grade can be quoted and supplied on request. Other standard door sizes are also available.

SPECIFICATIONS:

All doors shall be five-ply fire retarding doors manufactured by Owens-Illinois Plywood Company. Doors shall be covered by a lifetime guarantee and shall be standard sizes and thicknesses.

STILES—Stiles shall be made of western pine, white fir or equal species. Matching edges will be supplied on request. Finished dimension of stiles will be 1½" wide and shall be joined to the core with fire resistant glue.

RAILS—shall be of western pine, white fir or equal species. Dimension shall be 3⅞" wide. Matching hardwood rails can be supplied on request.

LOCK BLOCKS—Lock Blocks shall be 36" long, centered in the length of the door. Lock blocks shall be 3⅞" wide. Two lock blocks shall be supplied, one on each side.

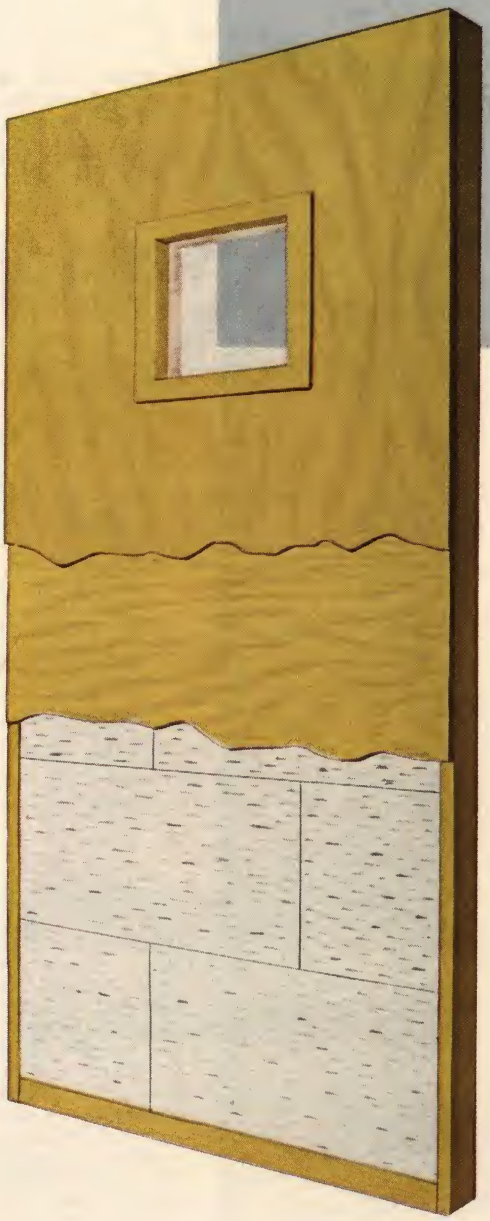
CORE—Core shall consist of closely fitted sections of inorganic Kaylo (calcium silicate) assembled with the door frame. Kaylo is a lightweight high temperature insulating material possessing a high resistance to the passage of heat. It is dimensionally stable and strong.

CROSSBANDS—Crossbands shall be thoroughly kiln dried hardwood 1/16" thick, extending the full width of the door and laid with the grain at right angles to the face veneer.

FACE VENEERS—Face veneers shall be standard thickness (1/28" or 1/24" dependent on species) sliced or rotary cut domestic or foreign woods, thoroughly kiln dried and laid with the grain at right angles to the crossbands.

ADHESIVES—Crossbands and faces shall be bonded to the core with water resistant glue.

ANNOUNCING...



New B-LABEL Fire Door with *vision panel*

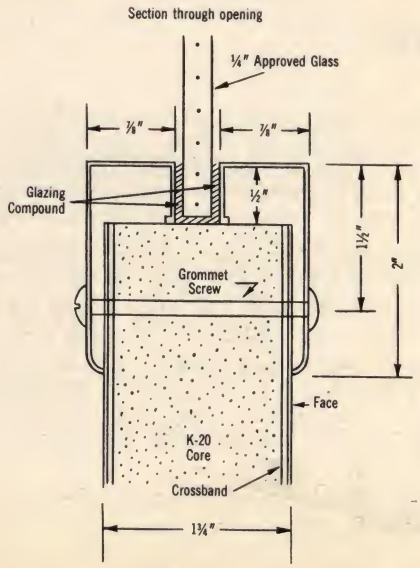
Now Owens-Illinois adds protection-with-vision to its line of B-Label Kaylo-core fire doors.

VISION PANEL DOOR WITH ONE-HOUR RATING—Already recognized for natural wood beauty, dimensional stability, high insulating properties and lightweight strength, Owens-Illinois B-Label Fire Doors are now available with 100 square inch light openings. Standard vision panel openings are 10″ x 10″ and 8″ x 12″. Other sizes are available upon request.

CHOICE OF FINISHES—These B-Label Vision Panel Fire Doors have all the properties and advantages of the present Owens-Illinois B-Label Fire Door, including availability of fancy finishes as well as the standard two grades: Colonial Birch (select red or white) or New Englander (A Grade) Birch. Other species and grades available upon request.

PROTECTION WITH VISIBILITY—Heavily-traveled entrances, exits, corridors and stairways in hospitals, schools, office buildings, public eating and gathering places and other commercial establishments are all suitable areas for Owens-Illinois B-Label Fire Doors with Vision Panels.

LIFETIME GUARANTEE BY OWENS-ILLINOIS: Owens-Illinois covers its new Vision Panel Fire Doors with the same lifetime guarantee backing given its other fire doors (see inside).



INSTRUCTIONS FOR GLAZING VISION PANELS

1. Vision panels are supplied separately or installed in Owens-Illinois B-Label Fire Doors. Required ¼″ wire glass is not supplied, and glazing will be by others. Metal frames must be partly removed for glazing.

2. Lay door on flat surface with slotted side of grommet screw facing up. Remove male portion of grommet screw and lift out top section of frame. Female portion of grommet screws and lower section of frame will remain in place.

3. Apply glazing compound to glass retaining edge of lower section of frame.

4. Position the ¼″ wire glass in the glazing compound on the lower frame.

5. Apply rolled glazing compound around external edges of glass.

6. Replace the top section of frame, insert male portion of grommet screws and tighten with screwdriver until tight.

7. Remove excess glazing compound squeezed out with putty knife.

OWENS-ILLINOIS

Plywood for Flush Doors

is available in . . .

22 finishes

AND GRADES

including pastels

The beautiful natural wood finishes shown here are available as facings for doors that demand a special touch. While the Owens-Illinois B-Label fire door ordinarily is faced with Colonial or New Englander Birch, you can choose from hardwood veneers of oak, cherry, walnut, Philippine or African mahogany, and pastel green, blue, red or yellow.

FACTORY PRE-FINISHED DOORS—All Owens-Illinois Plywood Company doors can be obtained pre-finished at the factory. Pre-finished doors require only installation.

The granite-like toughness of these finishes preserves the true wood beauty for a lifetime, and doors can be finished in various shades for particular architectural specifications.

Owens-Illinois pre-finished doors are packaged to protect the finish during shipment.

FACTORY PRE-SEALED DOORS—All doors made by Owens-Illinois may be obtained pre-sealed from the factory. The exclusive PB-101 and PB-202 processes can SAVE UP TO 75% OF FINISHING COSTS on the job.

PB-101—After sanding, a fine, top-quality sealer is applied as a first coat to face veneers. This process fills the larger pores and surface irregularities and renders the surface non-absorptive for liquids in coating materials. As a final step, faces are sanded with a very fine grade sandpaper that removes raised grain and levels fibers, rooting them in the sealer coat.

PB-202—New this year, this exclusive Owens-Illinois process offers another sealer coat in addition to the PB-101 finish. This coat, plus fine sanding, provides even more protection and easier finishing on the job.

OTHER OWENS-ILLINOIS PLYWOOD COMPANY PRODUCTS. Pre-Finished Paneling • Easy-to-Install Partitions • Door Skins • Bleached Panels

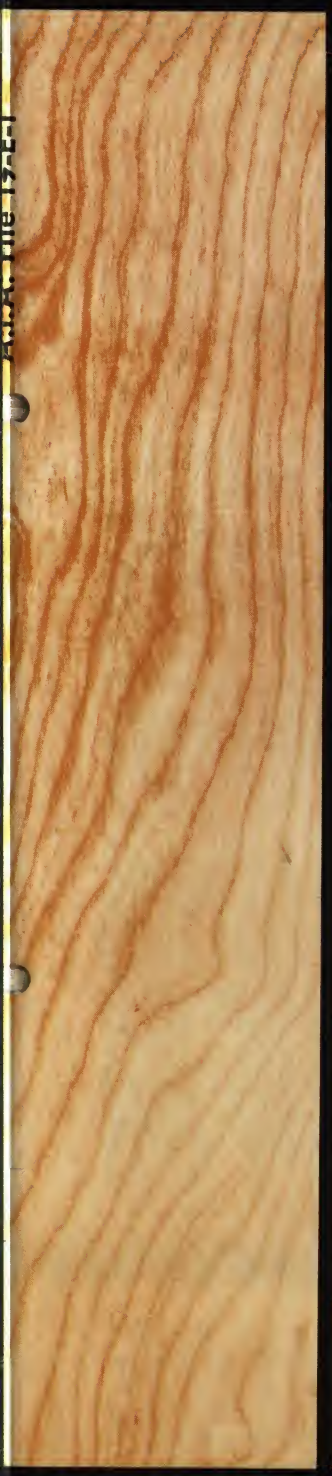
RODDIS PLYWOOD CORPORATION

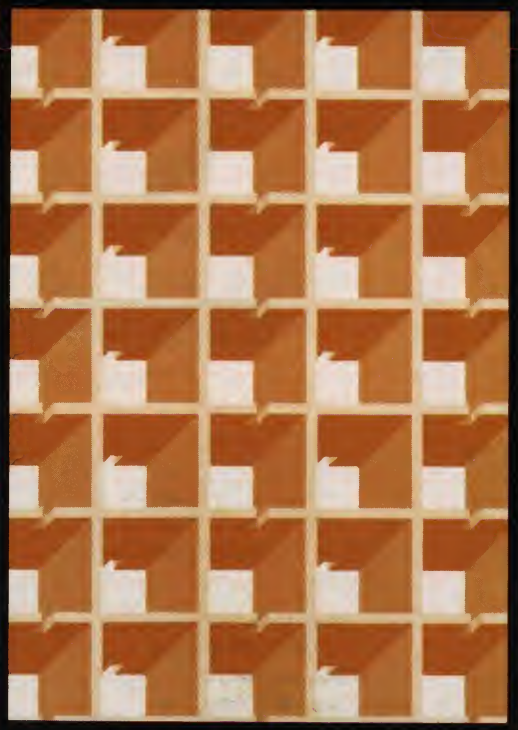
SUCCESSOR TO

OWENS-ILLINOIS PLYWOOD COMPANY
NORTH TROY, VERMONT

LITHO IN U.S.A.

PAINE FLUSH DOORS





REZO®

Wood Grid Core Doors

REZO®-FOLD

Wood Grid Core Door Units

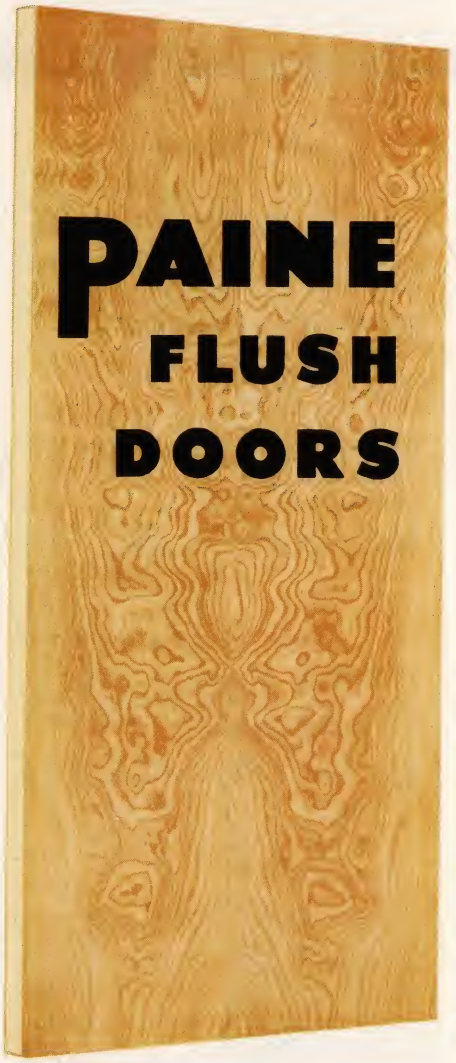
SOLID

Soft Wood Block Core Doors

SSS* TRADEMARK
SUPER SATIN-SURFACE*

A.I.A. File 19-E-1

PAINE
LUMBER COMPANY, LTD.
ESTABLISHED 1853 • OSHKOSH, WIS.



For over 100 years the Paine Lumber Company has maintained its widely known reputation for quality products and fine workmanship. Since the 1880's, when the company began its pioneering in door design, it has held acknowledged leadership in the door industry.

Hardwood veneered solid core flush doors came into being at the turn of the century and have been manufactured consistently since then; hollow core doors were tested and patented as far back as 1910. The famed REZO all-wood grid core door had its inception in the early '30's, was market tested in 1935, and now has given outstanding service in nearly ten million residential and institutional installations the world over.

The Paine Lumber Company is proud to have earned all the gold medals ever awarded the door industry by any national or international exposition held in the United States.

SSS* TRADEMARK SUPER SATIN-SURFACE*

*Trademarks "Super Satin Surface" and "SSS" (or "Triple S")—Use licensed on products having a Supersealed or Super Microsealed surface that satisfies the quality standards of Ky. GPC, the trademark owner.

The Paine Lumber Company, Ltd. is one of a few leading wood-working manufacturers licensed to use the new Super Microseal process to produce Super Satin surface doors.

WHAT IS THE SUPER MICROSEAL PROCESS?

Special equipment applies a precision-controlled, penetrating solution of additives, followed by the application of heat and pressure. This process "fuses" the lignin in the wood with the Super Microseal additives resulting in a surface with a hand-rubbed texture.

ADVANTAGES: Resists soiling . . . eliminates grain and fiber raising . . . has a uniform surface texture . . . looks and feels like a hand-rubbed finish. Should a higher gloss be required, will take paste wax, spirit stain, varnish, lacquer or paint with superior results.

SPECIFICATION: All doors shall be REZO (or SOLID CORE) SUPER SATIN SURFACE (Triple "S" or "SSS") DOORS with flat surface faces treated with the SUPER MICROSEAL PROCESS as manuactured by Paine Lumber Company Ltd., Oshkosh, Wisconsin.

GUARANTEE We, of Paine, are proud of our world-wide reputation for maintaining quality products. They are backed by more than 100 years of wood-working experience, by a tradition of product pride that has been passed down through generations of Paine craftsmen. We will never knowingly jeopardize our reputation and position of leadership in the door manufacturing industry. Each door is built to rigid standards of quality, workmanship and inspection. If, through human error, an imperfect door is shipped for installation, we will gladly replace it, provided it has not been subjected to abuse in shipping, storage or installation, over which we have no control after it leaves our factory.

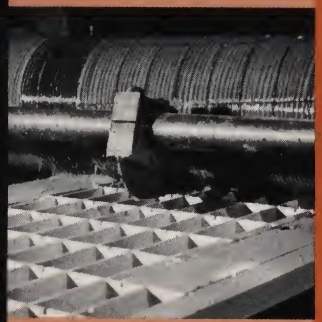
ALL WOOD GRID CORE

Paine REZO flush doors, with air-vented, all wood grid core, are recognized the world over for high quality and precise workmanship. This is the result of the absolute quality control maintained within the Paine factory plus the tradition for expert craftsmanship passed down by generations of Paine factory families.

Gridwork must be assembled in a skilled hand operation.

Stiles and rails are each securely locked into place.

Light openings, individually framed, are built into the core.



A complete coating of resin glue is applied by machine.

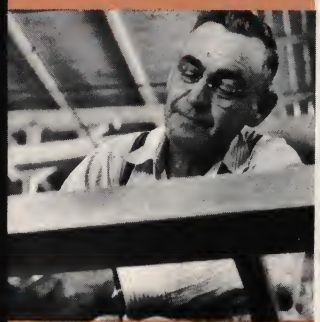
FACING

The plywood face panels used on Paine flush doors are completely fabricated from raw materials to finished product within the Paine plant under the watchful eyes of experienced craftsmen. Only in this manner can the hand-matched beauty of the face veneers be achieved and the correct combination of materials be assured.

Face veneers are matched for pleasing appearance.

Completed doors are sanded to a cabinetmaker's finish.

Each door must be carefully inspected in oblique light.

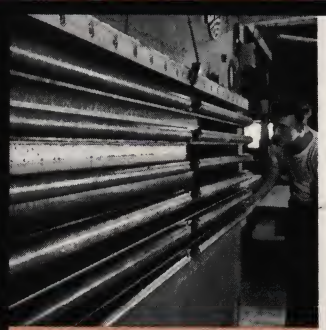


Special doors are handled by experienced craftsmen.

SOLID DOORS

Solid doors, with soft wood block cores, have been made by Paine for over fifty years. Because of their consistent high quality and excellent service, millions of these doors have been specified by architects for use in public buildings.

Solid core is carefully prepared for durable glue bond.



Controlled heat and pressure provide accurate assembly.

REZO®

EXTERIOR

Both research and experience have encouraged the development of the REZO wood grid core entrance door. Over a half million satisfactory installations give testimony to the fact that the properly designed and well manufactured REZO wood grid core entrance door is the best door.

INTERIOR

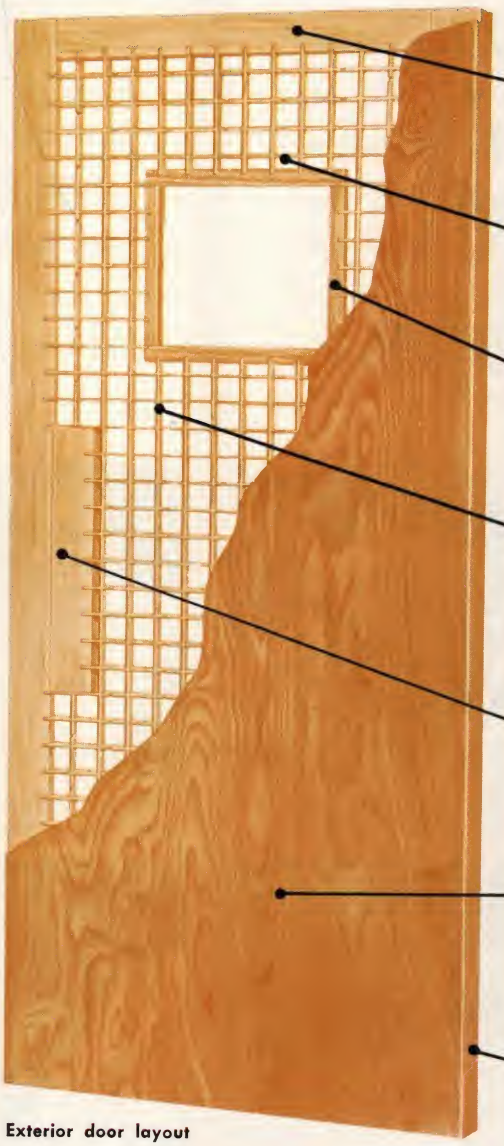
The Paine REZO interior door is much lighter than any other door of its strength, far stronger than any other door of its weight. This means exceptional resistance to abuse and the ability to withstand the stresses and strains imposed by temperature and humidity changes — all adding up to trouble-free performance.

INSTITUTIONAL

The REZO institutional door is designed to provide a door for public buildings with the strength and lightness in weight of the wood grid core door and the general utility of the solid core door — and at a lower price. It is completely blocked to receive the majority of special hardware and can be specified by name — "REZO institutional", eliminating the need for a detailed description of extra blocking. Other than standard blocking can be furnished when specified.

EXTERIOR DOORS

(Available "SSS" treated — see page 2)



3" (nom.) top and bottom rails are of sufficient width to permit cutting down 2" in height — cut equally from each end.

Notches and grooves provide core ventilation to permit rapid equalization of moisture content for perfect stability.

All light openings are individually framed and built into the core.

Standard grid mesh is 2" x 2" — double the strength used on interior doors — for the greater rigidity needed on exterior exposure.

Lock area, both sides, set in the middle, is 6¾" (incl. stile) x 24" on 6'8" doors; proportionately longer on doors over 6'8" high.

Extra strength 3-ply panels painstakingly hand-matched for pleasing appearance.

Stile width is 3" (nom.). Standard thickness is 1¾". When specified, matching vertical edge strips finish not less than ½" wide.

Exterior door layout

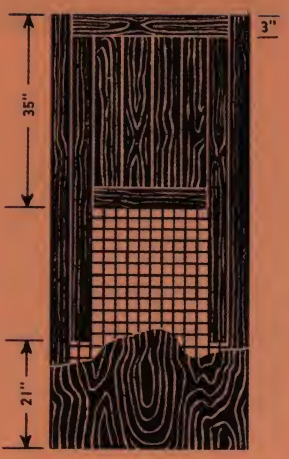
BUILT TO EQUAL OR EXCEED THE REQUIREMENTS OF COMMERCIAL STANDARD 171-58

◀ FRONT DOORS

Standard Entrance Door designs are available in a wide variety to satisfy most requirements where economy is a factor. Special designs to achieve any effect can be custom built to meet the needs of the most discriminating designer.

HALF SOLID DOORS ▶

Stock half solid entrance doors provide a suitable area for lights to be cut at any time.



INTERIOR DOORS

(Available "SSS" treated — see page 2)

3" (nom.) top and bottom rails are of sufficient width to permit cutting down 2" in height — cut equally from each end.

Notches and grooves provide ventilation for every core cell, permitting rapid equalization of moisture content for perfect stability.

The air cells formed by interlocked strips of finely machined softwood are 2" x 4" in the standard interior door.

Lock area, both sides, set in the middle is 4⅜" (incl. stile) x 20" on 6' 8" doors; proportionately longer on doors over 6'8" high.

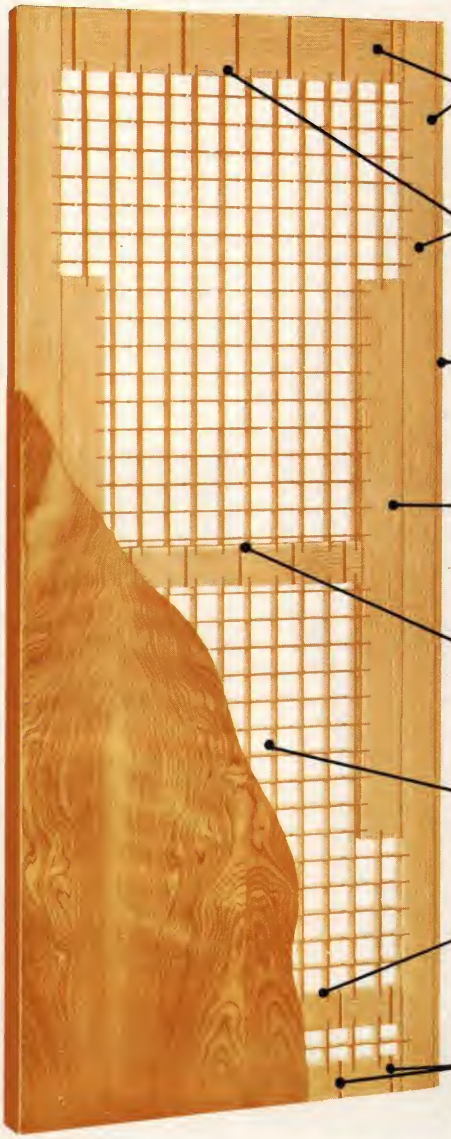
Core is overlaid with plywood ⅛" thick before sanding. Face veneers on all grade "A" doors are hand-matched for pleasing appearance.

Stile width 1½" (nom.). Door thickness can be 1⅜" to 2¼". When specified, matching vertical edge strips finish not less than ½" wide.

Interior door layout

INSTITUTIONAL DOORS

(Available "SSS" treated — see page 2)



One rail is 5" wide and can be used as either top or bottom of the door. Stiles are 3" (nom.).

Gridwork is locked into the stiles and rails for greater strength.

Matching vertical edge strips can be furnished and finish not less than ½" wide after trimming.

Lock area is 6¾" wide and 21" from either end and varies in length proportionate to door height.

3" rail for special hardware is 41" from bottom of door to top of rail unless otherwise specified.

Heavy duty 2" x 2" air cell gridwork interlocked for strength and durability.

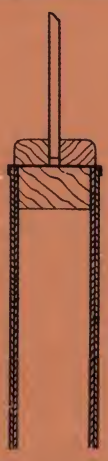
3" rail for kick plate located 10" from bottom of door to top of rail unless otherwise specified.

Vent grooves in top and bottom rails help keep moisture content in balance — prevent warpage.

Institutional door layout

BUILT TO EQUAL OR EXCEED THE REQUIREMENTS OF COMMERCIAL STANDARDS 171-58

CONSTRUCTION DETAILS



Exterior Sash Doors

Metal saddles are used at the bottom of light openings exposing a flat surface. Other openings are properly primed with lead and oil.

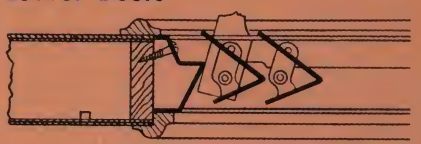
Interior Sash Doors

Light openings on the standard interior door are framed into the core and come complete with flush glass stops.

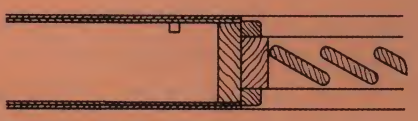
Mirror Doors

Our stock two member mirror moulding is recommended for the installation of mirrors on standard interior doors.

Louver Doors



Metal louver installation.

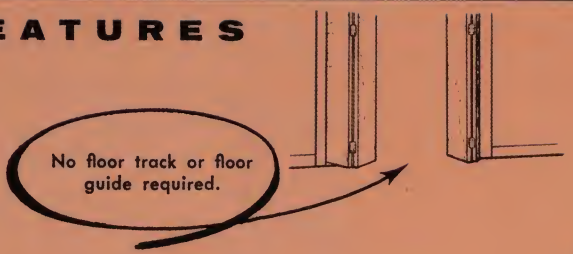


Stock wood louver design.

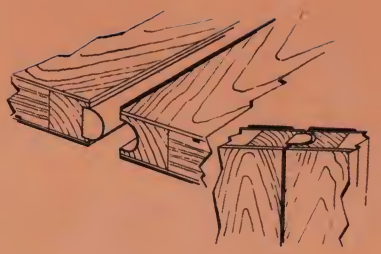
2-DOOR FOLDING UNIT

4-DOOR FOLDING UNIT

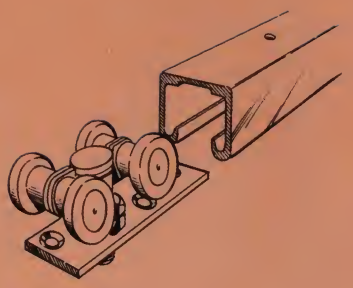
FEATURES



Carton packed — ready for immediate installation.



Tongue and groove meeting stiles assure snug fit.



Swivel hangers with 4-wheel nylon rollers operate smoothly in extruded aluminum track.

PAINE FLUSH DOORS

REZO-FOLD DOOR UNITS

(Available "SSS" treated — see page 2)

The Paine REZO-FOLD door unit is designed and engineered to the highest standards of quality in appearance, operation and durability.

DOORS

REZO all-wood, grid core doors, 1⅜" thick . . . manufactured in stock quantities using natural birch, red oak, and lauan face panels . . . can be made on special order in any commercially available species. A 3" crossrail is furnished in each door centered 36" from bottom to accommodate either the hardwood knobs furnished or other hardware of your own choice.

HARDWARE

Hardware is of the latest design utilizing all recent engineering improvements such as side-jamb mounted pivot brackets, center door swivel hangers with 4-wheel nylon rollers and sturdy, extruded aluminum head track.

SUSPENSION

With three-point suspension (top and bottom of each side jamb and top of each of the two meeting doors) easy and foolproof operation is assured, yet the REZO-FOLD unit will withstand rugged use. Because of this method of suspension and the added advantages of hardwood tongue-and-groove meeting stiles, the floor is entirely free from pivot sockets, tracks, guide plates or other devices ordinarily required to stabilize a unit in an opening.

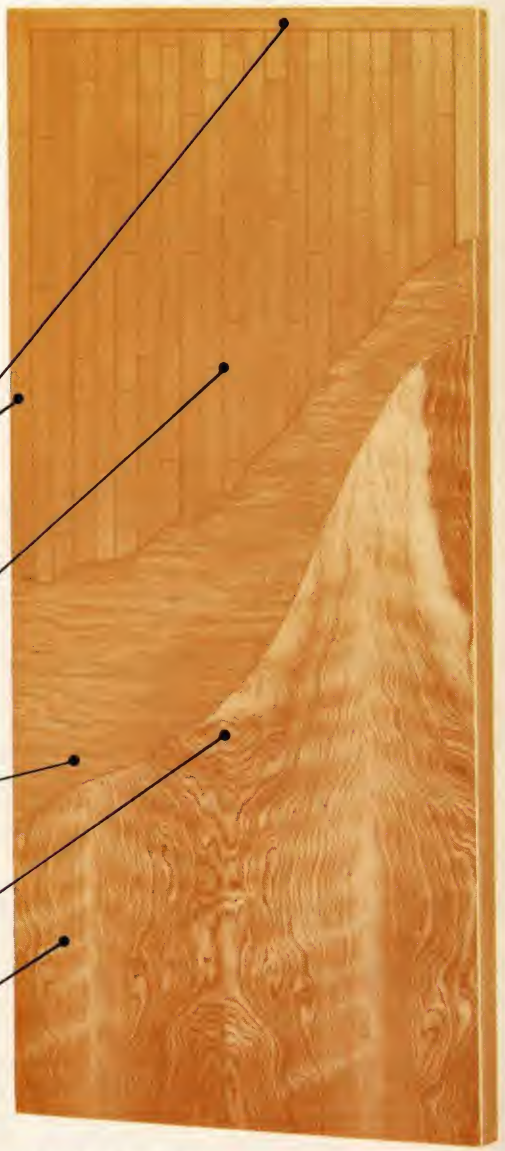
SIZES

REZO-FOLD units are manufactured in stock sizes for finished openings exactly 6'-8½" and 7'-11¼" high and 2'-0", 2'-6", 2'-8", and 3'-0" wide in a 2-door unit and 4'-0", 5'-0" and 6'-0" wide in a 4-door unit. Each REZO-FOLD unit is completely carton-packed with doors hinged in pairs, holes factory-drilled for exact location of all hardware. This provides an entire unit ready for immediate installation.

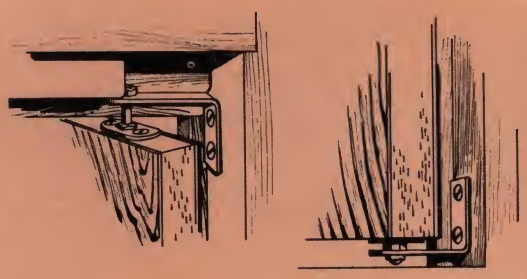
SOLID DOORS

(Available "SSS" treated — see page 2)

Building code requirements in some areas continue to specify solid wood doors for entrance, corridor and certain other types of openings. All Paine solid core flush doors are made in accordance with Commercial Standard 171-58 plus many refinements and extras not set forth in this standard such as the painstaking care of the hand-matching of face veneers and quality control at every stage of production.


Full length softwood edge strips on all sides finish ¾" wide after trimming. Matching vertical edges finish not less than ½" wide.
Built-up core of low density softwood blocks with grain running vertical and parallel and with end joints staggered.
All face panels include crossbanding of a thickness complementary to the face veneer.
Hand-matched face veneers of any commercially available species.
Face and edges are sanded to a cabinet-maker's finish.
Glue throughout shall conform to Commercial Standard 171-58, Type I or Type II, as required.

Solid flush door layout



Pivot brackets are located top and bottom on each side jamb.

SPECIAL DOORS

CUSTOM BUILT

Custom-building interior and exterior doors is a specialty of Paine craftsmen. Styles of doors with special lights, louvers and decorative designs are limited only by the imagination and are built with true cabinet-maker's technique.

PLASTIC FACED

All Paine flush doors are available with faces of durable, high pressure, decorative plastic laminates.

SPECIFICATIONS

SUPER SATIN SURFACE DOORS – All doors shall be REZO (or SOLID CORE) SUPER SATIN SURFACE (Triple "S" or "SSS") DOORS with flat surface faces treated with the SUPER MICROSEAL PROCESS as manufactured by Paine Lumber Company, Ltd., Oshkosh, Wis.

REZO INTERIOR DOORS — All DOORS shall be Paine REZO interior wood grid core flush doors as manufactured by the Paine Lumber Company, Ltd., Oshkosh, Wisconsin. CORE shall consist of 2" x 4" grid type cells made by interlocked softwood slats notched for ventilation and mortised into a framework of stiles, rails and lock blocks. STILES shall be softwood, 1½" nominal width and notched to receive gridwork. (Alt: Matching vertical edge strips shall be laminated to the stiles and finish not less than ½" after trimming). RAILS shall be 3" nominal width, grooved to receive core gridwork and notched for core ventilation. LOCK AREA shall be 4⅜" wide, including the stile, and 20" long on 6'8" doors, centered on both sides. On doors over 6'8" high, lock block area proportionately longer. PANELS shall be ⅛" thick BEFORE sanding and consist of two or three plies of veneer in accordance with Paine standards. GLUE throughout shall conform to Commercial Standard 171-58, Type I or Type II as required. DOORS shall be trimmed to exact, specified size. DOORS shall be of specified thickness with industry accepted tolerance of 1/16" under. Door FACES shall be stroke sanded, sharp edges eased; all surfaces prepared for painters' finish.

REZO EXTERIOR DOORS — All DOORS shall be Paine REZO exterior wood grid core flush doors as manufactured by Paine Lumber Company, Ltd., Oshkosh, Wisconsin. CORE shall consist of 2" x 2" grid type cells made by interlocked softwood slats notched for ventilation and mortised into a framework of stiles, rails and lock blocks. STILES shall be softwood, 3" nominal width and notched to receive core gridwork. (Alt:) Matching hardwood vertical edge strips shall be laminated to the stile and finish not less than ½" wide after trimming. RAILS shall be 3" nominal width, grooved to receive core gridwork and notched where necessary for core ventilation. LOCK AREA shall be 6¾" wide (incl. stile) and 24" long on 6'8" doors, centered on both sides. On doors over 6'8", lock area proportionately longer. PANELS shall be ⅛" thick before sanding and consist of three plies of veneer. GLUE throughout shall conform to Commercial Standard 171-58, Type I or Type II, as required. DOORS shall be trimmed square and to exact, specified size. DOORS shall be of specified thickness with industry accepted tolerance of 1/16" under. Door FACES shall be stroke sanded, sharp edges eased; all surfaces prepared for painters' finish.

REZO INSTITUTIONAL DOORS — All DOORS shall be Paine REZO institutional wood grid core flush doors as manufactured by Paine Lumber Company, Ltd., Oshkosh, Wisconsin. CORE shall consist of 2" x 2" grid type cells made by interlocked softwood slats notched for ventilation and mortised into a framework of stiles, rails and lock blocks. Two 3" cross rails provided at specified height for special hardware. STILES shall be softwood, 3" nominal width and notched to receive core gridwork. (Alt:) Matching hardwood edge strips shall be laminated to the stile and finish not less than ½" after trimming. Nominal width of one RAIL, 3"; the other, 5" both grooved to receive core gridwork and notched for core ventilation. LOCK AREA shall be 6¾" wide (incl. stile) centered on both sides and extending 21" from top and bottom of door. PANELS shall be ⅛" thick before sanding and consist of three plies of veneer. GLUE throughout shall conform to Commercial Standard 171-58, Type I or Type II, as required. DOORS shall be trimmed square and to exact, specified size. DOORS shall be of specified thickness with industry accepted tolerance of 1/16" under. Door FACES shall be stroke sanded; stiles sanded, sharp edges eased; all surfaces prepared for painters' finish.

SOLID CORE DOORS – All DOORS shall be Paine SOLID CORE flush doors as manufactured by Paine Lumber Company, Ltd., Oshkosh, Wisconsin. CORE shall be constructed of softwood blocks laid up with grain running vertically and parallel and with end joints in adjacent rows staggered. STILES shall be softwood finishing no less than ¾" wide after trimming. (Alt:) Matching hardwood edges shall be not less than ½" wide after trimming. Top and bottom EDGE STRIPS shall be of a low density softwood to match the core and finishing not less than ¾" wide after trimming. FACE VENEER shall be of the type specified with hardwood crossbanding of a complementary thickness. GLUE throughout shall conform to Commercial Standard 171-58, Type I or Type II, as required. DOORS shall be trimmed square and to exact, specified size. DOORS shall be of specified thickness with industry accepted tolerance of 1/16" under. Door FACES shall be stroke sanded, sharp edges eased; all surfaces prepared for painters' finish.

REZO-FOLD DOOR UNITS — All folding door units shall be REZO-FOLD as manufactured by Paine Lumber Company, Ltd., Oshkosh, Wisconsin combining REZO wood grid core doors 1⅜" thick and all hardware necessary for hanging and operation; both doors and hardware to be carton packed and ready for immediate installation.

PAINE LUMBER COMPANY, LTD. OSHKOSH, WISCONSIN EST. 1853

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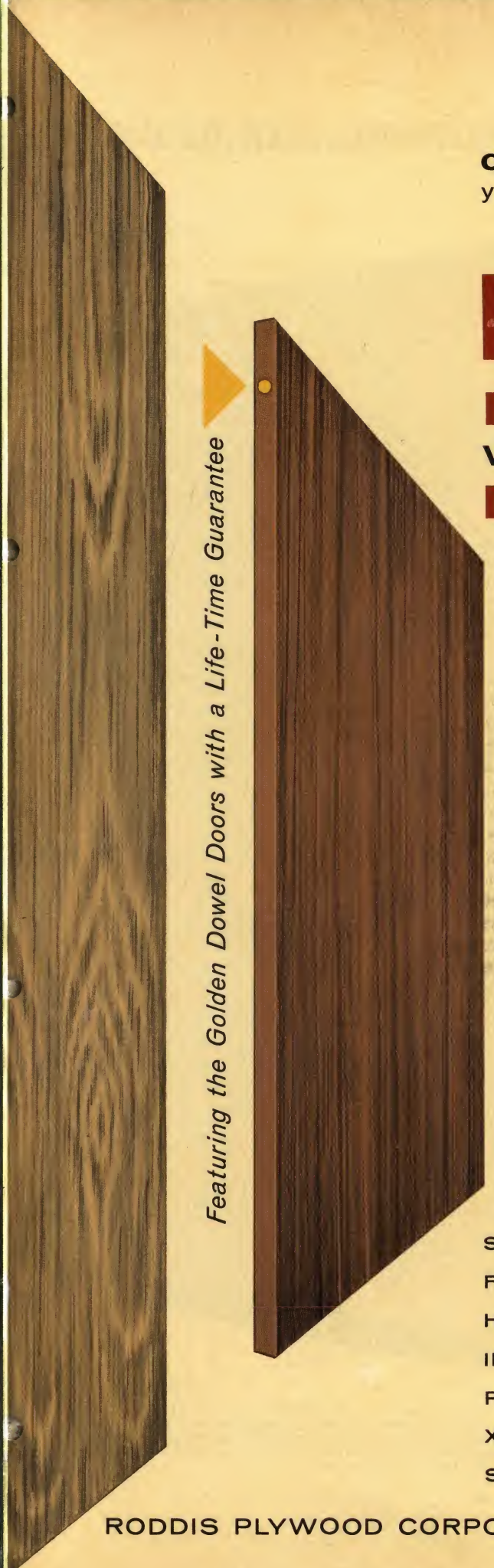
ONE SOURCE for all
your requirements

Roddis
FLUSH
VENEERED
DOORS

A.I.A. FILE NO. 19-E-1



Featuring the Golden Dowel Doors with a Life-Time Guarantee

SOLID CORE
FIRE (B- AND C-LABEL)
HOLLOW CORE
INSTITUTIONAL
PLASTIC FACED
X-RAY
SOUNDPROOF

RODDIS PLYWOOD CORPORATION, MARSHFIELD, WISCONSIN **1960**

Roddis GOLDEN DOWEL, SOLID CORE

The GOLDEN DOWEL solid core door is guaranteed for the life of the installation.

The Roddis Golden Dowel Door is truly an outstanding new development in door technology. The new process of TIME CONDITIONING is employed in its manufacture. This process, developed after extensive research, is another example of Roddis leadership in the door industry.

With this important development, for the first time, it is now possible to obtain staved wood core doors in which you can place your absolute confidence . . . Confidence backed by Roddis manufacturing skill . . . Confidence backed by a Lifetime Guarantee.

ALL Roddis doors are identified by a colored dowel on one edge of the door as stated in each door specification in this catalog. Please be certain to include this dowel information in *your* specifications so that you can be assured that only genuine Roddis doors will be used.

LIFETIME GUARANTEE

The purchaser of Roddis Golden Dowel doors and B-label, one-hour, fire doors is indemnified against loss under this guarantee by an insurance policy issued by one of the largest insurance organizations in the world.

DETAILS OF LIFETIME GUARANTEE

"The Roddis Plywood Corporation guarantees its Golden Dowel doors and B-label, one-hour, fire doors for the life of the installation, to be of good workmanship and material, free from defects, which render them unserviceable or unfit for the use for which they were manufactured, and agrees to pay the rehanging and refinishing costs of a reasonable nature for any door found defective within the meaning of this guarantee. This guarantee applies only if the doors are properly handled, protected and installed. Doors used in exterior locations must be protected at the bottom of the lights and at the bottom of the doors with approved metal flashing. Doors must be painted or varnished on all four edges as well as faces and must be kept in good finish at all times. Structural strength of the doors must not be impaired in the fitting of the door or application of hardware. Serial plate on the hinge side of door must be retained in place on the door for inspection."

FLUSH VENEERED DOORS

FIRE RESISTANT

The fire resistance of Roddis solid core flush veneered doors has been substantiated by independent laboratories. Here, Roddis doors withstood a regular fire test for over 40 minutes. (For information on B-Label, one-hour, fire doors, see pages 6 to 11).

SOUND RESISTANT

Roddis solid core doors have high sound resistance. Roddis also manufactures special soundproof doors designed to reduce noise to a minimum. (See Page 14).

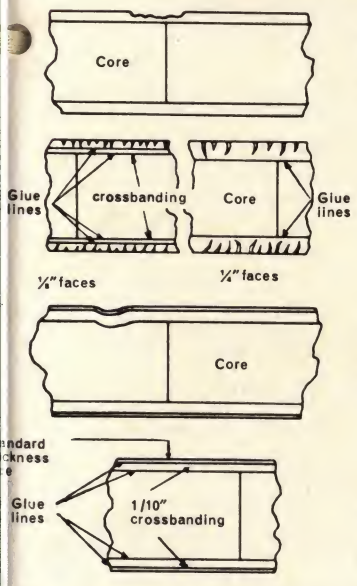
WATERPROOF

Use of phenolic resin glue provides two completely waterproof shields over the entire area of the door. Doors are suitable for both interior and exterior applications.

PLASTIC FACES AVAILABLE

Roddis Golden Dowel solid core doors and standard solid core doors are available with 1/16″ high-pressure laminate faces for interior application. Laminates are bonded to 1/7″ veneer crossband with a waterproof adhesive. Plastic fits flush with door rails. Crossband is not visible. Make of laminate and pattern desired may be specified.

Compare the advantages of Roddis construction over heavy face veneer construction



Heavy face veneer construction
Because of grain characteristics of wood, sharp blow is more likely to cause chipping here, rather than dent, requiring replacement of veneer or extensive sanding.

Heavy face veneer construction
Veneers are held at glue line, but excessive thickness makes exposed surface vulnerable to temperature & humidity changes.

Roddis construction
Dents affect face & crossbanding as a unit —can be raised by applying water and hot iron.
If face veneer is gouged out, matching replacement is relatively easy with standard thickness face veneers.

Roddis construction
Waterproof glue line close to surface prevents movement of face veneers caused by climatic action.

Note: In some exterior applications, face veneers up to ¼″ in thickness may be used advantageously, depending upon the type of wood and the amount of resistance to wear and weathering that is required. Roddis will be happy to discuss these applications with you.

SPECIFICATIONS — *Golden Dowel Solid Core Doors*

(See page 5 for specifications on Standard Solid Core Doors)

GENERAL: All Doors (so indicated on plans) shall be five-ply Golden Dowel Exterior doors made by Roddis Plywood Corporation, Marshfield, Wis. Doors shall be constructed utilizing the Roddis Time Conditioning process and covered by a Life-Time guarantee. All doors shall be identified with a golden colored dowel and the serial plate on the hinge side of door must be retained in place for inspection. All doors shall be treated with a wood preservative solution which seals the wood. No doors manufactured exceeding 4′ in width and 7′ in height unless installation approved by Roddis.

CORES: Cores shall be subjected to a special Roddis process and shall be made of low density* wood blocks no more than 2¼″ wide of varying lengths (none longer than 36″) assembled with the grain running parallel and vertically (from top to bottom of door). Cores shall be railed on two sides with matching edgestrips at least ½″ after trim. Double thickness strips top and bottom of any hardwood or softwood. Those on side edges to be same kind of wood as face veneer. The whole assembly shall be glued under pressure with water resistant resin glue and thoroughly kiln dried, seasoned and planed smooth.

CROSSBANDINGS: Crossbandings of 1/10″ thick, thoroughly dried, hardwood veneer shall be laid with the grain at right angles to that of the core and glued (pressure and heat) with waterproof phenolic resin glue to both sides of the core. Crossbandings shall run full to the four edges of the door.

FACE VENEERS: Only thoroughly dried, standard thickness face veneers** are to be used, laid with the grain at right angles to that of the crossbandings, and shall be glued (pressure and heat) with phenolic resin glue to both faces of the door and belt sanded smooth. This is not to be interpreted as meaning that the doors will be ready for painter's finish because grain may raise due to exposure to humidity and marks may result in handling.

Face veneers shall be as follows: **NOTE:** Here describe any special requirements of species, figure, pattern, inlays, etc. If more than one type is required, specify each separately and locate here or by reference to door schedules or special detail drawings.

Metal Door Bottoms and Glazing Strip:

All exterior doors shall be provided with 28-gauge aluminum moisture-protecting door bottoms (and glazing strip) in accordance with Roddis standard details. See page 4.

GLAZING: (Not by door manufacturer)—All glass for glazed doors shall be (specify).

Glazing shall be in accordance with details, using removable wood glazing molding set in white lead or varnish to seal against moisture absorption.

FITTING: Here specify factory sizing and fitting of doors and hardware.

Painting and Finishing:

Note: Here specify factory finishing (see page 15). Users who perform bleaching operations on Roddis doors, do so at their own risk.

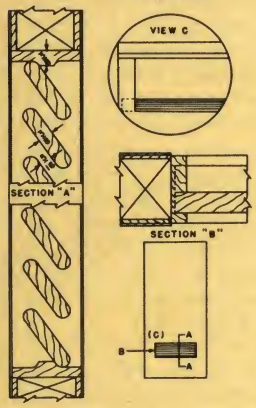
*Low density wood blocks are those weighing not more than 2300 pounds per 1000 board feet when kiln dried to a moisture content of 6%.

**Standard thickness of face veneers before sanding: Rotary Birch 1/26″, Plain Sliced Birch, Maple, Gum, Walnut, Rift Sliced Oak, Mahogany and most foreign woods 1/28″, Plain Sliced Red and White Oak 1/24″, White Pine 1/16″.

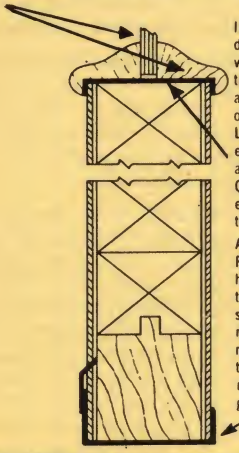
Roddis SOLID CORE DOOR

These drawings illustrate typical Roddis door details.
Through the years they have proved highly satisfactory.
Roddis also performs door detail work to architectural specifications.

Standard Louver Construction for flush doors (with round edge slats)



GLAZING CONTRACTOR SHOULD SET GLASS IN PUTTY AND EXTERIOR STOPS IN WHITE LEAD OR SPAR VARNISH.

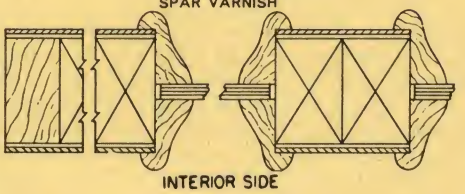


Inside of light opening and bottom of door thoroughly impregnated with wood preservative to seal wood prior to installing 28 gauge aluminum strips at the factory. Strip around bottom of door secured with aluminum nails. Lifetime guarantee on Golden Dowel exterior doors is effective only if aluminum flashing is employed. Quotations on Roddis Golden Dowel exterior doors automatically include this cost.

Aluminum moisture protection for Roddis Standard exterior doors is highly recommended and is installed at the factory for a nominal cost when specified. In cases where it is not felt necessary to use aluminum, doors must be sealed top and bottom at the time of installation and must be resealed as often as necessary or guarantee is voided.

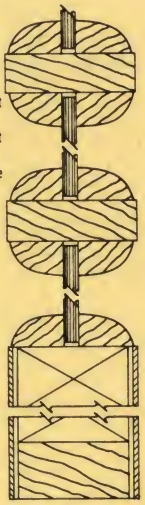
RECOMMENDED MOISTURE PROTECTION AND DIRT GUARD FOR EXTERIOR DOORS

EXTERIOR SIDE
STOPS SET IN WHITE LEAD OR SPAR VARNISH



INTERIOR SIDE

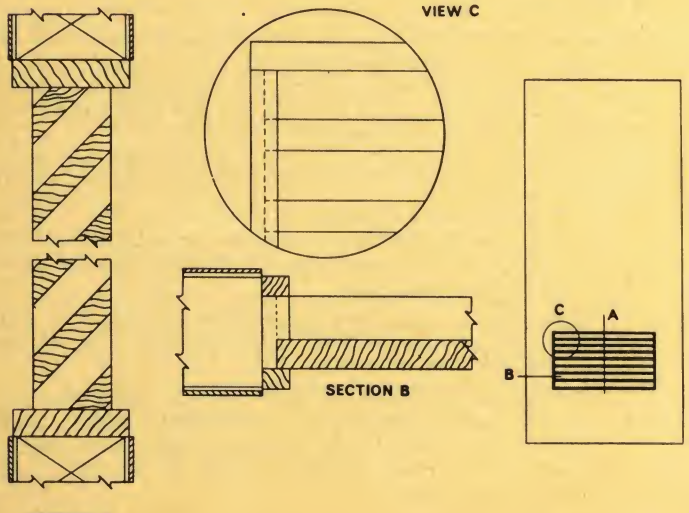
INDIVIDUAL LIGHT OPENINGS CUT OUT WHEN BARS ARE 1½" OR WIDER



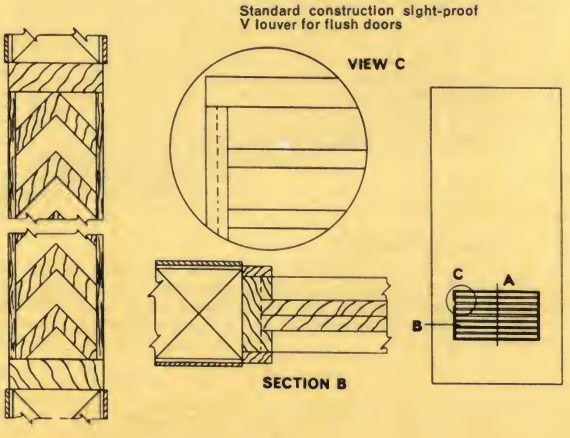
SOLID BARS USED WHEN MEASUREMENTS ARE LESS THAN 1¼"

- Exterior applications—lip or rabbeted raised moldings are recommended.
- Interior applications—sunken bead molding is recommended.

STANDARD LOUVER CONSTRUCTION FOR FLUSH DOORS



Standard construction sight-proof V louver for flush doors



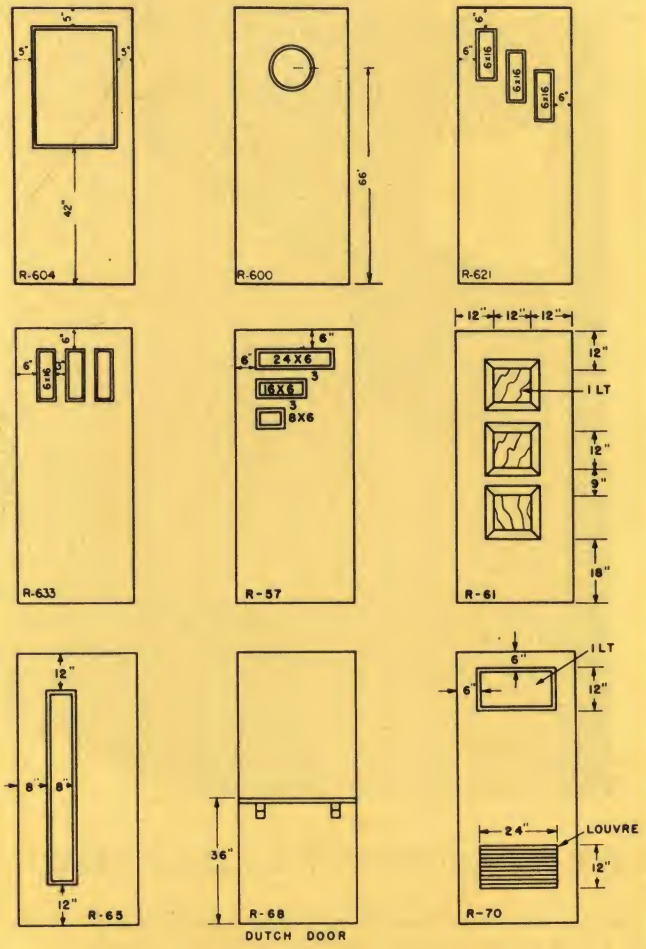
DETAILS HAVE PASSED THE TEST OF TIME

FACTORY-FINISHED DOORS—Roddis doors can be furnished primed and sealed or completely factory finished to architectural specification. (See page 15).

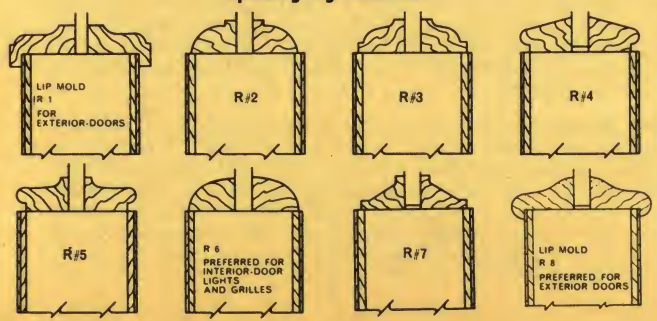
DETAIL WORK—Numerous door installations require light and louver openings and louver installation. Roddis is equipped to perform these detail operations to specification. Construction methods used are time tested. (See page 4).

MOISTURE PROTECTION—Roddis installs aluminum glazing strips at the bottom of light openings and at the bottom edges of the doors. Roddis recommends that when millwork firms install glazing, the lip mold on the exterior sides of the light openings be set in white lead or spar varnish, and the glass imbedded in putty. (See page 4).

REPRESENTATIVE LAYOUTS for FLUSH DOORS



Roddis stock door moldings. When ordering, specify by number



SPECIFICATIONS for Standard Solid Core Doors...Identified by the Red, White and Blue Dowel

GENERAL: All doors (so indicated on plans) shall be exterior five-ply Standard Flush Veneered doors made by Roddis Plywood Corp., Marshfield, Wisconsin. Doors shall be constructed in strict accordance with Roddis Standard Construction covered by their two-year Guarantee Bond (page 16) and permanently identified with the red-white-and-blue dowel. Doors shall be of sizes and thicknesses called for (1⅛″ to 2¼″ thick).

CORES: Cores shall be made of low density* wood blocks no more than 2¼″ wide of varying lengths none longer than 36″ assembled with the grain running parallel and vertically (from top to bottom of door). Cores shall be railed on two sides with matching strips at least ½″ after trim. Double thickness strips top and bottom of any hardwood or softwood. Those on side edges to be same kind of wood as face veneer. The whole assembly shall be glued under pressure with water-resistant resin glue and thoroughly kiln dried, seasoned and planed smooth.

CROSSBANDINGS: Crossbandings of 1/10″ thick, thoroughly dried, hardwood veneer shall be laid with the grain at right angles to that of the core and glued (pressure and heat) to both sides of the core. Crossbandings shall run full to the four edges of the door.

FACE VENEERS: Thoroughly dried, standard thickness face veneers** laid with the grain at right angles to that of the crossbandings, shall be glued (pressure and heat) with phenolic resin glue to both sides of the door and belt sanded smooth. This is not to be interpreted as meaning that the doors will be ready for painter's finish, because grain may raise due to exposure to humidity and marks may result from handling.

Face veneers ⅛″ and thicker are manufactured to customer specification at customer's risk. The Roddis Plywood Corp. will assume no responsibility for opening of joints or the checking of face veneers manufactured ⅛″ and thicker.

Face veneers shall be as follows: **NOTE:** Here describe any special requirements of species, figure, pattern, inlays, etc. If more than one type is required, specify each separately and locate here or by reference to door schedule or special detail drawings.

METAL DOOR BOTTOMS AND GLAZING STRIP: It is highly recommended that 28 gauge aluminum moisture-protecting door bottoms (and glazing strip) be specified on all exterior doors in accordance with Roddis standard details. (See page 4).

GLAZING: (Not by door manufacturer)—All glass for glazed doors shall be (specify).

Glazing shall be in accordance with details, using removable wood glazing molding set in white lead or varnish to seal against moisture absorption.

FITTING: Here specify factory sizing and fitting of doors and hardware.

PAINTING AND FINISHING: Note: Here specify factory finishing (See page 15). Users who perform bleaching operations on Roddis doors do so at their own risk.

*Low density wood blocks are those weighing not more than 2300 pounds per 1000 board feet when kiln dried to a moisture content of 6%.

**Standard thickness of face veneers before sanding: Rotary Birch 1/26″; Plain Sliced Birch, Maple, Gum, Walnut, Rift Sliced Oak, Mahogany and most foreign woods 1/28″; Plain Sliced Red and White Oak 1/24″; White Pine 1/16″.

Roddis

ANNOUNCES *the new* GOLDEN DOWEL B-LABEL, ONE-HOUR

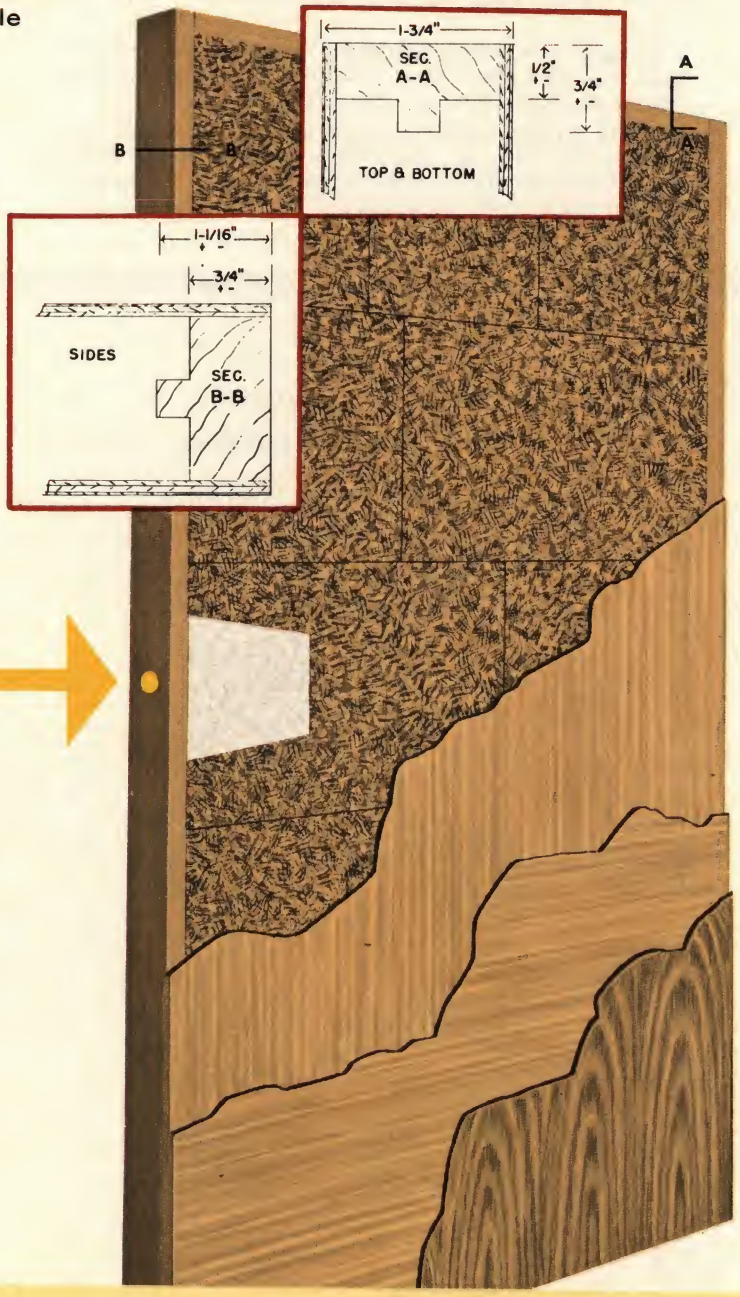
Patented core development now makes possible B-label and C-label fire doors with exceptional screw holding power... great sound resistance...added strength

CORE IS ALL WOOD

New Roddis Golden Dowel fire doors are all wood. Dimensioned wood particles are bonded with phenolic adhesive under pressure and heat. Equal strength in all directions and great sound resistance is obtained.

EXTRA WEIGHT GIVES ADDED STRENGTH

Weighing approximately six pounds per square foot, these new doors weigh about 50% more than mineral core fire doors. Added weight is one of the reasons for the outstanding sound resistance, fire resistance and good base for screw holding of Golden Dowel fire doors.



YOUR ASSURANCE OF PROTECTION

Roddis Golden Dowel B-label, one-hour fire doors are listed by Underwriters' Laboratories, Factory Mutual and the New York Board of Standards and Appeals (N.Y.B.S.&A., Calendar No. 165-54-SM). Roddis Golden Dowel C-label ¾ hour fire doors are also listed by Underwriters' Laboratories and the New York Board of Standards and Appeals (calendar number 354-58-SM)

EXCEPTIONAL SCREW HOLDING

The screw holding ability of these doors is exceptionally high. In comparison to mineral core fire doors, Roddis wood particle core doors have almost twice the screw holding ability.

SPECIFICATIONS: RODDIS GOLDEN DOWEL, B-LABEL

GENERAL: All doors required to maintain the integrity of One-Hour single door classification openings shall be seven ply Underwriters' Laboratories labeled fire doors manufactured by the Roddis Plywood Corporation, Marshfield, Wisconsin. The doors shall bear the label of Underwriters' Laboratories, Inc. Doors are intended for use in the protection of openings in **INTERIOR** walls of vertical shafts and corridor or room partitions. Door size shall not exceed 3'6" x 7'0" and the thickness shall not deviate from the approved thickness of 1¾".

Doors shall be covered by the Roddis Lifetime Guarantee (see page 2).

CORE: Core shall be composed of fire-proofed wood particles bonded with a waterproof thermo-setting resin into sectional slabs by heat and pressure. Core slab sections shall be tongue and grooved, bonded together, and railed with fire-proofed Birch lumber, ¾" thick on sides and ½" thick on the top and bottom edges. The rails shall be glued and joined to the core with a well fitting tongue and groove joint.

LOCK BLOCK: The lock block shall be composed of an asbestos compound and shall measure 9" in height where it joins the edgestrip, tapering to 8" in height. Width shall be 7¼". Unless otherwise specified, the standard height to the center of the lock block will be 36" for 80" doors and 38" for 84" doors. The center of the lock block shall be marked with ⅛" Golden Dowel.

FACE PANELS: Both sides of the door shall be faced with a three ply veneer panel. Panel faces shall be well dried, standard thickness* face veneers, laid with the grain perpendicular to that of the crossbanding. Both crossbanding (1/20" thick) and panel back (1/28" thick) shall be impregnated with fire-retardant chemicals. This three-ply panel shall extend the full width and length of the door.

FIRE DOOR...*and* C-LABEL ¾ HOUR DOOR

Guaranteed for the life of the installation

Roddis Golden Dowel Fire Doors have high screw-holding power.

***Comparative Screw Holding Properties**

With Face and Crossband

Standard Solid Core Doors (Softwood)	1,400 lbs.
Mineral Core Fire Doors	850 lbs.
Wood Particle Core Fire Doors	1,650 lbs.

Core Material Only

Pine Blocks	1,050 lbs.
Mineral Core	166 lbs.
Wood Particle Core	1,200 lbs.

*These tests were made with a #8 screw with one inch penetration. Pressure was then applied to determine pounds of resistance before the screw was withdrawn.

Golden Dowel C-Label, ¾ Hour Fire Doors with Light Openings up to 30" x 40"... Another Roddis First

Now for the first time, architects have available *flush veneered C-label fire doors* . . . thanks to the forward door research program at Roddis.

Important cost savings can be yours with this new door development, for in many applications, the new Roddis C-label fire door can be used instead of more costly B-label fire doors.

SPECIFICATIONS:

Roddis Golden Dowel, C-Label, ¾ Hour Fire Retardant Doors

Specifications are identical to those listed below on Roddis Golden Dowel, B-label fire doors with the exception of glazing, type of fire retardant treatment given wood particles, and the fact that the C-label is a one-piece core and is five-ply construction utilizing a 1/10" fire-retardant treated crossbanding.

GLAZING: Approved for vision panels up to 1,200 sq. inches. Factory will cut opening and supply complete vision panel assembly (standard sizes 30" x 40", 30" x 36", 24" x 36", 18" x 30", 8" x 12", 10" x 10") with or without ¼" wire glass. A minimum of 5" top and 5" sides should be left when cutting door for light openings.

ONE-HOUR FIRE RETARDANT DOORS

A. Face veneers shall be as follows:

NOTE: Here describe any special requirements of species, figure, pattern, etc. If more than one type is required, specify each separately and locate here, or by reference to door schedules or special detail drawings.

ADHESIVES: The core and rails shall be bonded together with thermosetting waterproof adhesive. The three-ply face panels shall be bonded together with waterproof adhesive and bonded to the core with waterproof adhesive.

SANDING: Both door faces shall be thoroughly belt sanded to a smooth even texture. This is not to be interpreted as meaning that the doors will be ready for painter's finish, because grain may raise due to exposure to humidity and marks may result from handling.

GLAZING: (Approval Pending)

FITTING: Trim top, bottom and side edges equally when fitting this door so that structural strength of door will not be impaired. Do not expose the core at any point. Roddis Plywood Corporation will not recognize claims arising from failure to comply with these instructions.

PAINTING AND FINISHING: Here specify factory finishing. (See page 15). Users who perform bleaching operations do so at their own risk.

NOTICE—The lumber used on the four edges of one-hour fire doors has been impregnated with a hygroscopic fireproofing salt. It is absolutely necessary to finish all four edges, as soon as possible to seal these salts in the wood to avoid staining and wood deterioration.

*STANDARD THICKNESS FACE VENEERS—Standard thickness of face veneers before sanding: Rotary Birch 1/26"; Plain Sliced Birch, Maple, Gum, Walnut, Rift Sliced Oak, Mahogany and most foreign woods 1/28"; Plain Sliced Red and White Oak 1/24"; White Pine 1/16".

Roddis MINERAL CORE

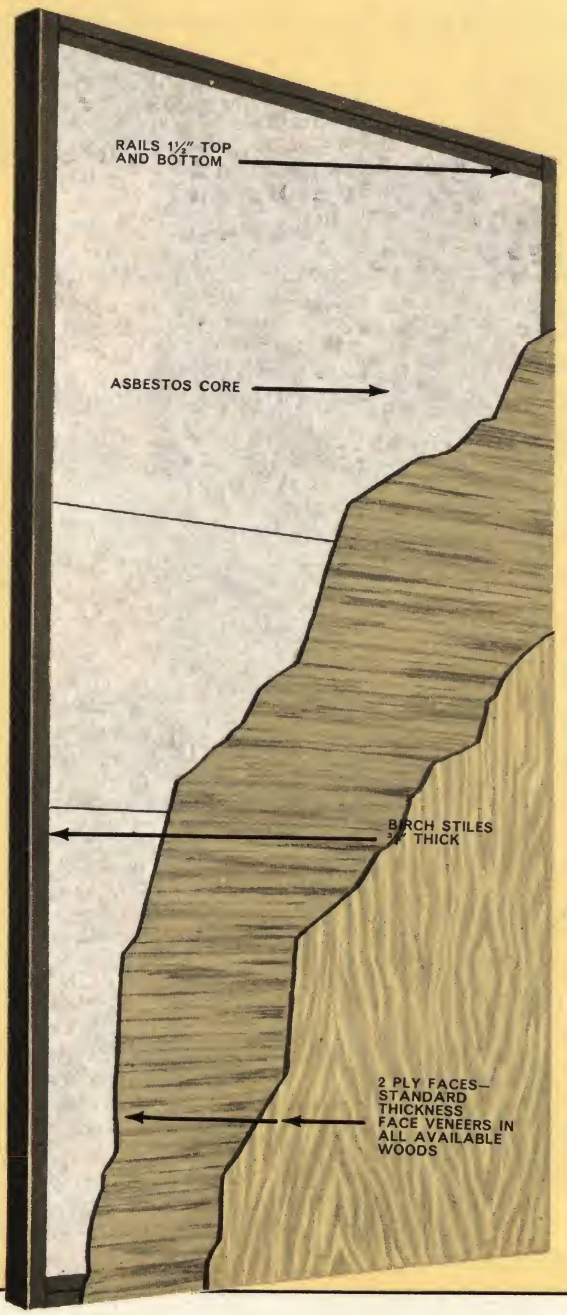
LIGHTWEIGHT...WARP FREE...LOW SOUND TRANSMISSION

Safety features that guard life and property are built into Roddis Mineral Core wood-faced fire doors, labeled by the Underwriters' Laboratories for use in B and C openings.

For effective fire protection, Roddis B-label fire doors are used in many institutions, including hospitals, schools and business establishments for stairway and room entrances, dumb waiter and fire escape openings. For residences, there's a growing trend to use these doors for bedrooms, basements and for entrances where a garage is connected directly to the house.

Produced in all available wood species, Roddis fire doors permit architects and builders to match their fire doors with conventional Roddis flush doors in a building.

Manufactured in all standard sizes, Roddis Mineral Core fire doors are available in widths up to 4 feet and heights to 7 feet.


RAILS 1¼" TOP AND BOTTOM
ASBESTOS CORE
BIRCH STILES ¾" THICK
2 PLY FACES—STANDARD THICKNESS FACE VENEERS IN ALL AVAILABLE WOODS

CONSTRUCTION FEATURES

The core is made of a special asbestos compound that is non-combustible. The door is faced on both sides with beautifully matched veneers and the sides and top are banded with fire-proofed lumber. To assure stability, the special asbestos core is made up with sections assembled together with tight tongue-and-groove joints.

Other outstanding features include: It is lightweight, weighing approximately the same as conventional solid core doors. Also the door is warp-free, and has a low sound transmission factor.

SPECIFICATIONS: MINERAL CORE, ONE-HOUR, B-LABEL

1. GENERAL: All doors required to maintain the integrity of B and lower single door openings, shall be five ply Underwriters' Laboratories B-label fire doors manufactured by the Roddis Plywood Corporation, Marshfield, Wisconsin, and labeled accordingly.

A. Doors shall be covered by the Roddis Lifetime Guarantee. (See page 2.)

B. Doors are intended for use in the protection of openings in *interior* walls of vertical shafts and corridor or room partitions.

C. The size shall not exceed 4'0" x 7'0", and the thickness shall not deviate from the approved thickness of 1¾".

2. CORE: The core shall consist of well-balanced sections of a rigid, incombustible inorganic bonded, long-fibered asbestos panel having an approximate density of 23 pounds per cubic foot. The sections shall be joined tightly together with a well-fitting tongue and groove joint, and the assembly shall be railed with Roddis fireproofed Birch lumber, ¾" thick on the sides, and 1½" thick on the top and bottom edges. The rails shall be glued and joined to the core assembly with a well-fitting tongue-and-groove joint.

3. FACE PANELS: The core assembly shall be faced on each side with face veneers and cross banding ⅛" in thickness. The face shall be well dried, standard thickness veneers—laid with the grain perpendicular to that of the crossbanding. The face and crossbanding veneers of each panel shall extend the full width and length of the door.

A. Face veneers shall be as follows:

NOTE: Here describe any special requirements of species, figure, pattern, etc. If more than one type is required, specify each separately and locate here, or by reference to door schedules or special detail drawings.

4. ADHESIVES: The core and rails shall be bonded together with resorcinol waterproof adhesive. The entire core assembly shall be

B-LABEL, ONE-HOUR FIRE DOOR

Guaranteed for the life of the installation

OUTSTANDING FEATURES

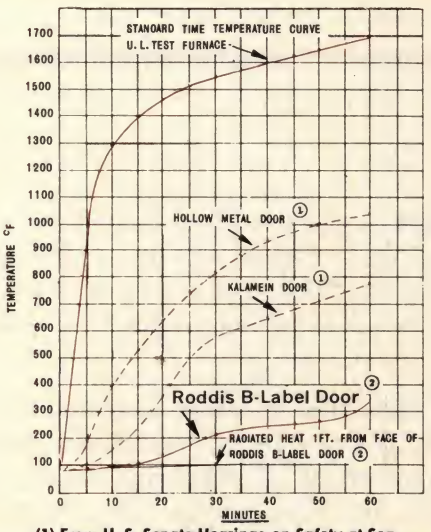
- Non-combustible core of special asbestos compound.
- Produced in all available wood species.
- Available in widths up to 4 feet . . . heights up to 7 feet.
- Warp-free, low sound transmission.
- Completely stable core. Sections are assembled with tight tongue-and-groove joints.

UNDERWRITERS' LABORATORIES LABELED . . .

And approved by Factory Mutual and The New York Board of Standards and Appeals (N.Y.B.S. & A., Calander No. 166-54-SA).

This metal Underwriters' Laboratories label is fastened to every Roddis One-Hour, B-label Fire Door.

HEAT TRANSMISSION COMPARISON



(1) From U. S. Senate Hearings on Safety at Sea
(2) From Fire Test Report Underwriters Laboratories

Confining fire is only one function of a fire door. The other is to retard the transmission of heat through the door, eliminating the possibility of igniting combustible materials contacting its other side. Dry paper will ignite when placed against a surface with a temperature approaching 500° F.

As shown in the graph, even though one side of the Roddis Mineral Core fire door was subjected to temperatures of 1700° F. in this sixty-minute test, the maximum radiated temperature, measured one foot from the opposite side, was only slightly over 100° F. The surface temperature of this side measured only about 350° F.

FIRE RETARDANT DOORS

sized on two sides to assure a perfect bond of the face panels to the core. The face panels shall be assembled to the core with waterproof adhesive and maintained under adequate pressure until completely cured.

5. SANDING: Both door faces shall be thoroughly belt sanded to a smooth, even texture. This is not to be interpreted as meaning that the doors will be ready for painter's finish, because grain may raise due to exposure to humidity and marks may result from handling.

6. GLAZING: Vision Panel Frames available for door sizes up to 4′0″ in width and up to 7′0″ in height. Factory will cut opening and supply complete vision panel assembly (standard sizes 8″ x 12″ and 10″ x 10″) with or without ¼″ wire glass.

7. FITTING: Trim top, bottom and side edges equally when fitting this door so that structural strength of door will not be impaired. Do not expose the core at any point. Roddis Plywood Corporation will not recognize claims arising from failure to comply with these instructions.

8. PAINTING AND FINISHING: Here specify factory finishing. (See page 15.) Users who perform bleaching operations do so at their own risk.

NOTICE—The lumber used on the four edges of B-label fire doors has been impregnated with a hygroscopic fireproofing salt. It is absolutely necessary to finish all four edges as soon as possible to seal these salts in the wood to avoid staining and wood deterioration.

**STANDARD THICKNESS FACE VENEERS—Standard thickness of face veneers before sanding: Rotary Birch 1/26″; Plain Sliced Birch, Maple, Gum, Walnut, Rift Sliced Oak, Mahogany and most foreign woods 1/28″; Plain Sliced Red and White Oak 1/24″; White Pine 1/16″.

Roddis INSTALLATION AND HARDWARE

the Underwriters' Laboratories specify that Roddis B-label fire doors used for vertical shaft and corridor openings be hung and equipped as follows:

THE LABEL is placed one-third down from the top of the door on the hinge side in manufacture. The label should be at the top when the door is installed. This label is not to be removed for any reason.

CLEARANCE. The maximum clearance shall be 1/16″ at the top and sides and 3/16″ at the bottom. To obtain proper width clearance and bevel, plane the lock edge only. The labeled edge is not to be trimmed or beveled. Trim equal amounts off both top and bottom to obtain proper height clearance. (See page 9—Painting and Finishing.)

HINGES. Fasten the door leaves of full-mortise and half-mortise hinges to the door with 1¼″ No. 12 flat head Type A sheet metal screws. The door leaf of full-surface and half-surface hinges should be bolted through the door as illustrated.

The Underwriters' Laboratories specify that hinges for Class B, C, D and E doors shall be full-mortise, half-mortise, half-surface, or full-surface. These are to be made of steel and not less than 4½″ in height and 0.134 in. in thickness. Also, olive knuckle steel hinges not less than 6 in. in height and 0.225 in. in thickness may be used. Two hinges shall be provided for doors up to and including 60 in. in height, and an additional hinge for each 30 in., or fraction thereof in height.

Doors not exceeding 5 ft. in height and 3 ft. in width shall be provided with two hinges of the types and sizes, as specified above, or not less than 4″ in height and 0.130 in. in thickness.

LOCKS. The Underwriters' Laboratories require that single-swing doors for Class B, C, D, and E openings be equipped with an Underwriters' Laboratories listed, single point lock having a minimum throw of ½″. Either the tubular or mortise-type lock set may be used. The locks should be installed according to manufacturer's instructions. Those locks having screwless roses are recommended.

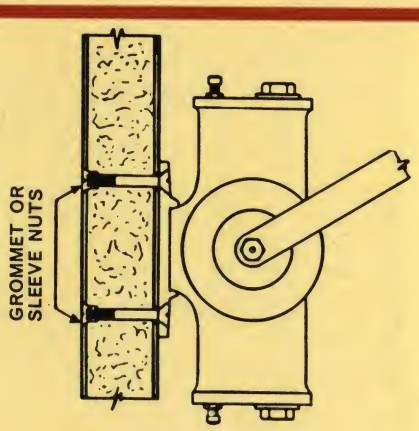
A positive latch must be used as the air currents created by a fire may cause the door to stand open, adding to the draft and losing the protection the door affords. Consequently, doors equipped with pull only are not suitable.

DOOR CLOSERS. The Underwriters' Laboratories have listed only the overhead, face-mounted and semi-concealed door closers. Those equipped with hold-open mechanisms are required to have a fusible link release incorporated in them.

FRAMES. The Roddis B-label Fire Door should always be installed in Underwriters' Laboratories labeled steel frames—16 gauge for openings of 3′6″ and under, and 14 gauge for openings over 3′6″. (For a list of suppliers of Underwriters' Laboratories listed hardware for use with Roddis B-label fire doors, write for FIRE PROTECTION EQUIPMENT LIST, published by Underwriters' Laboratories, Inc., 161 E. Sixth Ave., New York 13, N.Y.)

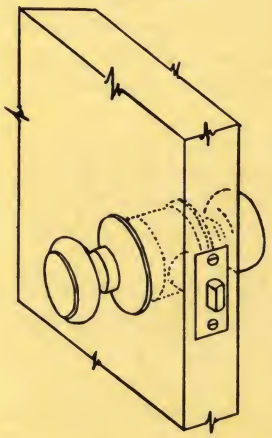
RECOMMENDATIONS FOR B-LABEL, COMPOSITE CORE, ONE-HOUR FIRE DOORS

preferred methods of installing tubular lock, half-surface hinge, door check mounting and full mortise hinge in Roddis B-label fire doors.

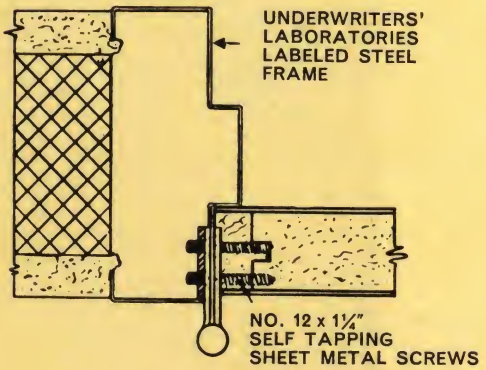


DOOR CHECKS WITH HOLD-OPEN ARM MUST BE EQUIPPED WITH A FUSIBLE LINK RELEASE

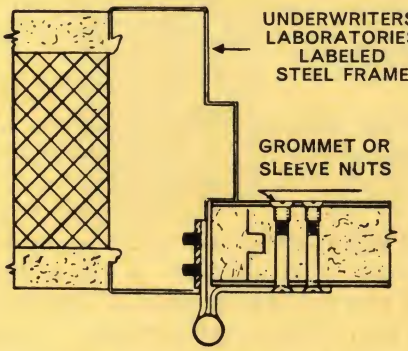
DOOR CHECK MOUNTING



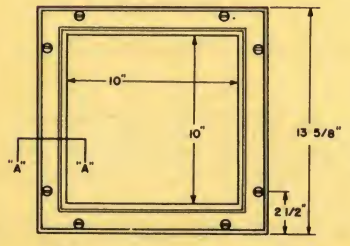
TUBULAR LOCKSET



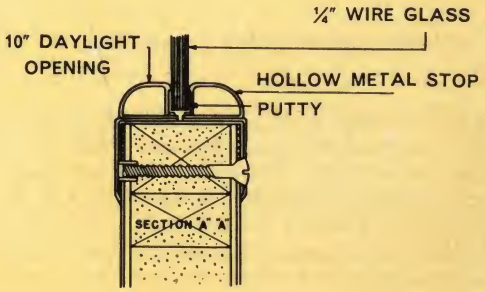
FULL MORTISE HINGE



HALF SURFACE HINGE

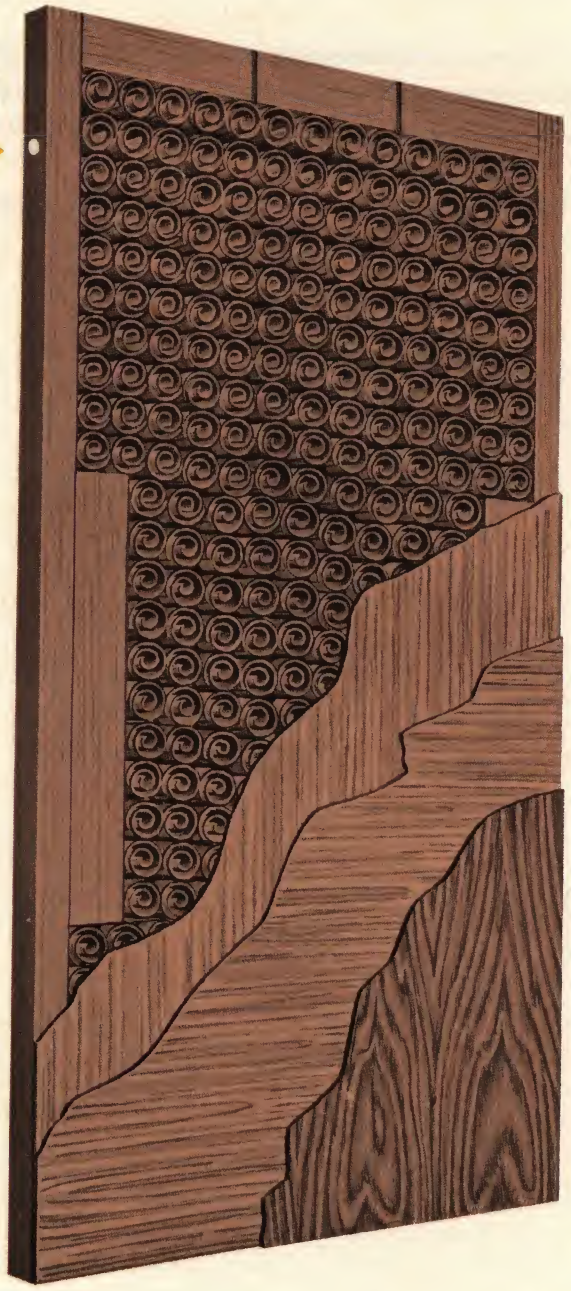


RODDIS VISION PANEL METAL FRAME
(STANDARD SIZE 10" x 10" AND 8" x 12")



Roddis HOUSEMART HOLLOW CORE DOORS...

The new Roddis 7-Ply
HOUSEMART HOLLOW CORE DOOR
Unique Wood Spiral Core utilized for maximum stability and dependability



The new Roddis seven-ply Housemart hollow core door presents practical economy and exceptional flexibility of installation. It is the ideal answer for strength, service and beauty on a limited budget. Here are a few of the features of this new Roddis door.

- **WOOD-SPIRAL CORE**—Maximum surface area for the adhesion of door faces is obtained with precision-cut wood spirals. All spirals touch one another giving superior face support.
- **SEVEN-PLY CONSTRUCTION**—Added quality is built into the new Housemart with time-proven, seven-ply construction.
- **STRONG**—Great strength has been built into this new door without adding weight . . . doors are easy to install.
- **GUARANTEED**—The new Housemart is backed by the Roddis Two-Year Guarantee Bond . . . your assurance of satisfactory service. (See page 16 for guarantee details.)
- **VERSATILE**—Standard door sizes in 1⅜″ and 1¾″ thickness as well as specified sizes are manufactured in all available woods.

FOR YOUR NEXT JOB where minimum cost coupled with maximum dependability is of primary importance, it will pay you to specify the new Roddis Housemart door. It is a quality door . . . made by a company that for over sixty years has produced fine wood products of superior craftsmanship.

Complete specifications are listed below

SPECIFICATIONS . . . Roddis Seven-Ply Housemart Hollow Core Doors

All doors (as indicated on plans) shall be seven-ply Housemart hollow core doors, made by the Roddis Plywood Corporation, Marshfield, Wisconsin, and covered by the Roddis Two-Year Guarantee Bond (See page 16). Doors shall be identified with a black-white-black dowel.

Cores shall be composed of wood spirals cut from prime lumber placed tangent to one another, and face panels shall be 3-ply construction utilizing standard thickness face veneers.

Lock blocks shall be on both sides of doors 4 1/16″ wide (including stiles) x 24″ on 6′8″ and 7′0″ doors. Top and bottom rails shall be 2⅝″ wide with vertical softwood edge strips 1 3/16″ wide.

Where hardwood edge strips are specified, they shall be ½″ thick, with backup strip attached, to make a total stile width of 1 3/16″. Doors shall be bonded with a water-resistant adhesive unless otherwise specified.

THE INSTITUTIONAL...

THE RODDIS INSTITUTIONAL DOOR is completely reversible, having identical construction top and bottom. The door is constructed to be easily fitted with special hardware, closers, kick plates and panic bars. Laminated hardwood stiles give added stability.

RODDIS INSTITUTIONAL—IDENTIFIED BY BLACK DOWEL. PRECISION-CUT WOOD SPIRALS ALL TOUCHING ONE ANOTHER GIVE EXCELLENT SUPPORT TO FACE PANELS.

SPECIFICATIONS...

Roddis Institutional Doors

All doors (so indicated on plans) shall be seven-ply, 1¾″ thick institutional doors made by the Roddis Plywood Corp., Marshfield, Wisconsin, and covered by the Roddis Two-Year Guarantee Bond (See page 16). Doors shall be identified with a black dowel.

Cores shall be composed of wood spirals cut from prime lumber placed tangent to one another. Top and bottom rails shall be softwood lumber 10⅜″ wide.

Vertical edge strips shall be pine (unless otherwise specified) ½″ wide after factory trim. Combined with laminated hardwood stile, overall width of side assembly shall be 2½″.

Lock blocks shall be of softwood on both sides of the door, 5½″ wide and 21″ from each end of the door. Center cross rail shall be 3″ wide.

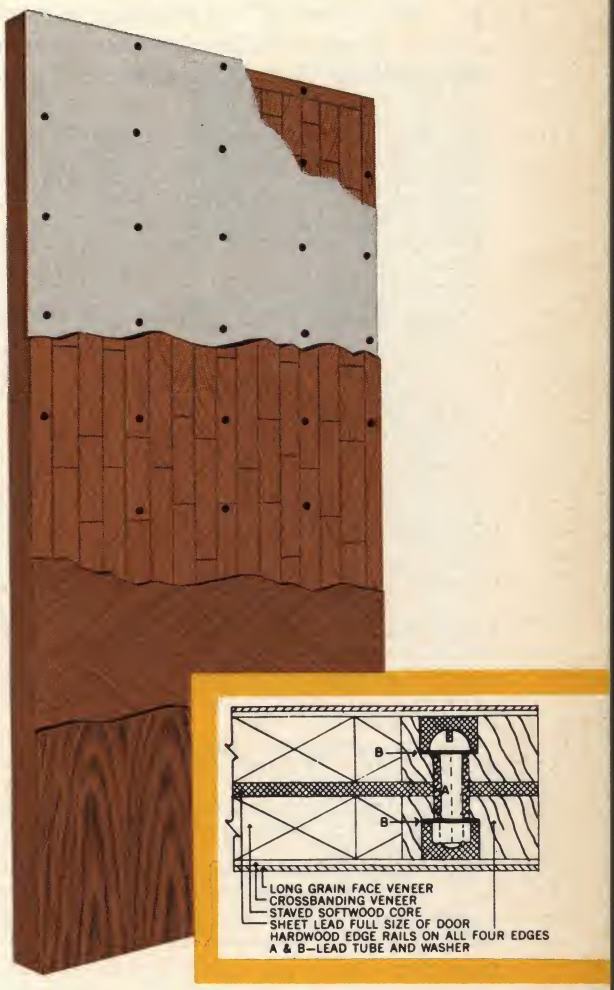
Note: If specifications call for cross rail to be located off center, dowel will indicate top of door.

Face panels shall be 3 ply construction utilizing standard thickness face veneers. Doors shall be completely assembled with water resistant adhesive unless otherwise specified.

All doors to be used in exterior locations shall be provided with 28 gauge aluminum bottoms and glazing strip in accordance with Roddis standard details. (This protection is applied by the Roddis Plywood Corporation at slight additional cost only if specified.)

AND X-RAY DOORS

RODDIS X-RAY DOORS are designed for beauty with complete protection. They are equipped with a continuous sheet of lead set midway between a divided wood core. Doors available in 1¾″ to 3″ thickness and lead thickness of 1/32″ to ½″.



SPECIFICATIONS...

Roddis X-Ray Doors

Doors, (so indicated on plans) shall be Roddis X-ray doors manufactured by Roddis Plywood Corporation, Marshfield, Wisconsin.

Divided wood cores composed of low density blocks bonded together with water resistant resin glue and banded four sides with hardwood lumber shall house a continuous sheet of lead running full to the four edges of the door. Side rails shall be 1½″ and top and bottom rails 4″. This assembly shall be secured with lead covered bolts spaced 8″ on center for 6′8″ doors and 9⅛″ on center for 7′0″ doors. To facilitate the fastening of hinges or door closers, there shall be no bolts in areas 3″ x 7¾″ on the four corners of the door, and there will also be a space free of bolts on both edges of the door for center hinges. 1/10″ hardwood crossbandings and standard thickness face veneers shall be bonded to the core with phenolic resin glue and the doors belt sanded smooth.

Vertical edge strips shall be of same species as face veneers. Lead thickness shall be as indicated on plans. (1/32″ or thicker.)

Roddis

GOLDEN DOWEL SOUNDPROOF DOORS

Guaranteed for the Life of the Installation

Three Thicknesses offered... 1¾", 2¼" and 3"...having average sound transmission loss ratings of 38, 42 and 44 decibels.

For offices, schools, hospitals and plants . . . in any application where sound must be controlled, new RODDIS GOLDEN DOWEL SOUNDPROOF DOORS are highly recommended. These doors utilize the New Roddis high-density wood particle core which gives maximum stability plus required acoustical properties.

TABLE OF SOUND TRANSMISSION LOSS RATINGS

Tests conducted according to ASTM Standard E90-55
(Copies of actual test results available on request)

RODDIS SOUND-PROOF DOORS	DECIBEL RATING CYCLES/SECOND									
	125	177	250	354	500	707	1000	2000	4000	Average
3" Thickness	43	47	39	43	42	41	42	48	53	44
2¼" Thickness	39	46	32	40	40	41	40	47	51	42
1¾" Thickness	36	44	33	36	33	33	38	43	49	38

DOOR WEIGHTS—The 3" thick soundproof door is 13 lbs. per sq. ft.—2¼" is 12 lbs.—1¾" is 6½ lbs.

HINGES AND LOCKS—Use three hinges, size 4½ x 4½ for doors 1¾" up to 3'0" x 7'0". Use 5 x 4½ hinges for larger doors in same thickness.

For 2¼" doors, use three hinges, size 5 x 5 for doors up to 3'0" x 7'0". For larger doors in same thickness use 6 x 5 hinges.

For 3" doors, use three hinges, size 6 x 6 for doors up to 3'0" x 7'0". For larger doors in same thickness use four hinges, size 6 x 6.

Type hinges for all doors should be extra heavy, ball bearing.

Use any conventional locks—cylindrical preferred.

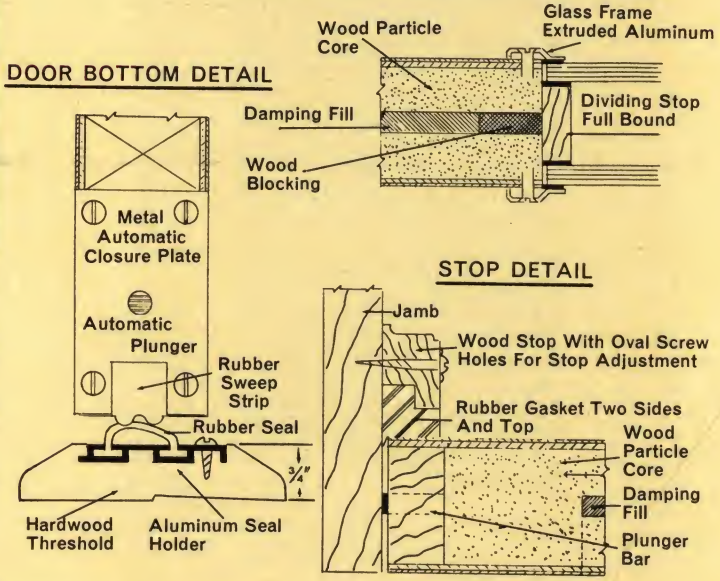
SIZES—For all three thickness doors, the maximum size is 48" x 96" and the minimum size is 12" x 48".

SEALING—Doors are sealed around top and sides with gasketed stops. These stops are applied with adjustable screws and washers after door is hung. For a 3' x 7' or larger door, the screws should be no more than 8" apart. Smaller doors may have a screw spacing up to 12" apart.

Bottom of the doors are sealed with a seal and also a threshold seal. Threshold should be bonded to the floor with calking compound, even though nailed. The stop adjustment is very important. Gasketed stops should be just tight enough to make a positive contact all around the door but must not bind it. The threshold closure is adjusted with a rod. Adjustments are made by screwing the rod out or in until the rubber is pressed down firmly against threshold gasket.

LIGHT DETAIL

MAXIMUM OPENING 20"x20" WITH FRAME CUT AND MITERED READY FOR INSTALLATION.



Center Of 2¼" And 3" Doors Has ¼" Thickness Damping Fill Extending To Within A Minimum 3½" Of Outside Edges And 3" Of Top And Bottom Edges. Damping Fill Not Utilized In 1¾" Doors.

COMBINED SPECIFICATIONS...Roddis Golden Dowel Soundproof Flush Veneered Doors...1¾", 2¼" and 3"

All sound insulating doors (so indicated on plans) shall be five-ply, wood particle core doors manufactured by the Roddis Plywood Corporation, Marshfield, Wisconsin, to provide a sound reduction of (give rating) decibels. Doors shall be of the construction tested and in compliance with ASTM standard E90-55.

All doors shall be identified with a tri-colored dowel (blue, gold, blue) and shall be covered by a life-time guarantee. The serial plate on the hinge side of the doors must be retained in place for inspection.

Doors shall have flush, unbroken surfaces on both sides and wood particle core shall be railed on two sides with edgestrips same specie wood as face veneer at least ½" after trim. Top edge shall have double thickness edgestrips of any hardwood or softwood, and bottom edge a 3" edgestrip, machined for bottom seal.

Crossbanding shall be 1/10" thick hardwood veneer, and standard thickness face veneers shall be utilized. Waterproof adhesive shall be used to bond faces, crossbands and edges assemblies.

Both 2¼" and 3" thickness doors shall have core center filled with special damping material ¼" in thickness and extending to within a minimum 3½" from side edges and 3" from top and bottom edges. The 1¾" thickness door shall not utilize a damping material but shall have a slotted core with two slots ⅛" wide and ¾" deep spaced on one side, and one slot of the same dimensions on the opposite side.

Doors shall be furnished complete with stops, gaskets and threshold sealing components.

GLAZING—Not by door manufacturer. Roddis will supply extruded aluminum frames up to 20" x 20", cut to size and mitred, ready for installation. Light opening must be specified when door is manufactured so that necessary blocking can be made. Light openings cannot be cut in doors not having blocking or damping fill will be lost.

Finishing—Here specify factory finishing (See Page 15).

NOW...FACTORY PRIME AND SEAL PROTECTION...*or* COMPLETE FINISHING OF DOORS OFFERED

Architects are quickly seeing the important cost-savings and numerous other advantages in having Roddis prefinish doors for them.

RODDIS PRIME AND SEAL locks in wood beauty; shuts out dirt, disfiguring stains and troublesome moisture during transportation and storage. Final finishing of doors on the job is made practically foolproof.

This Roddis process can reduce finishing costs substantially because it does away with all preparatory finishing steps. With Roddis Prime and Seal, the only work required is the application of the final finish. As many as five time consuming and costly steps are eliminated.

Exterior or interior finishes can be applied to Roddis Prime and Seal doors. In addition, any good oil or alcohol soluble stain may be used for coloring.

RODDIS COMPLETE FINISHING saves time on the job and can be done at the factory at less cost. Roddis finishes are used (unless others are specified). They give maximum wear, have high chemical and scratch resistance and do not yellow with age.

Doors are individually paper wrapped for protection in shipment and handling.

WHAT A DIFFERENCE RODDIS PRIME AND SEAL MAKES! Raw unprotected door at left shows smudges and scuffs so often inflicted during transportation and handling by tradesmen. Door at right, RODDIS PRIMED AND SEALED is unmarred, clean, dry and perfect for final finishing. This Roddis process is also an excellent protection against blue stain which frequently occurs on oak doors.

SPECIFICATIONS... Roddis Primed and Sealed Doors

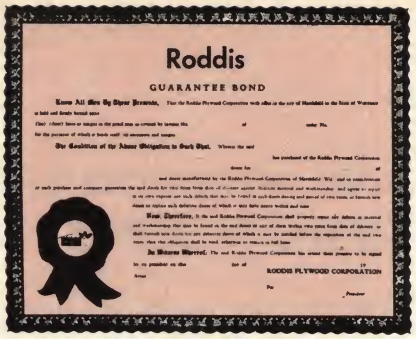
Door faces shall be primed and sealed by the Roddis Plywood Corporation, Marshfield, Wisconsin, utilizing a Roddis synthetic sealer in combination with a series of sanding, polishing operations and inspections. Doors so processed shall be ready for final finish coat.

SPECIFICATIONS... Roddis Completely Finished Doors

Door faces shall be completely finished and the four edges sealed by the Roddis Plywood Corporation, Marshfield, Wisconsin, utilizing Roddis finishes (unless others are specified). Doors shall be sealed, filled (if required), and stained (to specified color) with the doors properly sanded and polished to give a smooth base for two cover coats of Roddis Semi-gloss clear finish. Doors shall be individually paper wrapped prior to shipment.

NOTE: Conveniently packed Roddis finishes are recommended to finish edges on the job.

Roddis standard doors carry this Two-Year Guarantee Bond. For details of Lifetime Guarantee, see page 2.


Roddis

GUARANTEE BOND

STANDARD RODDIS DOOR GUARANTEE

The Standard Door Guarantee of the National Woodwork Manufacturers Association listed below is the basis for Roddis two-year guarantee. While the NWMA guarantee covers one year, the Roddis guarantee covers a two-year period. The Roddis Plywood Corporation is a member of this organization.

All doors produced by members of the National Woodwork Manufacturers Association, Inc., are guaranteed by the manufacturer for one year from date of shipment by the manufacturer to be of good material and workmanship, free from defects which render them unserviceable or unfit for the use for which they were manufactured. Natural variations in the color or texture of the wood are not to be considered as defects.

Doors must be accorded reasonable treatment by the purchaser. Doors must be stored or hung in dry buildings and never in damp, moist or freshly plastered areas. Doors must not be subjected to abnormal heat, dryness or humidity. The utility or structural strength of the door must not be impaired in the fitting of the door, the application of hardware, or cutting and altering the door for lights, louvers, panels and any other special details. When solid core and hollow core flush doors are cut for lights or louvers, the portion between the cut out area and the edge of the door shall not be less than 5 inches wide at any point; and the cut out area shall not exceed 40% of the area of the face of the door; and in addition the cut out area of a hollow core door shall not exceed half the height of the door and shall be suitably prepared. *Immediately after fitting, the entire door including top and bottom edges must receive two coats of paint, varnish or sealer* to prevent undue absorption of moisture. The manufacturer will not assume responsibility for doors which become defective because of failure to follow these recommendations or for hazards of shipment or storage after the doors leave the control of the manufacturer.

Doors must be inspected upon arrival for visible defects and all claims or complaints based thereon must be filed immediately and before the doors are hung and before the first coat of painter's finish is applied.

The manufacturer agrees to repair or replace in the white, unfitted, and without charge, any door found to be defective within the meaning of this guarantee.

Doors must not be repaired or replaced without first obtaining the consent of the manufacturer.

A warp or twist of not to exceed ¼ inch shall not be considered a defect.

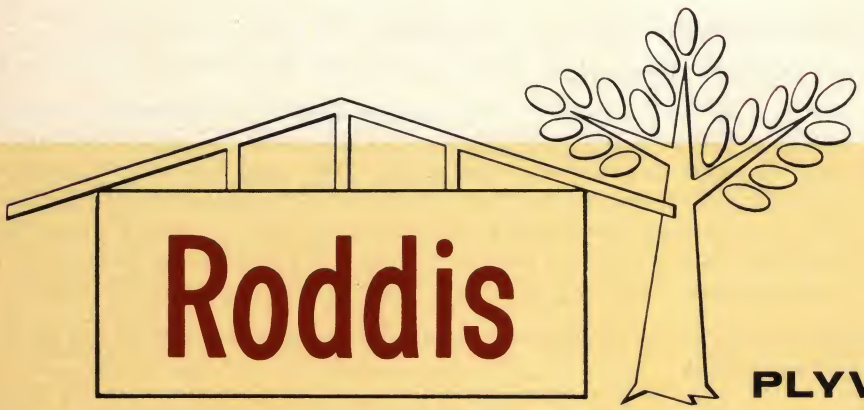
INTERPRETATION OF WARP OR TWIST

"A warp or twist of not to exceed ¼ inch shall not be considered a defect." This refers to any distortion in the door itself and not its relationship to the frame or jamb in which it is hung. Therefore, a warp or twist exceeding ¼ inch shall be considered a defect only:

1. When warp is determined by applying a straight edge to the concave face of the door, or
2. When twist is determined by placing the face of the door against a true plane surface. A simple device to determine and measure "twist" may be made by placing two cross-members on a post, one about door height and the other slightly above the floor. The cross-members must be perfectly straight, and true and plumbed into perfect alignment.

The guarantee against warp or twist does not apply to the following:

A. 1⅛″ and 1⅜″ thick doors that are wider than 3′0″ or higher than 7′0″.
B. Doors with face veneers of different species.
C. Doors that are improperly hung or do not swing freely.



PLYWOOD CORPORATION
MARSHFIELD, WISCONSIN

R.P.C. 128-60-80M

A.I.A. FILE NO. 19E1

Standard
5 ply and 7 ply
Flush Doors

Simpson®

FLUSH DOOR CATALOG

1960

Packaged,
Pre-Assembled
Bifold Doors

New, 7 ply
Ceiling Height
Flush Doors

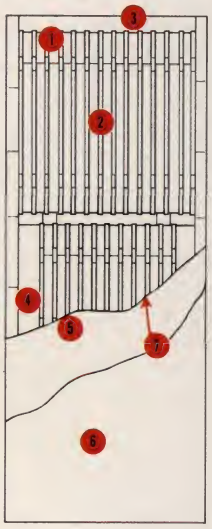
A.I.A. FILE NO. 19E1

5 PLY Hot Press HOLLOW CORE FLUSH DOORS

Each Simpson Door is made of carefully selected face veneers permanently bonded to a sturdy inner framework. This heat-welding process and exclusive core construction are your assurance of lasting strength and beauty.

These highly attractive doors are noted for their strength, durability and resistance to warping.

Note the exceptional construction details of this sturdy, lightweight hollow core flush door... (1) AIR VENTS in rails and vertical members for core ventilation. (2) KILN-DRIED VERTICAL GRID slats are on 2″ centers. (3) MORTISED RAILS hold sturdy vertical slats securely. (4) DOUBLE LOCK BLOCKS add to door strength, allow hanging from either side. (5) CROSS-BANDING increases dimensional stability. (6) FACE VENEER carefully selected for beauty, sanded to a smooth easy-to-paint or stain finish. (7) HEAT-WELDED for an inseparable, weather-resistant or fully exterior bond.

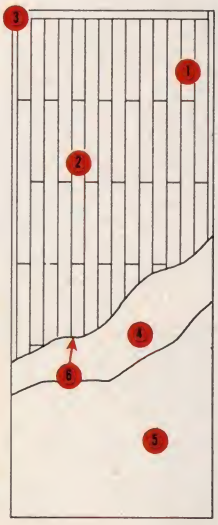


	Face Species	Grade	Edgestrips	Glue	Width	Height	Thickness
5-PLY HOLLOW CORE FLUSH DOORS	Rotary Fir Vertical Grain Fir	Select or Standard	Matching Fir	Int. or Ext.	1′6″ 1′8″ 1′10″ 2′0″ 2′2″ 2′4″ 2′6″ 2′8″ 2′10″ 3′0″	6′0″ 6′6″ 6′8″ 7′0″	1⅜″ 1¾″
	Rotary-Ribbon Grain Philippine Mahogany	Select	Matching Mahogany				
	Rotary Birch	Select or Standard	Softwood or Hardwood				

Other veneers and sizes available on special order. Always specify Ext. glue line for outside doors.

5 PLY Hot Press SOLID CORE FLUSH DOORS

These attractive doors provide great strength, resistance to warp and superior insulation from heat and noise. Solid construction of kiln-dried lumber gives them extra weight, ideal for entrances. Compare the outstanding construction details of Simpson Hot Press Solid Core Flush Doors with any other . . . (1) SOLID CORE BLOCKS are edge-glued and staggered for greatest dimensional stability. (2) KILN-DRIED CORE is pre-sanded before heat-welding to surface veneers for extra smoothness. (3) STILES AND TOP AND BOTTOM RAILS are glued and dowelled for greater strength. (4) CROSS-BANDING of face veneers adds to rigidity, increases warp resistance. (5) FACE VENEERS are carefully selected for beauty and to match veneers on reverse side—sanded to a smooth finish. (6) WATER-PROOF GLUE makes this door ideal for entrances under any weather conditions.



	Face Species	Grade	Edgestrips	Glue	Width	Height	Thickness
5-PLY SOLID CORE FLUSH DOORS	Rotary Fir Vertical Grain Fir	Select or Standard	Fir	Ext.	2′6″ 2′8″ 3′0″	6′8″ 7′0″	1⅜″ 1¾″
	Rotary-Ribbon Grain Philippine Mahogany	Select	Mahogany				
	Rotary Birch	Select or Standard	Hardwood				

Other veneers and sizes available on special order.

7 PLY HOLLOW CORE

Simpson Ceiling-Height hollow core flush doors are a perfect answer to the architectural trend for spacious luxury in homes, offices and commercial structures. These new doors eliminate costly time-consuming overhead framing in the area which frequently cracks above standard doors... builders report savings up to $10 per opening! Simpson's new Ceiling-Height doors are now mass-produced to effect greater savings.

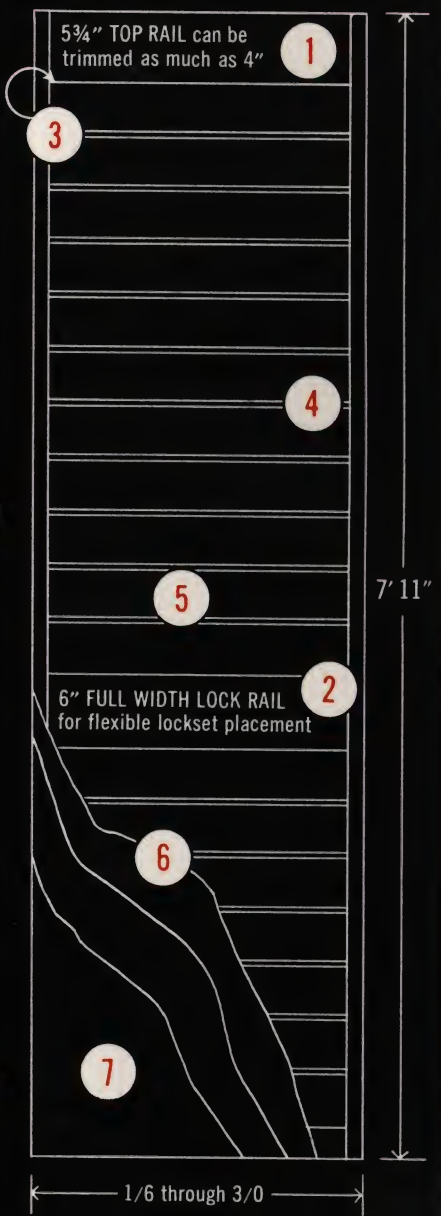
(1) TOP RAIL is 5¾″ deep to allow door to be trimmed as much as 4″. (2) FULL WIDTH 6″ LOCK RAIL for flexible lockset placement. (3) RAILS ARE TENONED into stiles for extra strength. (4) GRID CROSS-MEMBERS accurately positioned and interlocked with stiles. (5) KILN DRIED LUMBER is used throughout. (6) MOISTURE-RESISTANT glue bonds 3-ply skins or hardboard to core under tremendous pressure to assure a durable, strong inseparable unit. (7) SURFACE VENEERS are carefully selected for beauty, sanded to a smooth finish.

Available in 3 faces:
Rotary Lauan
Rotary Birch
Hardboard

RELY ON Simpson

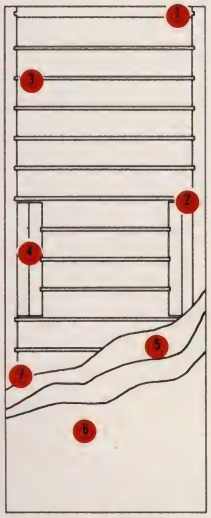
Ceiling-Height DOORS

Can be trimmed to fit any 8′ ceiling height opening.



7 PLY HOLLOW CORE FLUSH DOORS

(1) RAILS ARE TENONED into stiles for extra strength. (2) KILN-DRIED LUMBER is used throughout. (3) GRID CROSS-MEMBERS accurately positioned and interlocked with stiles. (4) LOCK-BLOCKS on both sides for left or right-side hanging. (5) MOISTURE-RESISTANT glue used between veneers and at joints. (6) SURFACE VENEERS are carefully selected for beauty, sanded to a smooth finish. (7) BONDED under tremendous pressure to assure a durable, strong, inseparable bond.



These economical doors are lighter than 5-ply or solid core doors, but must pass the same detailed factory inspection for overall high quality before shipment.

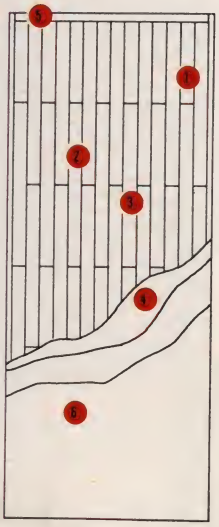
Simpson 7-ply Hollow Core Doors conform to CS171-58 and are manufactured with the same exacting craftsmanship as other Simpson Doors. But they are priced within reach of lowest budget jobs.

	Face Species	Grade	Edgestrips	Glue	Width	Height	Thickness
7-PLY HOLLOW CORE FLUSH DOORS	Rotary Sen Rotary Birch Hardboard	Good	Softwood or Hardwood	Int.*	1′6″ 1′8″ 1′10″ 2′0″ 2′2″ 2′4″ 2′6″ 2′8″ 2′10″ 3′0″	6′0″ 6′6″ 6′8″ 7′0″	1⅜″ 1¾″
	Rotary Lauan Ribbon Lauan	Good	Lauan or Softwood				

*Exterior glue available in Lauan and Hardboard only.
Other veneers and sizes available on special order.

7 PLY SOLID CORE FLUSH DOORS

(1) SOLID CORE BLOCKS are edge glued and staggered for greatest dimensional stability. (2) KILN-DRIED core lumber resists shrinkage and warpage. (3) PRE-SANDED core assures smooth veneer surface. (4) MOISTURE - RESISTANT GLUE bonds 3-ply skins to core for sturdy, permanent single unit. (5) STILES AND TOP AND BOTTOM RAILS are glued and dowelled for greater strength. (6) FACE VENEERS carefully selected for beauty, sanded to a smooth finish.



These attractive doors feature extra weight and solidity found in more expensive doors. They combine beauty, weight and strength at reasonable cost.

These attractive doors are designed for either interior or exterior use. Their handsome appearance, extra weight and strength are usually found in doors costing far more.

Since Simpson doors are made at more than one plant there may be minor variances in core construction.

	Face Species	Grade	Edgestrips	Glue	Width	Height	Thickness
7-PLY SOLID CORE FLUSH DOORS	Rotary Sen Rotary Birch	Good	Softwood or Hardwood	Int.*	2′6″ 2′8″ 3′0″	6′0″ 6′6″ 6′8″ 7′0″	1⅜″ 1¾″
	Rotary Lauan Ribbon Lauan	Good	Lauan or Softwood				

* Exterior glue available in Lauan only.
Other veneers and sizes available on special order.

BIFOLD DOORS

SIMPSON BIFOLD DOORS ARE SPRING LOADED TO FIT SNUGLY, INSTALL QUICKLY, OPERATE SMOOTHLY!

• Attractive doors install easily, with only a screwdriver • Each set features newest concealed hardware • Exclusive spring loaded pivot brackets self-adjust doors to fit tightly and eliminate gaps • Sure-shut door aligner eliminates floor attachments • Self-leveling nylon roller on metal track prevents gap or sag • 2-door units for 2', 2½', 3' widths • 4-door units for 4', 5', 6', 8' widths • Louver Doors in Philippine Mahogany and Douglas Fir • 7-Ply Hollow Core Flush Doors in Rotary Lauan, Ribbon Lauan, Rotary Sen and Rotary Birch • Dust-tight protective carton assures safe delivery.

Stained, painted or left natural—these beautiful Bifold Doors match your good taste and room decor... Ideal for Closets, Room Dividers and Passageways

THREE WAYS TO ORDER SIMPSON BIFOLD DOORS

TYPE A Set of Doors—Not Cartoned—Not machined for hardware. (Hardware not included.) • TYPE B Set of Doors—Cartoned—Machined for McKinney Hardware. (Hardware not included.) • TYPE C Set of Doors—Cartoned—Complete with McKinney Hardware attached. Includes extruded aluminum track, top and bottom pivot brackets, top and bottom pivots, guide hangers, hinges and door aligner.

	WOOD SPECIES	EDGESTRIPS[1]	OPENING	NO. OF DOORS	OPENING HEIGHT[2]	THICKNESS
7-Ply Hollow Core Flush Doors	Rotary Lauan Ribbon Lauan Rotary Birch Rotary Sen	Western Softwood	2'0 2'6 3'0 4'0 5'0 6'0	2 2 2 4 4 4	6'8½"	1⅜"
Stile & Rail Louver Doors	VG Fir Philippine Mahogany[3]		8'0	4		

[1]Matching Edgestrips on special quotation
[2]Other sizes on special quotation
[3]Philippine Mahogany on special quotation

ALUMINUM TRACK

TOP PIVOT BRACKET

HINGES

DOOR ALIGNER

GUIDE HANGER

PIVOT

YOUR ASSURANCE OF QUALITY

Simpson Red Diamond Gliders on the bottom of each door protect it from shipping damage, splinters and identifies it as a genuine Simpson door. Removes easily before installation.

PACKAGED FOR PROTECTION

All doors are available packaged in tough corrugated cartons at a slight additional cost.

GUARANTEED

Simpson doors are guaranteed under the same provisions as apply in the Standard Door Guarantee for Ponderosa Pine Doors as issued by the National Woodwork Manufacturers Association.

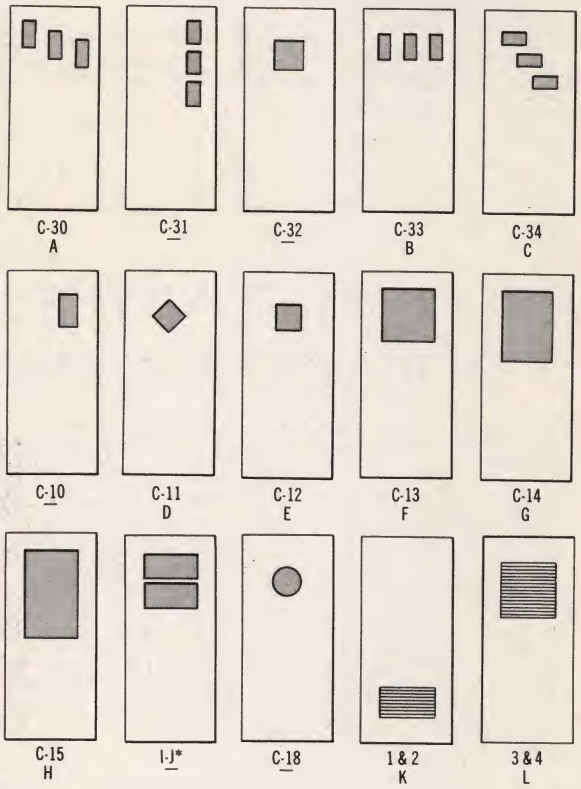
STILE & RAIL DOORS

Simpson makes a complete line of Stile & Rail Doors including Sash, Panel, French, Screen, Entrance, Louver, Jalousie and Garage. For complete information on these doors, please write to Simpson.

STANDARD CUT OPENINGS AND LOUVERS

Standard openings shown increase design possibilities, allow modifications for lighting and ventilation. Available for both solid and hollow core 5-ply or 7-ply flush doors in 1⅜" or 1¾" thickness. Two type openings are available.

FLUSH TYPE. Simple, streamlined construction complete with beads and stops, loosely-tacked in for ease in glazing. RAISED TYPE. Attractive raised moldings are held in place with small counter-sunk screws for easy glazing.



CUT OUT OPENINGS

Flush	Raised	No. of Openings	Door Width	Cut Out Size
C-30	A	3	All	5" x 10"
C-31		3	All	5" x 10"
C-32		1	All	12" x 12"
C-33	B	3	All	5" x 10"
C-34	C	3	All	10" x 5"
C-10		1	All	6" x 14"
C-11	D	1	All	10" x 10"
C-12	E	1	All	10" x 10"
	F	1	2'6" 2'8"	20" x 22"
C-13	F	1	3'0"	22" x 22"
	G	1	2'6" 2'8"	20" x 28"
C-14	G	1	3'0"	22" x 28"
	H	1	2'6" 2'8"	20" x 40"
C-15	H	1	3'0"	22" x 40"
	I	1*	2'6" 2'8"	20" x 10"
	J	1*	3'0"	22" x 10"
C-18		1	All	10" dia.

* Divided

LOUVERED

Flush	Raised	No. of Openings	Width	Louver Size
1	K	1	2'6" 2 8"	18" x 9"
2	K	1	3 0"	22" x 9"
3	L	1	2 6" 2 8"	18" x 18"
4	L	1	3 0"	22" x 18"

RELY ON Simpson SINCE 1895

SIMPSON LOGGING COMPANY, 2301 N. Columbia Blvd., Portland 17, Oregon

Sales Office, Plywood & Door Products

SPDMP — 94/1739

Lithographed in U.S.A. on Simpson Coated Offset (C2S) Substance 80

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Carol J. Dyson, AIA

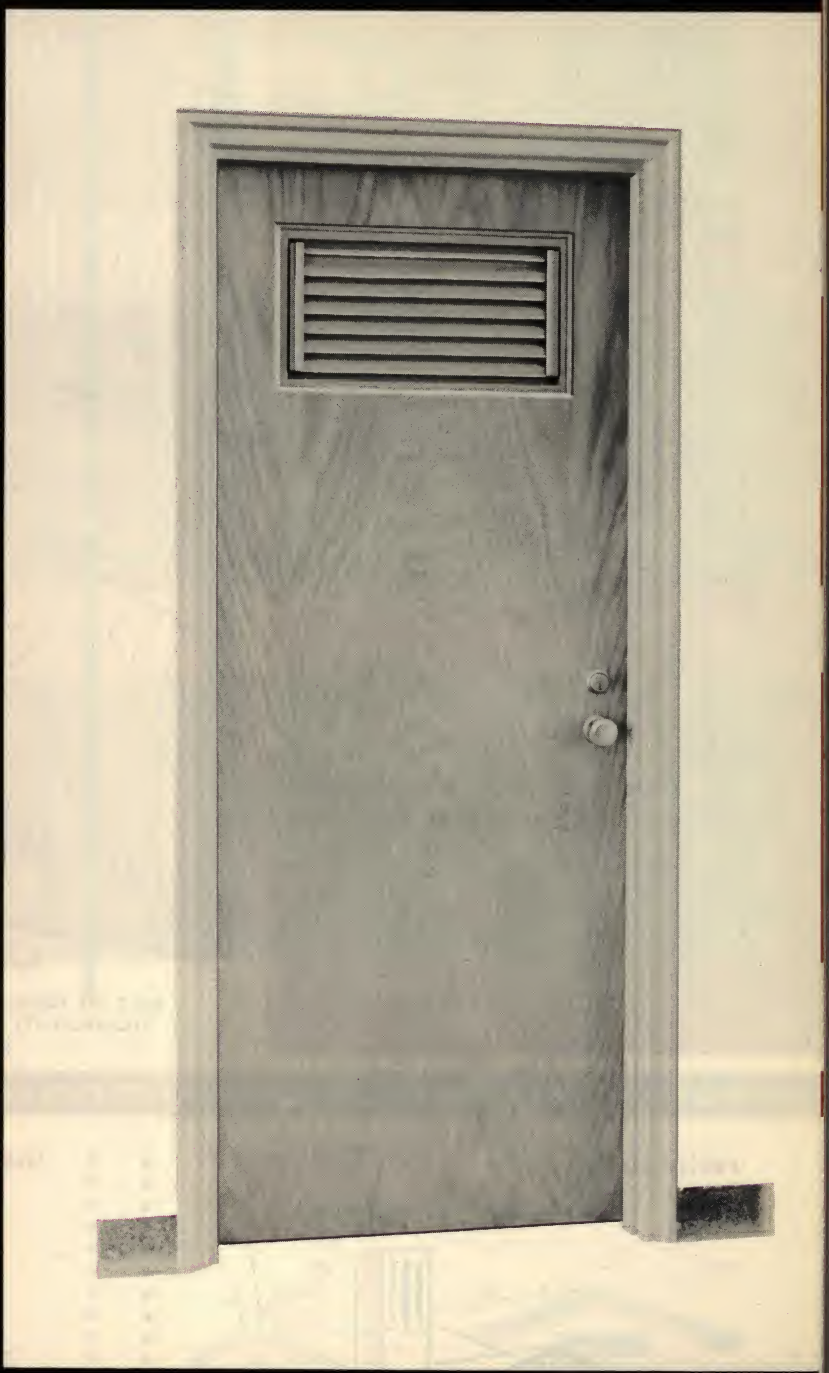
A.I.A. No. 19-E-1

16c
5p

SOLID CORE FLUSH VENEERED DOORS

Penwood®

A QUALITY NAME IN DOORS



SPLICEDWOOD CORPORATION · ASHLAND, WIS.
EXECUTIVE OFFICES: MELLEN, WIS.

PENOKEE VENEER COMPANY · MELLEN, WIS.

Penwood®

SOLID CORE FLUSH VENEERED DOORS

WHY PENWOOD DOORS ARE SUPERIOR . . .

MOISTURE CONTROL AT EVERY STATE OF MANUFACTURE

Equilibrium of Penwood Doors is assured by the installation of humidifiers throughout the Splicedwood plant. All components of each door are conditioned to the same moisture content. Splicedwood has been consistently producing doors which are in "perfect equilibrium," thereby eliminating much of the possibility of warpage.

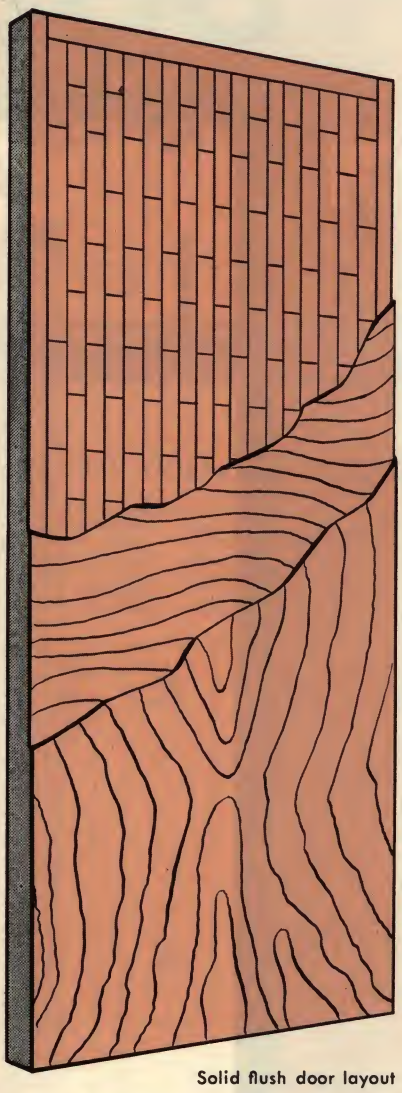
CUSTOM MADE TO MEET EXACTING SPECIFICATIONS

Experienced craftsmen using a great variety of naturally beautiful hardwood species and figure types and the special matching effect will custom build doors to achieve the appearance desired by the architect.

CARE OF PENWOOD HARDWOOD DOORS

1. Handle only with clean canvas gloves.
2. Do not drag doors, except on bottom end which is provided with skid shoes.
3. Do not drag one door across another.
4. Load only on clean covered trucks.
5. Do not truck thru rain or snow, unless fully protected.
6. Store only in clean, dry storage, avoid basements and freshly plastered areas.
7. Some soil or other handling damage is unavoidable. It is the duty of the painting contractor to remove any such by light sanding before applying finish.
8. After fitting, doors must be given 2 coats of paint or spar varnish on top and bottom edges.

CONSTRUCTION



Solid flush door layout

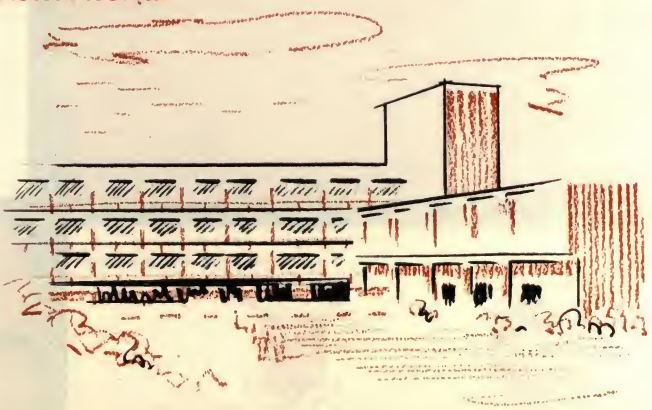
BUILT TO EQUAL OR EXCEED THE REQUIREMENTS OF COMMERCIAL STANDARD 171-50

- **thickness**
  1⅜" and 1¾", other thicknesses by request.
- **stiles**
  All doors supplied with Pine stiles. Matching stiles supplied upon request.
- **rails**
  Top and bottom rails 1¾" pine.
- **cores**
  Random length vertical wood staves, glued and permanently press-bonded together to make up a solid mass core of exceptional dimensional stability.
- **crossbands**
  Crossbanding of a thickness complimentary to the face veneer.
- **faces**
  Face veneer assembled with the grain running vertically at right angles to the grain of the crossbanding. ⅛" birch, oak and pine veneers available upon request.
- **sanding**
  Faces on all Penwood doors are smoothly sanded.
- **adhesive**
  Glue throughout conforms to Commercial Standard 171-50 exterior or interior as required.

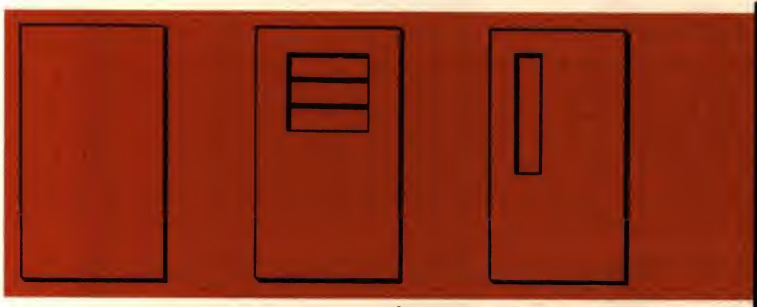
for the best in contemporary architecture . . .

religious

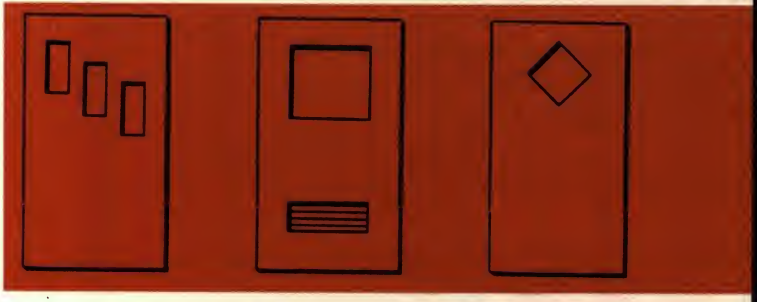
institutional



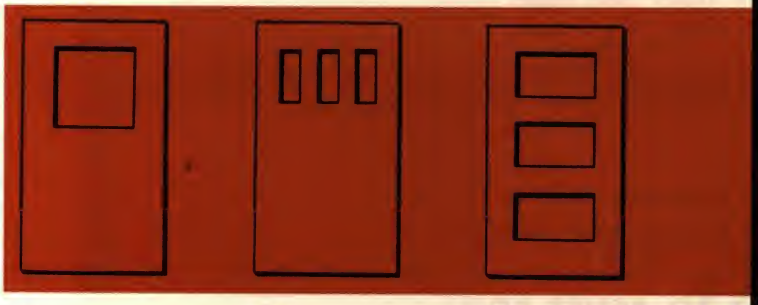
TYPICAL STYLES



P-1 P-2 P-3

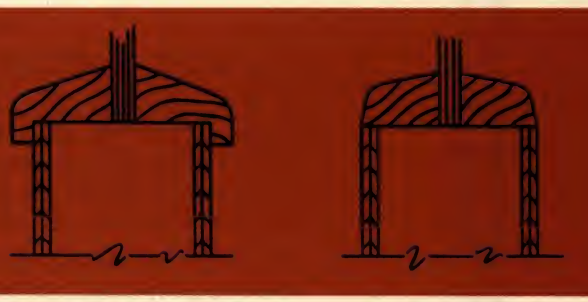


P-4 P-5 P-6

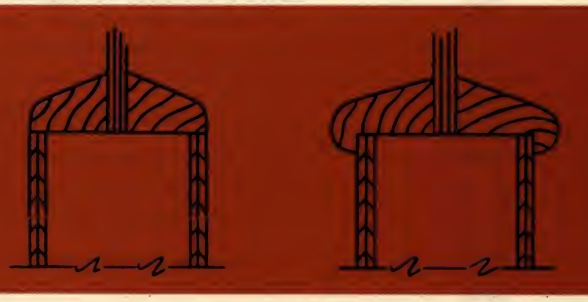


P-7 P-8 P-9

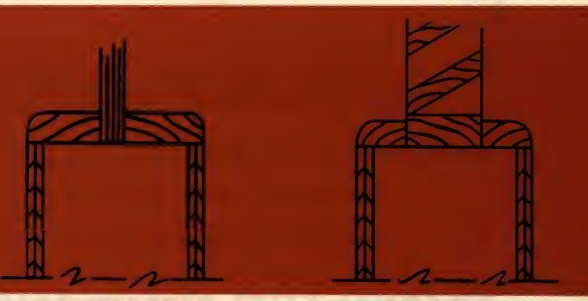
MOULDINGS



S-1 S-2



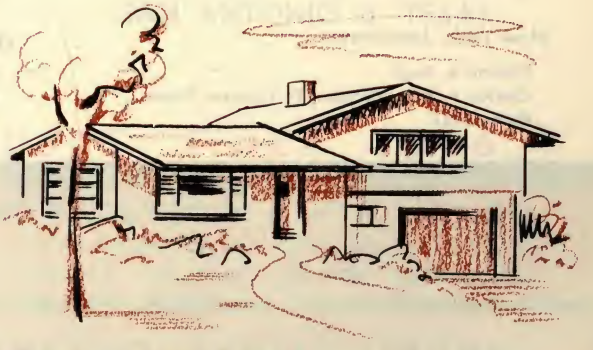
S-3 S-4



S-5 S-6

educational

residential



Penwood®

TWO YEAR GUARANTEE
PENWOOD SOLID CORE DOORS

All Penwood Doors are guaranteed by the Splicedwood Corporation as set forth in the provisions of the Standard Warranty of the National Woodwork Manufacturers Association to be of good manufacture and to be free from defects which render them unserviceable or unfit for the use for which they were manufactured. Natural variations in the color or texture of the wood will not be considered defects.

Doors must be accorded reasonable treatment by the purchaser. Doors must be hung or stored in fully dried buildings and not in damp, moist or freshly plastered areas or subjected to abnormal heat, dryness or humidity. The structural strength of the door must not be impaired in the fitting of the door, the application of hardware, or cutting and altering the door for lights, louvres, panels and other details. Immediately after fitting, the entire door including top and bottom edges must be painted, varnished or sealed to prevent undue absorption of moisture. We will not assume responsibility for doors which become defective because of failure to follow the above recommendations.

A warp or twist not to exceed ¼" will not be considered a defect.

Doors must be inspected upon arrival for visible defects and all claims or complaints based thereon must be filed immediately and before the doors are hung and before the first coat of painter's finish is applied.

The manufacturer agrees to repair or replace in the white, unfitted, and without charge, any door found to be defective within the meaning of this guarantee.

Doors must not be repaired or replaced without first obtaining the consent of the manufacturer.

HARDWOOD PLYWOOD CATALOG

For custom built architectural hardwood plywoods refer to the Penwood catalog in Sweet's Architectural File for 1960 (5b/Sp).

PERSONAL SALES REPRESENTATIVES . . . TO ASSIST YOU

Illinois, Chicago
Charles E. Close
Architectural & Industrial Hardwood Plywoods
600 S. Michigan Avenue

Michigan, Grand Rapids
Burt Hathaway, 1330 Ballard S. East

New York, Jamestown
Clayton A. Rugg
Clayton A. Rugg Veneers, 24 Windsor Street
Phone 3831

New York, Mount Vernon
Jere Stoller, 9 West Prospect Ave.

New York, New York
Phil Carver
American Wood Products Sales Co.
Box 104, Bayside 61, NYC
Phone Bayside 5-5300

Ohio, University Heights
Dave Carter
George Bechhold
Beckwood Company, 2624 Eaton

Oklahoma, Tulsa
G. U. A. Baird, c/o Tulsa Hotel
Phone Cherry 2-4301

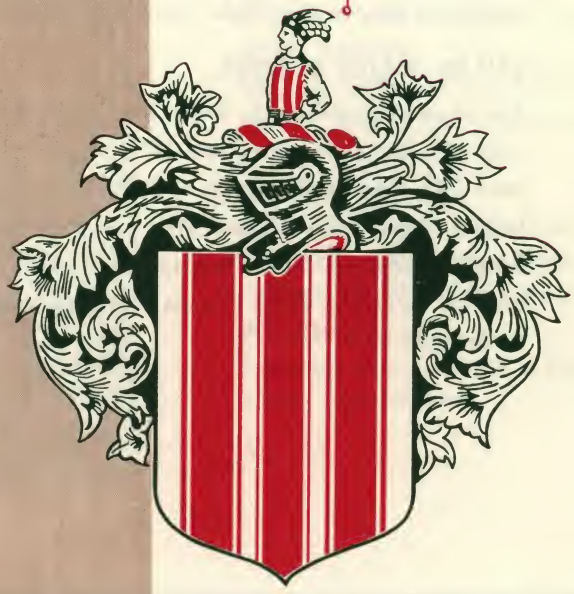
Wisconsin, Mellen
James W. Saunders
Roy Neibauer
Clayton H. Landry
Telephone 4-2511, Teletype 8827

SPLICEDWOOD CORPORATION
ASHLAND, WISCONSIN
EXECUTIVE OFFICES: MELLEN, WISCONSIN

PENOKEE VENEER COMPANY
MELLEN, WISCONSIN

Printed in U.S.A.

Crest Doors



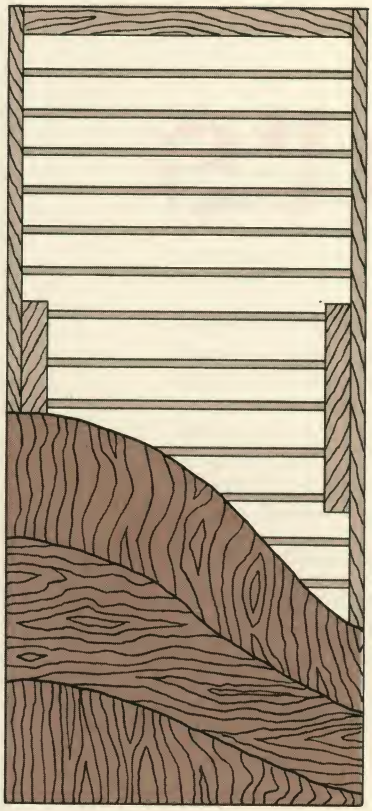
by

Superior woodwork co.

P. O. BOX 1898 SAN ANTONIO 6, TEXAS

QUALITY WOOD PRODUCTS SINCE 1866

HOLLOW CORE DOORS . . . .



Hollow core doors are a 7 ply flush type for interior or exterior use and are constructed so as to equal or exceed the requirements of commercial standards CS171-58.

FACES

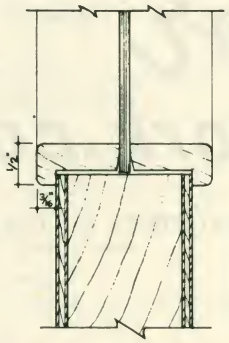
Are 3 ply construction of standard veneer thicknesses and are ⅛" or over in total thickness before sanding. Doors are shipped sanded from the factory ready for finish, but due to handling and moisture conditions may require light resanding before application of finish.

STILES, RAILS & CORE

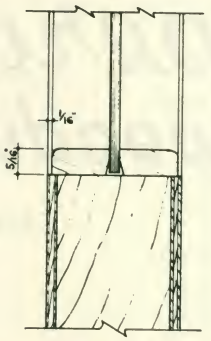
Are of western softwood. Stiles 1⅛"; rails 2½"; lock blocks 2⅞" wide (4" including stile) and 20" long in a 6'8" door, 7' doors have 24" long lock blocks and 8' doors have 36" lock blocks. Ladder type core is wood strip or composition, average space between ladder is 4". When specified, matching hardwood edges shall be furnished which provide a minimum of ½" matching wood on the stile.

STANDARD LIGHT AND LOUVER DETAILS

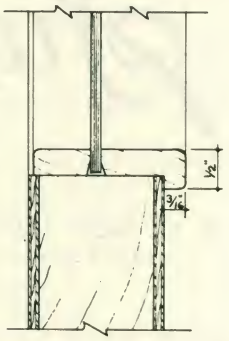
Glass stops are applied for ⅛" glass, if other thickness glass will be used please specify.
Hollow core doors have blocking as shown in detail S-245. All doors furnished open.



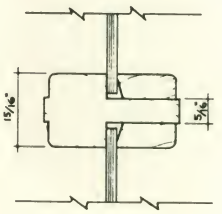
S-11
Ext. or Int.
H.C. or S.C.



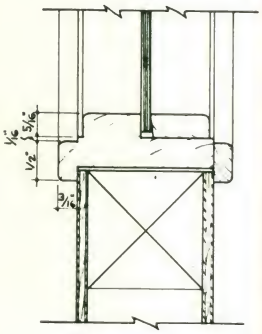
S-22
Int. (only)
H.C. or S.C.



S-12
Int.-Ext. Comb.
H.C. or S.C.

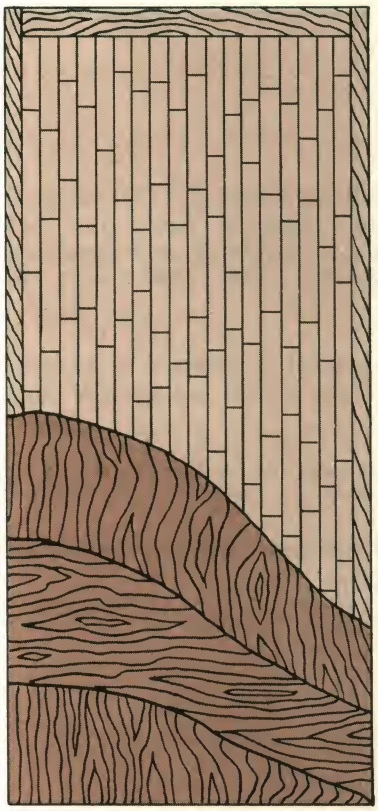


S-223
Ext. or Int.
H.C. or S.C.



S-245
Ext. or Int.
H.C. or S.C.

SOLID CORE DOORS . . . . .



Crest solid core doors are manufactured by skilled personnel using modern equipment to insure a trouble free, quality product.

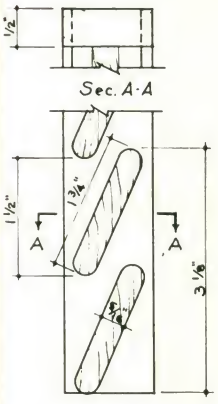
CORES:
Produced from edge grain western softwpods maximum width of core blocks 1¾", random lengths, butt joints, end joints staggered. Bonded under pressure into solid slab with urea resin glue. After cores have had several days to cure and moisture content has become stable, slabs are then surfaced to approximate thickness desired. Stiles top and bottom rails are then glued to slab with resin glue to form completed core which is drum sanded on both sides to produce an exact core thickness.

EDGE STRIPS:
May be Softwood or matching hardwood as desired. Top and bottom edges are always softwood unless specifically ordered as hardwood.

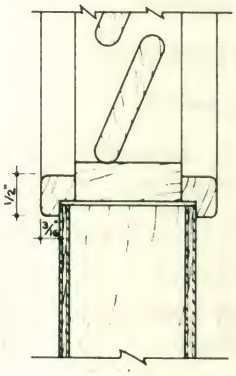
FACES:
Selected 3 ply faces of specie desired are then resin bonded to cores with accurately calibrated pressure and cured with heat to produce a sound, stablized door.

FINISHING:
Doors are then trimmed to exacting tolerances, belt sanding assures a truly superior door.

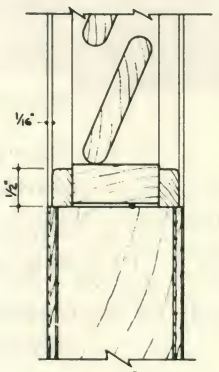
Doors with openings closer than 5" from edge, or with openings larger than 40% of the area of the door (or in the case of HC having a total height greater than one half the height of the door) are not guaranteed structurally, and will not meet Commercial Standard 171-58



LOUVER DET.



S-11L
Int.
H.C. or S.C.



S-22L
Int.
.C. or S.C. - 1¾" and thicke

Approximate Louver Heights

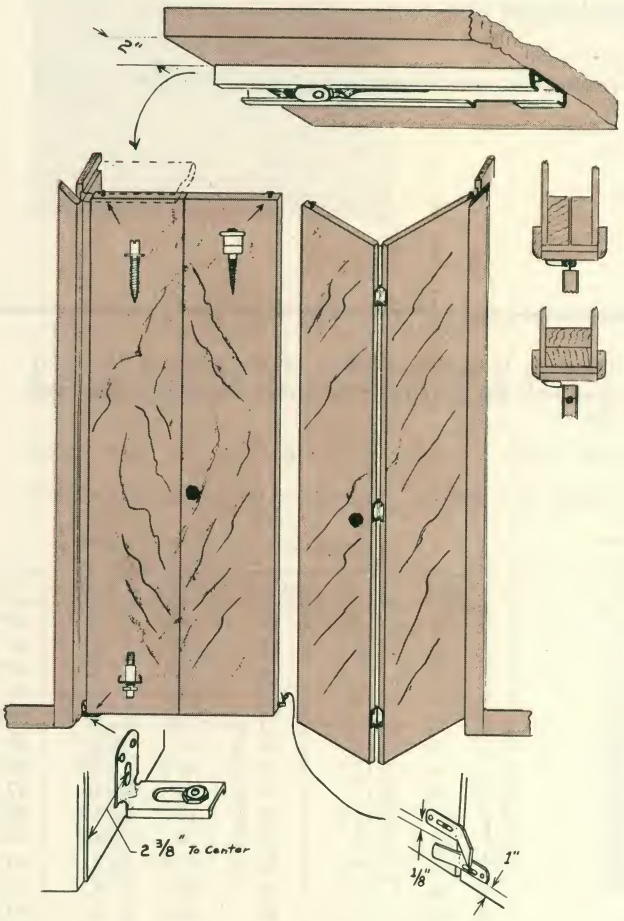
Slats	High	Slats	High	Slats	High
3	4½"	17	25½	31	46½
4	6	18	27	32	48
5	7½	19	28½	33	49½
6	9	20	30	34	51
7	10½	21	31½	35	52½
8	12	22	33	36	54
9	13½	23	34½	37	55½
10	15	24	36	38	57
11	16½	25	37½	39	58½
12	18	26	39	40	60
13	19½	27	41½	41	61½
14	21	28	42	42	63
15	22½	29	43½	43	64½
16	24	30	45	44	66

FOLDING DOOR

Features

Crest folding door units are the result of months of study, engineering and field testing. The design is such that the customer is provided a full adjustable unit, both horizontally and vertically. Guide pivot, that rides in the track, is a spring loaded self adjusting part that cannot come out of the track during use, and provides support to the door. Concealed spring loaded top pivots insure positive closing and secure the doors in closed position.

- Specially Designed Extruded Aluminum Track.
- All Pivot and weight-bearing points have nylon bushings for smooth, effortless performance.
- Track fits neatly behind standard 7/16" stop, eliminates special millwork — requires minimum headroom.



- Bottom Jamb bracket is designed to be load-carrying and will allow wall-to-wall floor covering.
- Hinges are full mortised or flush mounted as ordered.
- Screwdriver installation, wrench provided for final adjustment.
- Top pivot, top guide, bottom pivot and hinges are all factory installed.
- Stock 6'8½" jambs may be used.
- Packaged in carton complete ready for use.
- All Hardware concealed.
- No bottom track required.

INSTALLATION INSTRUCTIONS

1. Fasten track to header.
2. Apply bottom jamb bracket.
3. Place doors in position.
4. Raise adjusting screw with wrench provided to obtain proper clearance.
5. Adjust spring tension and complete adjustment of doors.
6. Add door stop, aligners, and pulls. (Pulls and stop not furnished)

U N I T S

SPECIE

Oriental Ash

Birch

Gum

Rotary Lauan

Ribbon Lauan

Oak

Walnut

Ponderosa Pine and

Lauan Louvered types

Others on special order

EDGES

Western Softwood

(Matching Edges on Special order)

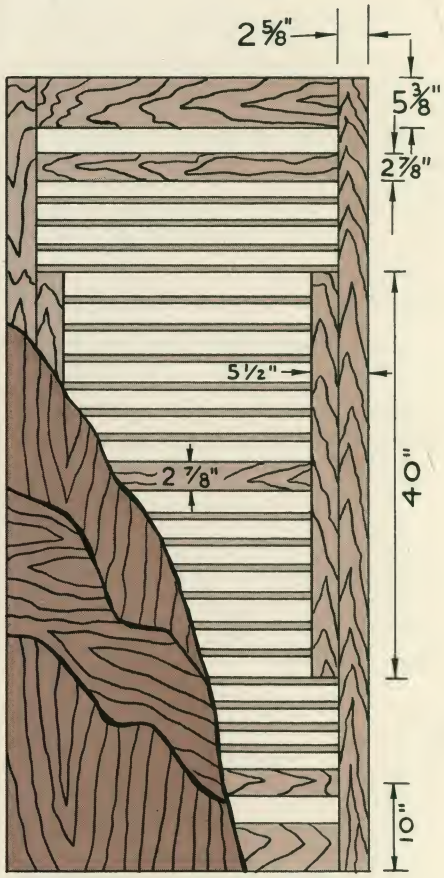
Standard Widths	*Doors per opening*
2'-0"	2
2'-6"	2
3'-0"	2
4'-0"	4
5'-0"	4
6'-0"	4

SIZES

Standard height units fit 6'8½ to 6'9" openings (measure finish floor to header) other heights on special order only.

Width of opening should be 4' clear for 4' unit – 5' for 5' unit, etc.
Thickness of flush doors is 1" for 2'-0" through 6'-0" width, 6'8" high units. Louvered type units are 1⅛" thick. Special units over 6' wide and 6'8" high may use 1⅜" thick doors.

INSTITUTIONAL HOLLOW CORE DOORS



Crest Institutional doors are 7 ply Hollow Core type with 3 ply faces of standard construction. Faces are well sanded, and may be made of any desired specie including Ash (Sen), Gum, Rotary or Ribbon Lauan, Oak and Walnut, etc.

CONSTRUCTION:

Stiles and rails are of softwood. When specified, hardwood edge strips shall be laminated to stiles and shall be ½" wide after sizing. Sketch at left gives dimensions of parts after sizing.

TYPES:

Doors are produced in all standard sizes either 1⅜" or 1¾" thick. Doors are fully reversable so that the identity of top or bottom need not cause job error.

GLUE:

All doors are made with special type 11 glue and are suitable for exterior use when covered on all six surfaces with waterproof finish. Type 1 glue is also available on special order.

SPECIAL STILE WIDTH:

When a job requires wider stiles; 4' and 5½" widths are also available on special order.

Crest Institutional doors are especially designed for architectual jobs where light weight, strength and durability are required, and for jobs where special hardware (kick plates, door closers, flush hinges, etc.) may be specified.

LEAD LINED DOORS (Custom)

For X-ray laboratories, hospitals, Atomic research, etc., lead lining is continuous from edge to edge. Two sheets of lead are used, one under each face (9 ply construction). The door is specified by the total thickness of lead required. Doors 2" and over in thickness may use a single sheet of lead centered in the core. The door is otherwise constructed in the same manner as Crest solid wood core doors. Special technical adhesives are used to provide permanent bond between wood and lead, thus eliminating perforation required when bolts, rivets, etc., are used.

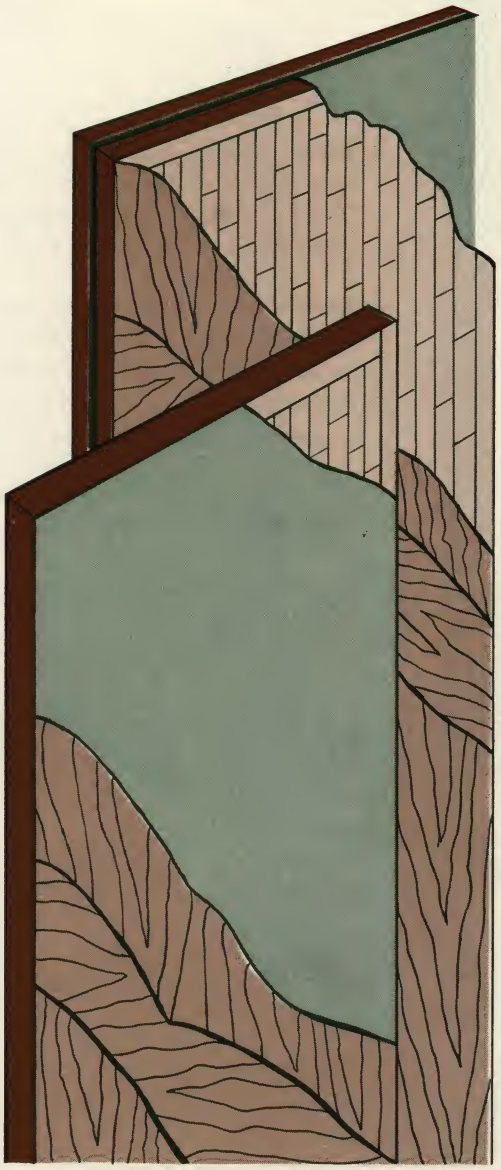
Lbs. Lead per sq. ft.	*Total thickness of Lead*
4#	1/16"
8#	1/8"
12#	3/16"
16#	1/4"

PLASTIC FACE DOORS (Custom)

High pressure laminates. For hotels, hospitals, cafes, schools, etc. Crest plastic face doors outlast ordinary doors, and will save on maintenance throughout the life of the installation. Doors require no finish, kick plates nor push plates; a simple cleaning cloth is the only maintenance required.

Door size is limited by brand and pattern of plastic selected.

Construction is identical to Crest solid wood core door. Heavy cross banding is first banded to the core, sanded smooth; after which plastic faces are applied.



WOOD EDGE TYPE:

Manufactured to standard tolerances and trimmed at time of installation by contractor. Edges may be specified as a blending colored wood or as a contrasting specie of wood.

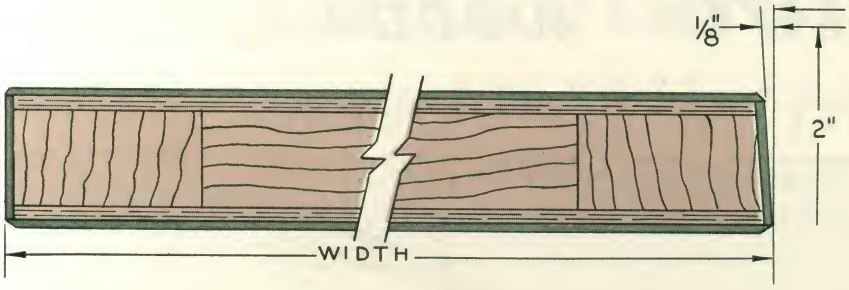
Width – 3/16" less than standard

Height – ⅛" less than standard

Lock Edge – beveled at slope of ⅛" per 2"

PLASTIC EDGE TYPE:

Are factory prefit and beveled per commercial standards (bevel on doors 1⅜" and thicker). Be sure and specify exact size of opening.



Width – 3/16" less than standard

Height – 1/8" less than standard

Lock Edge – beveled at slope of 1/8" per 2"

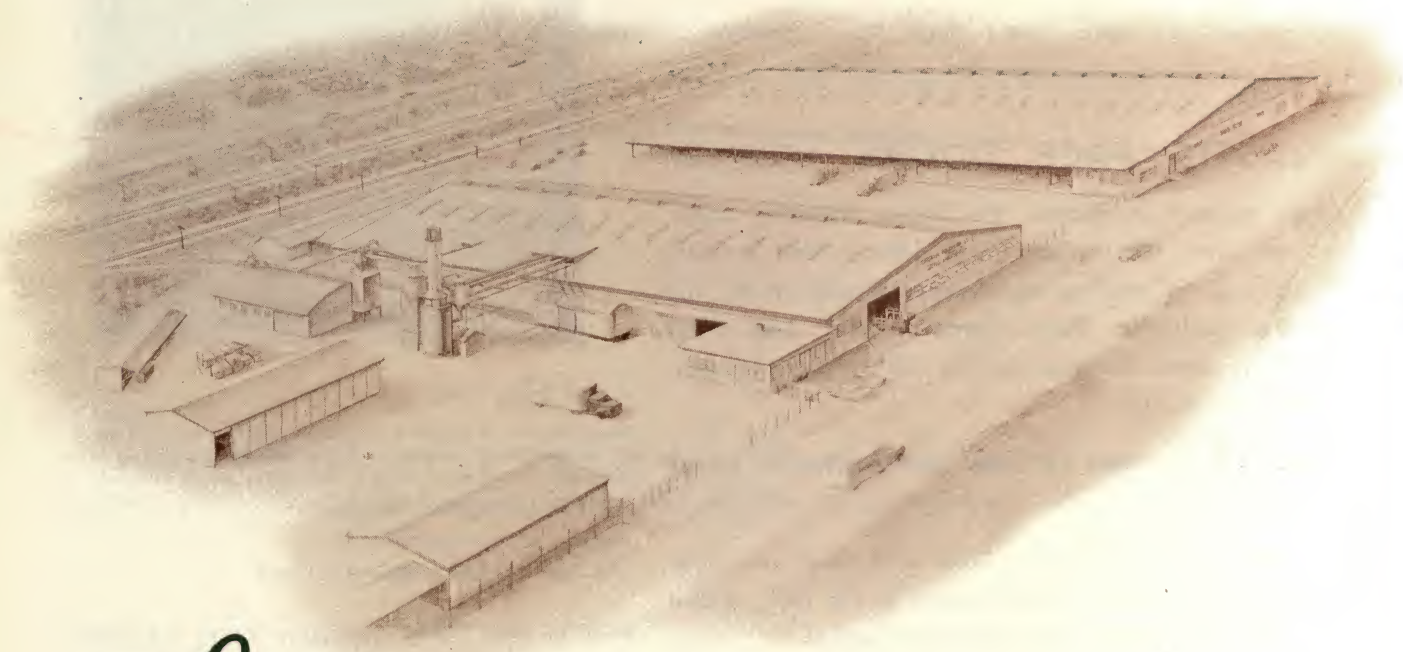
Guarantee

Superior Woodwork Company is a member of the National Woodwork Manufacturers Association #217 and all Crest doors are guaranteed fully in accordance with "NWMA Standard door guarantee" and are produced to comply with applicable commercial standards CS171-58.

Reasonable care should be exercised by the purchaser — store and hang in dry buildings, store flat with protection on both faces, structural strength should not be impared by hanging or application of hardware. *Immediately after fitting entire door including the top and bottom must receive two coats of paint, varnish or sealer to prevent undue absorption of moisture.*

Doors must be inspected at time of delivery for visable defects and any complaints filed immediately and before use.

We reserve the right to modify or change construction methods at any time without notice to improve quality and servicability of our products.



Superior woodwork co.

CONTINUOS SERVICE SINCE 1866

P. O. BOX 1898 • SAN ANTONIO 6, TEXAS

—DISTRIBUTED BY—

WELDWOOD®

Architectural Doors

hardwood and special faces for interiors and exteriors of all buildings

Weldwood® UNITED STATES PLYWOOD CORPORATION

A. I. A. FILE No. 19-E-1, OCTOBER 1959

WELDWOOD

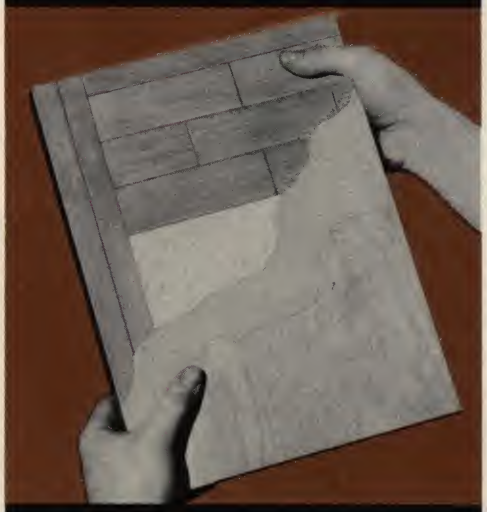
architectural doors

The famous Weldwood Doors are the unqualified choice of well-known architects for all types of buildings, including residential, apartment, hotel, motel, hospital, school, commercial and public buildings. They are first quality doors in every respect—finishes, faces, cores and constructions. Their sincere guarantee is solely the responsibility of the manufacturer and distributor, United States Plywood Corporation—with over 125 branches and offices in all areas of the country.

The line is complete.

Weldwood Doors are made in a useful variety of faces and cores . . . each specifically designed for perfect behavior in its own wide range of applications. One manufacturer for all your door needs—interior, exterior, fire doors, and even soundproof doors.

Red Birch Weldwood "Stay-Strate" Door and panel—Rabb Graduate Center, Brandeis University, Waltham, Massachusetts. Architect: Harrison & Abramovitz



WELDROK CORE

FACES

HARDWOOD FACES—Hardwood faces on all Weldwood Doors are Standard Thickness Face Veneers (1/28″ to 1/20″ veneers) which satisfy Commercial Standard CS-171-58. They will consistently outperform the old-style 1/8″ to 1/4″ lumber faces, and are far more economical. You can specify Birch, Oak, Walnut and other fine domestic and exotic species from Weldwood stock. On order, doors can match architectural woodwork.

Weldwood hardwood-faced doors can be specified factory-finished to suit the installation, or can be delivered ready for finishing.

DECORATIVE PLASTIC FACES—Where doors must be decorative, but also extremely resistant to scraping and denting, specify Weldwood Custom Royal Doors. Their faces are your choice of decorative Micarta or other high pressure plastic laminates in an almost unlimited range of colors, patterns, wood grains and special effects. Weldwood Custom Royal Doors are made for restaurants, hotels, schools, offices, and elsewhere, on Weldwood "Stay-Strate," staved lumber and hollow core constructions.

SPECIAL FACES (metal, etc.)—Doors with metal, plastic and special overlay faces should be specified for loading platforms, shipping and mail rooms, stock rooms, and anywhere else where doors are ordinarily subjected to severe opening and closing.

PAINT-GRADE FACES—perfect check-free painting on CreZon* faced "Stay-Strate" and staved lumber core door constructions.

*Reg. T. M. Crown Zellerbach Corp.

WELDWOOD STABLE CORES

WELDROK CORE

This unique, stable, incombustible core material, a development of United States Plywood Corporation, is used in Weldwood "Stay-Strate" Doors, see page 4, and Weldwood Fire Doors, see page 5. Weldrok will not burn, will not warp, will not shrink. It keeps doors straight and true. It offers excellent sound retardance. It is an extremely strong, light-in-weight, solid mineral.

STAVED LUMBER CORE

A very high quality, precision-made, stable core built up of low density wood. Weldwood Staved Lumber Core Doors are explained and detailed on page 8.

HOLLOW CORE

A "ladder" type wood core, securely and permanently bonded to husky frame members, provides the Institutional Door with a superior ruggedness not usually found in medium-weight doors.

Various hollow lumber cores can be detailed for special applications. Several moderately-priced hollow core door styles are available from stock.

WELDWOOD FACTORY FINISHES

Specify Weldwood factory-finished Hardwood Doors. You'll be certain of more perfect looking doors, and the progress of the job won't depend on unpredictable weather, labor and shop conditions. Finished doors will be protected by paper wrapping or carton.

WELDWOOD PREFINISHED DOORS

Durable conversion-type varnish or lacquer finish to match Weldwood Prefinished Paneling is applied by skilled Weldwood craftsmen under ideal finishing room conditions. These blemish-free clear finishes will take a good deal more wear and abuse than site-finishing can assure.

Algoma Prefinish is available (a) complete with door ready for hanging, or (b) sealed and primed, ready for final coat.

Sealed and primed—Four edges and faces sealed and primed; sanded when specfied.

3-Coat Finish—for close-grained woods such as Birch and Maple. Sealed and two top coats.

4-Coat Finish—for open-grained woods such as Oak and Mahogany—includes filler and toner. Sealed, filled and two top coats.

WELDWOOD CUSTOM-FINISHED DOORS

You can order doors finished to your own specification—according to finish manufacturer's instructions—in any suitable finish.

IMPORTANT

For best performance of all doors, it is essential to finish both faces and all four edges immediately after door is fitted for opening and prepared for hardware. For interior doors we recommend Satinlac. Exterior doors should be finished with finishes recommended for exterior use.

SPECIFICATIONS FOR WELDWOOD ALGOMA PREFINISH
either Lacquer or Conversion Varnish

PREPARATION OF WOOD SURFACES

1. The final polishing operation shall be thorough enough to eliminate all sander marks and sander scratches. The polished surface shall be wiped clean prior to the application of the sealer coat.

FINISH

1. The finish shall consist of four separate and distinct coats: the sealer coat; the combination filler stain; and two separate coats of the final finish. Sealer coat shall be compatible with final coats specified.
2. The sealer coat shall be applied by spray or roller coater, permitted to dry to solid film and then lightly sanded.
3. The combination filler-stain shall be applied by spray or roller coater and fully padded into the surface and wiped off.
4. The final finish (as specified) shall consist of two coats of a clear, durable, scratch resistant lacquer or catalyzed conversion resin.

Note: For dense, close grained woods such as Birch and Maple, the combination filler-stain may be eliminated at the customer's discretion.

PROPERTIES AND PERFORMANCE OF THE FINISH

1. The finish shall exceed the requirements of Military Specification MIL-F-002319A (QMC).
2. The finish shall not print when tested under a pressure of two pounds per square inch.
3. Cold check resistance—The finish shall withstand a minimum of 10 cycles of hot to cold temperatures without checking. One cycle shall consist of exposure for one hour at 120° F. and one hour at minus 20° F.
4. Abrasion Resistance—Using a Taber Abraser with Calibrase CS-10 wheels, 1 kilogram weight, the finish shall withstand a minimum of 400 cycles before permitting penetration of blue ink into wood fibers.
5. Spot Resistance—Finish shall be impervious to many common household items.
6. Alcohol Resistance Test—Normal alcohol spill will not damage finish.
7. Boiling Water—Twenty-five cubic centimeters of boiling water shall be poured on the finished surface and allowed to cool at room temperature. No spotting or softening shall be in evidence after the water has been wiped from the surface.

Weldwood "Stay-Strate®" Door

for interior and exterior use in schools, hospitals, hotels, churches, office and apartment buildings, residences

Where elegant appearance is a must, and where smooth-operating, solid-feeling, strong doors are a prime consideration, the Weldwood "Stay-Strate" Door will satisfy for the life of the building.

The faces are handsome standard thickness veneers of Birch and other hardwoods selected for grain figure and color. Special woods may be selected to match architectural woodwork, and Weldwood Factory-Finishing may be specified.

The Weldrok core is so stable that the door will be easy to operate for the life of the building. No warping, no twisting, no swelling or shrinking.

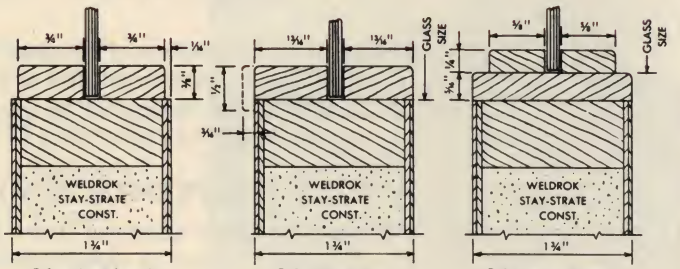
SIZES

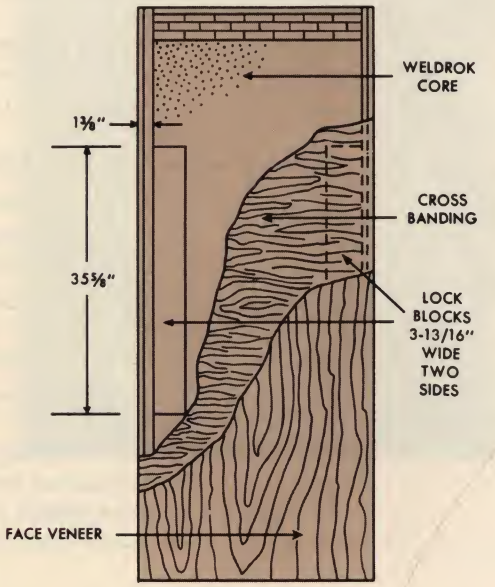
All standard door sizes. Special sizes on order.

LIGHTS AND LOUVERS

Openings for circular, rectangular and divided lights and louvers may be specified according to Weldwood Standard Details. Factory-installed wood louvers may be specified.

LIGHT AND METAL LOUVER OPENING DETAILS





GUARANTEE LABEL

The Weldrok core is so stable, that Weldwood "Stay-Strate" Doors are guaranteed for the life of the installation. Each door is registered by number and carries this label.

WELDWOOD **STAY-STRATE** FLUSH DOOR

REGISTRATION NUMBER 10338

UNITED STATES PLYWOOD CORPORATION unconditionally guarantees the Weldwood "Stay-Strate" Door against warping, twisting, or manufacturing defects for the LIFE OF THE INSTALLATION, when accorded treatment which is considered good practice as far as storage, installation and maintenance is concerned.

If any Weldwood "Stay-Strate" Door should fail to meet these standards, we will replace said door without charge, including all labor costs of hanging and refinishing involved.

Weldwood

SUGGESTED SPECIFICATIONS

All flush veneered doors (as indicated) shall be Weldwood "Stay-Strate" Veneer Doors, with Weldrok Core, as made and guaranteed by United States Plywood Corporation.

face veneers: Face veneers shall be thoroughly kiln dried hardwood, laid with grain at right angles to the grain of the cross bands. Standard thickness sliced or rotary cut woods. (Insert species). Both faces shall be smoothly belt sanded. Doors may not always be ready for painters' finish if subjected to excess humidity and rough handling during shipment and storage, and should be sanded lightly with 00 sandpaper before finishing.

core: The core shall be made of Weldrok with 22#—23# per cubic foot nominal density. Each core shall be made of three or more pieces securely bonded together by the high frequency gluing process.

cross bands: Cross bands shall be thoroughly kiln dried hardwood 1/16" thick, extending the full width of the door and laid with the grain at right angles to the face veneers.

edge bands: Top and bottom rails shall be thoroughly kiln dried stock, total width 4⅜", built up of a net ⅝" hardwood outer-rail securely glued to a staved inner-rail of Pine or equal species. Side edge bands shall be thoroughly kiln dried hardwood, total width 1⅜", built up of two (2) pieces of stock securely glued together. Exposed edges shall be one piece and of same species as face veneer on the long edges.

adhesive: Crossbandings and faces shall be laminated to core with 100% waterproof phenolic glue, by hot plate process, providing a door especially adapted for exterior use.

lock blocks: Lock blocks 3 13/16" wide, 35⅝" long, shall be provided on two (2) sides. Inside edge of lock blocks shall be not less than 5 5/16" from outer edge of door. Minimum distance from bottom of lock block to bottom of door shall be 22⅝". Wider lock blocks are available on order for special conditions such as back set locks.

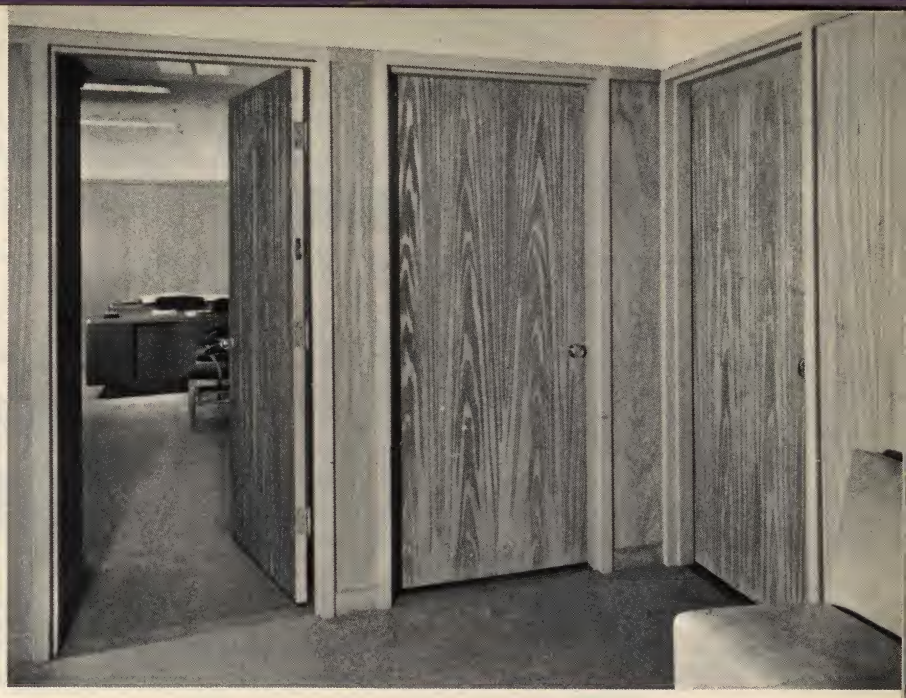
sizes: Doors shall be available in a wide range of sizes in 1¾" stock thickness, also 2¼" and 1⅜" thicknesses on special orders. All doors shall be trimmed square to standard book sizes. On order, doors can be prefit to exact size specified.

light and louver openings: Where specified, doors shall be provided by the door manufacturer with light and louver openings in accordance with the Weldwood Standard Details which include circular, rectangular and divided lights. Wood louvers of matching species can also be installed. Glass beads for light openings shall be provided tacked in loose. All glazing and installation of metal louvers by others.

note: *Doors with unusually large light openings should be detailed as stile and rail doors. Large light and louver opening areas shall be cut in a typical flush door at the user's risk.*

Weldwood Fire Doors

for Class "B" and Class "C" openings in hospitals, hotels, schools, institutions, office and apartment buildings, residences

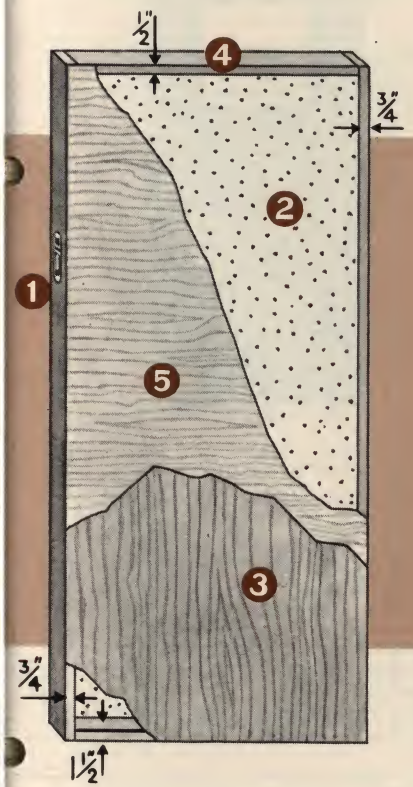


The Weldwood Fire Doors have been tested and rated for fire resistance, heat transmission and structural integrity by Underwriters' Laboratories, Inc., and labeled for all Class "B" vertical shaft openings and for all Class "C" room and corridor partition openings. Where protection against spread of open flames and heat is essential and where the permanent beauty of hardwood faced doors is also desired, Weldwood Fire Doors are the logical choice.

Weldwood Fire Doors are lighter in weight than others. Original cost is moderate—and is especially appealing when the minimum upkeep record of the doors is considered. The hardwood faces require almost no care in ordinary use, and the incombustible Weldrok core maintains the doors straight and true.

WELDWOOD FIRE DOOR FOR CLASS "C" OPENINGS

This door is identical in construction with the Weldwood Fire Door for Class "B" openings, except that it has a larger vision panel, in 7 sizes; 8″ x 12″, 10″ x 10″, 18″ x 24″, 18″ x 36″, 24″ x 30″, 24″ x 36″, and 30″ x 36″. Special sizes available on order up to 30″ x 36″. Vision panels must be at least 6″ from top edge of door. It is listed by Underwriters' Laboratories, Inc., for 45 minute fire barrier. It gives full protection against flame. This flush door for Class "C" openings is approved up to 4/0 x 8/0; with vision panels it is approved up to and including 4/0 x 7/0. Hardware application for Weldwood Class "B" and Class "C" Fire Doors is the same.



1 APPROVALS The combination Underwriters' Laboratories—United States Plywood Corporation metal label is firmly attached on hinge stile edge, ⅓ down from top of door. The Weldwood Fire Door is also approved by Factory Mutual Laboratories (FM)., New York City Board of Standards and Appeals (Approval Calendar No. 143-54SM), and Building Officials Conference of America (BOCA 51-3A).

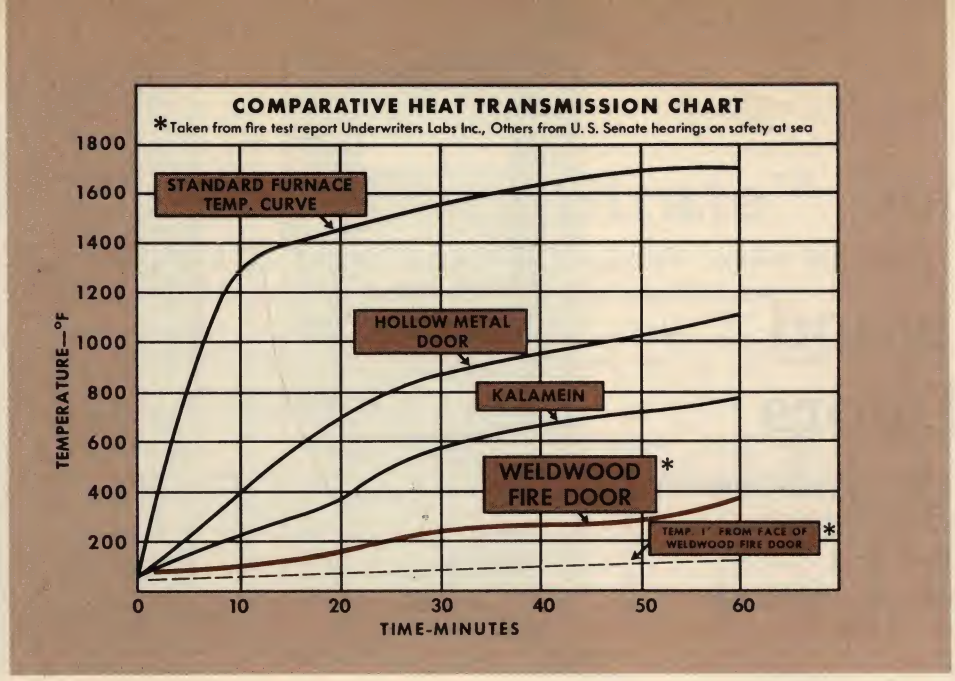
2 INCOMBUSTIBLE WELDROK CORE The core construction of the door is made up of accurately-shaped sections of Weldrok, exclusive United States Plywood mineral core material, joined tongue-and-groove.

3 HANDSOME HARDWOOD FACES Standard hardwood (Birch, Oak, Walnut) veneer. Other face veneer woods available.

4 FIREPROOFED EDGE BANDING All four door edges are banded with hardwood that has been properly treated to refusal with Class "A" fireproofing agent.

5 HARDWOOD CROSS BANDING 1/16"-thick hardwood veneer cross banding is bonded to the Weldrok core with waterproof phenolic resin glue.

This metal label is fastened to the hinge stile edge of each Weldwood Class "B" Fire Door. Similar label for Class "C" Door shows "RATING: ¾-HOUR (C)."



Weldwood Fire Doors (Continued)

LOW HEAT TRANSMISSION

As tests prove, Weldwood Fire Door's extremely low rate of heat transmission provides a substantial margin of safety in the reduction of fire spread.

This chart, compiled from official tests, compares the heat transmission rate of a Weldwood Fire Door with those of hollow metal doors and Kalamein doors. It shows that in tests by Underwriters' Laboratories, Inc., after 30 minutes in the test furnace, the temperature rise of Weldwood Fire Door's unexposed face is less than 250°F, while the temperature rise in the test furnace is well over 1500°F. Moreover, after a full hour's exposure of one face to searing 1700°F flame, the temperature rise is only 120°F at only 1 foot from the unexposed face of the Weldwood Fire Door.

FACES

Birch, Korina, Mahogany, Rift Oak, and Walnut are standard. Many other fine hardwoods are available on order, and to match architectural woodwork. Weldwood Factory-Finish can be specified.

SIZES

All standard door sizes. Special sizes on order, up to 4′0″ x 7′0″. (Class "C" Fire Doors without vision panels available up to 4′0″ x 8′0″.)

WEIGHT

3.5 lb. /sq. ft., approx.

LIFE-OF-THE-BUILDING GUARANTEE

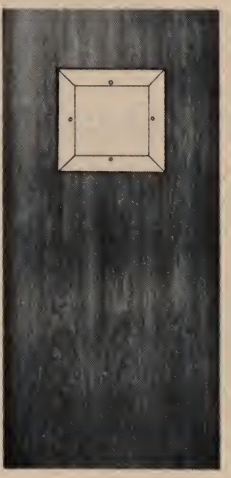
WELDWOOD FIRE DOOR GUARANTEE

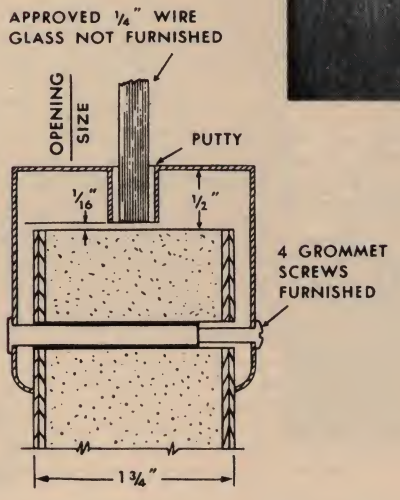
United States Plywood Corporation unconditionally guarantees the Weldwood Fire Door against warping, twisting or manufacturing defects for the Life of the Installation, when accorded treatment which is considered good practice, as far as storage, installation and maintenance are concerned.

If any Weldwood Fire Door should fail to meet these standards, we will replace said door without charge, including all labor costs of hanging and refinishing involved.

VISION PANEL

When required, a vision panel frame for light openings can be provided, either factory installed or packed in a carton complete with screws. For Class "B" openings, two standard size openings are available, 10" x 10" and 8" x 12", to meet the maximum allowable glass area of 100 sq. in., as established by Underwriters' Laboratories. For Class "C" openings, fire doors with any of seven standard size (or any special size, on order) vision panels are available, up to and including 30" x 36".





SUGGESTED HARDWARE AND INSTALLATION

for Class "B" and "C" openings

The following covers recommended hardware for the swinging, labeled Weldwood Fire Door for vertical shafts and corridor and room partition openings:

Clearance: Maximum clearance for Weldwood Fire Doors shall be 1/16" at the sides and top and 3/16" at the bottom. In fitting door to opening to establish proper width clearance and bevel, plane the lock stile edge only (opposite UL label). (The Underwriters' label is placed one-third (⅓) from the top on the hinge stile. The installed door must always have the label in this position.)

Important: In fitting for height, always trim door from bottom edge, but never reduce height more than ¾". Never cut door width or height to fit smaller opening than the size for which the door is manufactured.

LOCK SETS

Lock and latch sets should be Underwriters' Laboratories approved and listed single point locks or latches with a minimum ½" throw bolt.

Cylindrical-type lock set is installed on the lock stile side by boring two (2) holes as illustrated and secured in position. Mortise-type lock set is installed in lock stile and secured by screwing face plate to ¾" hardwood edge banding. It is recommended that lock sets with screwless roses be used to avoid the very short rose attachment screws which may in time work loose.

HINGES

Steel full mortise butt type hinges are installed on hinge stile edge, the leaf of hinge applied to door to be secured with 1¼" x 12 gauge flat head self-tapping sheet metal screws. When applying screws do not extend pilot holes deeper than the thickness of the wood edge banding which is ¾". Steel half surface hinges are secured by bolting thru the door, as illustrated. Half surface hinges should be not less than 4½" x 4½", made from not less than ⅛" steel and be of ball bearing type.

Butt hinges should be not less than 4½" x ½", made from not less than ⅛" steel and be of ball bearing type. Always use at least three of the above size hinges for all Weldwood Fire Doors. For doors 7' to 8', four hinges are required by Underwriters' Laboratories, Inc.

DOOR CLOSERS

Certain concealed and semi-concealed closers are suitable for the Weldwood Fire Door, having been installed in the Weldwood Fire Door and found satisfactory by Underwriters' Laboratories. It is recommended that the mortise opening in door for closer be sealed with shellac as soon as possible after cutting and that closers be secured in the top edge of the Fire Door with self-tapping sheet metal screws, in place of the wood screws normally supplied.

Surface-mounted door closers must be installed with through bolts.

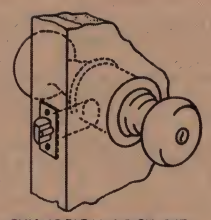
DOOR FRAMES

All Weldwood Fire Doors should be installed in Underwriters' Laboratories labeled metal frames: 16 gauge for 3'6" width and under, 14 gauge recommended for openings over 3'6".

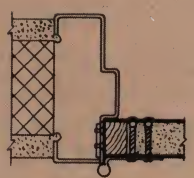
When doors are to be installed in bucks of a net opening size, better results will be obtained if the door is specified prefit ⅛" scant in width and ¼" scant in height.

Consult hardware manufacturers' catalogs for finishes and any additional information.

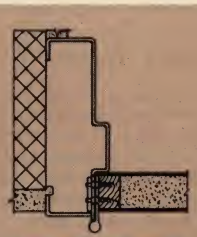
The fireproofing agent in stiles and rails is hydroscopic. All Weldwood Fire Doors are delivered with edges sealed. Immediately after fitting, edges should be sealed with Breinig Bros. Knot Stop, or Western Pine Association Knot Sealer.



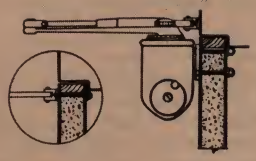
CYLINDRICAL LOCK SET



HALF SURFACE HINGE



FULL MORTISE HINGE



DOOR CLOSER

It is required by Underwriters' Laboratories, Inc., that mortise hinges for wood covered fire doors be secured to door with No. 12 x 1¼" self-tapping sheet metal screws, and surface hinges be applied with steel through bolts.

SUGGESTED SPECIFICATIONS

All Fire Doors for use in Class "B" or Class "C" locations shall be Weldwood Fire Doors as made by the United States Plywood Corporation, approved by the Underwriters' Laboratories, Inc., and labeled accordingly.

face veneers: Face veneers shall be thoroughly kiln dried hardwood, laid with grain at right angles to the grain of the cross bands. Standard thickness sliced or rotary cut woods. (Insert species). Both faces shall be smoothly belt sanded. Doors may not always be ready for painters' finish if subjected to excess humidity and rough handling during shipment and storage, and should be sanded lightly with 00 sandpaper before finishing.

core: The core shall be made of Weldrok, an incombustible mineral material consisting of hydrous calcium silicates with asbestos fiber binder. The core shall be joined together with tongue-and-groove joints as approved by the Underwriters' Laboratories. The core shall be smoothly sanded prior to application of cross bands and face veneers.

adhesives: The core and edge banding shall be bonded together with a Type 1 waterproof resin glue. The entire core shall be sized on two sides to insure perfect glue bond between core and cross band. The core, cross band and face veneer shall be bonded with Type 1 waterproof resin glue by the hot plate process.

cross bands: Cross bands shall be thoroughly kiln dried hardwood, 1/16" thick extending the full width of the door.

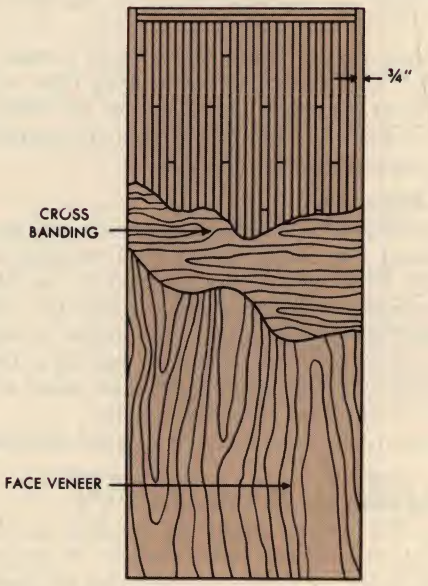
banding: The banding shall be of hardwood, treated to refusal with Class "A" fireproofing agent. The top banding shall be ½" in thickness; the side shall be ¾" in thickness; and the bottom banding shall be 1½" in thickness made by laminating two ¾" pieces.

sizes: The thickness of all fire doors shall be 1¾". Available in range of standard sizes, special sizes on order, to 4/0 x 7/0, maximum. Class "C" Fire Doors without vision panels available up to 4/0 x 8/0.

vision panels: If required, a vision panel frame for light opening shall be provided packed in a carton complete with screws. A baked finish of light brown metal paint shall be provided on all surfaces. (For Class "B" Doors, opening shall be 10" x 10" or 8" x 12" only. For Class "C" Doors, opening shall be 8" x 12", 10" x 10", 18" x 24", 18" x 36", 24" x 30", 24" x 36", 30" x 36", or any special size up to 30" wide x 36" high, but not closer than 6" from top edge of door. Glazing with ¼" wire glass shall be done by others.

Weldwood Staved Lumber Core Door

the all-purpose door, exterior and interior—for hospitals, hotels, schools, churches, apartment buildings and residences



The highest quality door of its type . . . ideal for exterior or interior installations, this architectural door is particularly suitable to match Algoma-Made plywood paneling.

The staved lumber core is carefully constructed of varying length blocks of low density wood to provide a high strength/weight ratio not usually attained in doors of this general design.

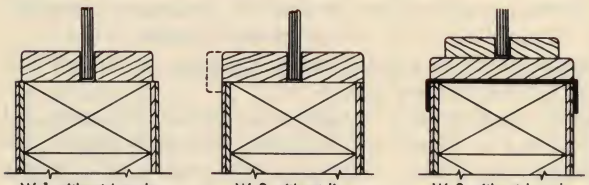
STANDARD THICKNESS FACE VENEERS

Birch and a wide variety of other beautifully-grained hardwood standard thickness veneers are available as well as special woods to match architectural woodworking.

STOCK SIZES AND THICKNESSES

1⅜", 1¾", 2" and 2¼" thicknesses are available, as well as 1⅛" and 1¼" stall doors. The complete range of standard sizes can be furnished on order to meet your needs, up to a maximum of 6/0 x 12/0.

LIGHT AND METAL LOUVER OPENING DETAILS



W-1 without beads
W-1A with beads

W-2 without lip
W-2A with lip

W-3 without beads
W-4 with beads

THE LIFE OF THE BUILDING GUARANTEE

Weldwood Staved Lumber Core Doors are manufactured to the highest standards of the industry and under the most rigid quality controls. If treated in accordance with the best carpentry and finishing practices, the United States Plywood Corporation will guarantee against manufacturing defects and performance for the LIFE OF THE INSTALLATION.

Weldwood Doors must not be structurally impaired by excessive trimming or manufacturing. Immediately after fitting, they shall be finished with exterior or interior varnish as required, or painted on all edges as well as the faces. Should any Weldwood Staved Lumber Core Door prove unsatisfactory after installation, the United States Plywood Corporation agrees, after inspection by an authorized representative, to replace the door and allow costs of a reasonable nature for rehanging and finishing.

SUGGESTED SPECIFICATIONS

All flush doors (as indicated) shall be Weldwood Staved Lumber Core Doors, as made and guaranteed by United States Plywood Corporation.

face veneers: Face veneers shall be standard thickness, thoroughly kiln dried hardwoods and laid with the grain at right angles to the grain of the cross bands. Standard thickness sliced or rotary cut domestic or foreign woods. (Insert species and any special requirements). Both faces shall be smoothly belt sanded. Doors may not be ready for painters' finish if subjected to excess humidity and rough handling during shipment and storage, and should be sanded lightly with 00 sandpaper before finishing.

cross bands: Cross bands shall be thoroughly kiln dried hardwood, 1/16" (or 1/10", where specified) thick, extending the full width of the door and laid with the grain at right angles to the face veneers.

core: Core shall be built up of properly kiln dried wood blocks (varied lengths of narrow pieces of pine or equal species). Hardwood core is available on specification.

edge bands: The stile edge bands shall be thoroughly kiln dried ¾" hardwood to match the faces. Top and bottom edge bands of 2 pieces of ¾" glued up hardwood shall be applied. All edge bands shall be laminated to the core with Type 1 100% waterproof resin glue.

adhesive: Cross bands and faces shall be laminated to the cores with Type 1 100% waterproof resin glue, by the hot plate process.

prefit: All doors shall be trimmed square and factory prefit to standard book size.

sizes: Doors shall be available in a wide range of sizes and in thicknesses of 1⅜", 1¾", 2" and 2¼". Stall doors available in 1⅛" and 1¼" thicknesses.

light and louver openings: Where specified, doors shall be provided with light and louver openings (with metal flashing for exterior doors), in accordance with Weldwood details which include circular, rectangular and divided lights, and wood louvers.
Glass beads for light openings shall be provided tacked in loose. All glazing and installation of metal louvers shall be done by others.

note: *Doors with unusually large light openings should be detailed as stile and rail doors. Large light and louver opening areas shall be cut in a typical flush door at the user's risk.*

Hollow Core Door

beautiful wood veneer faces on carefully produced low-cost cores

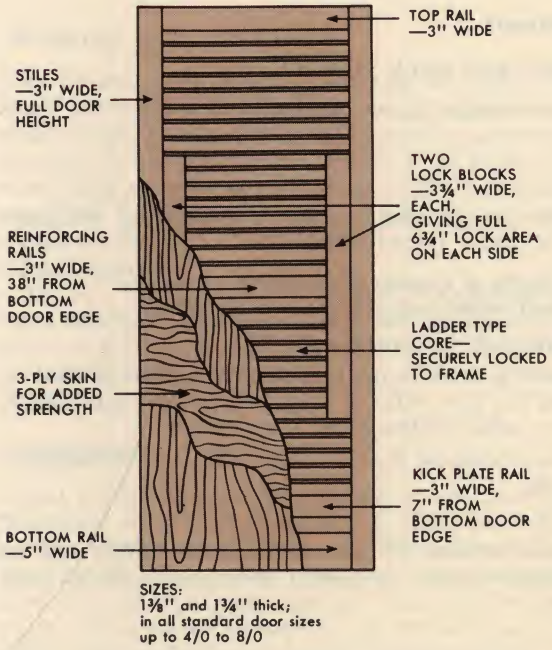
In a wide variety of interior and exterior applications, these doors prove themselves entirely adequate. Particularly when the budget is restricted, the qualities of this construction should be investigated.

FACES Standard thickness face veneers suitable for natural, stain, or paint finishing: Gum, Birch, Oak, Walnut, African Mahogany, Philippine Mahogany.

CONSTRUCTIONS In all standard sizes for Interior use: 1⅜" and 1¾" thick; and for Exterior use: 1¾" thick.

Institutional Door

for hotels, hospitals, schools, libraries, and all other public buildings where doors must withstand severe opening actions


TOP RAIL —3" WIDE
STILES —3" WIDE, FULL DOOR HEIGHT
TWO LOCK BLOCKS —3¾" WIDE, EACH, GIVING FULL 6¾" LOCK AREA ON EACH SIDE
REINFORCING RAILS —3" WIDE, 38" FROM BOTTOM DOOR EDGE
LADDER TYPE CORE— SECURELY LOCKED TO FRAME
3-PLY SKIN FOR ADDED STRENGTH
KICK PLATE RAIL —3" WIDE, 7" FROM BOTTOM DOOR EDGE
BOTTOM RAIL —5" WIDE
SIZES: 1⅜" and 1¾" thick; in all standard door sizes up to 4/0 to 8/0

In one door—the lightness and economy of hollow core construction, plus the reinforced construction that accommodates heavy duty hardware. The rugged, husky frames take in stride the shock and stress of frequent, rapid openings.

The construction shown will perform satisfactorily for most installations. However, on special order, variations may be detailed where operating conditions require a "custom" installation.

Faces are standard thickness veneers, with light and louver openings as desired. Faces and matching edge strips may be Birch, Oak, Walnut and a wide variety of foreign and domestic woods.

Institutional Doors conform with the same high standards of manufacture and finishing as do all Weldwood doors.

SUGGESTED SPECIFICATIONS†

"All flush veneer doors as detailed shall be Institutional Doors as guaranteed by United States Plywood Corporation."

†**NOTE:** Full specifications to follow, and specifications for Institutional Doors detailed differently than shown, will be supplied as requested.

GUARANTEE

All its Institutional Doors are guaranteed by United States Plywood Corporation as set forth in the provisions of the Standard Warranty of the National Woodwork Manufacturers Association, copies of which are available. Within the limitations of this warranty, should Institutional Doors by United States Plywood Corporation be found defective in materials, manufacture or finishing*, the doors will be replaced free of charge, but not including installation or painters' finish, of course.

***NOTE:** Doors may not be ready for painters' finish on arrival, if subjected to excess humidity and rough handling during shipment and storage, and should therefore be sanded lightly with 00 sandpaper before finishing on the job.

Weldwood Custom Royal Door

interior door faced with high pressure plastic laminate for restaurants, hotels, cafes, hospitals, schools, chambers.

Weldwood Doors with decorative Micarta or other plastic faces of your choice . . . as applicable to the cafe and restaurant as to the swank hotel or modern hospital.

ECONOMICAL IN USE—Weldwood Custom Royal Doors outlast ordinary doors, are hung as any flush door, require no on-site finishing, need no push-plates or kick plates, need no wax or stain—a damp cloth wipes away dirt, grease and fingermarks.

FACES, COLORS: Decorative high pressure laminate is bonded to the faces of the well known Weldwood "Stay-Strate," staved lumber core, and hollow core doors. It takes all the abuse that visitors, guests, and passers-by can give . . . and shows virtually no signs of wear. It resists solvents, chemicals, heat, cold, dampness and staining agents. For door faces and optional edge strips, any currently available plastic color or pattern is available, as well as beautiful Mahogany, Oak, Maple and Walnut grainings to blend with woodwork.

EDGE STRIPS can be (1) plastic laminate to match or contrast the face (s), or (2) hardwood to match or contrast the face (s), or (3) hardwood suitable for staining.

SIZES: Standard and special door sizes are limited by plastic sheet sizes. (On unusually large doors check the size of the plastic with its manufacturer.) Light and louver openings, of wood, match the face, or can be finished to reasonably match the color of the door faces. When edge strips are ordered, order door to net width and height.

EASY FITTING: Weldwood Custom Royal Door surfaces are easily worked with standard tools when installing butt hinges, locksets, closers, checks, etc., at the site.

GUARANTEE

Weldwood Custom Royal Doors are guaranteed for two years against manufacturing defects and unsatisfactory performance, by United States Plywood Corporation.

Weldwood Acoustical Door

. . . effective, economical sound control

. . . 1¾″ and special thicknesses . . . standard book sizes

. . . Algoma hardwood faces . . . Algoma-Made construction

THOROUGHLY TESTED at an official acoustical laboratory.

Tested as an operating door, not in a sealed-in panel. Based on comparable tests of leading 35 db 1¾″ soundproof doors, the Weldwood Acoustical Door achieves the highest decibel rating based on current testing standards (ASTM E-90-55).

EXCELLENT APPEARANCE

Algoma-Made quality, in many domestic and exotic hardwoods. Companion door to the famous Weldwood Stay-Strate® and Fire doors. Blends beautifully with other wood doors and paneled walls and woodwork and almost any interior. Weldwood factory finishes can be furnished or custom prefinishing to specification.

The Weldwood Acoustical door is a 1¾″ flush door—it does not require the use of rubber gaskets separating the faces from the stiles and rails—it is a true flush door.

A unique, concealed bottom closing device eliminates exposed metal parts—the bottom closing device is reversible for either left hand or right hand doors, hence, it is not necessary to designate door swing when ordering.

STANDARD SIZES

1¾″—thicker doors on special order. All normal door sizes to 4/0 x 8/0.

SIMPLICITY OF INSTALLATION

Engineered for lighter weight, flush appearance, with all accessories designed for easy fitting and utmost efficiency.

For all interior or exterior applications where economical sound control is desired, including:

- Exterior doors for motels.
- Connecting doors in offices, recording studios, conference rooms, doctors' offices, hospitals, hotels, restaurants, schools, public buildings, factories, churches.
- Interior or exterior doors in homes and small buildings of all kinds.

For acute situations, Weldwood Acoustical Doors may be hung double—as two individual doors separated by dead air space.

LIFE-OF-THE-BUILDING GUARANTEE

United States Plywood Corporation unconditionally guarantees the Weldwood Acoustical Door against warping, twisting, or manufacturing defects for the Life Of The Installation, when accorded treatment which is considered good practice, as far as storage, installation and maintenance is concerned. If any Weldwood Acoustical Door should fail to meet these standards, we will replace said door without charge, including all labor costs of hanging and refinishing involved.

SOUND TRANSMISSION LOSS RATINGS

Established at tests conducted at Riverbank Acoustical Laboratories. Testing procedure meets explicitly the standards of both the American Society for Testing Materials (E 90-55) and the American Standards Association (Z24.19-1957) for the laboratory measurements of Sound transmission loss.

WELDWOOD ACOUSTICAL DOOR 1¾" thick	db ratings (All tests guaranteed accurate to ± 2 db)											
	frequencies, cycles/second											
	125	175	250	350	500	700	1000	1400	2000	2800	4000	average
(Gasketed door Values—operating under practical field conditions)	32.5	32.5	33.0	32.5	33.5	37.0	38.0	(36.5)	36.5	(39.5)	41.5	35*

*Average Panel Value is 37.5 db, with the Acoustical Door tested as a completely sealed-in panel. For your performance assurance you may request copies of actual laboratory tests.

The Operating Values of the Weldwood Acoustical Door are remarkably close to its Panel Values. This attests to the unquestionable value of the recommended installation procedures and to the quality of the specially developed bottom seal, and synthetic rubber stops and astragals available for Weldwood Acoustical Doors from United States Plywood Corporation.

WHERE TO INSTALL

The Weldwood Acoustical Door can be used to control sound transmission through any opening, interior or exterior, where a high quality, flush door is otherwise appropriate and practical. It will perform satisfactorily in all kinds of rooms, in all kinds of buildings. Wherever walls are of acoustically beneficial construction, such as plaster, the Weldwood Acoustical Door provides suitable barrier to sound and at reasonable cost.

The only limit to the use of Weldwood Acoustical Doors is that a reasonable balance must exist between the walls and the doors. For instance, where the walls readily transmit sound, no manufacturer's door can possibly assure accurate sound retardancy.

SPECIFICATIONS

Sound insulating doors as indicated on the plans, shall be Weldwood Acoustical Doors with a sound reduction of 35 decibels, as manufactured by United States Plywood Corporation. Doors shall be 7-ply construction consisting of 3-ply skins, face ply to be (state species). Skins shall be bonded to 11/16" Novoply with resin glue by the hot plate method. Doors shall be furnished complete with automatic threshold sealing device, gaskets, stops and stop adjuster. All doors shall be guaranteed against manufacturing defects and for performance for the life-of-installation, in accordance with the terms of manufacturer's guarantee.

The contractor shall submit a certification from the manufacturer that sound transmission loss of the door is not less than 35 decibels average, based on Riverbank Acoustical Laboratories' tests at nine frequencies over a range of 125 to 4000 cycles per second.

Glazing: Matching wood light openings can be furnished with gasketing and stops for double ¼" Plate Glass glazing. (Glass by others). Openings must not be less than 6" from edge of door and not exceed 40% of door area. No special blocking required.

INSTRUCTIONS FOR HANGING

FRAME AND BUCK OR JAMB (by others)

Frame must be square. Hinge side of jamb or buck must be solid and adequate. Air spaces between frame and buck or jamb should be loosely packed with felt or other sound deadening material. Hollow metal bucks should have flat faces to assure adequately tight fit.

HANGING

Hanging to be as with any precision-made door of similar thickness. Hang from bottom up: stand door in opening on 3/16" spacers (to provide space for bottom seals) and scribe only top and lock edges to provide for 1/16" or less clearance at top and each side. Scribe hinge edge only if jamb or buck is not square. Do not trim bottom—it is routed at the factory to accept automatic drop seal.

ACCESSORIES

Door Stops (included in package) Miter to required length, slightly longer than wood member, so these synthetic rubber stops fit snugly to compress approximately 1/32" against door in closed position.

Automatic Drop Seal (included in package) Install bottom seal in accordance with instructions, placing a small bead of caulking on top of metal housing to assure firm seating.

Astragals for doors hung in pairs (available from door manufacturer) Mount synthetic rubber gasketed astragal on inactive door to seal both leading edges of closed doors.

HARDWARE (by others)

Butt Hinges 4½" x 4½" minimum, BB preferred, three per door positioned in accordance with standard practice, with one hinge centered.

Lock Sets Cylindrical (preferred) or mortise lock sets, with either standard or 5" back-set.

Weldwood Special-Design Doors

As well as its standard complete line of high quality flush doors, United States Plywood Corporation, on order, also manufactures variations of standard Weldwood designs for special applications.

Furthermore, to satisfy certain unusual conditions, where even special detailing is not adequate, Weldwood designers have cooperated with the architect or engineer to create custom detail doors.

Weldwood Special-Purpose Doors

METAL-CLAD FLUSH DOORS—Any Weldwood flush door can be specified metal-clad to withstand exceptional abuse as expected at service entrances to kitchens, hotels and hospitals; entrances to loading platforms; and warehouse and plant areas.

X-RAY DOORS—Lead-Lined doors are available to limit passage of X-rays in hospitals, clinics, doctors' offices, laboratories and industrial areas.

LOUVER DOORS—Decorative wood-louvered doors permit full air flow, yet offer privacy and security for all types of residences, commercial and office buildings, plants, public buildings, summer resort buildings, etc.

Algoma-Made

Weldwood Duraply® Paint Grade Exterior Doors

Stay-Strate and Staved Lumber Core Constructions

Added protection from elements. CreZon faces, same as for painted boat hulls, will not check. Excellent paintability—prime and two finish coats of good paint can last 4 to 5 years. **Stiles and rails of Cedar Heartwood,** well-known for resistance to rot and decay. **Greater dimensional stability** due to added CreZon faces. **Economical**—maintenance and adjustment much less than for thicker-faced wood doors. **Lifetime guaranteed.**

CONSTRUCTION

7-PLY—Algoma-made 5-ply paint grade door (sound Birch or Maple) plus CreZon each side.

CORES — Stay-Strate — Weldrok, incombustible mineral core.

Staved Lumber—Low density,** properly kiln dried wood blocks (not more than 2300 lb./1000 board ft., 6% moisture content).

EDGE BANDS — Cedar Heartwood.*

Stay-Strate — 1-3/8″ stiles. 4-3/8″ glued-up top and bottom rails, with solid exposed edges.

Staved Lumber—1-3/8″ solid stiles and rails.

ADHESIVE — 100% waterproof resin glue.

LOCK BLOCKS — Stay-Strate — 3 13/16″ x 35⅝″, two sides. Inside edges not less than 5 3/16″ from door edge. Minimum distance to door bottom: 22 3/16″. Wider lock blocks, on order.

LIGHT AND LOUVRE OPENINGS

Preservative treated Pine, in accordance with Weldwood details, including circular, rectangular, and divided lights and wood louvres. Glass beads for light openings tacked in loose. Aluminum flashing available.

Stay-Strate—Concealed banding of 1⅜″ Cedar Heartwood.

DETAILS OF LIFETIME GUARANTEES

STAY-STRATE

United States Plywood Corporation unconditionally guarantees the Weldwood DURAPLY STAY-STRATE Exterior Door against warping, twisting, *face checking,* or manufacturing defects for the LIFE-OF-THE-INSTALLATION, when accorded treatment which is considered good practice, as far as storage, installation and maintenance is concerned. If this door should fail to meet these standards, we will replace said door without charge, including all labor costs of hanging and refinishing involved.

STAVED LUMBER

United States Plywood Corporation guarantees its WELDWOOD DURAPLY STAVED LUMBER CORE DOORS are manufactured to the highest standards of the industry and under the most rigid quality controls. If treated in accordance with the best carpentry and finishing practices, the UNITED STATES PLYWOOD CORPORATION will guarantee against manufacturing defects, face checking, and for performance for the LIFE-OF-THE-INSTALLATION. These doors must not be structurally impaired by excessive trimming or remanufacturing. Immediately after fitting, they shall be finished with a good exterior paint as required, on all edges as well as the faces. Should any WELDWOOD STAVED LUMBER CORE DOOR prove unsatisfactory after installation, the United States Plywood Corporation agrees, after inspection by an authorized representative, to replace the door and allow costs of a reasonable nature for rehanging and refinishing.

RECOMMENDED SPECIFICATION

SHORT SPECIFICATION

All exterior flush doors (as indicated) shall be Weldwood Duraply 7-ply (Stay-Strate) (Staved Lumber Core) construction, as manufactured by United States Plywood Corporation.

LONG SPECIFICATION

All exterior flush doors shall be Weldwood Duraply 7-ply (Stay-Strate) (Staved Lumber Core) construction as manufactured by United States Plywood Corporation. Faces shall be medium density CreZon fused to an inner-face of Sound Birch or Maple standard thickness face veneer. Crossbands shall be kiln dried hardwood 1/16″ thick extending the full width of the door with the grain at right angles to the face veneers.

Construction

Stay-Strate construction—core shall be of Weldrok (all inorganic materials based on calcium silicate with asbestos fibers), with 22#-23# nominal density. Each core shall be made of three or more pieces securely bonded together by the high frequency gluing process. Top and bottom rails shall be glued up of Heartwood Cedar properly dried 4⅜″ wide. Side edge bands or stiles shall be solid Cedar Heartwood* 1⅜″ wide. Two lock blocks 3 13/16″ wide and 35⅝″ long shall be installed on two sides. The inside edge of lock blocks shall not be less than 5 3/16″ from outer edge of door. Minimum distance from bottom of lock block to bottom of door shall be 22 3/16″.

Staved Lumber Core construction—core shall be made of kiln dried, low density,** narrow wood blocks of varying lengths. Stiles, top and bottom edge bands shall be 1⅜″ wide, kiln dried solid Cedar Heartwood.*

Adhesive

Crossbands and faces shall be laminated to the cores with 100% waterproof resin glue by the hot plate process.

Light and Louvre Details

Light detail (bars, beads and louvres) shall be preservative treated Pine in accordance with Weldwood details. Glass beads for light openings shall be provided tacked in loose. Where metal louvres are indicated, openings shall be properly sealed to prevent absorption of moisture. All glazing and installation of metal louvres shall be done by others.

Stay-Strate Construction only—When indicated on the plans, light and louvre opening shall have a concealed banding, 1⅜″ wide Heartwood Cedar properly dried.

Guarantee

All doors shall be guaranteed against manufacturing defects and for performance for the life-of-the-installation, in accordance with the terms of the manufacturer's guarantee.

*Screw-Holding Power—Repeated tests prove each No. 12 x 1¼″ flathead wood screw, in a 5/32″ pilot hole in the Cedar Heartwood stile, will resist a straight withdrawal load of 440 pounds.

**Low density wood blocks are those weighing not more than 2,300 pounds per 1,000 board feet when kiln dried to a moisture content of 6%.

UNITED STATES PLYWOOD CORPORATION

Executive Offices: 55 West 44th Street, New York 36, N. Y.

offices in all large cities

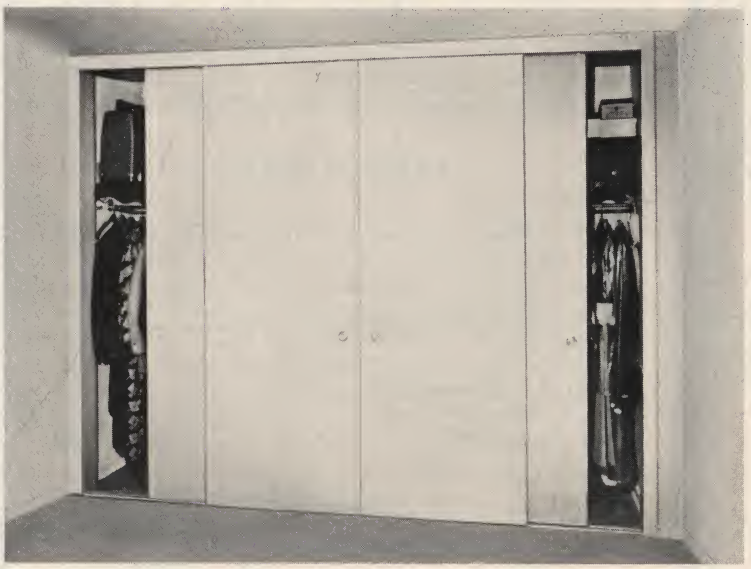
in Canada: WELDWOOD PLYWOOD LIMITED

Form No. 2010-5910

Litho in U. S. A.

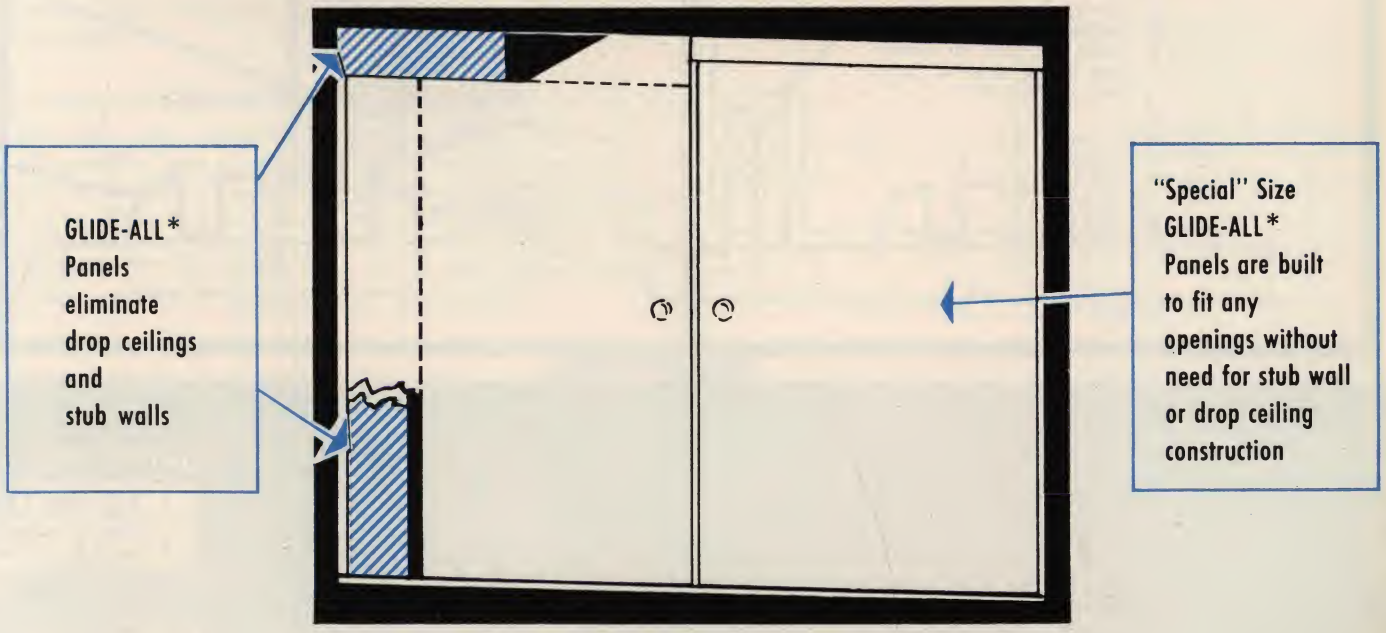
GLIDE-ALL® *Sliding Wardrobe Doors*

for Wardrobes and Closets in
HOUSING PROJECTS, MULTI-APARTMENTS, HOMES, HOTELS, MOTELS, SCHOOLS, DORMITORIES, INSTITUTIONAL BUILDINGS



- **Easier to Install and Adjust**
- **More Storage Space**
- **Lower First and Final Cost**
- **Lasting Quality**
- **Smooth, Quiet Operation**

SPECIAL SIZES ELIMINATE STUB WALLS, DROP CEILINGS


GLIDE-ALL* Panels eliminate drop ceilings and stub walls
"Special" Size GLIDE-ALL* Panels are built to fit any openings without need for stub wall or drop ceiling construction

A.I.A. File No. 17-D

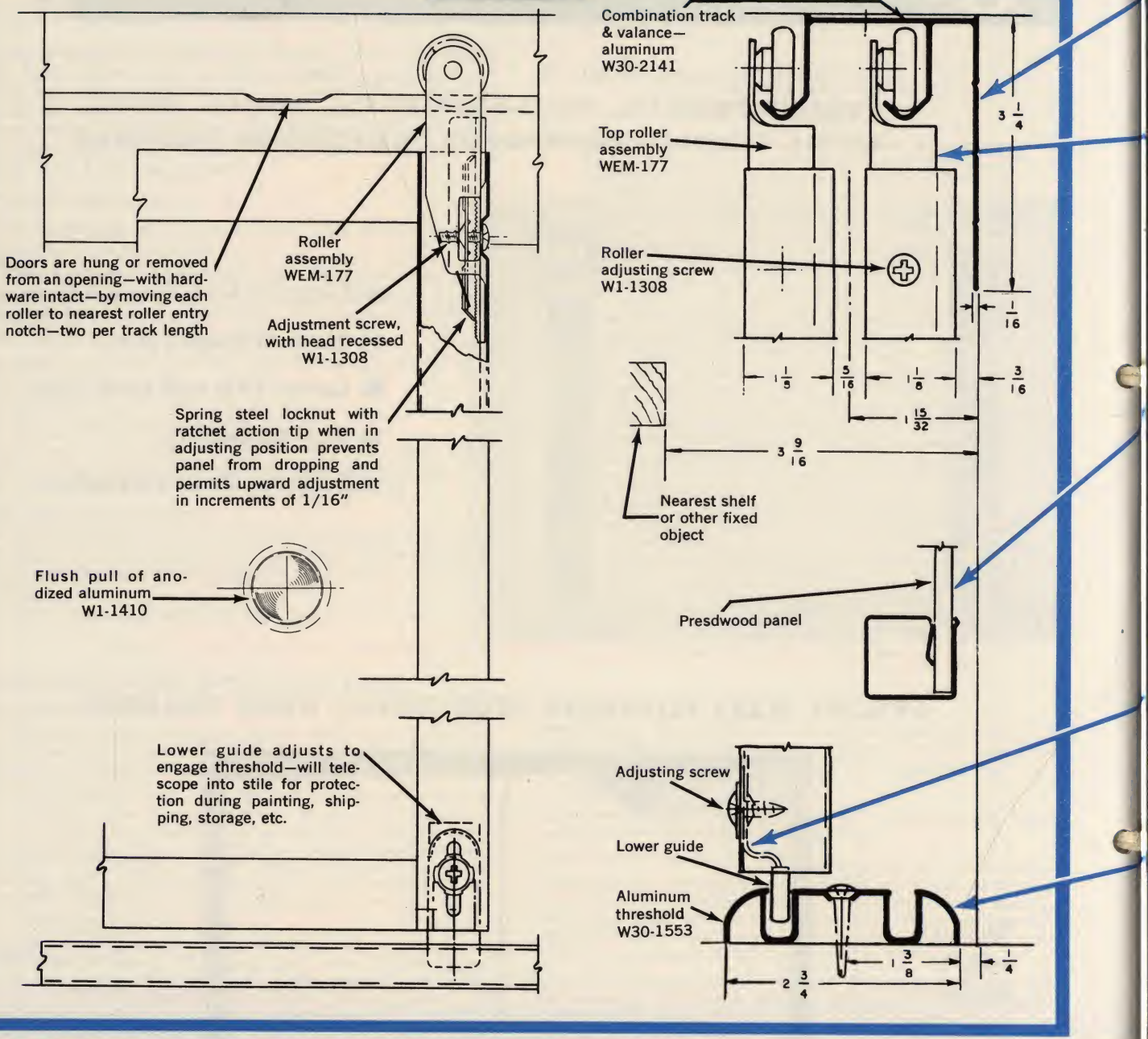
GLIDE-ALL® SLIDING WARDROBE DOORS ARE A PRODUCT OF **WOODALL INDUSTRIES INC.**

GLIDE-ALL®

Sliding Wardrobe Doors

Patent Nos. 2111448 2659939 2784445 2798261

MODEL F


Doors are hung or removed from an opening—with hardware intact—by moving each roller to nearest roller entry notch—two per track length
Roller assembly WEM-177
Adjustment screw, with head recessed W1-1308
Spring steel locknut with ratchet action tip when in adjusting position prevents panel from dropping and permits upward adjustment in increments of 1/16"
Flush pull of anodized aluminum W1-1410
Lower guide adjusts to engage threshold—will telescope into stile for protection during painting, shipping, storage, etc.
Combination track & valance—aluminum W30-2141
Top roller assembly WEM-177
Roller adjusting screw W1-1308
3 1/4
1/16
1 1/8
5/16
1 1/8
3/16
1 15/32
3 9/16
Nearest shelf or other fixed object
Presdwood panel
Adjusting screw
Lower guide
Aluminum threshold W30-1553
1 3/8
1/4
2 3/4

MODEL F STANDARD SPECIFICATIONS*

Sliding Doors shown on drawings and referred to in specifications shall be Glide-All* Sliding Doors Model F (Flush Panel) as constructed by Woodall Industries, Inc.

Door panels shall be of hardboard (specify "Standard" or "Tempered") not less than 1/8" in thickness with patented Galvannealed and Bonderized steel tubes on all edges.

Upper roller assemblies installed in side tubes shall have Nylon rollers and provide for 3/4" variation in height of opening.

Lower door guides shall be spring steel with polyethylene sleeves.

Upper track and valance shall be of extruded aluminum, drilled for No. 10 R.H. wood screws for mounting, and slotted for easy installation of door.

Threshold shall be of extruded aluminum, drilled and countersunk for No. 10 oval head wood screws for fastening to floor. Undrilled track for installation with adhesive is available. Write for details.

Each panel shall be equipped with a circular satin finish aluminum door pull recessed flush with face of panel. Bronze finish is available on special order.

We reserve right to change specifications without notice.

*Consult price list for further optional specifications and additional information.

STANDARD FINISHED OPENING SIZES

2 PANEL		3 PANEL		4 PANEL	
Widths	Heights	Widths	Heights	Widths	Heights
36"		53½"		72"	
47"	80"	70"	80"	94"	80"
60"	or	89½"	or	120"	or
64½"	96"	96"	96"	128½"	96"
72"		107½"		144"	
95"		142"		189"	

SPECIAL SIZES AVAILABLE TO FIT ALL OPENINGS

*West Coast Architects and Builders. Write El Monte, California Division for special specifications and details of GLIDE-ALL Doors available for West Coast.

TRACK-VALANCE COMBINATION

Track and valance is made of heavy extruded aluminum, especially formed for smooth, solid, noiseless operation of the roller assembly. Slots are cut in the sides for easy mounting and removal of panels. Track is quickly fastened to ceiling or joist with ordinary wood screws. Galvannealed steel track and extruded aluminum valance optional—see detail at right.

ROLLER ASSEMBLY

Unique Roller Assembly is completely concealed and is easily adjusted to suit variations in height of opening, and off-square or out-of-plumb conditions. Case hardened galvanized steel hanger insures maximum strength. Adjustment is quickly made by loosening a single screw and moving the special ratchet mount to desired height. Tough, molded Nylon rollers assure quiet, smooth, lifetime operation.

DOOR PANELS

Made of sturdy 3/16" hardboard proven for its ideal panel qualities, strong, dense, smooth—doesn't split, splinter or dent.

All four edges of the panels are reinforced with special rolled steel tubing. They are designed to overcome warpage so common in other type doors. The hardboard panel floats within its non-welded steel tube frame, thus keeping the panel flat. It is held in a constant vertical plane by the four-point contact of the upper rollers and the lower guides with the track and threshold.

Steel tubing is prime coated, ready for finishing. Glide-All* Sliding Doors are primed both sides ready for paint —unprimed panels optional. Panels are also available in Perforall (perforated hardboard).

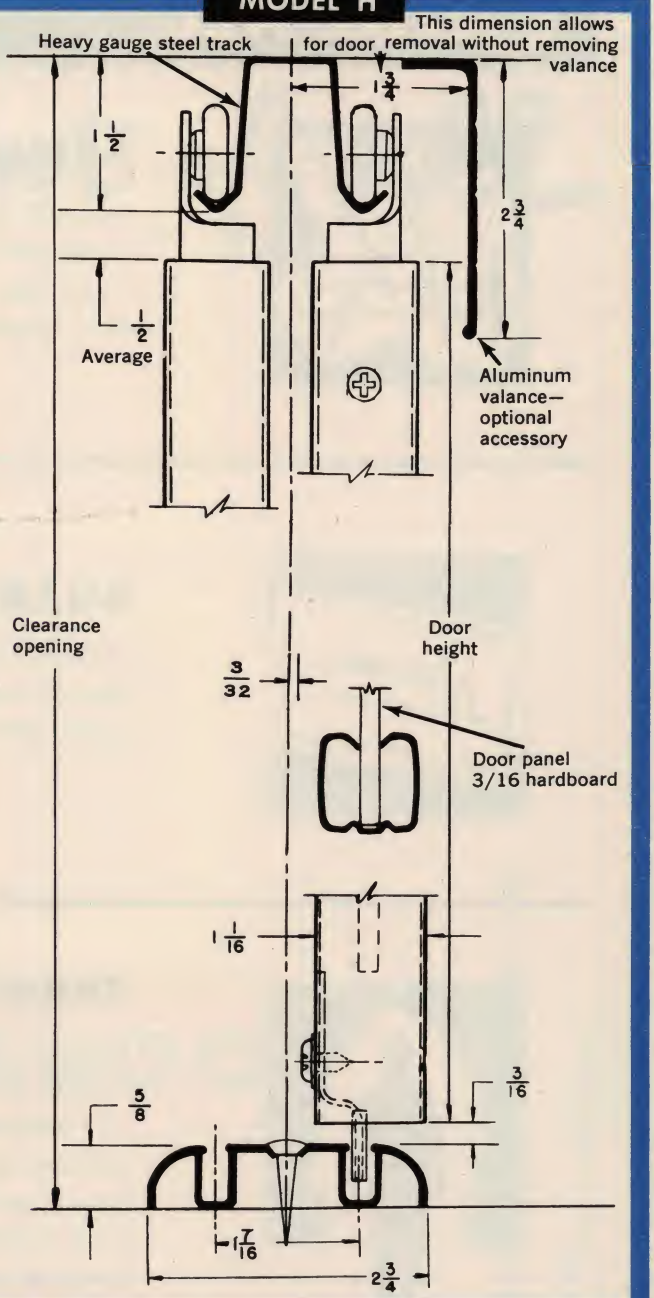
ADJUSTABLE LOWER GUIDES

The lower guides are cadmium plated spring steel with a polyethylene sleeve to provide quiet, smooth action. They are concealed inside the tubes and are easily adjusted to insure proper engagement into threshold to meet variable conditions.

ALUMINUM THRESHOLD

The neat, satin finished threshold is designed to assure door stability and to provide continued trouble-free operation. It fastens to wood floors with No. 10 x 1¼" oval head screws. For concrete floors, track should be specified unpunched and mounted with an adhesive equal to 3M EC-847. A ⅛" vertical bevel at bottom edge allows laying of tile, linoleum or carpeting fiush to threshold.

MODEL H



DETAILS

EASY INSTALLATION

A—Top track is mounted with screws.
B—Threshold is fastened to floor.
C—Panels are installed by placing rollers in track, engaging bottom guides in threshold and adjusting.

VALANCES

For Model H Doors (with steel track), satin finish extruded aluminum or hardboard valances are available as accessories. They permit easy removal of doors.

MORE SPACE EASIER

Glide-All* Doors simplify wardrobe-closet construction, making wall-to-wall, floor-to-ceiling, corner and other storage space available at lower cost.

DOOR PULLS

Model F doors are factory equipped with circular satin finish aluminum door pulls recessed flush with panel face (bronze finish available on special order).

On Model H doors, the vertical reinforcing tubes serve as full-length pulls. However, satin finish aluminum, circular recessed, factory installed, pulls are available as accessories. (Bronze finish available on special order.)

What's Behind

GLIDE-ALL® *Sliding Wardrobe Doors*

DESIGN *for Modern Building*

Glide-All* Doors are the result of extensive research by Woodall design and production engineers to provide the modern, versatile, low cost, "packaged" sliding doors required for contemporary building.

GUARANTEE *by Woodall*

Glide-All* Doors are quality-built and guaranteed by Woodall Industries, Inc. to give top performance and trouble-free service when properly installed.

SERVICE *by Woodall*

Glide-All* representatives are technicians as well as salesmen. They are experienced in on-the-job planning and installation of Glide-All* Doors . . . and committed to follow through to assure finished-job satisfaction. This is another part of the Woodall guarantee that has given architects and builders, from coast to coast, complete confidence in specifying Glide-All* Doors.

*Glide-All is the registered trade mark of Woodall Industries, Inc.

Glide-All Doors are available in principal cities throughout the United States and Canada. For complete details, write plant nearest you.*

GLIDE-ALL* DOORS ARE A PRODUCT OF

WOODALL INDUSTRIES INC.

DETROIT 34, MICHIGAN

CHICAGO, 3500 Oakton St., Skokie, Ill.
EL MONTE, Calif., 801 West Valley Blvd.**
LAKE WORTH, Fla., 411 So. H St.
LAUREL, Miss., P. O. Box 673
SANTA CLARA, Calif., 1020 Bay Shore Blvd.
CANADA, Somerville Ltd., Scarborough

**West Coast Architects and Builders. Write El Monte, California Division for special specifications and details of GLIDE-ALL* Doors available for West Coast.

Printed in the U.S.A.

16d
Ac

now...
the very finest of all

DorWAL

series 100

ALUMINUM SLIDING GLASS DOORS CREATED BY

acorn aluminum products co.
21750 Hoover Road · Warren, Michigan

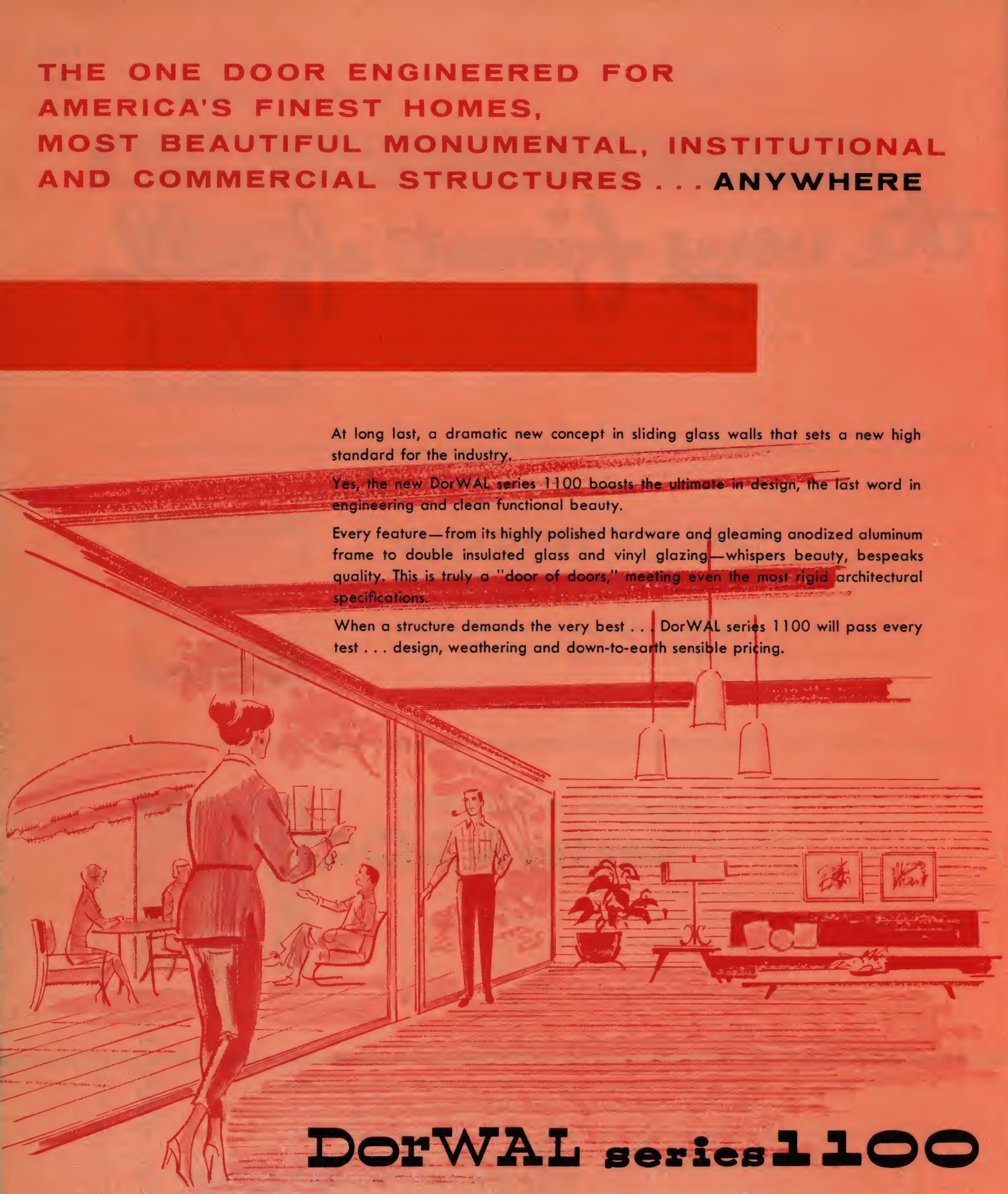
THE ONE DOOR ENGINEERED FOR AMERICA'S FINEST HOMES, MOST BEAUTIFUL MONUMENTAL, INSTITUTIONAL AND COMMERCIAL STRUCTURES . . . ANYWHERE

At long last, a dramatic new concept in sliding glass walls that sets a new high standard for the industry.

Yes, the new DorWAL series 1100 boasts the ultimate in design, the last word in engineering and clean functional beauty.

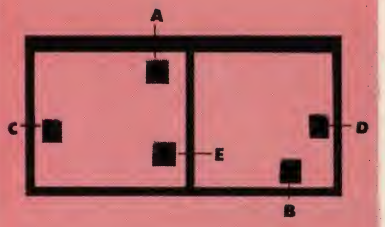
Every feature—from its highly polished hardware and gleaming anodized aluminum frame to double insulated glass and vinyl glazing—whispers beauty, bespeaks quality. This is truly a "door of doors," meeting even the most rigid architectural specifications.

When a structure demands the very best . . . DorWAL series 1100 will pass every test . . . design, weathering and down-to-earth sensible pricing.



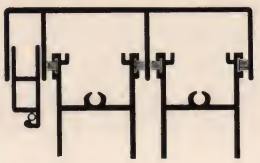
DorWAL series 1100

SECTIONS

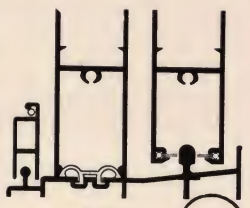


TYPICAL CROSS SECTIONS

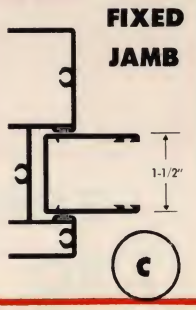
NOTE: THESE SPECIALLY DESIGNED EXTRUSIONS FEATURE DOUBLE WEATHERSTRIPPING, VINYL GLAZING AND OTHER EXCELLENT FEATURES WHILE GIVING A CLEAN, SMARTLY SIMPLE EXTERIOR DESIGN.



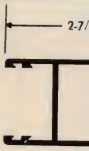
HEAD (A)



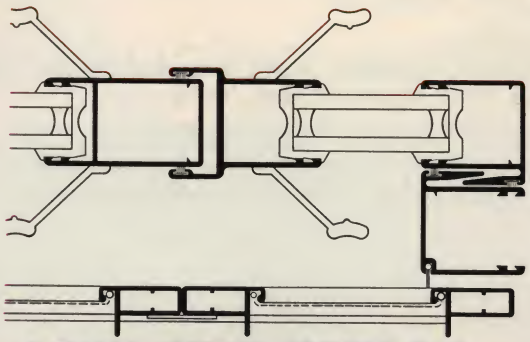
SILL (B)



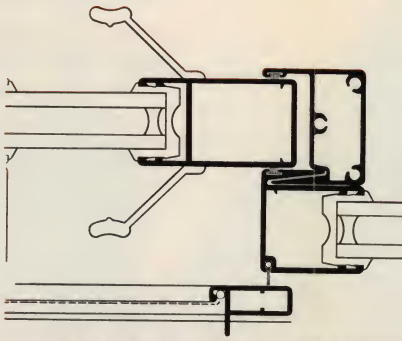
(C)



ACTIVE JAMB



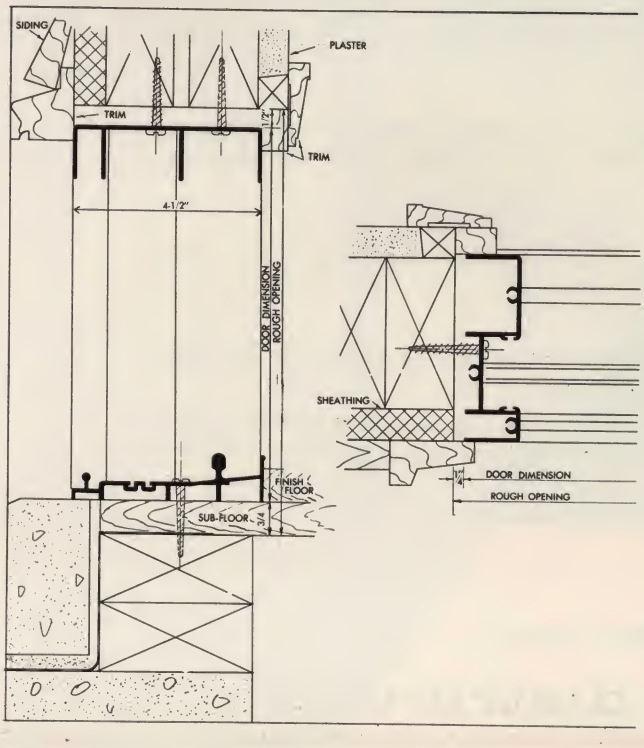
4 PANEL (OXXO) MEETING RAIL

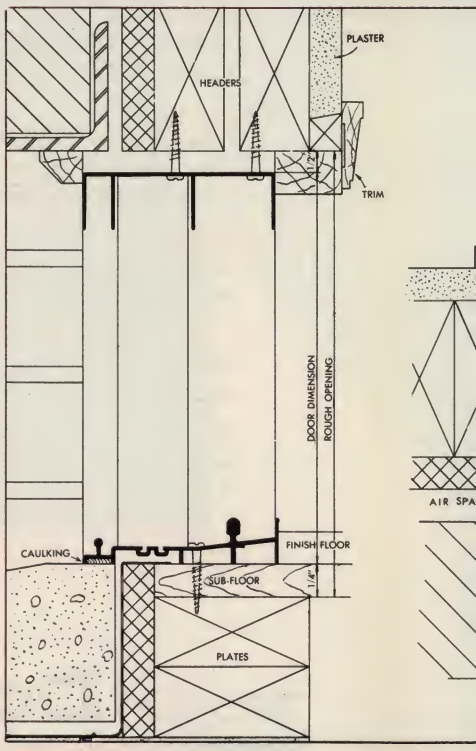


3 PANEL (OXO) MEETING

INSTALLATIO

SCALE: 3″ = 1′-0″ FULL SIZE DETAILS



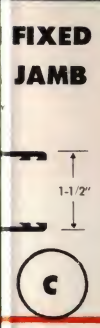


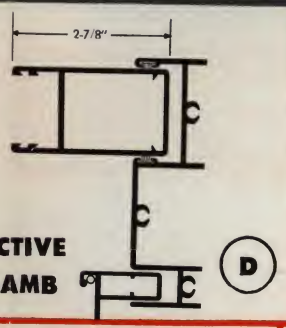
FRAME

BRICK VEN

NS

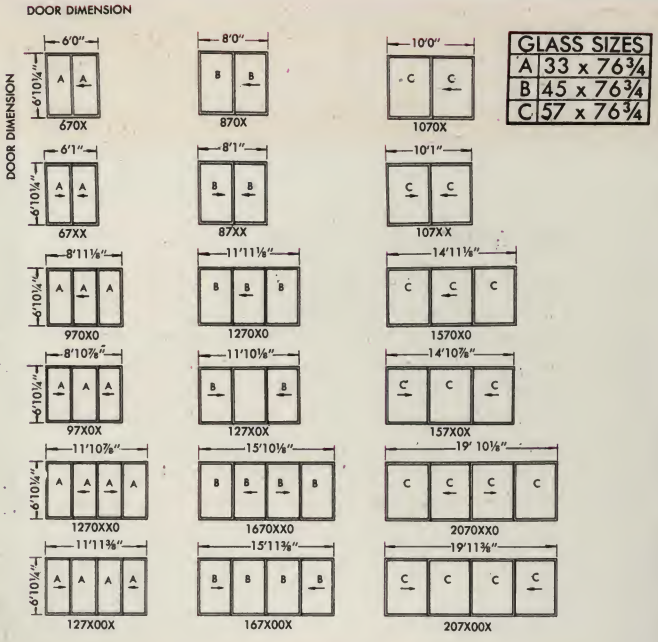
TYPES AND SIZES

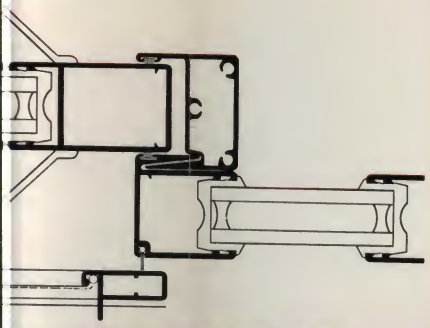




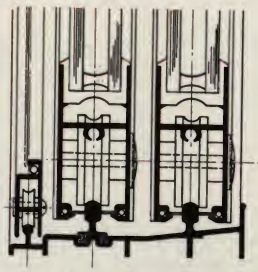
MEETING
RAIL

E





IEL (OXO) MEETING RAIL

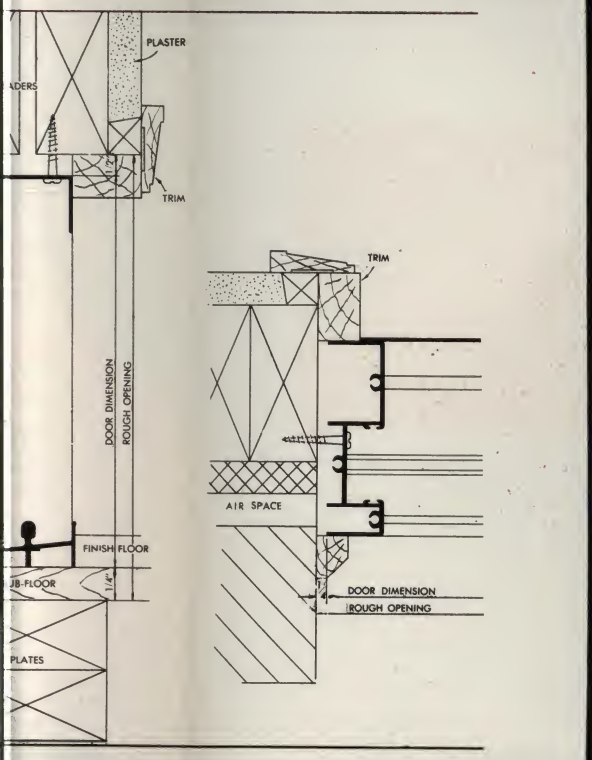


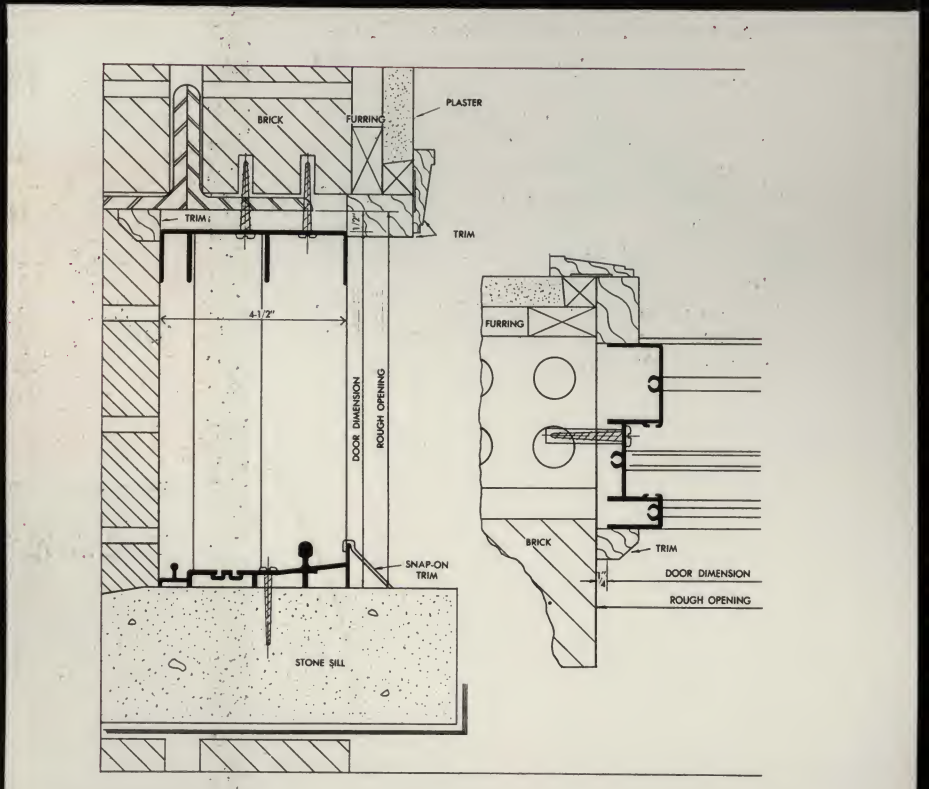
DOUBLE TRACK
ADAPTER

ALL HANDING AS VIEWED FROM EXTERIOR

TION DETAILS

" FULL SIZE DETAILS AVAILABLE





CK VENEER

MASONRY

These superior features are engineered into

DorWAL series 1100

A THING OF BEAUTY . . .

BUT MORE THAN ***VISUAL BEAUTY*** . . . here is a door engineered to gladden the heart of every architect and builder . . . for there is ***beauty*** in the way it looks, ***beauty*** in the way it protects, ***beauty*** in the way it installs, ***beauty*** in its fantastic ease of operation . . . Examine the features shown below, see for yourself that THE DorWAL is truly A THING OF RARE ENGINEERING AND OPERATIONAL BEAUTY.

SLOPED SILL and interior condensation gutter provide positive drainage.

DEEP BAFFLE JAMB sections provide automatic alignment of out-of-square installations.

WEATHERTIGHT CORNERS secured by triangular screw pattern into extruded boss.

MAXIMUM STRENGTH assured by overlap-interlock corners and tubular jamb sections that prevent twisting and bowing of panel.

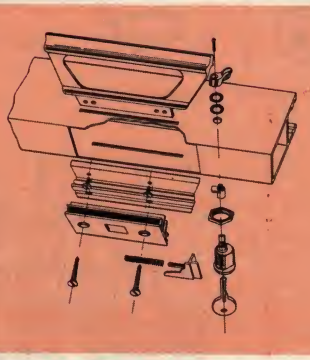
DOUBLE WEATHERING PROTECTION with Schlegel Cloth weatherstripping on both inside and outside surfaces.

AUTOMATIC LOCKING ADJUSTABLE HARDWARE cannot be accidentally locked or broken—full security night lock, anodized aluminum handles.

ADJUSTABLE SILL ROLLERS permit servicing to fit all field conditions.

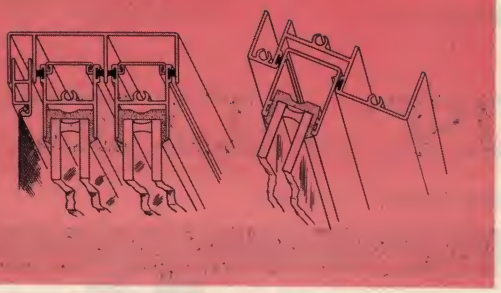
HEAD ROLLER GUIDE —assembly attached to door—cannot work loose.

FULL RANGE OF SIZES AND STYLES —1, 2, 3 or 4 moving panels in sizes to fit all openings in all types of construction.



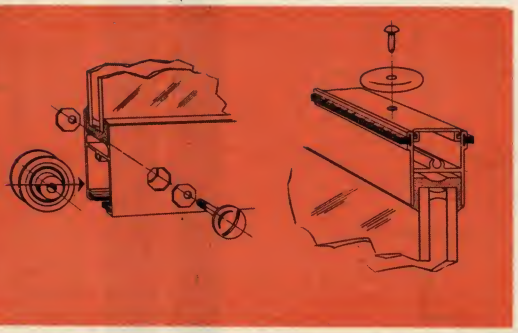
HARDWARE

Beautifully designed and quality crafted of extruded aluminum—polished and anodized to a satin smooth lasting finish. Flush mounted cylinder lock, master keyed, available if required.



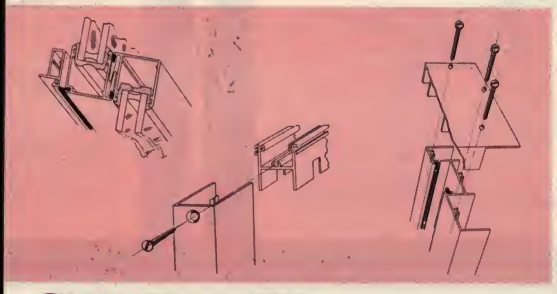
WEATHERING

High pile silicon treated Schlegel Cloth on both inside and outside surfaces provides all members with double weathering protection. Double insulating glass is held securely by heavy vinyl weatherstripping.



EASY OPERATION

Effortless finger-tip control. Heavy DorWAL sections glide effortlessly and silently on nylon ball bearing rollers at sill, while guided by friction-reducing nylon roller assembly at head.



STRENGTH

Triangular frame corner, overlap-interock panel corner, and specially designed tubular extrusions make DorWAL strongest in the industry.

DorWAL series 1100

SPECIFICATIONS

general
Aluminum horizontal sliding doors shown on plans and in specifications shall be DorWAL doors as manufactured by ACORN ALUMINUM PRODUCTS COMPANY, Warren, Michigan.

material and construction
DorWAL door units shall be constructed from specially designed, heavy gauge, extruded sections of 63ST5 tempered aluminum alloy in accordance with DorWAL engineering standards drawings.

frame
Consists of head channel track, sloped sill track and jamb tracks. Corner of frame joined by three large diameter screws fastened into integral extruded strengthening ribs in jamb section in triangle pattern. Sloped sill track contains panels and condensation gutter.

sash
Stiles and rails constructed of heavy extruded tubular section. Panel jambs machined to overlap and interlock with head and sill joined by screws fastened into extruded bosses in panel head and sill.

weatherstripping
All weathering surfaces provided with double weathering (inside and outside surfaces). All weatherstripping of high pile, silicon treated, water resistant, vinyl backed Schlegel Cloth, held in extruded keyways in sections. Weatherstripping is in continuous lengths and forms a complete seal. All weatherstripping replaceable. Inactive panel to seal on bulb vinyl at sill.

hardware
Snap action latch automatically snaps shut as panel and keeper meet. Automatically opens as handle is pulled. Safety action, button operated night security latch. Bumper stops on all sliding panels. Sliding panels equipped with two nylon covered cadmium plated ball bearings, weather sealed, adjustable rollers at bottom. Top roller guides on active panel of nylon riveted to aluminum plate and keyed to head section. All screws self tapping, either plated or stainless steel. Flush mounted, master keyed cylinder lock available.

finish
All doors satin etched and anodized (204-R1) free of all exposed surface blemishes, scratches and tool marks, to provide a uniform color and texture.

screens
Frames of tubular aluminum extrusion fitted with 18 x 14 mesh rewireable aluminum insect screen cloth held by vinyl spline. Adjustable nylon ball bearing sill rollers and vinyl head guide. Positive action dead bolt lock, extruded aluminum pull handles. Schlegel Cloth insect seal at meeting rail.

glazing
All doors supplied on jobsite completely glazed (as specified) with vinyl glazing channel. Complete door packages shipped knocked down to point of distribution for assembly and glazing by others.

erection (by others)
DorWALS erected in prepared openings according to manufacturer's recommendations and installation drawings. Frames must be securely fastened, set plumb and level without twisting, bowing or springing.

After installation all DorWALS may be adjusted if necessary, to insure efficient operation. Mastic furnished by others. Installation screws provided by manufacturer. Manufacturer assumes no liability for damage by the trades or final cleaning of aluminum.

Your **DorWAL** distributor

A 1100 20M 959

Ador

A.I.A. FILE NO. 16-E 16d Ado

FIRST COMPLETE LINE OF ALL-ALUMINUM SLIDING GLASS DOORS

MEMBER SLIDING GLASS DOOR AND WINDOW INSTITUTE

A.I.A. FILE NO. 16-E

FIRST COMPLETE LINE OF SLIDING GLASS DOORS

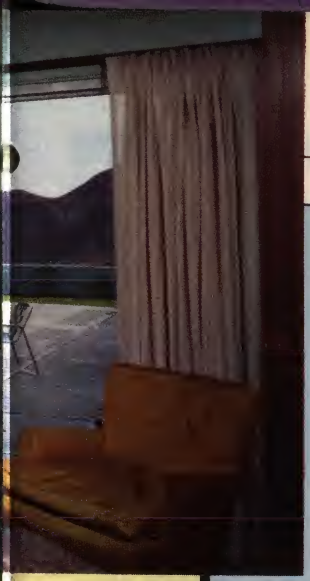
For every type of construction . . . Residential, Commercial, Monumental and Institutional there is an Ador unit specially designed to meet individual specification and construction requirements. This first complete line of aluminum sliding glass doors now provides a single source of highest quality doors for every climate, every type of construction, every price range, and for both standard and custom installations.

Extra values and top quality details found throughout all Adors are the result of continuing leadership in the sliding glass door industry. Luxury details like custom design hardware with clear lucite pulls, beautifully finished glass lines, lustrous lifetime aluminum finishes add to the quality of the construction. Characteristic is the *rigid, tubular design* of all Ador units—in which both door and frame are integrally held together.

Ador is the originator of the advanced 4-way weatherseal design which provides a guardian interlocking action for year around comfort. This unique proven weatherseal *checks dust, wind, sand and water infiltration.*

These key features—and many more as outlined on the following pages—are to be found in all Ador sliding glass doors.

WATER PROOF DUST PROOF WIND PROOF SAND PROOF



Ador doors allow specification to meet individual requirements for every type of installation.

CHARACTERISTICS	DOOR TYPES	DOOR SIZES	GLASS SIZES
Ador **FINEST CUSTOM QUALITY DOOR** with exclusive features. Today's greatest value in sliding glass doors; superb custom details, lifetime durability, and available for non-standard openings.	X O TYPE 2 O X O X O TYPE 3 C X O O O O X TYPE 3 E O X X O TYPE 4 C X O O X TYPE 4 E (WITH MUNTIN) X O X TYPE 4 E (WITHOUT MUNTIN)	5′ 11⅝″ x 6′ 10″ 7′ 11⅝″ x 6′ 10″ 9′ 11⅝″ x 6′ 10″ 11′ 11⅝″ x 6′ 10″ 8′ 10-13/16″ x 6′ 10″ 11′ 10-13/16″ x 6′ 10″ 14′ 10-13/16″ x 6′ 10″ 17′ 10-13/16″ x 6′ 10″ 8′ 10⅞″ x 6′ 10″ 11′ 10⅞″ x 6′ 10″ 14′ 10⅞″ x 6′ 10″ 17′ 10⅞″ x 6′ 10″ 11′ 10½″ x 6′ 10″ 15′ 10½″ x 6′ 10″ 19′ 10½″ x 6′ 10″ 23′ 10½″ x 6′ 10″ 11′ 11⅜″ x 6′ 10″ 15′ 11⅜″ x 6′ 10″ 19′ 11⅜″ x 6′ 10″ 23′ 11⅜″ x 6′ 10″ 11′ 11⅜″ x 6′ 10″ 15′ 11⅜″ x 6′ 10″ 19′ 11⅜″ x 6′ 10″ 23′ 11⅜″ x 6′ 10″	(2 pc.) 34″ x 76″ (2 pc.) 46″ x 76″ (2 pc.) 58″ x 76″ (2 pc.) 70″ x 76″ (3 pc.) 34″ x 76″ (3 pc.) 46″ x 76″ (3 pc.) 58″ x 76″ (3 pc.) 70″ x 76″ (3 pc.) 34″ x 76″ (3 pc.) 46″ x 76″ (3 pc.) 58″ x 76″ (3 pc.) 70″ x 76″ (4 pc.) 34″ x 76″ (4 pc.) 46″ x 76″ (4 pc.) 58″ x 76″ (4 pc.) 70″ x 76″ (4 pc.) 34″ x 76″) (4 pc.) 46″ x 76″ (4 pc.) 58″ x 76″ (4 pc.) 70″ x 76″ (2 pc.) 34″ x 76″ and (1 pc.) 69¼″ x 76″ (2 pc.) 46″ x 76″ and (1 pc.) 93¼″ x 76″ (2 pc.) 58″ x 76″ and (1 pc.) 117¼″ x 76″ (2 pc.) 70″ x 76″ and (1 pc.) 141¼″ x 76″

Ador **FLUSH THRESHOLD**—6′0″ to 24′0″ WIDTH X 6′10″ or 8′ 0″ HEIGHT. Special types and sizes supplied to order. **ORIGINAL FLUSH THRESHOLD DOOR** for multiple sliding and "pocket" door installations. All sections slide; threshold may be set in slab or mounted on sub-floor for flush installations.

CHARACTERISTICS	DOOR TYPES	DOOR SIZES	GLASS SIZES
Mdor **NEW MEDIUM PRICE QUALITY DOOR** Engineered to fit all general construction conditions and average climate requirements. Quality details and construction.	X O O X TYPE 2 O X O TYPE 3 C O X X O TYPE 4 C	6′ 0⅝″ x 6′ 10″ 8′ 0⅝″ x 6′ 10″ 10′ 0⅝″ x 6′ 10″ 8′ 11⅞″ x 6′ 10″ 11′ 11⅞″ x 6′ 10″ 14′ 11⅞″ x 6′ 10″ 11′ 11⅞″ x 6′ 10″ 15′ 11⅞″ x 6′ 10″ 19′ 11⅞″ x 6′ 10″	(2 pc.) 34″ x 76″ (2 pc.) 46″ x 76″ (2 pc.) 58″ x 76″ (3 pc.) 34″ x 76″ (3 pc.) 46″ x 76″ (3 pc.) 58″ x 76″ (4 pc.) 34″ x 76″ (4 pc.) 46″ x 76″ (4 pc.) 58″ x 76″

CHARACTERISTICS	DOOR TYPES	DOOR SIZES	GLASS SIZES
Idor **NEWEST BUDGET-PRICE DOOR** with extra-value features and smart appearance to add to the overall quality of the home. The all-new, years ahead door low priced for volume construction.	X O O X TYPE 2 O X O TYPE 3 C O X X O TYPE 4 C O FIXED FRAME	*5′ 10⅝″ x 6′ 9″ *7′ 10⅝″ x 6′ 9″ 9′ 10⅝″ x 6′ 9″ *8′ 11½″ x 6′ 9″ *11′ 11½″ x 6′ 9″ 14′ 11½″ x 6′ 9″ *11′ 8⅝″ x 6′ 9″ *15′ 8⅝″ x 6′ 9″ *3′ 0⅝″ x 6′ 9″ *4′ 0⅝″ x 6′ 9″ 5′ 0⅝″ x 6′ 9″ * Also available for ⅝″ dual glazing.	(2 pc.) 34″ x 76″ (2 pc.) 46″ x 76″ (2 pc.) 58″ x 76″ (2 pc.) 34″ x 76″ (2 pc.) 46″ x 76″ (2 pc.) 58″ x 76″ (4 pc.) 34″ x 76″ (4 pc.) 46″ x 76″ 34″ x 76″ 46″ x 76″ 58″ x 76″

CHARACTERISTICS	DOOR TYPES	DOOR SIZES	GLASS SIZES
Thermo Door **FIRST FULLY-INSULATED DOOR** exclusively for use with 1″ dual glazing. A completely new kind of door to assure comfort in extreme climates; controls heat flow winter and summer.	X O O X TYPE 2 O X O O O X TYPE 3 C AND 3 E O X X O TYPE 4 C X O O X TYPE 4 E	6′ 0″ x 6′ 11¾″ 8′ 0″ x 6′ 11¾″ 10′ 0″ x 6′ 11¾″ 8′ 10⅝″ x 6′ 11¾″ 11′ 10⅝″ x 6′ 11¾″ 14′ 10⅝″ x 6′ 11¾″ 11′ 9¾″ x 6′ 11¾″ 15′ 9¾″ x 6′ 11¾″ 19′ 9¾″ x 6′ 11¾″ 11′ 11″ x 6′ 11¾″ 15′ 11″ x 6′ 11¾″ 19′ 11″ x 6′ 11¾″	(2 pc.) 33″ x 76¾″ (2 pc.) 45″ x 76¾″ (2 pc.) 57″ x 76¾″ (3 pc.) 33″ x 76¾″ (3 pc.) 45″ x 76¾″ (3 pc.) 57″ x 76¾″ (4 pc.) 33″ x 76¾″ (4 pc.) 45″ x 76¾″ (4 pc.) 57″ x 76¾″ (4 pc.) 33″ x 76¾″ (4 pc.) 45″ x 76¾″ (4 pc.) 57″ x 76¾″

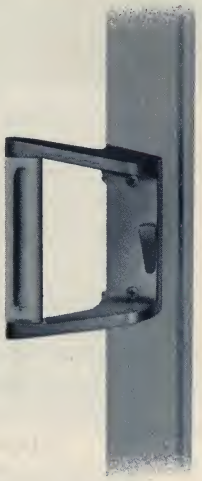
Ador

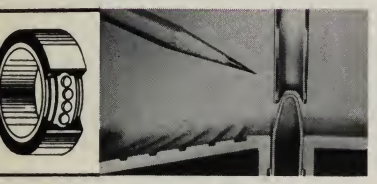
FINEST CUSTOM QUALITY DOOR–Ador Standard

No other door offers so much in advanced design features and custom details. Exclusive features like: Effortless door operation; heavy tubular aluminum sections so strong that Ador doors can be installed in widths of 48 feet or more; 4-way weatherstripping more weathertight than conventional hinged exterior doors, and sloping design threshold free of deep ridges to collect dirt, water or mud. New heavy duty screens, snap-on glazing bead, maintenance free anodized finish, are added reasons why the Ador is today's greatest value.

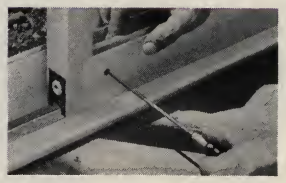
How Ador 4-way Weatherseal Protects with double weatherstripping

Luxury style Ador hardware is most beautiful in field. Flared lucite grip, lustrous satin-silver finish—keyed lock optional.





Finger-tip door operation assured by stainless steel ball bearings and stainless steel track.



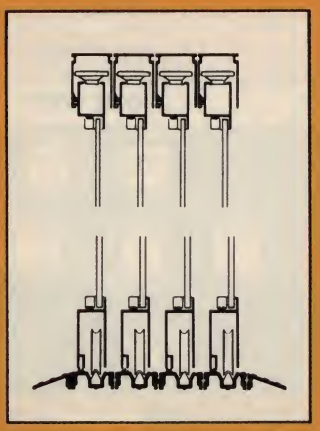
Perfect Operation always; screwdriver adjustment moves two sheaves on door.

Smart New Screen Door Hardware is this positive latching solidly constructed Ador screen detail.

Ador

FLUSH THRESHOLD DOOR–Ador Multiple Sliding

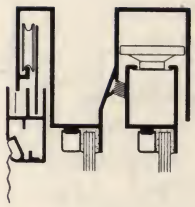
One of the most flexibly used sliding glass units, the Ador Flush Threshold Door is designed for multiple sliding and "pocket" installations. As a basic unit is ideal for interior use, where it is widely used as an area or room separator and divider, or partition. All sections slide on cleanly designed recessed stainless steel track; threshold may be set in slab or mounted on sub-floor for flush installations.



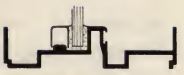
Design permits any number of threshold sections to be used to carry multiple numbers of sliding vents.

Smart Inset Hardware in striking modern design is a distinctive feature of Flush Threshold door. Positive locking action.

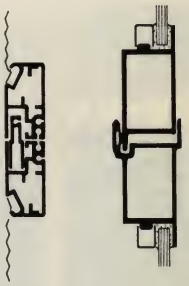
Sliding Glass Door for Single Glazing



A HEAD

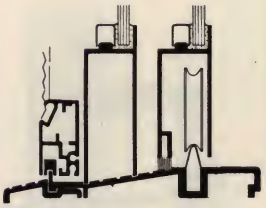


D FIXED JAMB

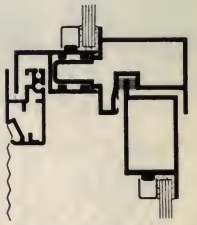


F MEETING STILE

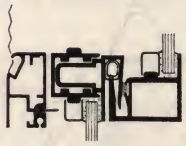
B CLOSING JAMB



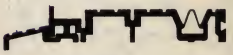
E THRESHOLD



G FALSE JAMB



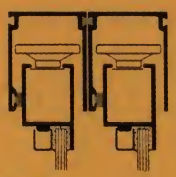
C INTERLOCKER



H FLUSH THRESHOLD

CONSTRUCTION DETAILS ¼ SIZE

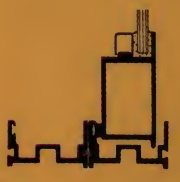
Glass Door for Single Glazing



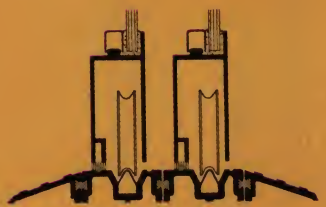
A HEAD

C MEETING STILE TYPE 4

E INTERLOCKER



F JAMB



B THRESHOLD

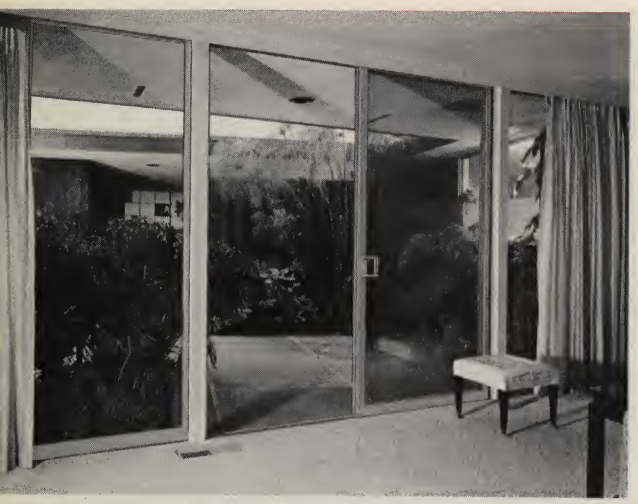
D JAMB

G Multiple slide doors may be made by adding additional frame and vent units.

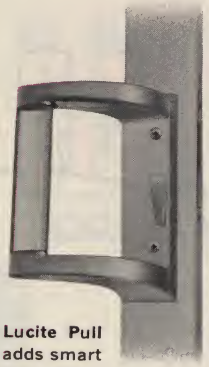
CONSTRUCTION DETAILS ¼ SIZE

Mdor

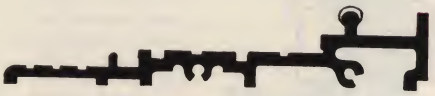
NEW MEDIUM PRICE QUALITY DOOR—Mdor for



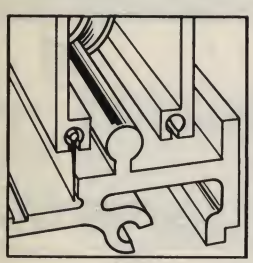
The Mdor is the first completely new, full-quality door to be available at a competitive medium price. Its snap-on surrounds fit it for all building conditions and its engineered construction equips it for use in all average climates. Features include: Smart lucite grip hardware; protective satin alumilite finish; stepped weatherproof threshold with replaceable track; finest quality vinyl weatherstripping; sturdy bottom rolling screens; two sheave adjustments; and silent nylon rollers. Here is a door exclusively designed to provide additional quality to the building—at a new medium price cost.



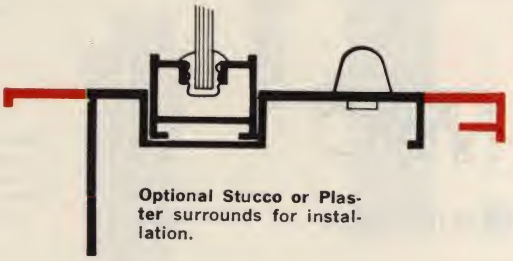
Beautiful Lucite Pull Hardware adds smart note of fine quality; keyed lock available.



Stepped Threshold design provides raised section for track, protects against entry of water.



Replaceable Track provides lifetime service for unit.



Optional Stucco or Plaster surrounds for installation.

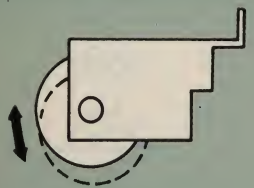
Idor

NEW BUDGET PRICE DOOR— Idor Sliding Glass

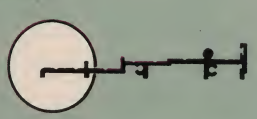
This luxury-feature sliding glass door at a low "best-buy" price is a new kind of door. From dramatic hardware, to more than 10 extra-value features, the Idor features include: heavy duty bottom rolling screens; silent, feather-touch ball-bearing operation on nylon rollers; rigid strength of heavy tubular aluminum sections; *two* enclosed sheaves for easy door adjustment; finest all around weatherstripping, with optional double weatherstripping. Dollar for dollar, the Idor offers the greatest value in a sliding glass door designed for mass volume building.

Easy Ball-Bearing Operation—Precision ball-bearings with silent nylon rollers provide smooth finger-tip easy door operation.

Luxurious Decorator Hardware with graceful gleaming lucite pull. Positive locking, keyed lock available.



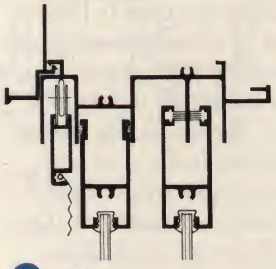
Adjustable Nylon Sheaves—Exclusive in the low cost field, this is first door with two completely enclosed nylon sheaves to assure easy door adjustment.



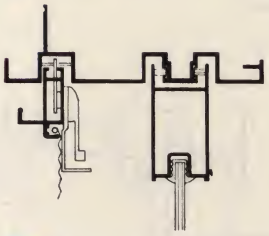
Stepped Threshold bars entry of water, includes stucco trim for installation savings.

Strong Tubular Stile Section of aluminum is typical of rigid strength of the Idor.

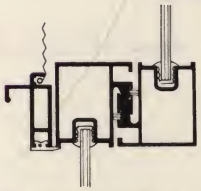
3/16″, 1/4″ Single Glazing and 5/8″ Dual Glazing



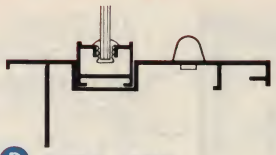
A HEAD



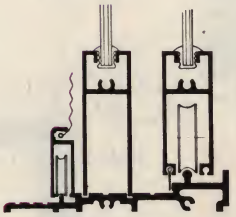
B CLOSING JAMB



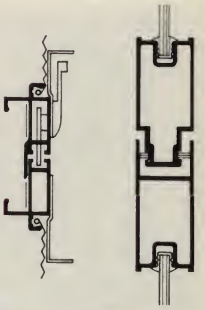
C INTERLOCKER



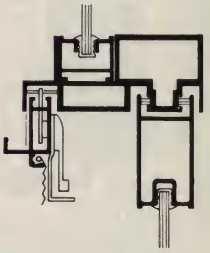
D FIXED JAMB



E THRESHOLD



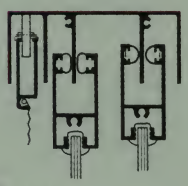
F MEETING STILE



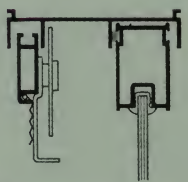
G FALSE JAMB

CONSTRUCTION DETAILS ¼ SIZE

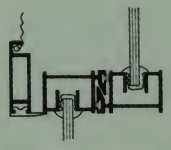
Door for 3/16″ to 1/4″ Single Glazing and 5/8″ Dual Glazing*



A HEAD

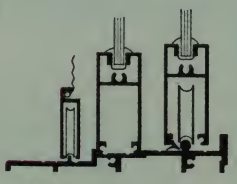


B CLOSING JAMB



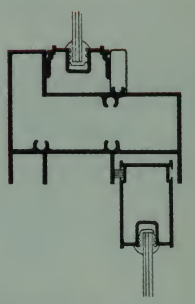
C INTERLOCKER

D FIXED JAMB



E THRESHOLD

F MEETING STILE



G FALSE JAMB

*See glass size limitations on Page 3

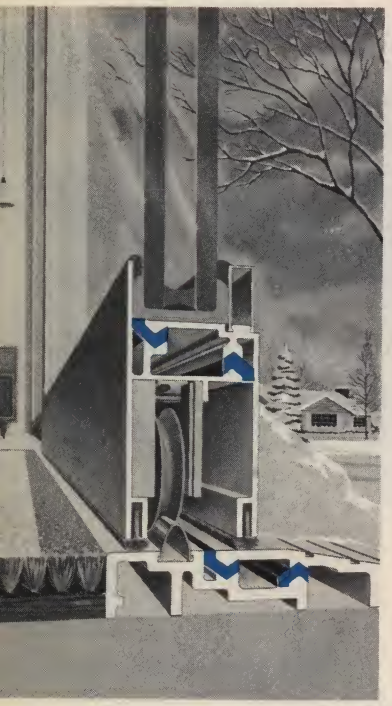
HEAT GLASS U. FACTOR:
¼″ single glazing — 1.15 • ⅝″ dual glazing — 0.65

SUMMER AIR FACTOR:
¼″ single glazing — 1.06 • ⅝″ dual glazing — 0.61

CONSTRUCTION DETAILS ¼ SIZE

Thermo Door

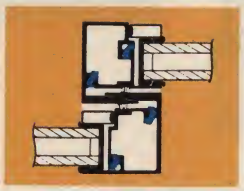
FIRST FULLY-INSULATED DOOR—Thermo Door



Insulated Themro Door is 2 doors in 1 —continuous strips of insulation (in blue) separate interior from exterior frames to control heat flow and reduce condensation.

Winter Comfort and savings in heat cost.

Summer Comfort and air conditioning savings.



Interlocker Double Insulation, shown in blue, plus double weatherstripping efficiently control extreme weather.

The Thermo Door is the first sliding glass door *insulated* to reduce damaging condensation and costly heat loss in extreme temperature areas. Designed exclusively for 1″ dual glazing it assures year around comfort—winter and summer. It has the most efficient weatherseal ever devised...double weatherstripping of hi-pile silicone treated mohair. Actually the Thermo Door is two doors in one—an inner frame and an outer frame—separated by continuous strips of non-metallic insulation to provide heat control efficiency similar to that of dual glazing. Features include heavy duty aluminum extrusions; stainless steel bearings; stainless steel track; rugged top hung screens and maintenance free anodized finish.

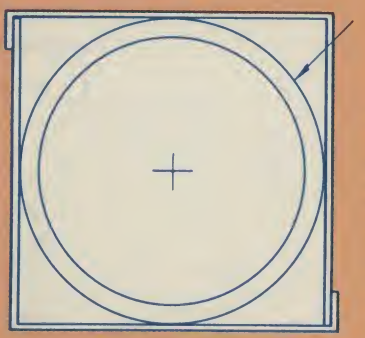
Distinctive Lucite Grip Hardware in smart custom design is typical of the finest qaulity details found in the Thermo Door.

ACCESSORIES

SLIDING GLASS DOOR CUSTOM DETAILS

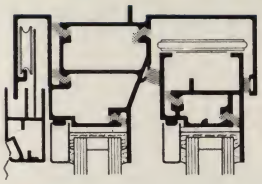
Matching Transoms offer unusual design flexibility to the Ador installation. Aluminum transom extrusions are identically matched to door extrusions to visually extend glass areas and horizontal and vertical lines.

To provide the maximum benefits and advantages to be gained from the use of sliding glass units, Ador makes available a number of special details and accessories. Through the use of these coordinated and highly flexible elements, the architect, designer and builder may gain added beauty and utility in his application of Ador sliding glass doors to the structure.

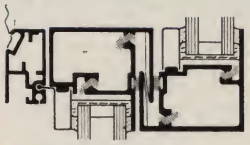


Mullion Cover Plates of aluminum in custom sizes are available in matching alumilited finish. Cover plates are specially designed to compliment the Ador door design and are most frequently used to cover posts and pipes.

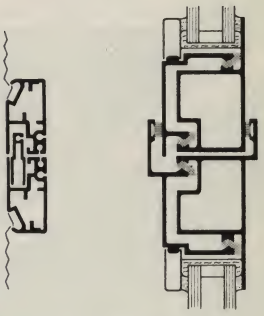
Insulated Sliding Glass Door for 1" Dual Glazing



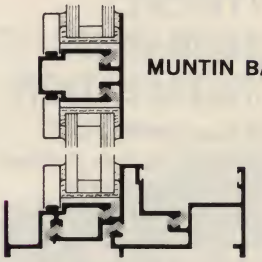
A HEAD



C INTERLOCKER

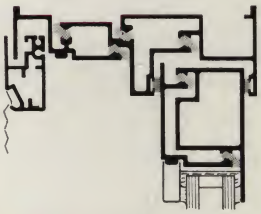


F CLOSING STILE

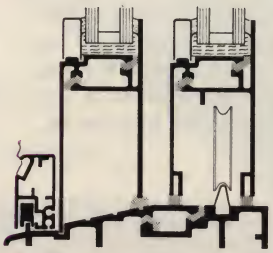


MUNTIN BAR

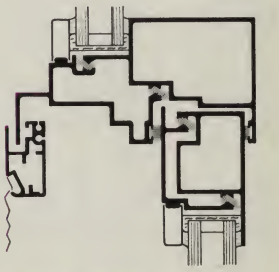
D FIXED JAMB



B CLOSING JAMB



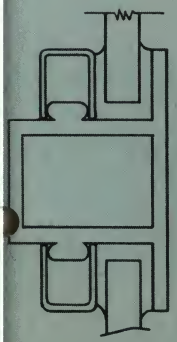
E THRESHOLD



G FALSE JAMB

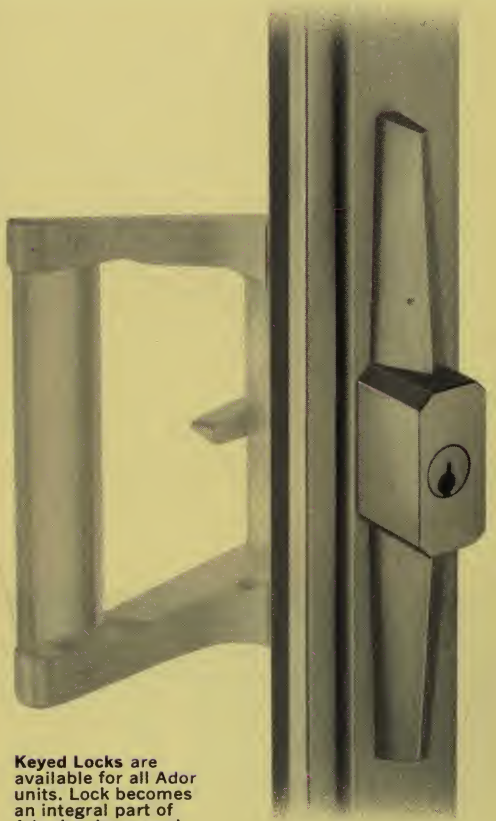
CONSTRUCTION DETAILS ¼ SIZE

Ador Doors for Trailers are but one of many special adaptations of sliding glass units for special requirements.



Additional Glazing Trim, such as vertical muntin bars, are available for most Ador units and provide great adaption in handling special glass areas. Extrusions harmonize completely in design and finish.

Available sliding vent Bottom Rail Locks. May be installed in various positions in the bottom rail; provide positive security.



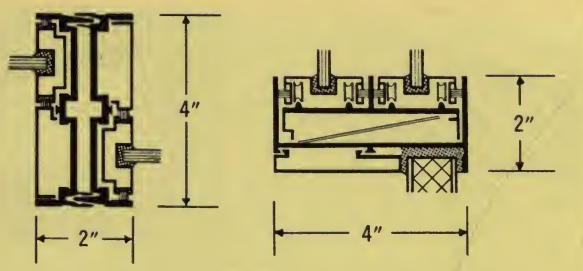
Keyed Locks are available for all Ador units. Lock becomes an integral part of Ador hardware and harmonizes with the door design. Positive locking design assures full security.

ADOR-WALL

BRINGS THE ADVANTAGES OF

TYPICAL ADOR-WALL INSTALLATION

is this institutional building. Cleanly finished lines of this simple, versatile wall system add to the beauty of this Fine Arts Building completed in 1957. Ador-Wall is ideal for medical and professional buildings, industrial and office buildings, schools, stores and shops, and motels and apartments.



Basic 2″ x 4″ mullion system used throughout, with available add-on mullion to obtain greater architectural definition and depth.

Ador PIONEER IN THE CURTAIN WALL FIELD...

Kaiser Hospital Clinic, Los Angeles, Calif.

CURTAIN WALL TO THE SMALLER BUILDING

VERSATILE SYSTEM USES SLIDING GLASS DOORS, SWINGING DOORS, SLIDING WINDOWS AND PROJECTED OR CASEMENT WINDOWS
INSIDE PANEL SURFACES ECONOMICALLY FORM FINISHED INTERIOR WALL
USES SINGLE, DUAL OR TRIPLE GLAZING
ANODIZED WEATHER RESISTANT FINISH
DESIGN IN GRID UNIT ALLOWS FOR CONDENSATION DRAIN-OFF
MEETS REQUIREMENTS FOR 1, 2 AND 3 STORY BUILDINGS
USES ANY TYPE PANEL IN 3/16" TO 3" THICKNESS

ADOR-WALL IS THE FIRST ECONOMICALLY PRICED WALL SYSTEM

for the 1, 2 or 3 story building. Ador-Wall—a new engineering approach to windowall—provides complete design freedom to meet individual building specifications. Ador-Wall offers unusual ease of installation at lower cost; a knock-down design which eliminates bulky shipments and provides savings in shipping costs; elimination of damage to product in transit; and permits rapid assembly and full standards inspection on the job site.

Architectural beauty is a major contribution of Ador-Wall through its basic 2″ x 4″ mullion system—the first to produce desirable narrow sight lines to the scale of the smaller building. All surfaces are finished trim and smooth without exposed fasteners, and glass extends cleanly without exposed glazing beads. Designed by Ador, pioneer in the quality sliding glass door field and in the multi-story curtain wall field, the new system has been proven over the past 2 years.

See the Ador-Wall brochure in SWEETS CATALOG, under section 3d—CURTAIN WALLS

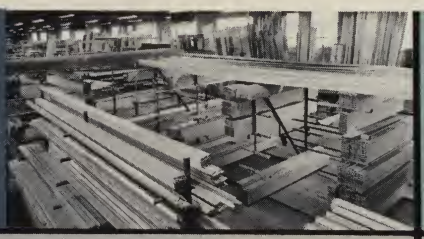
olorado State University, Ft. Collins, Colo.

I.B.M. Building, Los Angeles, Calif.

Texas Company Building, Los Angeles, Calif

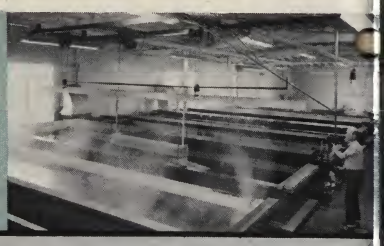
MODERN ADOR MANUFACTURING PLANT plus advanced product design assure today's greatest value in quality aluminum sliding glass doors

Ador



GENERAL: Aluminum sliding glass doors shall be **Ador,** as manufactured by Ador Corporation, 2345 W. Commonwealth Ave., Fullerton, Calif. **MATERIAL AND CONSTRUCTION:** All sections shall be constructed of 6063-T5 tempered aluminum alloys. Corners of the door and frame shall be constructed of aluminum castings to give a rigid frame. Sliding vents shall be bottom rolling type on 1¾" O.D. sheaves, with sealed grease-packed, stainless steel ball bearings. Sill track shall be stainless steel continuous track and be easily replaceable. All frames shall be designed to accommodate ¼" plate glass. Doors and frames shall have an aluminum snap-on glazing bead. All screws used throughout the door frame and installation shall be aluminum or otherwise corrosive resistant material. **WEATHERSTRIPPING:** All ventilating units to include positive-acting weatherstripping at header, threshold, interlocker and closing jamb. Mounted hi-pile mohair weatherstripping to be used throughout. Mohair to have silicone treatment to reduce moisture absorption. **HARDWARE:** Hardware shall be of non-corrosive material, satin-finished, and constructed so as to incorporate an inside locking latch. Cylinder locks, if desired, shall be supplied at extra cost. **FINISH:** All extruded shapes and glazing bead shall have the satin anodized finish, with suitable protective coating of lacquer, meeting or exceeding the salt spray requirements of Alcoa Specifications 204-R-1. **SCREENS:** Sliding door screens, where ordered, shall be top hung from overhead track integral with the top header of the door frame, and operate on nylon rollers. Nylon spring-loaded guides on track shall be used at bottom. Screen construction shall be extruded tubular shapes 6063-T6 aluminum alloy, anodized. Screens shall be fitted with 18 x 14 mesh wire cloth and shall include provisions for adjustment of screen to frame. **ERECTION:** Installation by other than a trained factory representative shall be in accordance with Ador instructions and recommendations. All door frames shall be installed plumb, level and square to allow proper functioning in regard to sliding, locking and weathering. **WORK BY OTHERS:** All glass, glazing, putty, caulking and flashing is excluded unless bid by manufacturer, or his representative.

Mdor



GENERAL: Aluminum sliding glass doors shall be Mdor as manufactured by Ador Corporation, 2345 W. Commonwealth Avenue, Fullerton, Calif. **MATERIAL AND CONSTRUCTION:** All sections shall be constructed of 6063-T5 tempered aluminum alloys. All corners of door frame, and fixed and sliding panels shall incorporate a screw slot to make a free-standing frame. All vertical vent members and the vertical interlocker on the fixed sash shall be hollow extruded shapes. Sliding vents shall be bottom rolled on 1¼" O.D. nylon sheaves double sealed and grease packed. Sheaves shall be fully adjustable without removing sash from frame. All frames designed to accommodate ¾", ¼", single glazing, and ⅝" dual glass. All screws used throughout the door, frame and installation shall be corrosion resistant material. **WEATHERSTRIPPING:** All ventilating units shall be double weatherstripped with vinyl with sliding vinyl at threshold. **HARDWARE:** Shall be satin finished and constructed so as to incorporate an inside locking latch, keyed locks available on request. **FINISH:** All extruded sections shall have the satin anodized finish. **SCREENS:** All door frames shall have provisions for installing sliding screens with tubular extrusions of 6063-T6 aluminum satin finish. Screens shall be bottom rolling and shall be fitted with 18 x 14 mesh wire cloth (aluminum or fiberglas). **ERECTION:** Installation shall be in accordance with ADOR's instructions and recommendations. **WORK BY OTHERS:** All glass, glazing, caulking and flashing is excluded unless bid by manufacturer, or his representative.

ThermoDoor

GENERAL: All aluminum sliding doors on plans shall be **Ador** thermo insulated sliding doors as manufactured by Ador Corporation, 2345 W. Commonwealth Ave., Fullerton, California. **MATERIAL AND CONSTRUCTION:** All sections shall be constructed of 6063-T5 tempered aluminum alloys. Corners of the door and frame shall be constructed of heavy aluminum extrusions to give a rigid frame. Sliding vents shall be bottom rolling type on 1¾" O.D. sheaves, with sealed grease-packed ball bearings. Sill track shall be stainless steel continuous track and be easily replaceable. All frames shall be designed to accommodate 1" dual glazing. Doors and frames shall have an aluminum snap-on glazing bead. All screws used throughout the door frame and installation shall be aluminum or otherwise corrosive resistant material. **INSULATION:** All extruded sections of primary frame and vent shall incorporate a non-metallic insulation barrier to minimize straight line heat flow through extrusions. Insulation shall be of a non-metallic material having an extremely low coefficient of thermal conductivity. **WEATHERSTRIPPING:** Top rail of the door shall be double weatherstripped with mounted mohair stripping. Interlocking weatherstripping of the door and frame shall be of mohair stripping. Bottoms of the door shall be equipped with a double floating positive seal mohair weatherstripping providing continuous contact between door rail and threshold along full width. Jamb and stile weatherstripping shall be double mohair weatherstripping mounted on the stile, for a continuous seal. Weatherstripping shall be hi-pile wool mohair, silicone treated to lessen moisture absorption. **HARDWARE:** Hardware shall be of non-corrosive material, satin-finished, and constructed so as to incorporate an inside locking latch. Cylinder locks, if desired, shall be supplied at extra cost. **FINISH:** All extruded shapes and glazing bead shall have the satin anodized finish, with suitable protective coating of lacquer, meeting or exceeding the salt spray requirements of Alcoa Specifications 204-R-1. **SCREENS:** Sliding door screens, where ordered, shall be top hung from overhead track integral with the top header of the door frame, and operate on nylon rollers. Nylon spring-loaded guides on track shall be used at bottom. Screen construction shall be extruded tubular shapes 6063-T6 aluminum alloy, anodized. Screens shall be fitted with 18 x 14 mesh wire cloth (aluminum or fiberglas) and shall include provisions for adjustment of screen to frame. Handle hardware shall be of non-corrosive materials and so constructed as to incorporate an inside latching means. **ERECTION:** Installation by other than a trained factory representative shall be in accordance with Ador instructions and recommendations. All door frames shall be installed plumb, level and square to allow proper functioning in regard to sliding, locking and weathering. **WORK BY OTHERS:** All glass, glazing, putty, calking and flashing is excluded unless bid by manufacturer, or his representative.

Idor

GENERAL: Aluminum sliding glass doors shall be Idor, as manufactured by Ador Corporation, 2345 West Commonwealth Ave., Fullerton, California. **MATERIAL AND CONSTRUCTION:** All sections shall be constructed of 6063-T5 tempered aluminum alloys with threshold 6063-T6 alloy. Vertical closing stile shall be hollow extruded shape. Sliding vents shall be bottom rolling type on 1¼" O.D. nylon sheaves with cadmium plated steel race, double sealed and grease packed ball bearings. Both sheaves shall be fully adjustable without use of shims. Frames to receive 3/16" to ¼" single glazed or ⅝" dual glazed vents and shall be interchangeable after installation. Stepped aluminum threshold shall incorporate stucco trim. Screws used throughout the door, frame and installation, shall be corrosion resistant material. **WEATHERSTRIPPING:** Ventilating units shall be effectively weatherstripped on all four sides. Double weatherstripping optional. **HARDWARE:** Contemporary hardware shall be of non-corrosive material, and constructed so as to incorporate an inside locking latch. Cylinder locks optional. **FINISH:** All extruded shapes shall have a smart aluminum finish. **SCREENS:** Door frames shall have provision for installing sliding screens. Screen construction shall be extruded tubular shapes of 6063-T6 aluminum alloy. Screens shall be bottom rolling on nylon rollers and fitted with 18 x 14 mesh wire cloth (aluminum or fiberglas) and shall include provision for adjustment. **ERECTION:** Installation shall be in accordance with Ador instructions and recommendations. All door frames shall be installed plumb, level and square to allow proper functioning in regard to sliding, locking and weathering. **WORK BY OTHERS:** All glass and glazing is excluded unless sold by manufacturer, or his representative.

ADOR CORPORATION division of Poly Industries, Inc. • 2345 W. Commonwealth Ave., Fullerton, Calif.

DISTRIBUTORS AND DEALERS IN ALL PRINCIPAL CITIES

Ador one of America's Foremost Architectural Product Manufacturers
ADOR CURTAIN WALL—ADOR-WALL—
ADOR MONUMENTAL WINDOWS—
ADOR SLIDING GLASS DOORS

A.I.A. FILE NO. 16-E

FOR RESIDENTIAL, INSTITUTIONAL AND COMMERCIAL INSTALLATIONS

THE REGENCY

THE CORONET

aluminum sliding glass doors

GENERAL BRONZE CORPORATION

ALWINTITE®

the line that offers PLUS VALUES

D-60

ALWINTITE DIVISION GENERAL BRONZE CORPORATION GARDEN CITY, N. Y.

For complete aluminum window catalog see SWEET'S 6a/ALw

A.I.A. FILE NO. 16-E

ALWINTITE®

the line that offers
PLUS VALUES

ALUMINUM SLIDING GLASS DOORS

No longer a luxury item limited to expensive custom-built homes, sliding glass doors are a vital part of today's new home – of today's great vogue for indoor-outdoor living. Sliding glass doors not only add extra "sales appeal" to houses, but they have become a "MUST" if your houses are to be really up-to-date.

In selecting sliding glass doors for new homes, apartments, motels, hospitals, and other new institutional or commercial buildings, be sure you select doors that have been engineered and built to give years of trouble-free service.

As a pioneer in the development and volume production of sliding glass doors, General Bronze through its Alwintite Division is able to offer you a line of sliding glass doors that will meet most any specific requirement. The "REGENCY"—a superior quality de luxe door can be specified and used with full confidence in hospitals, apartments and commercial buildings as well as residences. The "CORONET"—a well-designed, competitively priced door will satisfy most residential demands.

Due to our policy of constant product improvement, we reserve the right to modify or amend or discontinue any of the products shown herein, at any time without notice as we in our sole discretion may determine.

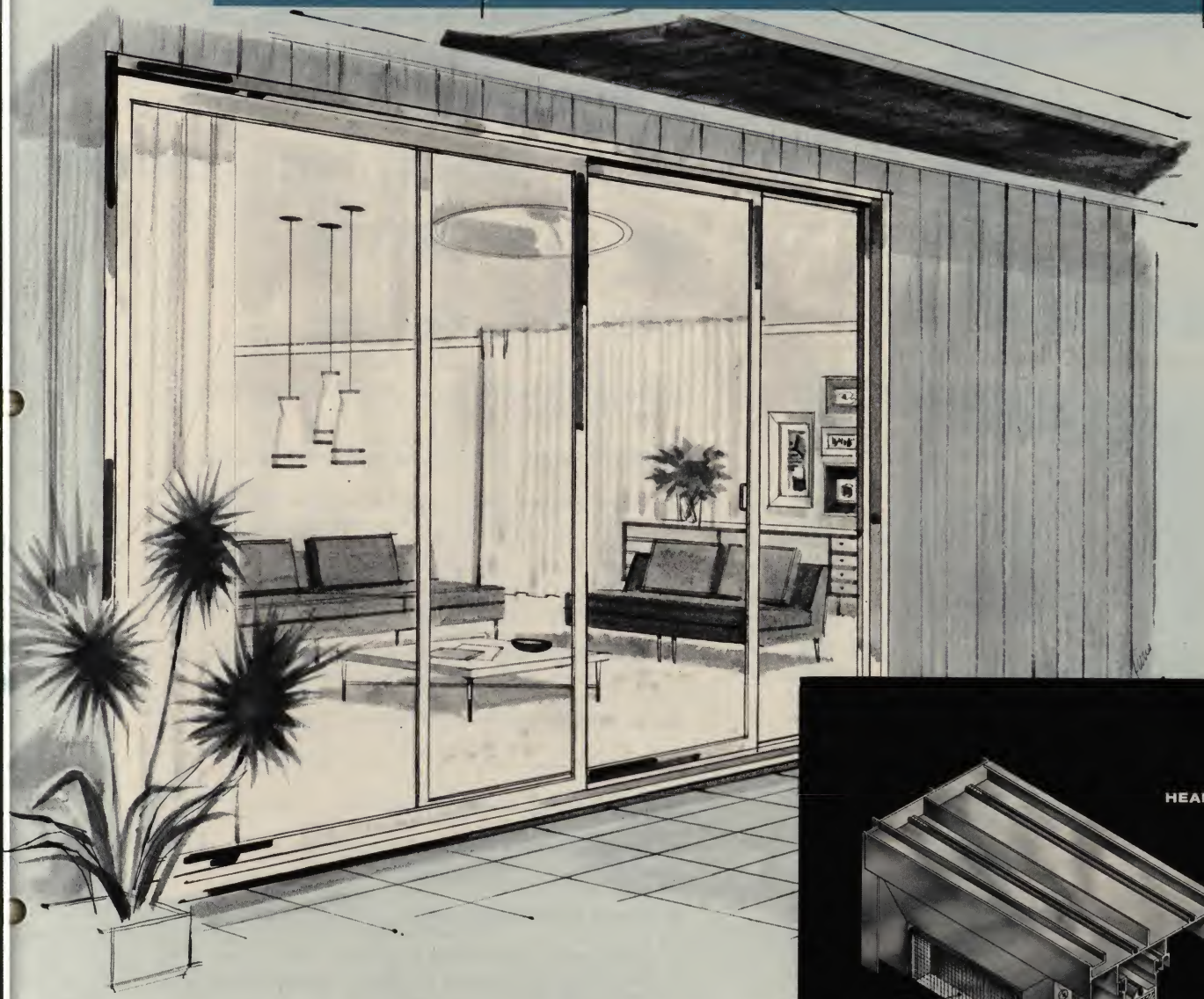
The installation details throughout this catalog show suggested appplications, which may vary according to local building practices.

SERIES **770**

REGENCY

SLIDING GLASS DOORS

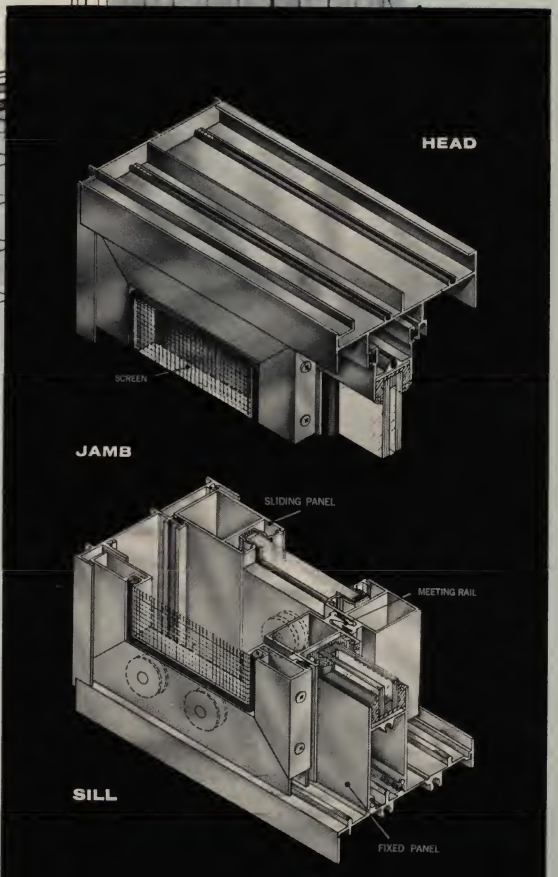
A 16d / AL



The REGENCY, series 770, sliding glass door by ALWINTITE is truly a fine quality door – the type of sliding door you'll be proud to install anywhere...new houses, apartments, motels or commercial showrooms.

Constructed from heavy gauge aluminum extrusions with a pleasing Alumilite finish, these doors are designed to take either sheet glass or insulating glass. Double seal wool pile and vinyl weatherstripping around the entire door area–head, jambs, meeting rails and sill – makes the REGENCY door readily usable in northern climates.

The REGENCY sliding glass door will add visible quality to your new homes. Ideal for living room, family room, den or recreation room – any room that leads out on to a terrace, patio or porch.



GENERAL BRONZE CORPORATION
Garden City, N.Y.

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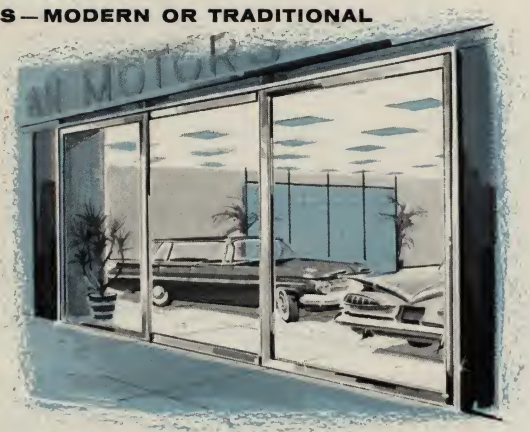
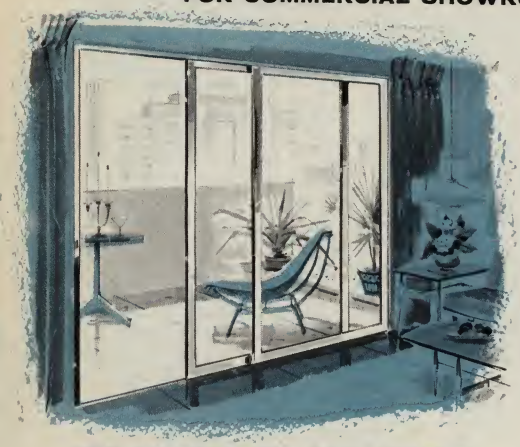
ALWINTITE®

the line that offers
PLUS VALUES

FOR HOMES—MODERN OR TRADITIONAL



FOR COMMERCIAL SHOWROOMS



FOR APARTMENTS AND MOTELS

THE REGENCY
Series 770

A ROYAL QUALITY SLIDING GLASS DOOR BY ALWINTITE

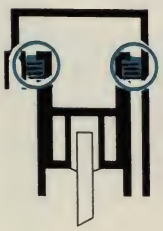
Check all these PLUS VALUES!

- ★ Designed to take any type glazing 3/16" sheet glass up to 1" insulating glass.
- ★ Double weatherstripping at head, jamb and sill.
- ★ Magic pressure buttons assure weathertight closure.
- ★ Modern "Sweep" lock on attractive, sturdy aluminum handle.
- ★ Door glides easily on nylon rollers.
- ★ With thumb latch up, door locks automatically—with latch down, door closes without locking.
- ★ Easy adjustment of roller raises or lowers door.
- ★ Cylinder lock.
- ★ Soft, pleasing Alumilite finish lasts a lifetime.
- ★ Door perfectly balanced for finger tip glide — even with heavy insulating glass.
- ★ Weeps in sloping sill assure rapid drainage.
- ★ Fixed panel held tightly in position with screws into jamb section of frame. No angle braces at head and sill to mar door's attractive appearance.
- ★ Screen with sturdy, tubular extruded frame glides easily on rollers—has neat, attractive, positive-locking latch.

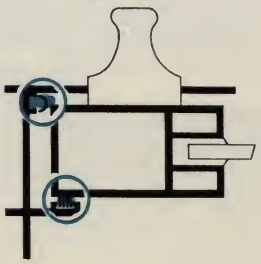
DOUBLE-SEAL WEATHER PROTECTION

at all important points—head, jamb, meeting rail and sill—give double protection against cold wintry weather.

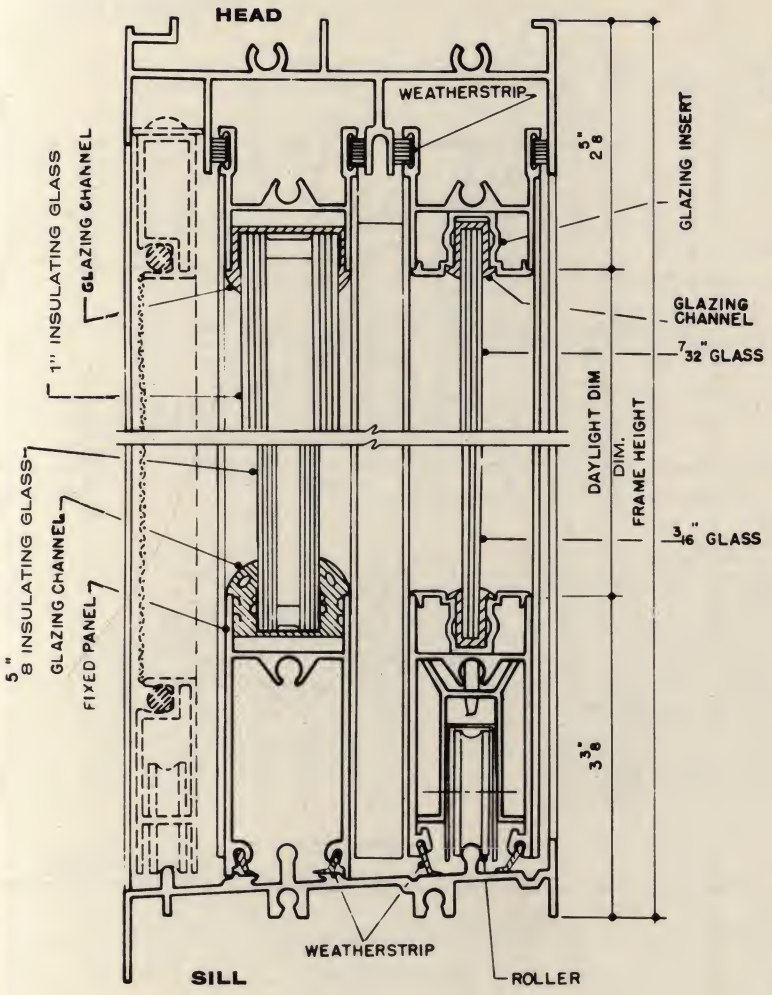
AT HEAD



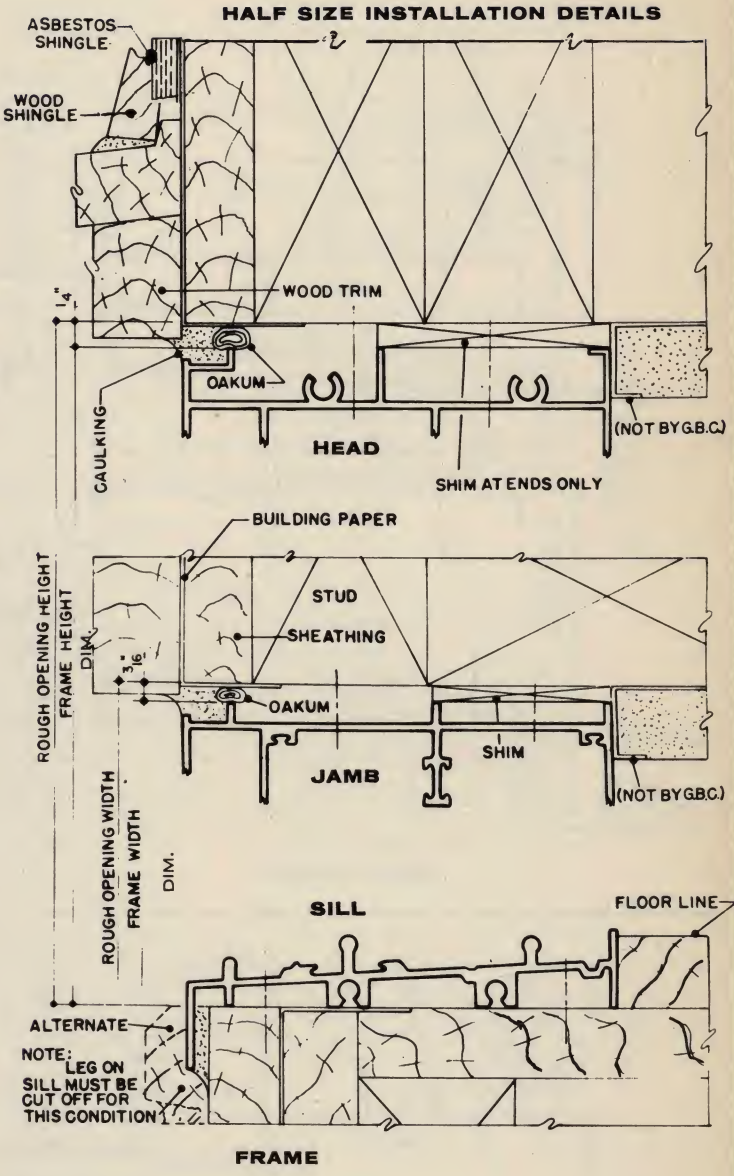
AT JAMB

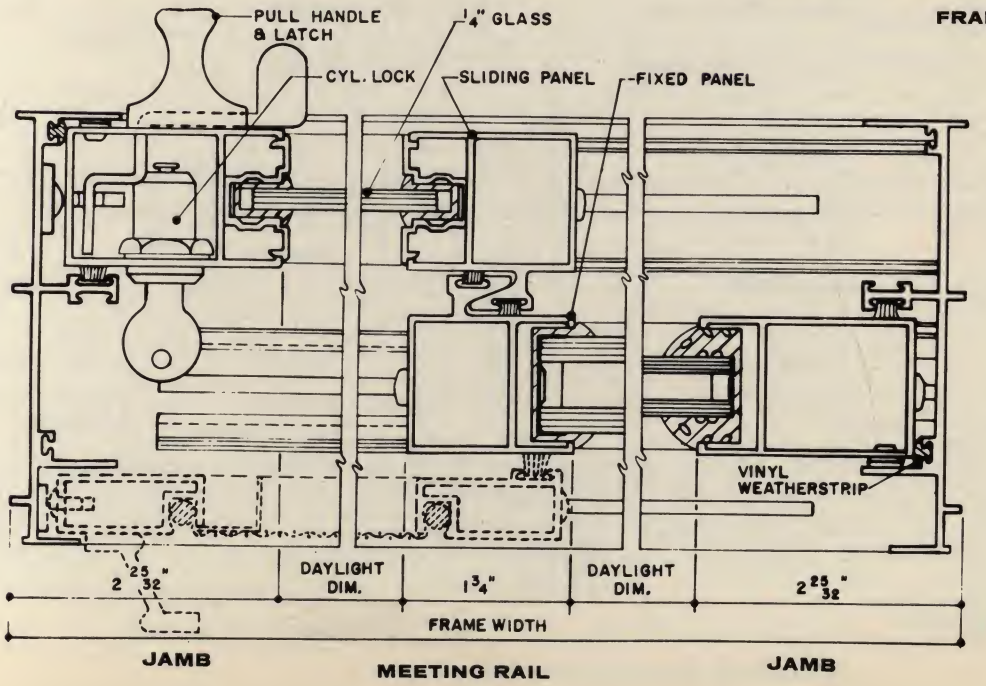


AT SILL

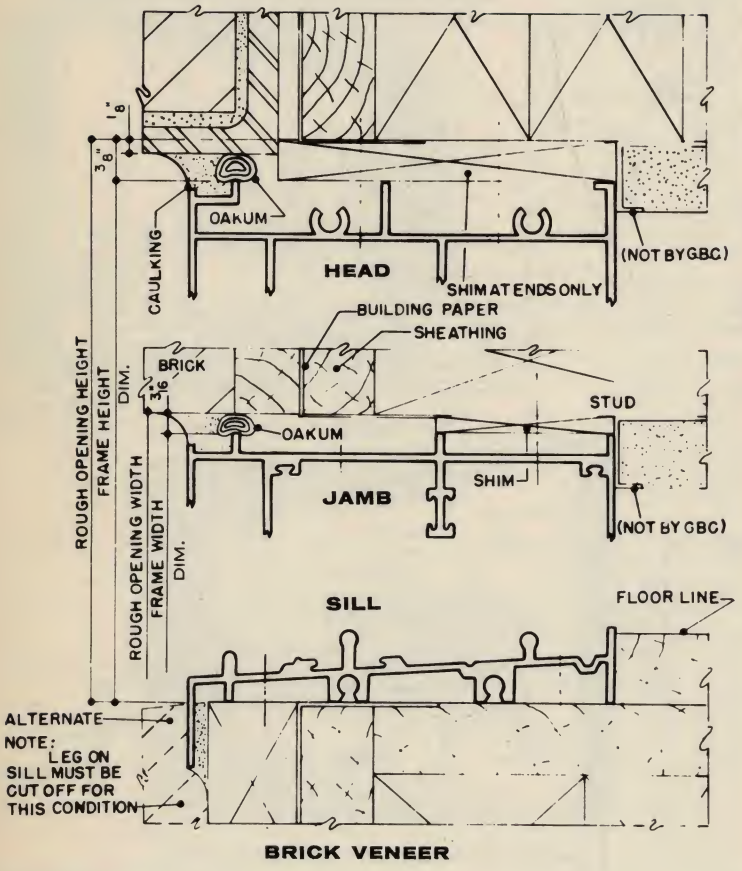


HALF SIZE DETAILS

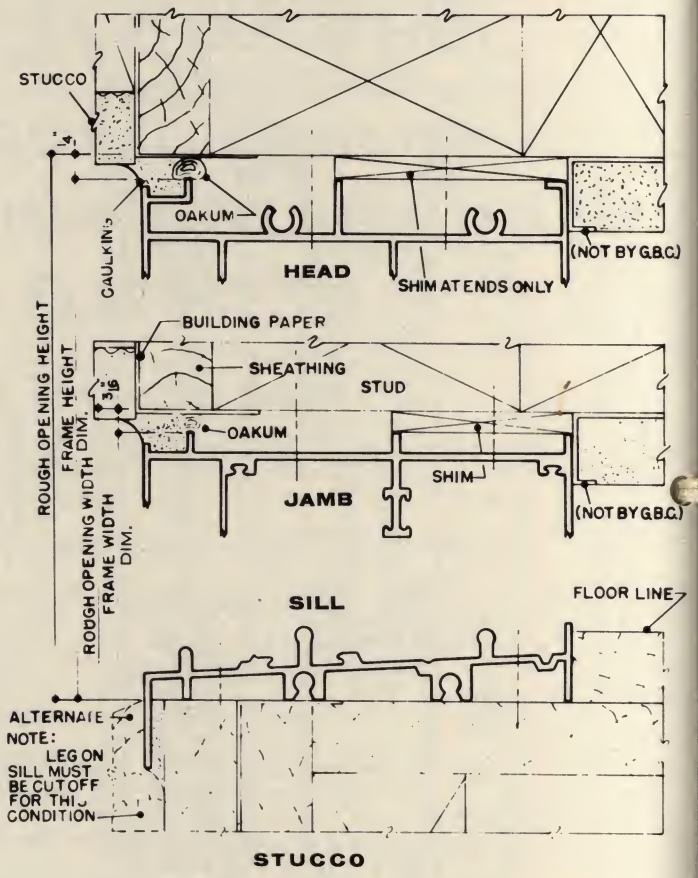




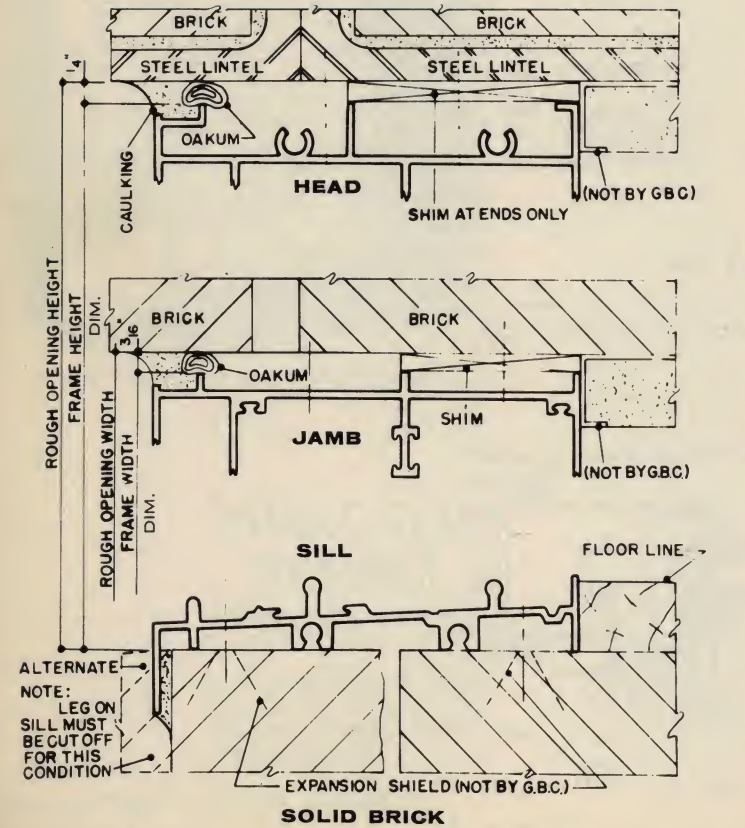
HALF SIZE INSTALLATION DETAILS



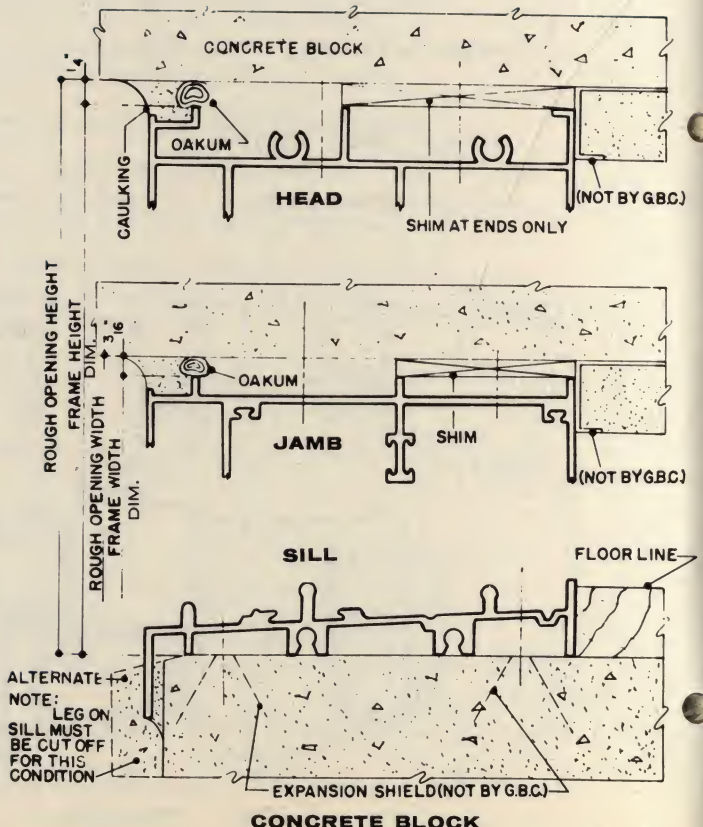
BRICK VENEER



STUCCO



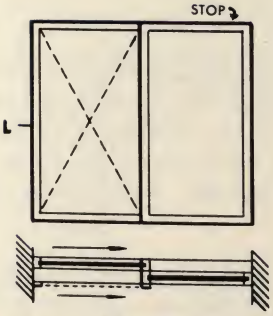
SOLID BRICK



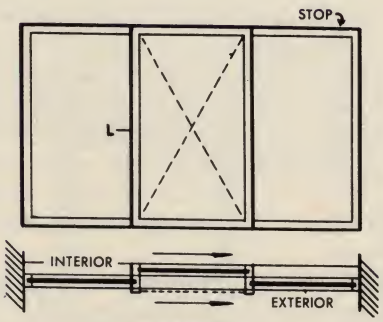
CONCRETE BLOCK

Full Size Details will be furnished on request

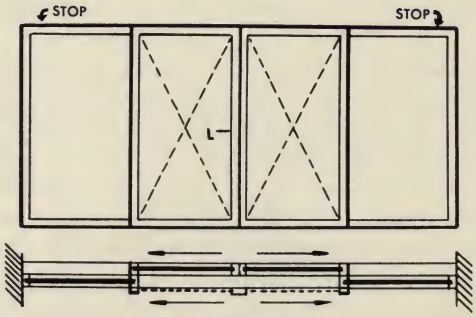
REGENCY Series 770



2 PANEL
TYPES 60610, 80610, 100610



3 PANEL
TYPES 90610, 120610



4 PANEL
TYPE 160610

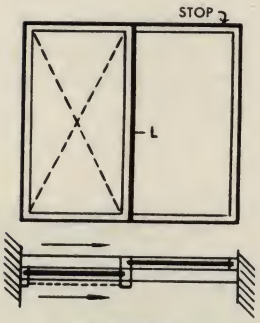
NOTE: EXTERIOR LEFT HAND DOORS SHOWN. OPPOSITE HAND AVAILABLE ON REQUEST. CROSSED PORTION INDICATES SCREENED AREA L LATCH

GLASS TOLERANCE: 3/16", 7/32" & 1/4" SHEET GLASS ±1/16", 5/8" & 1" INSULATING GLASS +3/16" −1/16"

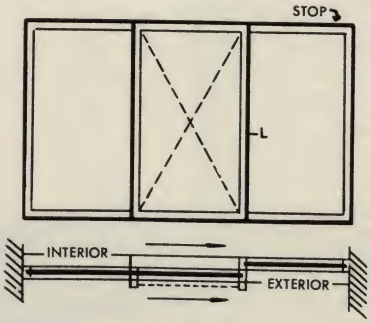
TYPE	OVERALL FRAME SIZE		NO. OF PANELS		INDIVIDUAL PANEL SIZE			INDIVIDUAL PANEL DAYLIGHT		GLASS SIZE				DOOR AREA (SQ. FT.)	VENTILATING AREA (SQ. FT.)
						HEIGHT				5/8" & 1" INSULATING GLASS		3/16", 7/32" & 1/4" SHEET GLASS			
	WIDTH	HEIGHT	SLID.	FIXED	WIDTH	SLID.	FIXED	WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT		
60610	5'-11 13/16"	6'-10"	1	1	3'-0 1/4"	6'-8 1/4"	6'-8 1/2"	2'-8 1/4"	6'-4"	33"	76 3/4"	33"	77"	38.47	17.09
80610	7'-11 13/16"	6'-10"	1	1	4'-0 1/4"	6'-8 1/4"	6'-8 1/2"	3'-8 1/4"	6'-4"	45"	76 3/4"	45"	77"	51.73	23.72
90610	8'-11 13/16"	6'-10"	1	2	3'-0 1/4"	6'-8 1/4"	6'-8 1/2"	2'-8 1/4"	6'-4"	33"	76 3/4"	33"	77"	58.07	17.93
100610	9'-11 13/16"	6'-10"	1	1	5'-0 1/4"	6'-8 1/4"	6'-8 1/2"	4'-8 1/4"	6'-4"	*57"	76 3/4"	57"	77"	64.99	30.35
120610	11'-11 13/16"	6'-10"	1	2	4'-0 1/4"	6'-8 1/4"	6'-8 1/2"	3'-8 1/4"	6'-4"	45"	76 3/4"	45"	77"	77.97	23.93
160610	15'-11 1/8"	6'-10"	2	2	4'-0 1/4"	6'-8 1/4"	6'-8 1/2"	3'-8 1/4"	6'-4"	45"	76 3/4"	45"	77"	104.39	48.10

*1" INSULATING GLASS ONLY

CORONET Series 711



2 PANEL
TYPES 9068, 8068, 10068



3 PANEL
TYPES 9068, 12068

NOTE: EXTERIOR LEFT HAND DOORS SHOWN. OPPOSITE HAND AVAILABLE ON REQUEST. CROSSED PORTION INDICATES SCREENED AREA

L=LATCH GLASS TOLERANCE: 3/16", 7/32" & 1/4" SHEET GLASS ±1/16",

TYPE	FRAME SIZE		NO. OF PANELS		INDIVIDUAL PANEL SIZE				INDIVID'L PANEL DAYLIGHT		GLASS SIZES		DOOR AREA (SQ. FT.)	VENTILATING AREA (SQ. FT.)
					WIDTH		HEIGHT							
	WIDTH	HEIGHT	SLID.	FIXED	SLID.	FIXED	SLID.	FIXED	WIDTH	HEIGHT	WIDTH	HEIGHT		
6068	5'-11 7/16"	6'-8 5/16"	1	1	3'-0 1/4"	2'-11 13/16"	6'-6 7/8"	6'-6 11/16"	2'-9 5/16"	6'-3 3/8"	34"	76"	37.67	17.23
8068	7'-11 7/16"	6'-8 5/16"	1	1	4'-0 1/4"	3'-11 13/16"	6'-6 7/8"	6'-6 11/16"	3'-9 5/16"	6'-3 3/8"	46"	76"	50.64	23.71
10068	9'-11 7/16"	6'-8 5/16"	1	1	5'-0 1/4"	4'-11 13/16"	6'-6 7/8"	6'-6 11/16"	4'-9 5/16"	6'-3 3/8"	58"	76"	63.61	30.20

TYPE	FRAME SIZE		NO. OF PANELS		INDIVIDUAL PANEL SIZE						INDIVID'L PANEL DAYLIGHT		GLASS SIZE		DOOR AREA (SQ. FT.)	VENTILATING AREA (SQ. FT.)
					OUTER FIXED PANEL		SLIDING PANEL		INNER FIXED PANEL							
	WIDTH	HEIGHT	SLID.	FIXED	WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT	WIDTH	HEIGHT		
9068	8'-10 3/4"	6'-8 5/16"	1	2	2'-11 3/4"	6'-6 7/8"	3'-0 1/4"	6'-6 7/8"	2'-11 13/16"	6'-6 11/16"	2'-9 5/16"	6'-3 3/8"	34"	76"	56.57	16.97
12068	11'-10 3/4"	6'-8 5/16"	1	2	3'-11 3/4"	6'-6 7/8"	4'-0 1/4"	6'-6 7/8"	3'-11 13/16"	6'-6 11/16"	3'-9 5/16"	6'-3 3/8"	46"	76"	76.21	23.49

ALWINTITE®

the line that offers
PLUS VALUES

GENERAL SPECIFICATIONS — Series 711 and Series 770 Sliding Doors

GENERAL: Doors to be Alwintite Series 711 or Series 770 aluminum sliding doors as manufactured by the General Bronze Corp., Alwintite Division, Garden City, New York.

MATERIALS, CONSTRUCTION, AND HARDWARE: Sliding doors to be fabricated from 6063-T5 extruded aluminum alloy. Frames to be assembled with two stainless steel screws at each corner threading into integral screw pockets. Sill of frame to slope to exterior. Wool pile and vinyl weatherstripping to be retained in keyways provided in frame and panel members. Door panels to be weatherstripped at both exterior and interior sides to form a double weatherseal. Sliding panel members to have extruded aluminum pull handle. Operating panel to have ball bearing rollers in bottom rail.

Series 711: Head and jambs of frame to have integral fin; panel members of doors to have semi-tubular sections secured by stainless steel screws; sliding panel will lock with fixed panel at meeting rail by tilt action aluminum latch; and operating panel meeting rail will have vinyl sweep from head to sill.

Series 770: Doors to have all vertical panel members of tubular sections secured with stainless steel screws; alternate position latch and pull handle, and exterior key-operated cylinder lock; and extruded aluminum inserts for single glazing.

FINISH: Series 711 doors to have natural aluminum finish; Series 770 doors Alumilite finish; both doors to have protective coat of transparent lacquer capable of withstanding the action of lime mortar for at least one month in 100% relative humidity at room temperature.

ERECTION: (By Others) Frames shall be assembled and installed straight, plumb and level in the openings using necessary shims and securely fastened in place in accordance with manufacturer's details. Approved caulking compound to be applied to provide a watertight installation. Operating panel shall retain proper weathering contact with the frame and fixed panel, and after installation door to be cleaned and adjusted, if necessary.

GLAZING: (By Others) Panels to be assembled and glazed with 3/16", 7/32" or 1/4" glass set in vinyl glazing channel in accordance with manufacturer's instructions. In addition to sheet and plate glass the 770 door will also provide for glazing with 5/8" or 1" insulating glass.

SCREENS: (Optional) Series 711 or 770 sliding doors to be equipped with 'Alwintite' extruded aluminum tubular screens having rollers at bottom rail, screen cloth of no. 18 x 14 aluminum mesh; slide bar lock, and interior and exterior pull handles. Screens to be delivered fully assembled, ready for installation.

SERIES 711

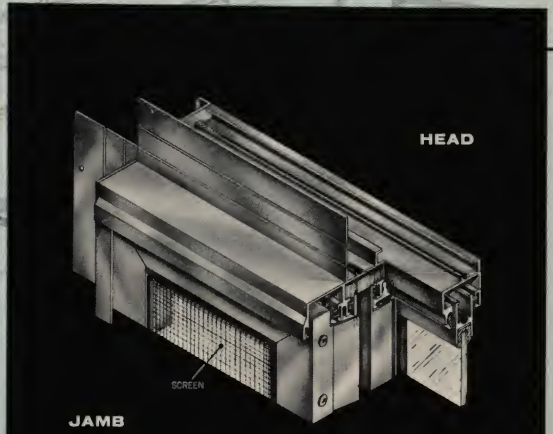
CORONET

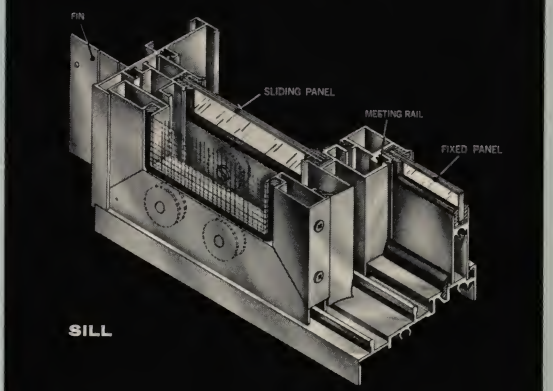
SLIDING GLASS DOORS

B 16d AL

Now, you can include the exciting and powerful sales appeal of sliding glass doors in every house you build. ALWINTITE's new Series 711 Coronet doors are priced so low they fit any building budget. Yes, these new economical, budget-priced doors will enable you to offer all the glamour and excitement of indoor-outdoor living, so important in selling today's new houses.

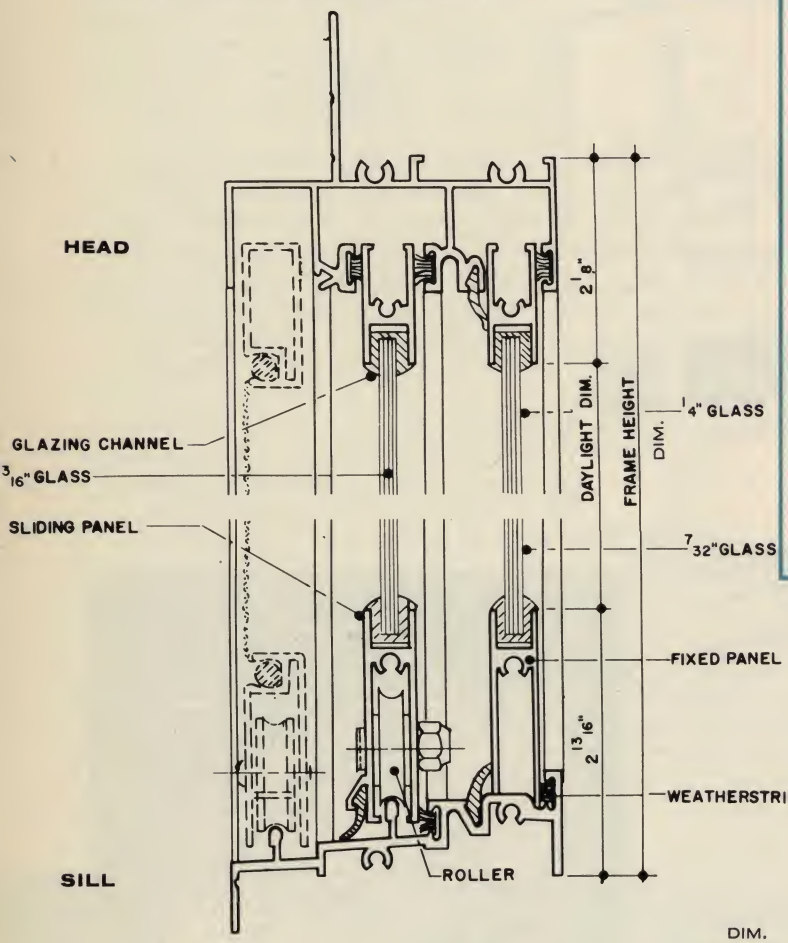
Despite its low, competitive price the new Coronet Series 711 is a well-designed, well-made sliding glass door that can be used in any house and will give many years of efficient trouble-free service. Its extremely low price is made possible only through efficient large volume mass production and by limiting this production to the four most universally popular sizes.

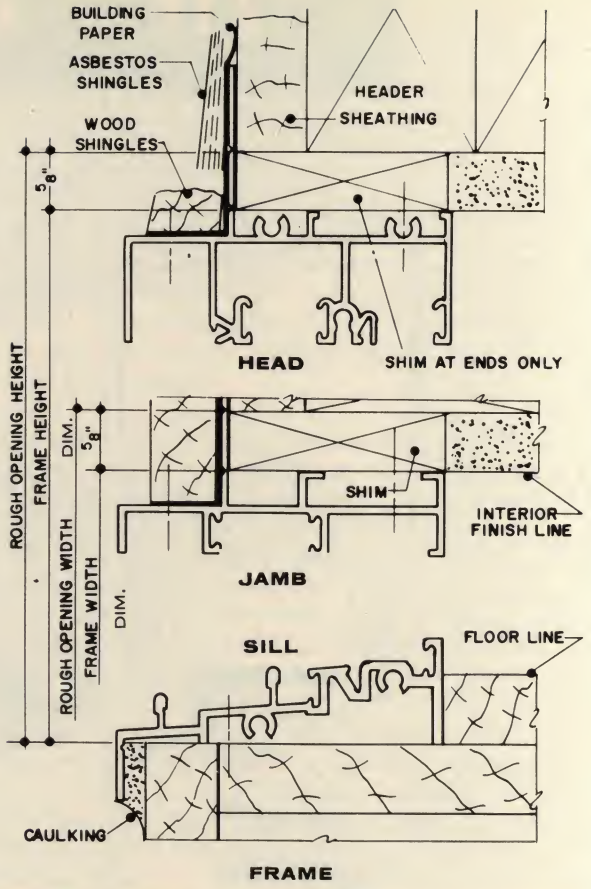




GENERAL BRONZE CORPORATION
Garden City, N.Y.

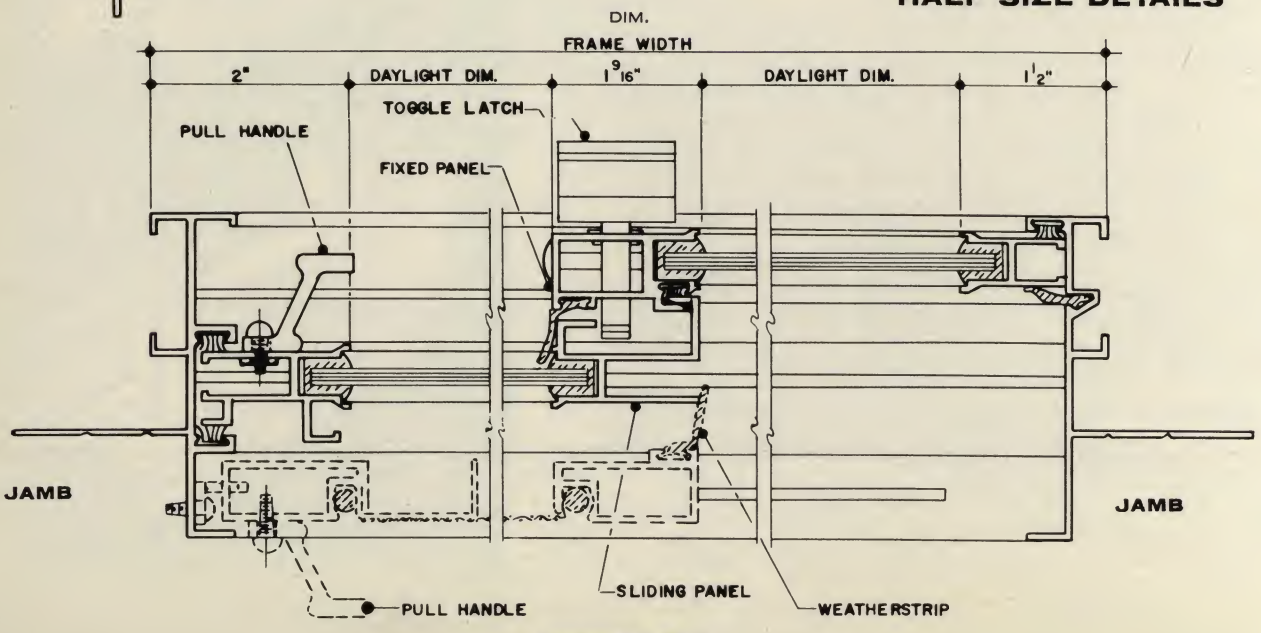
- Easy glide action on nylon adjustable rollers.
- Positive, "Tilt-Action" lock.
- Completely weatherstripped at head, jambs, meeting rail and sill with wool pile and vinyl weatherstripping.
- Strong, heavy gauge extruded aluminum sections that cannot rust or rot, that never need painting.

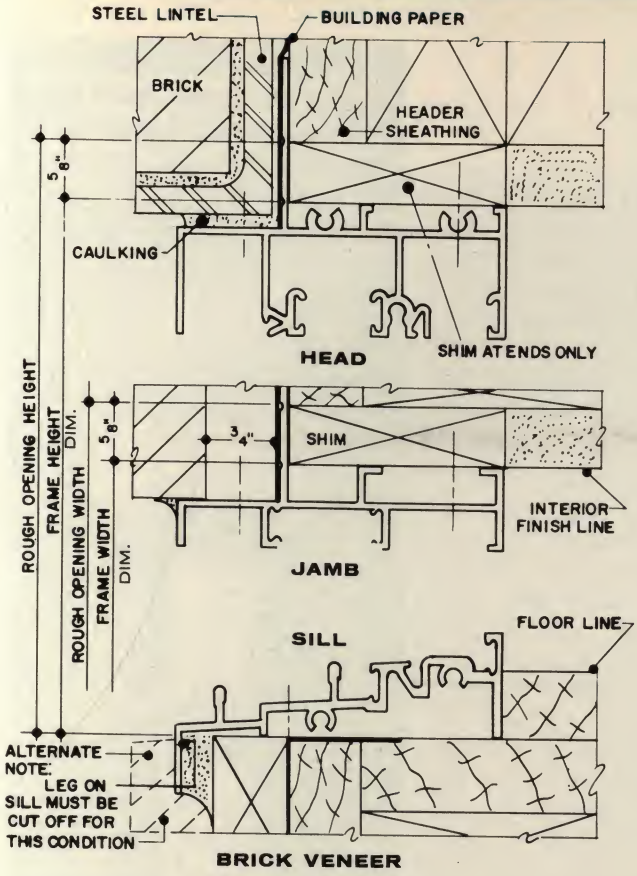




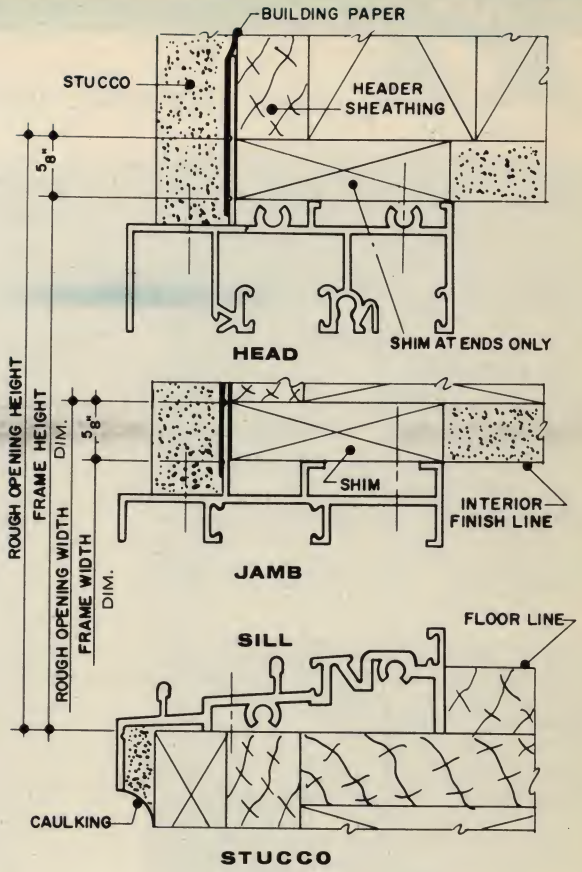
- Sloping sill with weeps assure quick drainage.
- Supplied with integral fin for simplified installation. Easily removed when not required.
- Interlocking design of meeting rail assures snug fit.
- Narrow frame, easy operating screen with positive slide lock. Cannot be removed from frame when in closed position.

HALF SIZE DETAILS

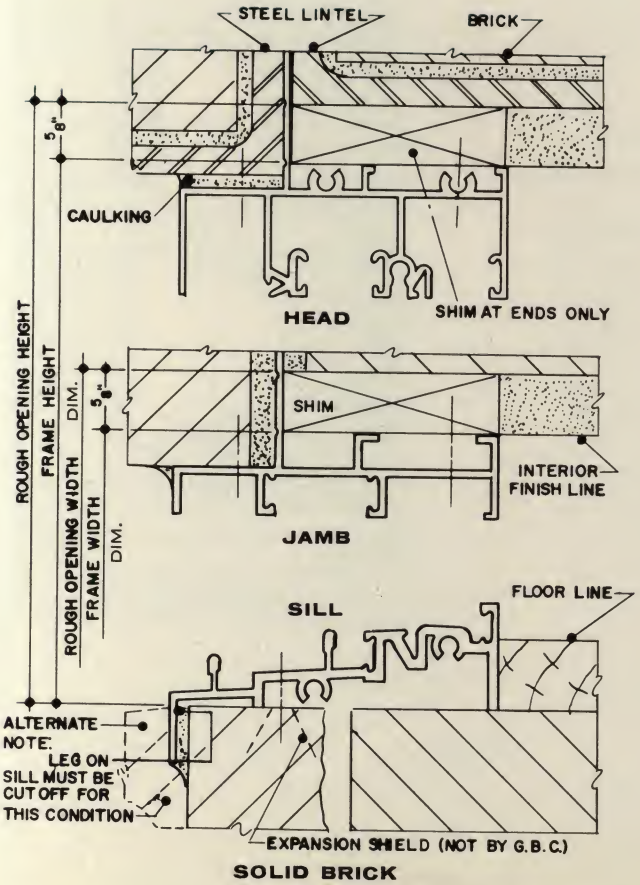




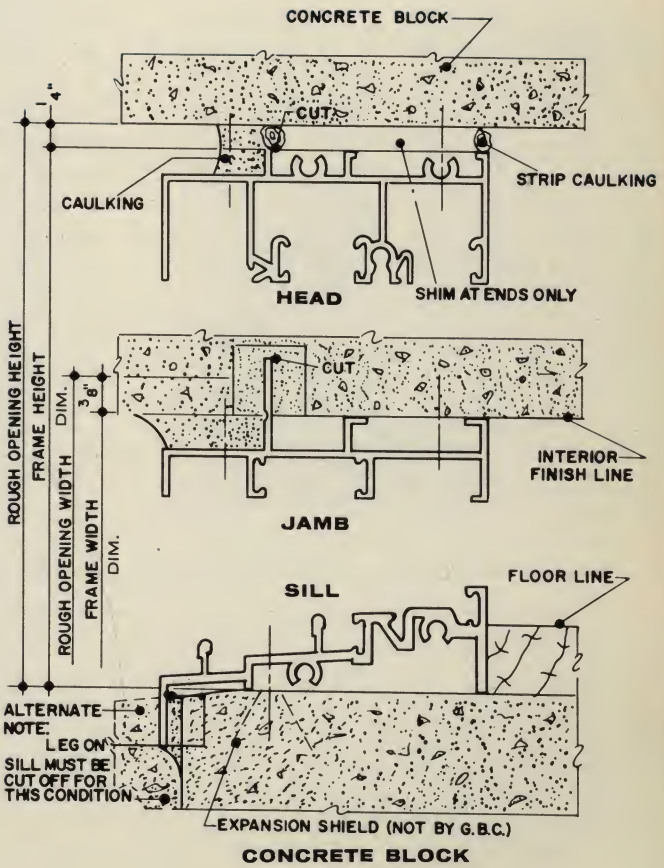
BRICK VENEER



STUCCO



SOLID BRICK

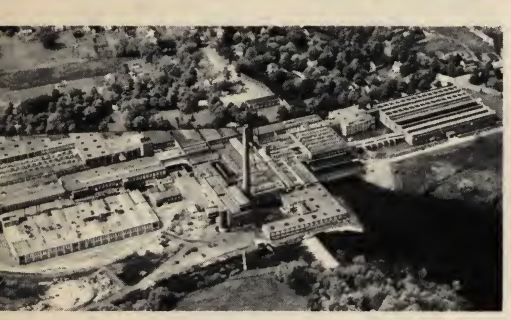


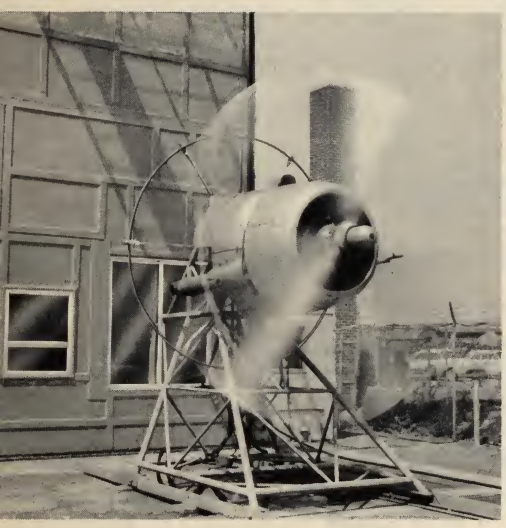
CONCRETE BLOCK

HALF SIZE INSTALLATION DETAILS

ALWINTITE®

the line that offers
PLUS VALUES





THE COMPANY BEHIND THE PRODUCT

You're safe when you specify and use "ALWINTITE by General Bronze"—a company that has been faithfully serving the building industry for half a century, a company that stands solidly behind every product it produces.

ALWINTITE aluminum windows and sliding doors are superior quality products in every respect. They embody all the latest and most advanced features in design, operation and construction to assure years of trouble-free service for homeowners, to eliminate costly call backs for builders. They have been carefully engineered in every detail and precision made in one of the world's largest and most modern window plants at North Dighton, Mass. (340,000 sq. ft. with capacity for 6,000 windows per day). What's more, ALWINTITE offers the services of a reliable and dependable distributor organization with local warehouse stocks in every area and factory-trained window specialists always ready to serve you.

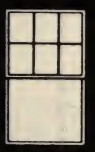
EVERY PRODUCT TESTED

To prove the engineering soundness and weathertightness of every new ALWINTITE product, General Bronze maintains one of the finest and most complete testing laboratories anywhere. Before being approved for production, new products are subjected to intensive Dynamic Weather Tests, where every type of weather condition is duplicated—from a steady drizzle, to a gusty, driving rain, to the full force of a 140 m.p.h. hurricane.

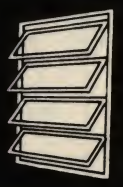
ALWINTITE MANUFACTURES A COMPLETE LINE OF ALUMINUM WINDOWS AND SLIDING GLASS DOORS

SINGLE AND DOUBLE VENT SLIDING WINDOWS

PICTURE SLIDING WINDOWS



SINGLE-HUNG AND DOUBLE-HUNG WINDOWS



AWNING WINDOWS

COMBINATION STORM WINDOWS

SLIDING GLASS DOORS

GENERAL BRONZE CORP.
ALWINTITE DIVISION
GARDEN CITY, NEW YORK

AMERICAN—SAINT GOBAIN CORPORATION

16d
Am

A1A-16-N

SECURIT® GLASS DOORS

1960

SECURIT GLASS DOORS

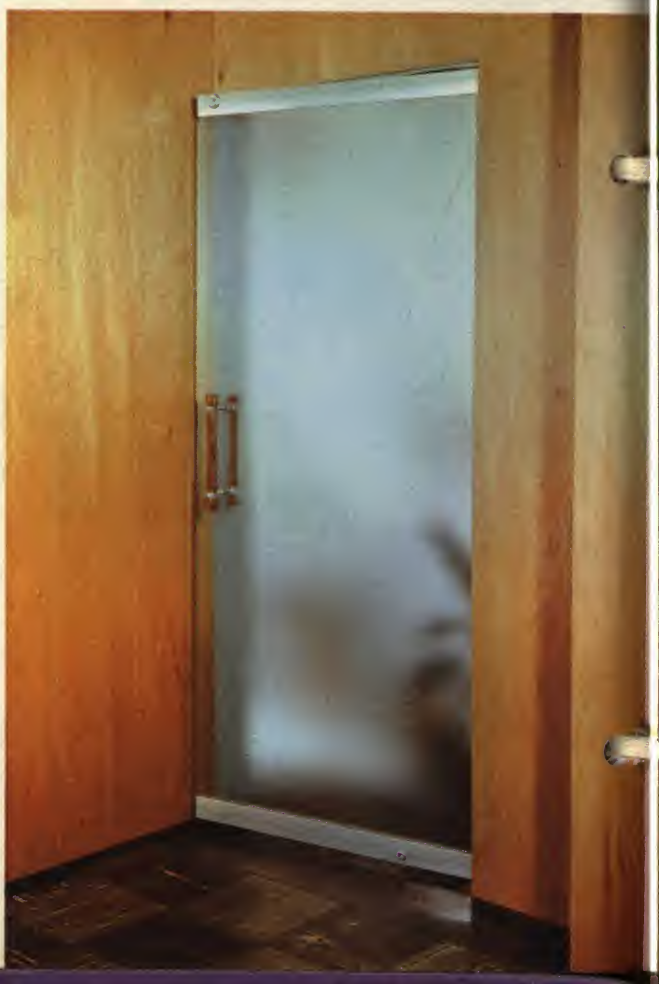
The Securit Glass Door was developed years ago in response to the need for a glass door for interior use, where privacy is usually more important than it is with an exterior door. The Securit door, besides transmitting diffused light without loss of privacy, becomes a thing of beauty in itself. The jewel-like ⅜″ thick Muralex® patterned glass of the doors adds excitement and decoration to rooms on both sides, enhances the decor of both sides, and separates yet holds together with shared light the spaces divided.

For years there has been but one style of Securit Glass Door, the famous Style M. Now, another has been added to the line, Style R, and it is a worthy addition. Style R is a pivoted door, with pivots and lock concealed within the gleaming satin finished top and bottom aluminum fittings of the door itself. Modern in style, functional as well as decorative, it gives the decorator or architect yet another way to create ideas in glass.

Securit Glass Doors, by American-Saint Gobain, have many uses. They are neutral in tone and harmonize with any setting and color scheme. They are strong, made with tempered glass . . . 3 to 5 times stronger than ⅜″ thick annealed glass. They are reversible . . . patterned on both surfaces, the door can be used for right- or left-hand opening. They are adaptable . . . may be used equally well for residence, office, store or institution. They won't warp, rot, buckle . . . and never need painting or refinishing. The Securit door may be surface treated with Satinol® or colored enamels, and may be cleaned simply by wiping with a damp cloth. Installation is simple . . . no cutting, mortising, drilling, tapping, or painting time spent on the door.

Securit Glass Doors may be adapted to practically any use, single or double, butt hinged to swing in either direction from either side, or center- or off-set pivot hung. There is a wide choice of hardware functions. For details of hardware and materials available, study the pages following. Dimensions shown indicate the necessary preparation of frames or bucks (Complete installation instructions are packed with each door).

If you have a door problem . . . the solution may well be a Securit door. Call your local glass distributor . . . or any of our offices (listed on the back of this bulletin) . . . or write to us.



style R

The style R Securit door is essentially a custom made patterned glass door. Any size up to the maximum of 40″ x 88″ can be supplied on order with various hardware functions, floor clearances, and lock options.

The door is made with a very slim satin finished aluminum fitting at the top and bottom of the glass. All items of hardware that must be attached to the door are installed at the factory. Only the installation of the floor and head jamb pivots must be done in the field.

hardware functions: The style R door is available in two basic types: center pivot or off-set pivot, in a total of 13 different hardware functions. Floor clearances, depending on the type of installation, interior, exterior, with or without carpet, etc., are also variable. On pages 4 and 5 the two basic types and 13 hardware functions are presented in table form for selection of the proper model number.

closers: Doors are available without closers, with built-in checking door closers, or with surface mounted door closers. Selection of center-hung or off-set hung and hardware function governs closers available. See table on pages 4 and 5 for proper selection.

locks: The style R Securit door is available without lock, with a side jamb lock in the lower fitting, or with a floor or threshold lock. The side jamb lock is recommended for interior use. No threshold plate or floor keep is required. The floor or threshold lock is the standard dead bolt type. Both types of locks are available keyed both sides or keyed one side and thumb turned on the opposite side. Locks are designed so that cylinders can be readily changed when a keying change becomes necessary.

finish: The style R Securit door is available in satin aluminum finish only.

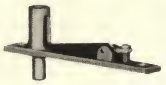
letter drop: Doors or side lights can be furnished with cutout for Peabody Letter Drop No. 228 with inside hood. Plate and hood not furnished by American-Saint Gobain.

push-pull bar: The custom designed push-pull bars are supplied as part of the door hardware. All metal parts match the satin aluminum finish of the fittings. Handles are walnut colored Compreg. All the necessary studs and grommets required for mounting the pulls are packed with the door hardware.

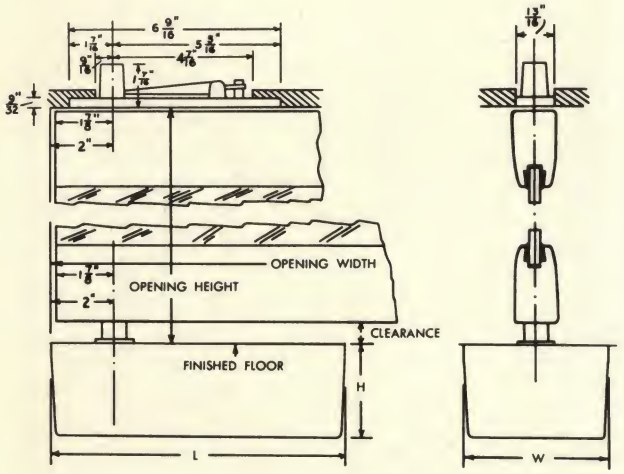
STYLE R—hardware functions

center hung

checking hinge



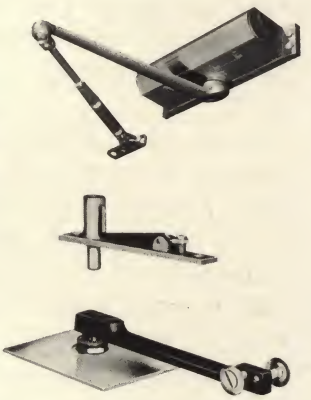
A compression spring checking floor hinge recommended for use on fine residential or other double and single acting doors. The design provides for quick door alignment and controlled closing speed.



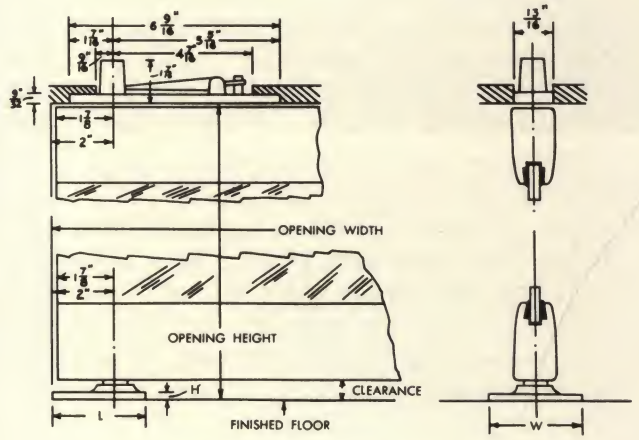
action	L	H	W	floor clearance	model*
double	9 5/16"	3 1/8"	4 5/8"	11/16" no threshold	A
				3/16" to threshold	B
				15/16" no threshold	C
single	10 1/16"	3 3/8"	5"	11/16" no threshold	D — RH D — LH
				3/16" to threshold	E — RH E — LH
				15/16" no threshold	F — RH F — LH

*RH — right hand
LH — left hand

pivot hinge



For use instead of butt hinges. Fastens directly to the finished floor. A surface mounted closer must be used and hand of door must be specified. An adjustable, two-speed closer with optional hold open or adjustable link arm can be supplied.

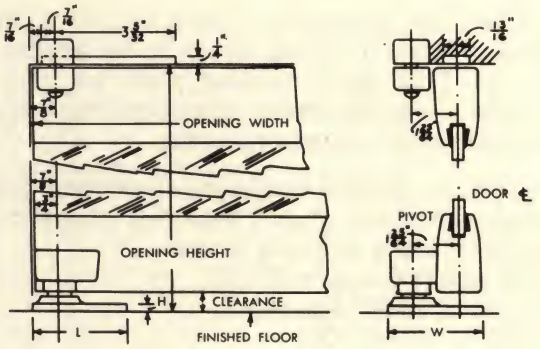


action	L	H	W	floor clearance	model*
single	3"	3"	7/32"	5/8" no threshold	G
				15/16" no threshold	H

offset hung

pivot hinge

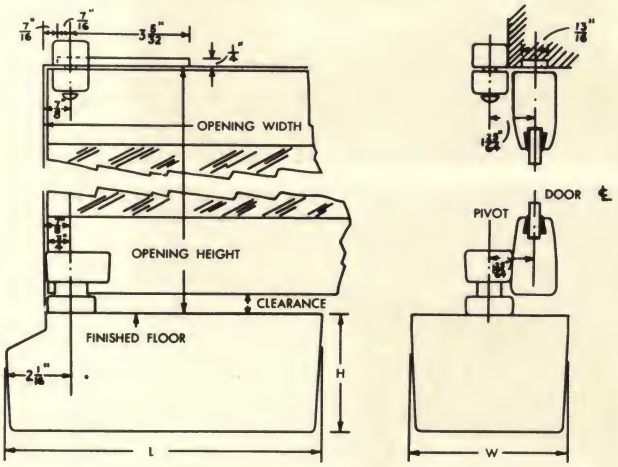
For use instead of butt hinges. Fastens directly to the finished floor. Permits door to be opened 180°. A surface mounted closer must be used and hand of door must be specified. An adjustable, two-speed closer with optional hold open or adjustable link arm can be supplied.



action	L	H	W	floor clearance	model*
single	3"	3"	7/32"	5/8" no threshold	K — RH K — LH
				15/16" no threshold	L — RH L — LH

checking hinge

Especially adapted to schools and institutions. Tampering with working parts is eliminated since all of the operating mechanism is concealed in the floor. Nothing hangs below the top rail to reduce headroom.



action	L	H	W	floor clearance	model*
single	10 1/16"	3 5/8"	5"	11/16" no threshold	M — RH M — LH
				3/16" to threshold	N — RH N — LH
				15/16" no threshold	P — RH P — LH

style M

The style M Securit door is a tempered patterned glass door which comes equipped with special butt hinges. This type of hinge permits the glass door to be installed in the same manner as conventional doors. All drilling and tapping is done at the factory thus eliminating the need for this type of work in the field. It is only necessary for the owner to secure an appropriate lock and mount it in the housing.

locks: American-Saint Gobain does not furnish locks. A cast metal housing is mounted on the door in which a 2⅛" bore, flat face cylindrical lock can be installed for either standard or heavy duty locks as listed below. On special order, the lock housing may be left off and the door drilled for push-pull bars.

	standard duty 2⅜" backset type M-SD	heavy duty 2¾" backset type M-HD
Schlage	"A" Series	"C" and "D" Series
Yale	"5300" Series	"5400" Series
Russell and Erwin	Stilemann	Stilemaker
Lockwood	"S" Series	"H" Series
Corbin	Refender	Cylindrical

closers: Doors can be equipped with a mounting plate for either surface mounted closer or for attaching closer arm. Door and mounting plate are drilled during fabrication, therefore complete information about closer must accompany order.

American-Saint Gobain can supply mounting plate and Sargent No. 43V closer. Mounting plates only are available for the following closers:
LCN 504, 504 H, C-Reg, or C-H90
Norton 10300, 10300 A or No. C
Corbin No. 3, 103, or 104
Russwin No. C
Schlage No. T 500
Yale No. 93 or No. 193

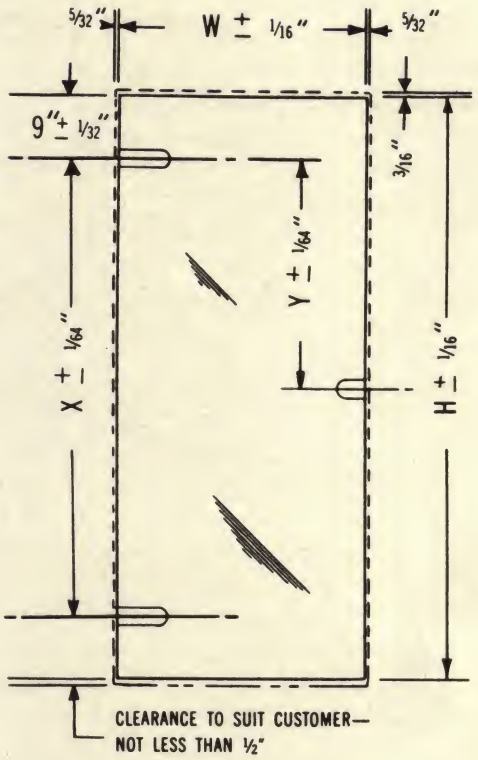
hinges and finish: Wrought steel 4½" Stanley hinges in dull bronze (US10) or dull chrome (US26D) finish are furnished. For areas requiring high resistance to corrosion, hinges can be furnished in satin-finish stainless steel to match (US26D) finish or other hardware.

letter drop: Doors or side lights can be furnished with cutout for Peabody Letter Drop No. 228 with inside hood. Plate and hood not furnished by American-Saint Gobain.

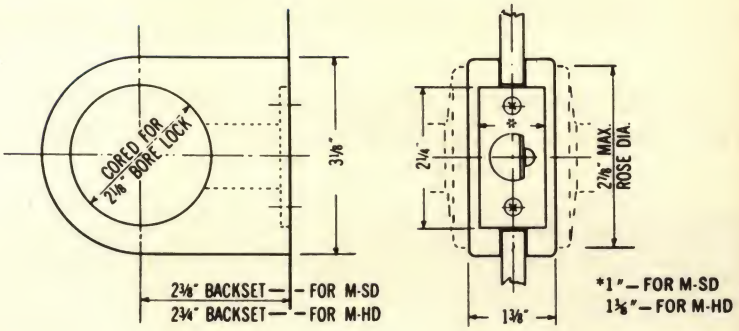
standard sizes

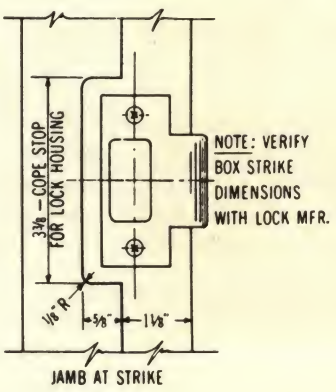
Style M Securit doors are heat-tempered, cannot be cut, ground or drilled after manufacture—specification must be to the exact size. Non-standard doors can be made in widths up to 40″ and heights up to 88″, at extra cost—give complete dimensions and specifications.

H	W	X	Y	model	weight
79 1/16″	29 11/16″	61″	32″	2668 F	95 lbs.
	31 11/16″	61″	32″	2868 F	100 lbs.
	35 11/16″	61″	32″	3068 F	110 lbs.
80″	30″	62″	33″	2668 D	95 lbs.
	32″	62″	33″	2868 D	100 lbs.
	36″	62″	33″	3068 D	110 lbs.
83 1/16″	35 11/16″	65″	36″	3070 F	115 lbs.
84″	36″	66″	37″	3070 D	115 lbs.

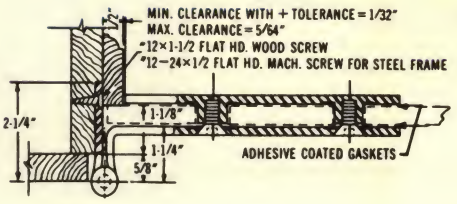


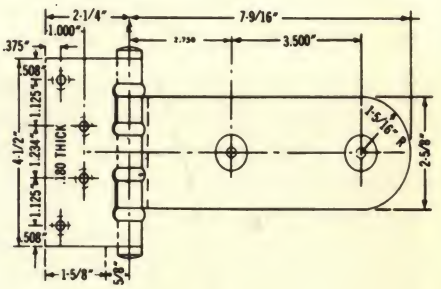
lock assemblies





hinge details





SHORT FORM SPECIFICATIONS

All tempered, patterned glass doors specified herein or shown on plans shall be _____ style, _____ hardware type, ⅜" thick, _____ finish (color), Securit door(s) made by American-Saint Gobain Corporation. Each door must be identified by the name Securit enamelled on the edge of the glass.

OTHER GLASS PRODUCTS

American-Saint Gobain Corporation provides, from one source, a complete line of high quality flat glass products. This line embraces sheet, rolled, plate and laminated glasses—as well as a wide variety of special-process products.

For additional information, see the following catalogs in Sweets Files as indicated below or write us for your copy.

Glass Products: Sweets Architectural File $\frac{7a}{Am}$, Light Construction File $\frac{2d}{Am}$, Industrial Construction File $\frac{6a}{Am}$, or Plant Engineering File $\frac{5b}{Am}$

Spandrel Glasses: Sweets Architectural File $\frac{3e}{Am}$ or Industrial Construction File $\frac{3b}{Am}$

Special Glasses and Products: Sweets Product Designers' File $\frac{3a}{Am}$

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Yukon 6-1580

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Room 359 Delaware Trust Bldg.
900 Market Street
Olympia 5-4462

AMERICAN—SAINT GOBAIN CORPORATION

625 Madison Avenue, New York 22, N. Y.
Farmer's Bank Bldg., Pittsburgh 22, Pa.

1960 / Arcadia Aluminum Sliding Glass Doors

arcadia®

AIA FILE NUMBER 16-E

1960 / Arcadia Aluminum Sliding Glass Doors

Residence: Eliot Noyes, AIA, and Associates, Architects.
Residence: Jose Luis Sert, AIA, Architects.
School: Daniel, Mann, Johnson & Mendenhall, Architects and Engineers.
Residence: Richard L. Dorman, AIA, and Associates, Architects.
Offices: Killingsworth, Brady and Smith, AIA, Architects.

Arcadia Metal Products, recognized through the years as an innovator and leader in engineering improvements in the sliding door field, serves the architectural profession and construction industry with products designed for the quality market.

ENGINEERING APPROACH Research by Arcadia engineers in the field of pressure differential and its relation to weathertightness of sliding doors resulted in a completely new approach to design. With exclusive design details and construction features, Arcadia's aluminum standard and heavy-duty doors provide building occupants with protection against the elements that is not prevalent in other designs (see details of door sections).

DESIGN INNOVATION Arcadia's new engineering concept places the sliding panels of doors on the exterior of the installation rather than the interior. Not only does this reversal of arrangement produce a tighter installation at the interlockers and sill section, in particular, but also it permits an interior sliding screen.

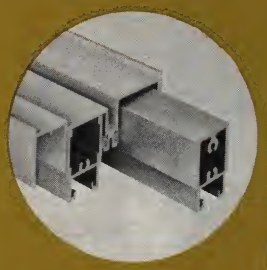
INSIDE SCREEN Arcadia's new door design which permits interior installation of the screen introduces an exclusive quality feature new to the industry. Interior screens reduce maintenance problems, assure quality of appearance over a longer period of time. Interior screens are easier to clean, are not subject to deterioration caused by moisture residue from overnight dew and from yard watering.

HOW TO USE THIS CATALOG

Details and specifications for three lines of Arcadia doors are included in this catalog. The selection chart on pages 4-5 summarizes features and data about these doors. Arcadia also manufactures accessory items which are desirable for many sliding door installations, especially those of custom design. Muntins, mullions, transoms, jamb joining kits, structural posts and other items are available through Arcadia's custom and specials department.

Limitations stated in this catalog are conservative, and in keeping with responsible engineering research in the field. Where installations have protection of overhang or are oriented for lower wind load than they would have under normal conditions, the architect should consult Arcadia engineers if additional height or width of opening is desired.

Sections of doors are made in two weights, standard and heavy-duty. Primarily, the differences permit higher and wider sliding units with heavy-duty sections than with standard. All doors in the 102-104 series and 202-204 series are designed to serve as exterior wall components. Multi-slide doors, however, may or may not fulfill all conditions for maximum protection as exterior wall components because of differences of engineering principles utilized in applications. Arcadia engineers should be consulted on multi-slide and pocket installations if these doors are to serve as exterior wall components.



TOP RAIL is of one-piece tubular construction. Mohair weatherstripping on each side of top rail serves as guide for sliding panel and provides positive weatherseal.

INTERLOCKERS of one-piece tubular construction maintain proper relation of meeting pieces at all times to assure weather-tightness. Through use of nylon spacers and special engineering of wedge design on interlocking tongues all metal-to-metal contact is prevented.

SILL with removable threshold provides neat appearance. Weather-stripping in threshold on sill places it on same plane as w/s on door for maximum efficiency. Step in sill assures protection against air and water infiltration possible only with outside sliding panel.

HARDWARE on 102 series combines aluminum with satin-black insert. All Arcadia hardware is equipped with non-jam latch.

HARDWARE on 202 series is simple design statement in aluminum. Exterior cylinder locks may be specified for all Arcadia doors.

ADJUSTABLE SHEAVES permit easy adjustment in case of deflection or settling of structure without removing door from installation. Nylon rollers with sealed, self-lubricated ball bearings are housed in heavy stamped aluminum.

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Arcadia features are protected by U.S. Patent Numbers 166862 2668317 2668318 2719340 2619205 2701156 2701157 and patents pending.

ARCADIA SELECTION CHART FOR ALUMINUM SLIDING DOORS

Types and sizes shown include stock sizes, available for immediate delivery, and non-stock sizes, subject to two to four weeks delivery.

Special types and custom sizes are available. For detailed information consult Architectural Sales division.

arcadia®

ARCADIA 102 SLIDING DOOR — standard sections for single glazing

up to 8′ 0″ ht. (glass available in any height)

DOOR SIZES FOR HEIGHT: 6′ 8 11/16″

DOORS VIEWED FROM OUTSIDE	CATALOG NUMBER	DOOR WIDTH	GLASS WIDTH x 76″ HT.	SHIPPING WTS. (lbs) DOOR	SHIPPING WTS. (lbs) SCREEN
	102-XO -106•	6′-0 3/8″	34″	54	22
	102-XO -108•	8′-0 3/8″	46″	61	26
	102-XO -110•	10′-0 3/8″	58″	68	30
	102-XO -112	12′-0 3/8″	70″	75	34
	102-OX -106•	6′-0 3/8″	34″	54	22
	102-OX -108•	8′-0 3/8″	46″	61	26
	102-OX -110•	10′-0 3/8″	58″	68	30
	102-OX -112	12′-0 3/8″	70″	75	34
	102-XOO -109	8′-11 1/16″	34″	70	22
	102-XOO -112	11′-11 1/16″	46″	81	26
	102-XOO -115	14′-11 1/16″	58″	92	30
	102-XOO -118	17′-11 1/16″	70″	103	34
	102-OOX -109	8′-11 1/16″	34″	70	22
	102-OOX -112	11′-11 1/16″	46″	81	26
	102-OOX -115	14′-11 1/16″	58″	92	30
	102-OOX -118	17′-11 1/16″	70″	103	34
	102-OLXO -109	8′-11 7/8″	34″	75	22
	102-OLXO -112•	11′-11 7/8″	46″	86	26
	102-OLXO -115	14′-11 7/8″	58″	97	30
	102-OLXO -118	17′-11 7/8″	70″	108	34
	102-OXRO -109	8′-11 7/8″	34″	75	22
	102-OXRO -112	11′-11 7/8″	46″	86	26
	102-OXRO -115	14′-11 7/8″	58″	97	30
	102-OXRO -118	17′-11 7/8″	70″	108	34
	102-OXXO -112	11′-10 13/16″	34″	95	44
	102-OXXO -116•	15′-10 13/16″	46″	110	52
	102-OXXO -120	19′-10 13/16″	58″	125	60
	102-OXXO -124	23′-10 13/16″	70″	140	68
	102-XOOX -112	11′-11 1/8″	34″	95	44
	102-XOOX -116	15′-11 1/8″	46″	110	52
	102-XOOX -120	19′-11 1/8″	58″	125	60
	102-XOOX -124	23′-11 1/8″	70″	140	68
Fixed frame	102-O -103	3′-0 5/16″	34″	29	..
	102-O -104	4′-0 5/16″	46″	32	..
	102-O -105	5′-0 5/16″	58″	35	..
	102-O -106	6′-0 5/16″	70″	38	..

•Stock sizes, immediate delivery. Other sizes 2 to 4 weeks delivery.

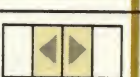
SEE PAGE 6 FOR DETAILS

SIZE LIMITS	Height—Exposed locations max. 8′-0″. Protected locations max. 8′-6″ (Requires Engineering Dept. approval.) Width—Sliding Panel max. 8′-0″. Sliding Panel Height/Width ratio maximum 3:1.
TYPE OF GLAZING	"Geon" vinyl glazing channel for shop or field glazing. Channel for 3/16″ heavy sheet glass—standard. Channel for 7/32″ heavy sheet or 1/4″ polished plate optional at no extra cost.
SPECIAL APPLICATIONS	Flush sill with integral screen provisions optional at extra cost. For interior installation, or for exterior installation, where protected from weather.
TYPES & SIZES	Stock sizes, immediate delivery. Other sizes listed, two to four weeks' delivery. Custom and special sizes also available.
SCREENS	Standard—but must be ordered separately. Inside sliding W/fiberglass mesh 14x18 standard; aluminum mesh 14x16 available at extra cost. Maximum screen width without vertical muntin 6′-2″.
MUNTINS	**Vertical or horizontal—available at extra cost.
FIXED FRAMES	Available.
TRANSOMS	Available. Transoms larger than the following require special reinforcement and are quoted only by the factory. HEIGHT—up to 3′-6″ WIDTH 14′-0″ maximum
MATERIALS & FINISH	Aluminum extrusions of 6063-T5 alloy. Anodized finish per ALCOA Spec. 202-R1. Special finishes optional at extra cost. Extruded black nylon sill track. Step type sill with extension. Two adjustable nylon sheaves having sealed ball bearings for each sliding panel. W/S is dense, moth and mildew resistant wool pile and neoprene.
HARDWARE & LOCKS	Hand-grip type; model 61, satin alumilite finish with black acrylic insert. Exterior locks—available at extra cost. Unless otherwise specified Schlage 5-pin cylinder locks will be furnished. Other locks available at additional extra cost.
LATCH	Rotary, jam-proof.
JAMB JOINING KIT	Kit 102M1 used for joining 102 doors other than fixed frames. Kit 102M2 used for joining fixed frames to fixed frames or fixed frames to fixed jambs. Note: Fixed frames cannot be mulled with latching jambs.
POST KIT	Includes steel post with bearing plates top and bottom and exterior and interior cover plates. For 90°, 180° and 270° intersections.
CONSTRUCTION PROTECTION	Frame members furnished with polyethylene sleeves for protection from paint and plaster during construction.
FRAME MEMBER WIDTH	Head and jambs—3-5/8″; sill 4-5/8″ (including sill extension).
ROUGH OPENING SIZES	Add 1/2″ to height and width of door.

ARCADIA 104 SLIDING DOOR — standard sections for 5/8″ insulating glass

up to 6′ 8-11/16″ ht. (door sizes limited by glass sizes)

DOOR SIZES FOR HEIGHT: 6′ 8 11/16″

DOORS VIEWED FROM OUTSIDE	CATALOG NUMBER	DOOR WIDTH	GLASS WIDTH x 76″ HT.	SHIPPING WTS. (lbs) DOOR	SHIPPING WTS. (lbs) SCREEN
	104-XO -106•	6′-0 3/8″	34″	54	22
	104-XO -107•	7′-4 3/8″	42″	58	25
	104-XO -108•	8′-0 3/8″	46″	61	26
	104-OX -106•	6′-0 3/8″	34″	54	22
	104-OX -107•	7′-4 3/8″	42″	58	25
	104-OX -108•	8′-0 3/8″	46″	61	26
	104-OLXO -109	8′-11 7/8″	34″	75	22
	104-OLXO -111•	10′-11 7/8″	42″	83	25
	104-OLXO -112	11′-11 7/8″	46″	86	26
	104-OXRO -109	8′-11 7/8″	34″	75	22
	104-OXRO -111	10′-11 7/8″	42″	83	25
	104-OXRO -112	11′-11 7/8″	46″	86	26
	104-OXXO -112	11′-10 13/16″	34″	95	44
	104-OXXO -115•	14′- 6 13/16″	42″	105	50
	104-OXXO -116•	15′-10 13/16″	46″	110	52
Fixed frame	104-O -130	3′-0 5/16″	34″	29	..
	104-O -135	3′-8 5/16″	42″	31	..
	104-O -140	4′-0 5/16″	46″	32	..

•Stock sizes, immediate delivery. Other sizes 2 to 4 weeks delivery.

SEE PAGE 8 FOR DETAILS

SIZE LIMITS	Height maximum—6′-8-11/16″ subject to size limitations of 5/8″ insulating glass. Width sliding panel maximum 4′-0″ subject to size limitations of 5/8″ insulating glass. Sliding Panel Height/Width ratio, maximum 3:1.
TYPE OF GLAZING	"Geon" vinyl glazing channel for shop or field glazing. Channel for 5/8″ insulating glass only is standard.
SPECIAL APPLICATIONS	Flush sill with integral screen provisions optional at extra cost. For interior installation, or exterior installation where protected from weather.
TYPES & SIZES	Stock sizes, immediate delivery. Other sizes listed, two to four weeks' delivery. Door sizes limited to glass sizes. Maximum size in 5/8″ insulating glass: 46″ x 76″.
SCREENS	Standard, but must be ordered separately. Inside sliding with fiberglass mesh 14x18 standard; aluminum mesh 14x16 available at extra cost. Maximum screen width without vertical muntin, 6′-2″.
MUNTINS	Vertical or horizontal—available at extra cost.
FIXED FRAMES	Available.
TRANSOMS	Available. Transoms larger than the following require special reinforcement and are quoted only by the factory. Also limited by 5/8″ glass sizes. HEIGHT—up to 3′-6″ WIDTH—14′-0″ max.
MATERIALS & FINISH	Aluminum extrusions of 6063-T5 alloy. Anodized finish per ALCOA Spec. 202-R1. Special finishes optional at extra cost. Extruded black nylon sill track. Step type sill with extension. Two adjustable nylon sheaves having sealed ball bearings, for each sliding panel. W/S is dense, moth and mildew resistant wool pile and neoprene.
HARDWARE & LOCKS	Hand-grip type; model 61 satin alumilite finish with black acrylic insert. Exterior locks available at extra cost. Unless otherwise specified Schlage 5-pin cylinder locks will be furnished. Other locks available at additional extra cost.
LATCH	Rotary, jam-proof.
JAMB JOINING KIT	Kit 102M1 used for joining 104 doors other than fixed frames. Kit 102M2 used for joining fixed frames or fixed frames to fixed jambs. Note: Fixed frames cannot be mulled with latching jambs.
POST KIT	Includes steel post with bearing plates top and bottom, and exterior and interior cover plates. For 90°, 180°, and 270° intersections.
CONSTRUCTION PROTECTION	Frame members furnished with polyethylene sleeves for protection from paint and plaster during construction.
FRAME MEMBER WIDTH	Head and jambs—3-5/8″; sill 4-5/8″ (including sill extension).
ROUGH OPENING SIZES	Add 1/2″ to height and width of door.

ARCADIA
202
SLIDING DOOR

heavy-duty sections

for single glazing

up to 10′ 0″ ht. (glass available in any height)

DOOR SIZES FOR HEIGHT: 6′ 9 3/4″

DOORS VIEWED FROM OUTSIDE	CATALOG NUMBER	DOOR WIDTH	GLASS WIDTH x 76-5/16″	SHIPPING WTS. (lbs) DOOR	SHIPPING WTS. (lbs) SCREEN
	202-XO -106	6′-0″	33 3/16″	84	23
	202-XO -108	8′-0″	45 3/16″	95	27
	202-XO -110	10′-0″	57 3/16″	108	32
	202-XO -112	12′-0″	69 3/16″	120	37
	202-OX -114	14′-0″	81 3/16″	133	44
	202-OX -116	16′-0″	93 3/16″	146	48
	202-OX -118	18′-0″	105 3/16″	160	52
	202-OX -120	20′-0″	117 3/16″	175	56
	202-XOO -109	9′-0″	33 3/4″	118	23
	202-XOO -112	12′-0″	45 3/4″	140	27
	202-XOO -115	15′-0″	57 3/4″	165	32
	202-XOO -118	18′-0″	69 3/4″	190	37
	202-OOX -121	21′-0″	81 3/4″	215	44
	202-OOX -124	24′-0″	93 3/4″	230	18
	202-OOX -127	27′-0″	105 3/4″	255	52
	202-OOX -130	30′-0″	117 3/4″	280	56
	202-OLXO -109	9′-0″	33 3/8″	124	23
	202-OLXO -112	12′-0″	45 3/8″	146	27
	202-OLXO -115	15′-0″	57 3/8″	171	32
	202-OLXO -118	18′-0″	69 3/8″	196	37
	202-OXRO-121	21′-0″	81 3/8″	221	44
	202-OXRO-124	24′-0″	93 3/8″	246	48
	202-OXRO-127	27′-0″	105 3/8″	271	52
	202-OXRO-130	30′-0″	117 3/8″	296	56
	202-OXXO-112	12′-0″	33 9/16″	150	47
	202-OXXO-116	16′-0″	45 9/16″	173	57
	202-OXXO-120	20′-0″	57 9/16″	197	67
	202-OXXO-124	24′-0″	69 9/16″	220	78
	202-XOOX-128	28′-0″	81 9/16″	243	88
	202-XOOX-132	32′-0″	93 9/16″	266	98
	202-XOOX-136	36′-0″	105 9/16″	289	108
	202-XOOX-140	40′-0″	117 9/16″	312	118
	For each additional foot of height add following weights:	2 Panel		10	2
		3 Panel		15	3
		4 Panel		20	4

No stock sizes. Door height shown is not stock height but provides reference for shipping weight, etc.

SEE PAGE 7 FOR DETAILS

Height—Exposed locations, maximum 10′-0″.
Protected locations, maximum 11′-0″. (Requires Engineering Dept. approval)
Width—Sliding panel maximum 10′-0″.
Sliding panel Height/Width ratio, max. 3:1.

"Geon" vinyl glazing channel for shop or field glazing. Channel for 1/4″ polished plate glass is standard. Channel for 3/16″ heavy sheet or 7/32″ heavy sheet glass optional at no extra cost.

Flush sill with integral screen provisions, optional at extra cost. For interior installation, or exterior installation where protected from weather.

No stock sizes. Door height shown on chart for reference in shipping weights etc. All doors are made to size specified.

Standard—but must be ordered separately. Inside sliding W/fiberglass mesh 14x18 standard; aluminum mesh 14x16 available at extra cost. Maximum screen width without vertical muntin 6′-2″.

**Vertical or horizontal—available at extra cost.

Available.

Available. Transoms larger than the following require special reinforcement and are quoted only by the factory.
HEIGHT—up to 3′-6″ WIDTH—15′-0″ maximum

Aluminum extrusions of 6063-T5 alloy. Anodized finish per ALCOA Spec. 204-R1. Special finishes optional at extra cost. Roll-formed 22 gauge type 302 stainless steel sill track. Step type sill. Two adjustable nylon sheaves, sealed ball bearings for each sliding panel. W/S is dense, moth and mildew resistant wool pile and neoprene.

Solid pull type; model 62 with anodized finish per ALCOA Spec. 204-R1. Exterior locks available at extra cost. Unless otherwise specified, Schlage 5-pin cylinder locks will be furnished. Other locks available at additional extra cost.

Jam-proof, up-acting, cam-action.

Kit 202M1 used for joining 202 doors other than fixed frames. Kit 202M2 used for joining fixed frames to fixed frames or fixed frames to fixed jambs. Note: Fixed frames cannot be joined with latching jambs.

Includes steel post with bearing plates top and bottom and exterior and interior cover plates. For 90°, 180° and 270° intersections.

Frame members furnished with polyethylene sleeves for protection from paint and plaster during construction.

Head, jambs and sill 4-3/4″.

Add 1/2″ to height and width of door.

ARCADIA
204
SLIDING DOOR

heavy-duty sections

for 1″ insulating glass

up to 10′ 0″ ht. (door sizes limited by glass sizes)

DOOR SIZES FOR HEIGHT: 6′ 9 3/4″

DOORS VIEWED FROM OUTSIDE	CATALOG NUMBER	DOOR WIDTH	GLASS WIDTH x 76¾″	SHIPPING WTS. (lbs) DOOR	SHIPPING WTS. (lbs) SCREEN
	204-XO -106•	5′-10 11/16″	33″	75	23
	204-XO -108•	7′-10 11/16″	45″	85	27
	204-XO -100•	9′-10 11/16″	57″	97	32
	204-OX -106•	5′-10 11/16″	33″	75	23
	204-OX -108•	7′-10 11/16″	45″	85	27
	204-OX -110•	9′-10 11/16″	57″	97	32
	204-OLXO -109	8′-9 7/16″	33″	110	23
	204-OLXO -112•	11′-9 7/16″	45″	131	27
	204-OLXO -115	14′-9 7/16″	57″	155	32
	204-OXRO-109	8′-9 7/16″	33″	110	23
	204-OXRO-112	11′-9 7/16″	45″	131	27
	204-OXRO-115	14′-9 7/16″	57″	155	32
	204-OXXO-112	11′-7 7/8″	33″	131	47
	204-OXXO-116•	15′-7 7/8″	45″	153	57
	204-OXXO-120•	19′-7 7/8″	57″	175	67
Fixed frame	204-O -103	2′-11 1/2″	33″	33	..
Fixed frame	204-O -104	3′-11 1/2″	45″	36	..
Fixed frame	204-O -105	4′-11 1/2″	57″	40	..

•Stock sizes, immediate delivery. Other sizes 2 to 4 weeks delivery.

SEE PAGE 8 FOR DETAILS

Height—Exposed locations maximum 10′-0″. Protected locations, maximum 11′-0″. (Requires Engineering Dept. approval)
Width—Sliding Panel maximum 10′-0″.
Sliding Panel Height/Width ratio, Maximum 3:1.
Subject also to size limitations of 1″ insulating glass.

"Geon" vinyl glazing channel for shop or field glazing. Channel for 1″ insulating glass only is standard.

Flush sill with integral screen provisions, optional at extra cost. For interior installation, or exterior installation where protected from weather.

Stock sizes, immediate delivery. Other sizes listed, 2 to 4 weeks' delivery. Door sizes limited to glass sizes. Maximum available size in 1″ insulating glass is 10,000 sq.″e.g.82″ x120″, 100″x 100″, etc.

Standard—but must be ordered separately. Inside sliding with fiber-glass mesh 14x18 standard; aluminum mesh 14x16 available at extra cost. Maximum screen width without vertical muntin 6′-2″.

Vertical or horizontal—available at extra cost.

Available.

Available. Transoms larger than the following require special reinforcement and are quoted only by the factory.
HEIGHT—up to 3′-6″ WIDTH—15′-0″ maximum.

Aluminum extrusions of 6063-T5 alloy. Anodized finish per ALCOA Spec. 204-R1. Special finishes optional at extra cost. Roll-formed 22 gauge type 302 stainless steel sill track. Step type sill. Two adjustable nylon sheaves, sealed ball bearings for each sliding panel. W/S is dense, moth and mildew resistant wool pile and neoprene.

Solid pull type; model 62 with anodized finish per ALCOA Spec. 204-R1. Exterior locks available at extra cost. Unless otherwise specified, Schlage 5-pin cylinder locks will be furnished. Other locks available at additional extra cost.

Jam-proof, up-acting, cam-action.

Kit 202M1 used for joining 204 doors other than fixed frames. Kit 202M2 used for joining fixed frames to fixed frames or fixed frames to fixed jambs. Note: Fixed frames cannot be joined with latching jambs.

Includes steel post with bearing plates top and bottom, and exterior and interior cover plates. For 90°, 180°, and 270° intersections.

Frame members furnished with polyethylene sleeves for protection from paint and plaster during construction.

Head, jambs and sill 4-3/4″.

Add 1/2″ to height and width of door.

202MS
204MS
MULTI-SLIDE

heavy-duty sections

for single glazing or 1″ insulating glass

up to 10′ 0″ in height

ALL SIZES ARE CUSTOM-MADE

Two sliding panels on two tracks. Opens at either side.

Four sliding panels on two tracks. Opens at center or either side.

Two sliding panels on two tracks and one fixed panel. Opens at one side only.

Four sliding panels on two tracks and two fixed panels. Opens at center only.

Three sliding panels on three tracks. Opens at either side.

Six sliding panels on three tracks. Opens at center or either side.

Three sliding panels on three tracks and one fixed panel. Opens at one side only.

Six sliding panels on three tracks and two fixed panels. Opens at center only.

SEE PAGE 9 FOR DETAILS

Height maximum 10′-0″
Width Sliding Panel, Maximum 10′-0″.
Sliding Panel Height/Width ratio, Maximum 3:1.

"Geon" vinyl glazing channel for shop or field glazing. Series 202MS: Channel for 1/4″ polished plate glass is standard. Channel for 3/16″ or 7/32″ heavy sheet optional at no extra cost. Series 204MS: Channel for 1″ insulating glass only is standard.

Multiple sliding panels. Interior and exterior pocket installations. Surface mounted installations. Interior sliding partitions. Other special designs to meet specific requirements.

No stock sizes. All doors are made to size specified.

Screens and screen provisions must be ordered as a separate item. Inside sliding screens with fiber-glass mesh 14x18 standard when ordered aluminum mesh 14x16 available at extra cost. Maximum screen width without vertical muntin 6′-2″.

Vertical or horizontal—available at extra cost.

Not available for multi-slide doors.

Not available for multi-slide doors.

Aluminum extrusions of 6063-T5 alloy. anodized finish per ALCOA Spec. 204R-1. Special finishes available at extra cost. Roll-formed 22 gauge, type 302 stainless steel sill track. Step type sill, two adjustable nylon sheaves having sealed ball bearings for each sliding panel. W/S is dense, moth and mildew resistant wool pile.

Solid pull type; model 62 with anodized finish per ALCOA Spec. 204-R1. Exterior locks available at extra cost. Unless otherwise specified, Schlage 5-pin cylinder locks will be furnished. Other locks available at additional extra cost.

Jam-proof, up-acting, cam-action.

Not available for multi-slide doors.

Not available for multi-slide doors.

Not available for multi-slide doors.

Head, jambs and sill width, variable; depending upon number of fixed and sliding panels.

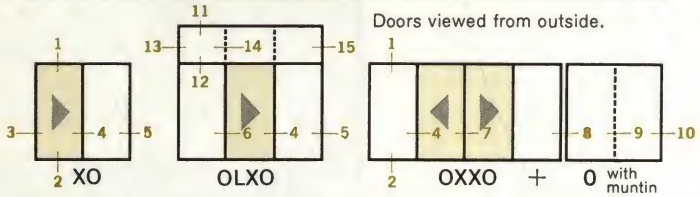
Add 1/2″ to height and width of door.

ARCADIA
102
SLIDING DOOR

standard sections

for single glazing

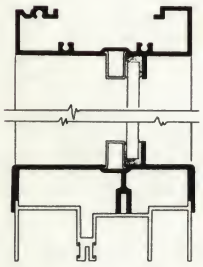
up to 8′ 0″ ht. (glass available in any height)



Rough opening normally should be 1/2″ larger than door size.

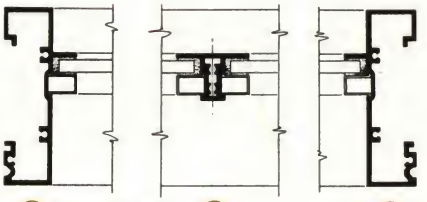
Standard sections in series 102 provide a door of strength and design that equals the quality required in architectural specifications for both commercial and residental installations where the height does not exceed 8′0″, and the conditions permit single glazing. Doors in stock sizes in this series are available in quantity purchases for use in large installations or merchant-built housing, thus permitting quality of Arcadia door at considerable savings. Special performance tests for weather-tightness made by independent laboratories reveal positive resistance to air and water infiltration. For installations of 8′0″ to 10′0″ in height, see details for series 202 heavy duty door, page 7.

SCALE: 3″=1′0″ (Full-size details available)



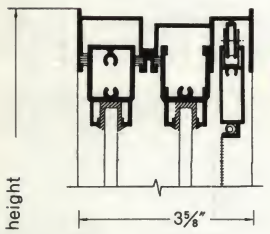
11 transom head

12 transom sill



13 transom jamb 14 muntin 15 transom jamb

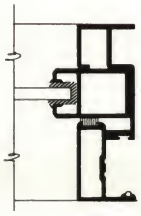
See pages 4 and 5 for Selection Chart of types, sizes and limitations for all Arcadia doors.



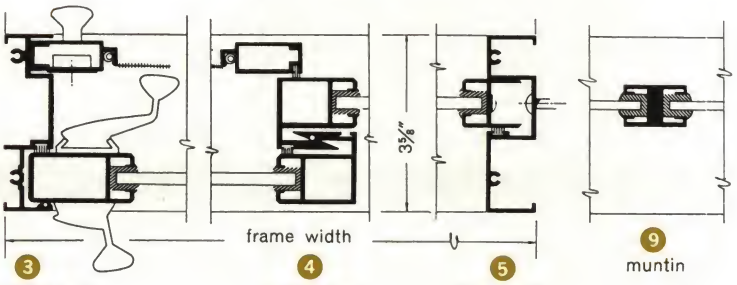
1 head

3⅝″

frame height



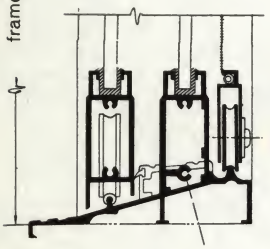
6 mullion



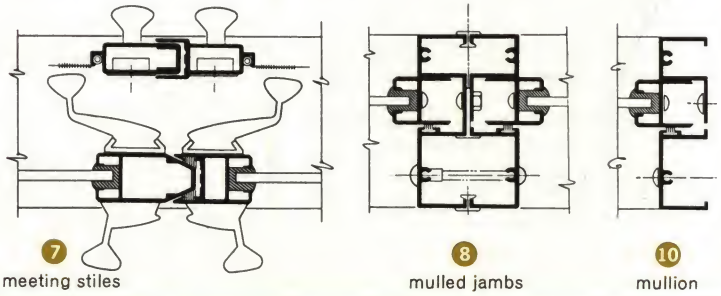
3⅝″

frame width

3 locking jamb 4 interlockers 5 fixed jamb 9 muntin



2 sill



7 meeting stiles 8 mulled jambs 10 mullion

Because of engineering improvements specifications and details of Arcadia doors and other products are subject to change without notice.

ARCHITECT'S SPECIFICATIONS

General: Aluminum sliding doors, fixed frames and transoms shall be Arcadia Series 102 Aluminum Sliding Doors manufactured by Arcadia Metal Products, 801 South Acacia Avenue, Fullerton, California.

Materials: Basic frame and sliding sections shall be aluminum extrusions of 6063-T5 alloy. Nominal metal thickness shall be 0.072″. Component parts and accessories shall be of aluminum alloy, stainless steel or non-metallic materials which will neither deteriorate nor promote corrosion.

Weatherstripping shall be silicone-treated, wool pile or pliable neoprene. Glazing channel shall be "Geon" vinyl.

Construction: Interlockers and stile members shall be of one piece hollow sections of adequate stiffness to insure strength and rigidity. Sliding panels shall be bottom rolling on nylon sheaves having sealed ball bearings. The sheave supports at both ends of the sliding panel shall be capable of adjustment without removing the panel from the track. The sliding panel when in a locked position shall not be removable from the outside. Door track shall be capped with extruded black weather-resistant and light stabilized nylon.

Pulls and Latches: Sliding panels shall be equipped with a rotary-type non-jambing latch with provision for locking from the inside. Exterior locks, when specified, shall be Schlage five pin cylinder. Pulls shall be Arcadia Model 61.

Finish:* All aluminum members of the unit shall receive a finish Alumilite coating according to Aluminum Company of America Specification 202-R1.

Glazing: The fixed and sliding panels shall be constructed to allow either shop or field glazing. "Geon" vinyl glazing channel for 3/16″, 7/32″, ¼″ glass shall be furnished, as specified.

Structural: Door members shall be capable of supporting without permanent deformation a uniformly distributed load of 20 pounds per square foot of glazed surface for doors up to 8′-0″ high.

Weathertightness: The door shall be so constructed and weathersealed that the air infiltration shall not exceed 0.75 cubic feet per minute per foot of sliding panel perimeter when the full sized unit is subjected to an external pressure of 1.6 pounds per square foot, or the dynamic pressure of a 25 mile per hour wind. A full size unit when tested for a 15 minute period in a simulated rainfall of 2 inches of water per hour and subjected to either a 45 mile per hour wind or a ¾ inch pressure differential between the inside and outside of the unit, shall allow no infiltrated water to overflow any part of the sill on the interior face of the unit.

Screens: Basic screen sections shall be of 6063-T5 alloy extruded aluminum sections. Sliding screens for Series 102 doors shall be bottom rolling on adjustable nylon sheaves operating on nylon bushings. Frame shall be wired with 14 x 18 gauge Fiberglas mesh or 14 x 16 gauge Aluminum wire mesh, as specified. A wool pile or neoprene insect closure shall be provided on the trailing stile of the screen frame. The screen shall be equipped with inside and outside pulls of solid aluminum extrusions and a self-latching rotary type latch which can be locked from the outside.

*Other finishes available on quotation by factory.

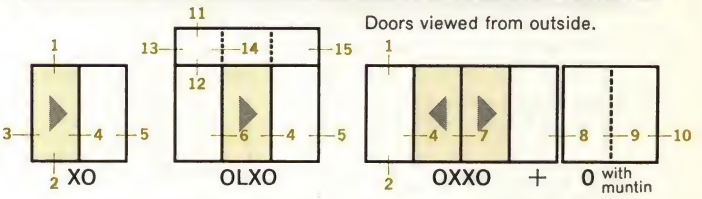
Research Library: Felix Augenfeld, AIA, Architect.

ARCADIA 202 SLIDING DOOR

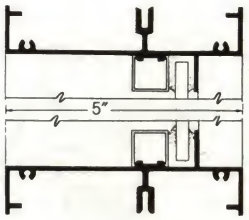
heavy-duty sections

for single glazing

up to 10′ 0″ ht. (glass available in any height)

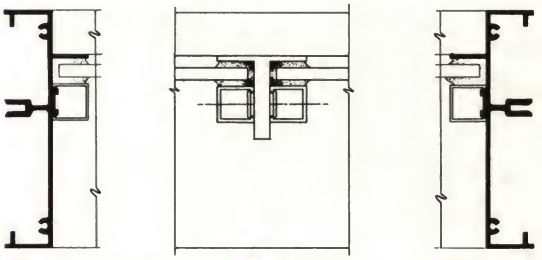


Rough opening normally should be 1/2″ larger than door size.

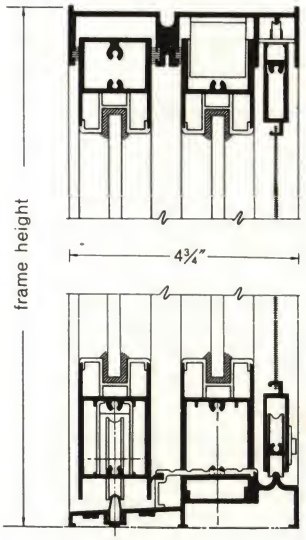


11 transom head

12 transom sill

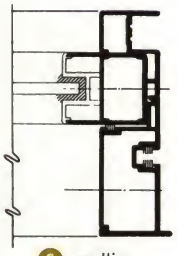


13 transom jamb 14 muntin 15 transom jamb

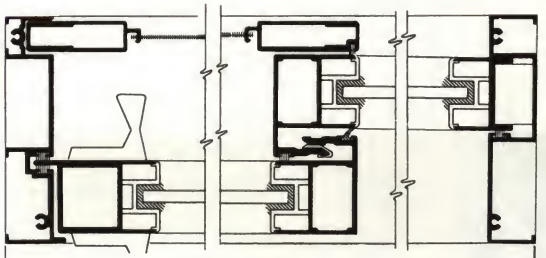


1 head

2 sill

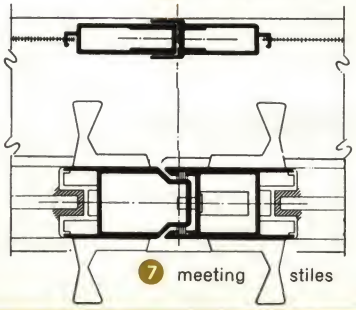


6 mullion

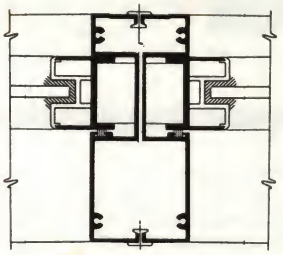


3 locking jamb 4 interlockers 5 fixed jamb

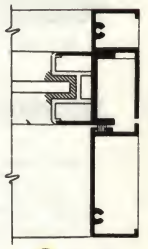
9 muntin



7 meeting stiles



8 mulled jambs



10 mullion

ARCHITECT'S SPECIFICATIONS

General: Sliding aluminum framed doors shall be Arcadia Series 202 sliding aluminum doors as manufactured by Arcadia Metal Products, 801 South Acacia Avenue, Fullerton, California.

Material: Basic frame and sliding sections shall be aluminum extrusions of 6063-T5 alloy. Component parts and accessories shall be of aluminum alloy, stainless steel, heavy cadmium plated steel or non-metallic materials which will neither deteriorate nor promote corrosion. Weatherstripping shall be dense, silicoted, fungus, mildew and moth resistant wool pile and/or pliable neoprene where leakage resistance is required.

Construction: Interlockers, stile, top and bottom rail members of sliding panel, shall be of one piece hollow sections of adequate stiffness to insure strength and rigidity. Interlockers shall provide mechanical interlocker to maintain fit and seal of the weatherstripping.

Sliding panel shall be bottom rolling on nylon sheaves having sealed ball bearings. Sliding panel shall be equipped with adjustable sheave at each end to allow for alignment of the sliding panel with the frame. Track shall be roll formed 22 gauge type 302 stainless steel firmly retained by the sill member.

Pulls and Latches: Sliding panel shall be equipped with Arcadia positive jam proof, up acting cam night latch. Arcadia solid aluminum pulls shall be provided for both inside and outside of the sliding panel. When specified, exterior locks shall be Schlage five pin cylinder.

Finish:* All aluminum members and hardware of the unit shall receive an anodized finish according to Aluminum Company of America Specification 204-R1. Manufacturer shall be able to show by filmeter test that he has complied with coating thickness specified.

Glazing: The fixed and sliding panels shall be constructed to allow for either shop or field glazing. Vinyl glazing channels for 3/16″, 7/32″, or ¼″ glass shall be furnished, as specified.

Structural: All door members shall be capable of supporting without deformation a uniformly distributed exterior load of 15-40 pounds per square foot (depending upon the requirements of the size and type of unit) of glazed surface.

Weathertightness: The door shall be so constructed and weathersealed that the air infiltration shall not exceed 0.75 cubic feet per minute per foot of sliding panel perimeter when the full sized unit is subjected to an external pressure of 1.6 pounds per square foot, or the dynamic pressure of a 25 mile per hour wind. Test shall be a pressure differential chamber test. The unit shall be placed in the side at a pressure chamber and a pressure differential of 0.6″ shall be put across the unit by means of air pressure or vacuum, water shall be sprayed onto the outside of the unit at the rate of 2″ of rain per hour. No water shall overflow the sill in a 15 minute period.

Screens: Basic screen sections shall be of 6063-T5 alloy extruded aluminum sections. Frame shall be wired with 14 x 18 gauge Fiberglas mesh or 14 x 16 gauge Aluminum wire mesh, as specified.

*Other finishes available on quotation by factory.

ARCADIA
104
SLIDING DOOR

standard sections

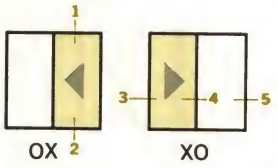
for ⅝" insulating glass

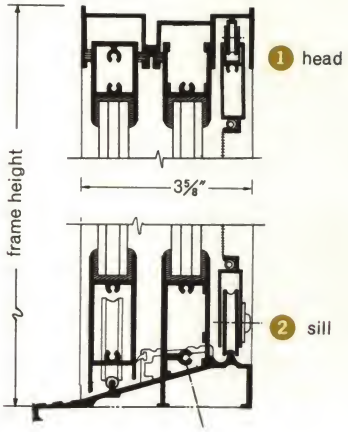
up to 6′ 8-$^{11}/_{16}$″ ht. (door sizes limited by glass sizes)

Doors viewed from outside.

Rough opening normally should be 1/2" larger than door size.

Other details similar to series 102 details.



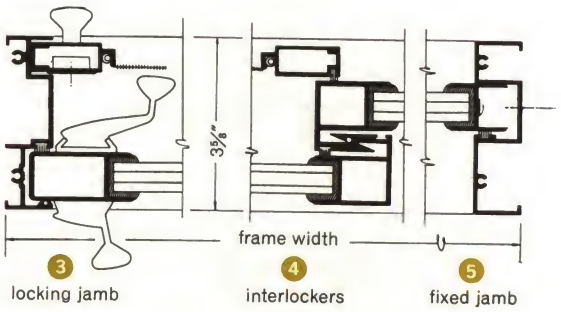


ARCHITECT'S SPECIFICATIONS

Specifications for Series 102 and Series 104 are same except for glazing provisions.

Sections for the 104 door are designed in accordance with specifications for the 102 series and permit use of ⅝" insulating glass, an economical method of providing added protection in colder climates. Sizes of the door panels, however, are limited by available sizes of glass. Maximum dimensions for this type of glass are 48" x 76".

SCALE: 3"=1′0" (Full-size details available)



ARCADIA
204
SLIDING DOOR

heavy-duty sections

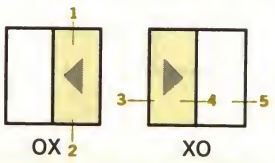
for 1" insulating glass

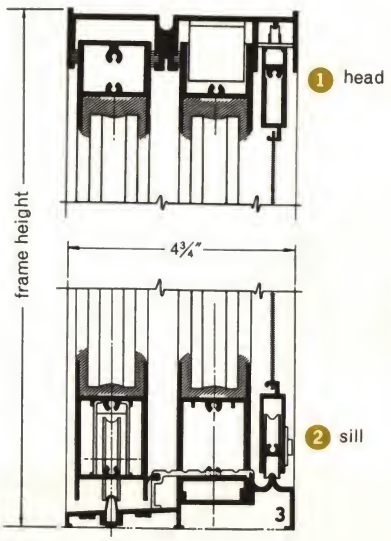
up to 10′ 0" ht. (door sizes limited by glass sizes)

Doors viewed from outside.

Rough opening normally should be 1/2" larger than door size.

Other details similar to series 202 details.



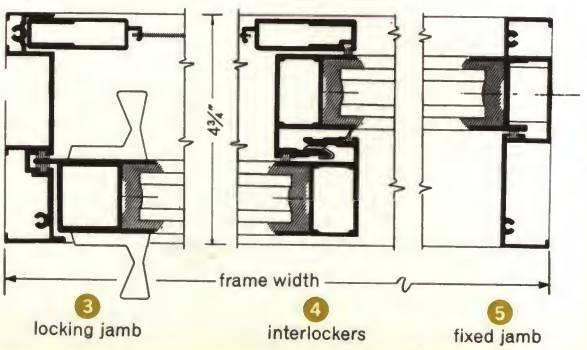


ARCHITECT'S SPECIFICATIONS

Specifications for Series 202 and Series 204 are same except for glazing provisions.

Sections for the 204 door are designed in accordance with specifications for the 202 series and permit use of 1" hermetically sealed insulating glass. Door sizes are limited by available sizes of insulating glass. Door design provides maximum weathertightness in extreme climates, according to test data available from the factory.

SCALE: 3"=1′0" (Full-size details available)



Because of engineering improvements specifications and details of Arcadia doors and other products are subject to change without notice.

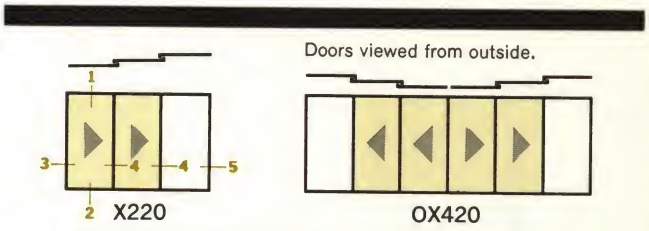
202MS
204MS
MULTI-SLIDE

heavy-duty sections

single glazing or 1″ ins. glass

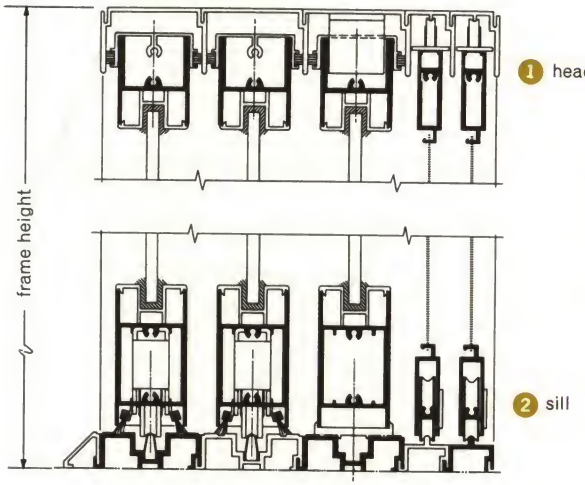
up to 10′ 0″ in height

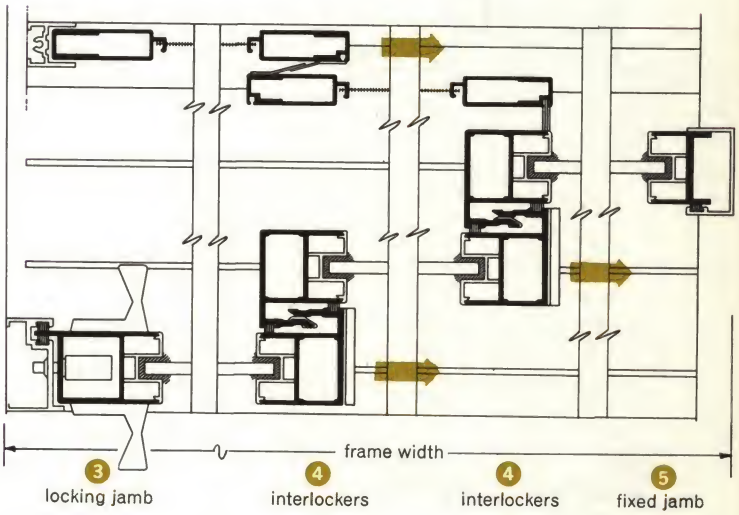
Arcadia Metal Products home offices: A. Quincy Jones and Frederick E. Emmons, AIA, Architects.



Rough opening normally should be 1/2″ larger than door size.

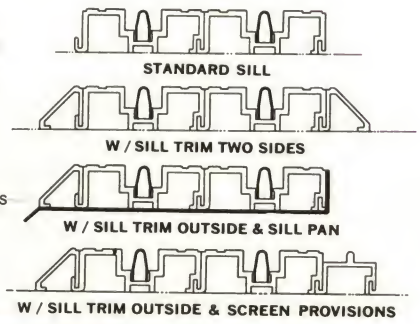
All Multi-Slide doors are custom-made to the width and height specified. Types shown on page 5 have been standardized and are manufactured without custom engineering. Other types with different combinations of fixed and sliding panels, models for pocket applications, etc., require special details.





MULTI-SLIDE SILL OPTIONS:

Slide options include screen tracks, sill trim and sill pan as illustrated at right. When screen provisions are specified, screen track, screen head and screen jambs are specified.



See pages 4 and 5 for Selection Chart of types, sizes and limitations for all Arcadia doors.

ARCHITECT'S SPECIFICATIONS

General: Sliding aluminum framed doors shall be Arcadia 202-204 multi-sliding aluminum doors as manufactured by Arcadia Metal Products, 801 South Acacia Avenue, Fullerton, California.

Material: Basic frame and sliding sections shall be aluminum extrusions of 6063-T5 alloy. Members shall be designed to carry the designated Wind Load for type and size specified.

Component parts and accessories shall be of aluminum alloy, stainless steel, heavy cadmium plated steel or non-metallic materials which will neither deteriorate nor promote corrosion.

Weatherstripping shall be either dense, silicoted, fungus, mildew and moth resistant wool pile or pliable neoprene where leakage resistance is required.

Construction: Interlockers, stile, top and bottom rail members of sliding panel, shall be of one piece hollow sections of adequate stiffness to insure strength and rigidity. Frame and panel members shall be accurately cut and upon assembly present a neat finished appearance and watertight joint. Interlockers shall provide mechanical interlocker to maintain fit and seal of the weatherstripping. The outside sliding panel when in a locked position shall not be removable from the outside. The sliding and fixed panels shall be removable for glazing or maintenance. Sliding panel shall be bottom rolling on nylon sheaves having sealed ball bearings. Sliding panel shall be equipped with adjustable sheave at each end to allow for alignment of the sliding panel with the frame. Track shall be roll formed 22 gauge type 302 stainless steel firmly retained by the sill member. Where water drainage is important, a metal sill pan shall be used and sill member shall provide for drainage.

Pulls and Latches: Sliding panel shall be equipped with Arcadia positive jam proof, up acting cam night latch. Arcadia solid aluminum pulls shall be provided for both inside and outside of the sliding panel. When specified, exterior locks shall be Schlage five pin cylinder.

Finish: All aluminum members and hardware of the unit shall receive an anodized finish according to Aluminum Company of America Specification 204-R1. Anodic treatment shall provide a hard oxide surface coating .0004 inch in thickness and having a density of 17 mg. per square inch. Manufacturer shall be able to show by filmeter test that he has complied with coating thickness specified.

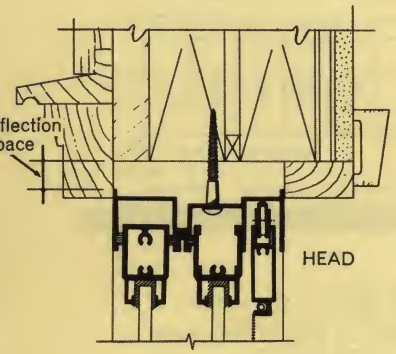
Glazing: The fixed and sliding panels shall be constructed to allow for either shop or field glazing. "Geon" vinyl glazing channels for 3/16″, 7/32″, ¼″ glass or 1″ insulating glass shall be furnished, as specified.

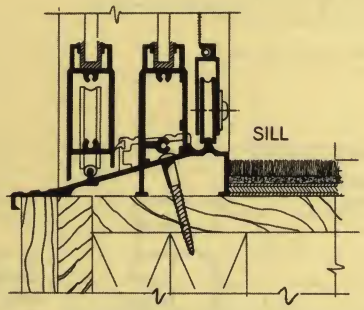
Screens: Basic screen sections shall be of 6063-T5 alloy extruded aluminum sections. Sliding screens for 202-204 Doors shall be bottom rolling on adjustable nylon sheaves operating on nylon bushings. Frame shall be wired with 14 x 18 gauge Fiberglas mesh or 14 x 16 gauge Aluminum wire mesh, as specified. A wool pile insect closure shall be provided on the trailing stile of the screen frame. The screen shall be equipped with an inside pull of a solid aluminum, outside finger pulls, and a self-latching rotary type latch which can be locked from the inside.

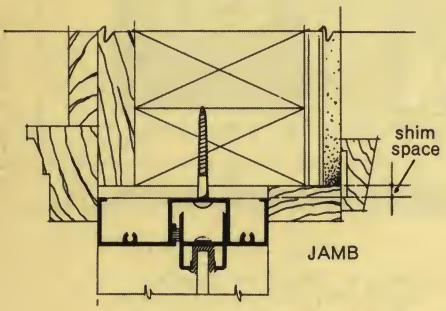
arcadia®

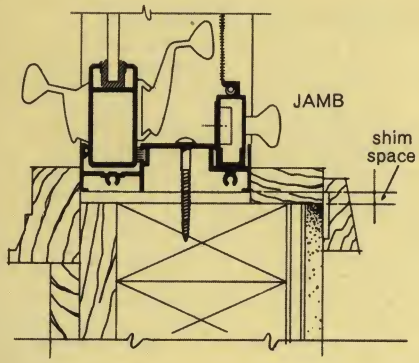
INSTALLATION DETAILS

Frame and Siding / Series 102

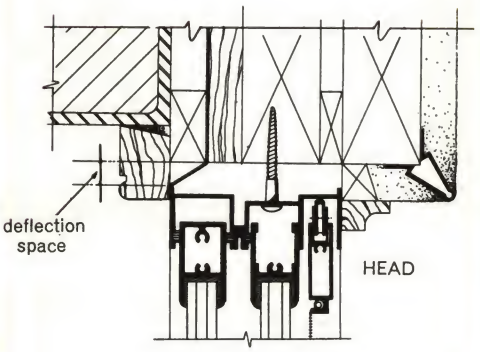


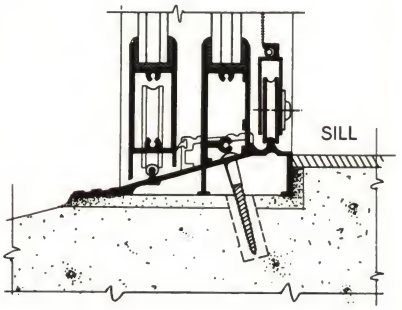


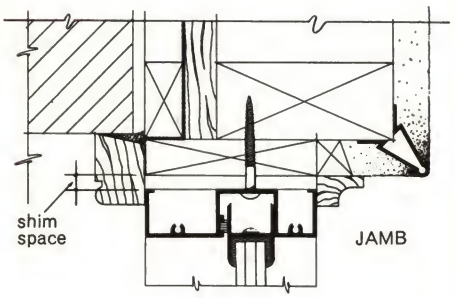


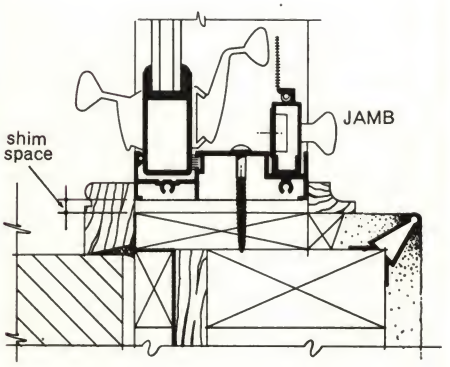


Brick Veneer / Series 104

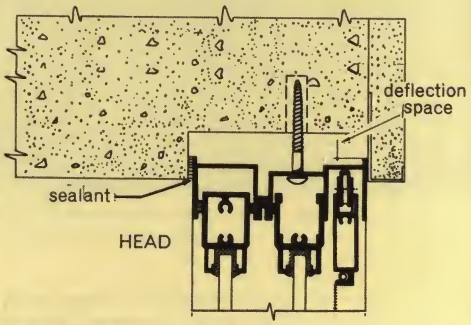


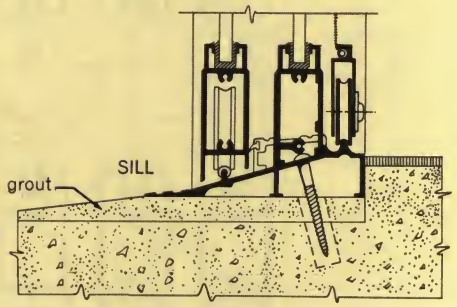




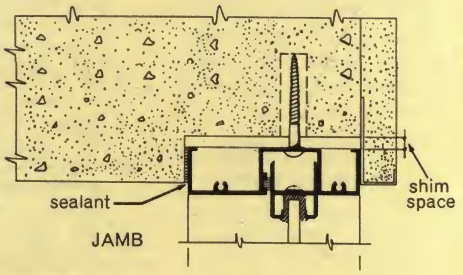


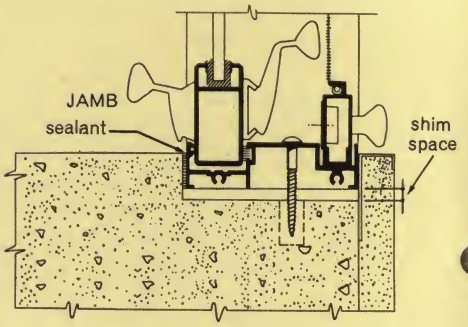
Poured Concrete / Series 102



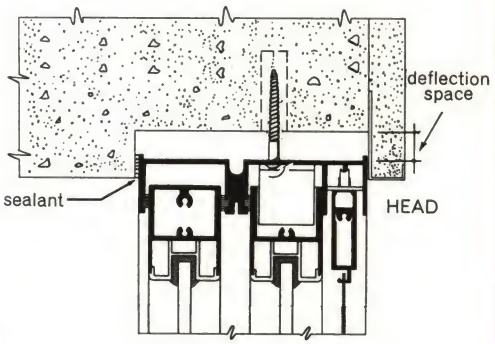


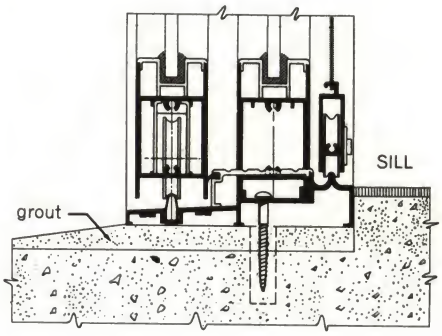
SCALE: 3″=1′0″. (Full-size details available)

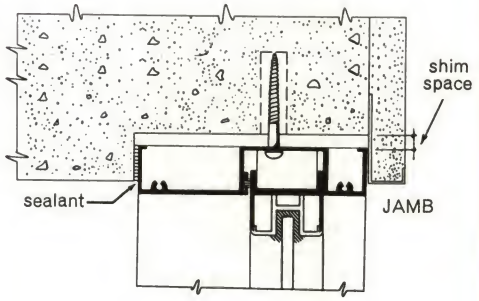


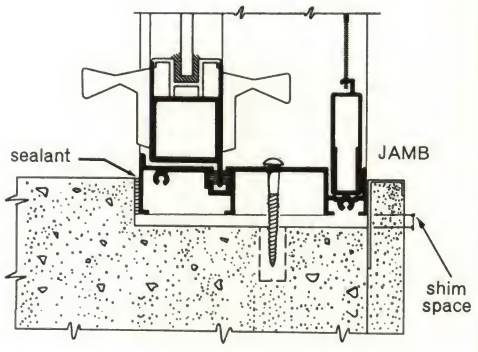


Poured Concrete / Series 202

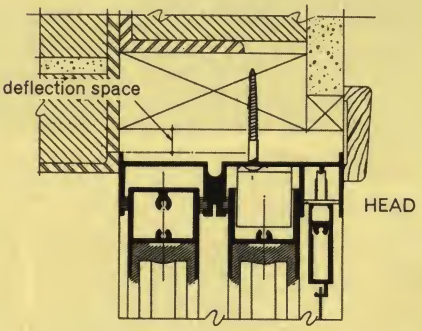


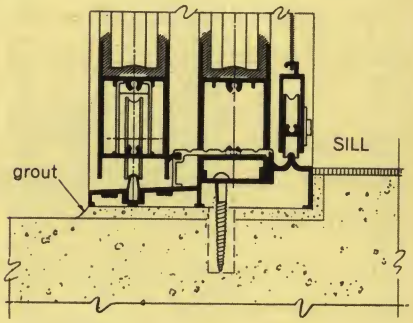


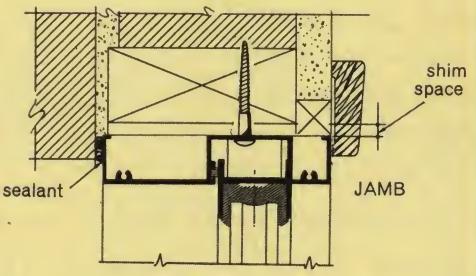


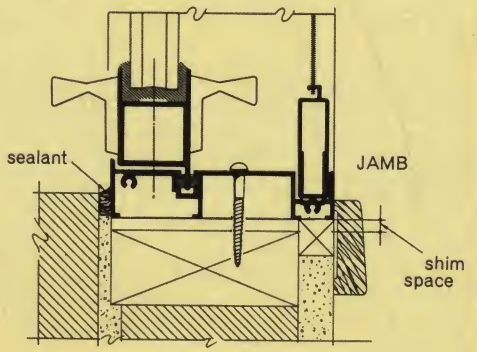


Brick Masonry / Series 204

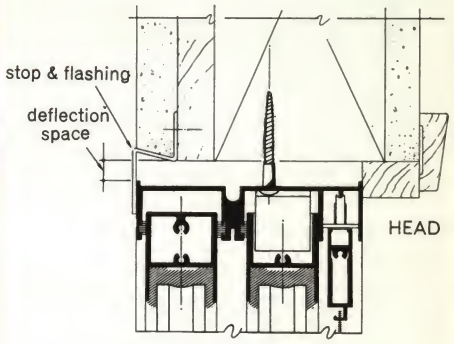


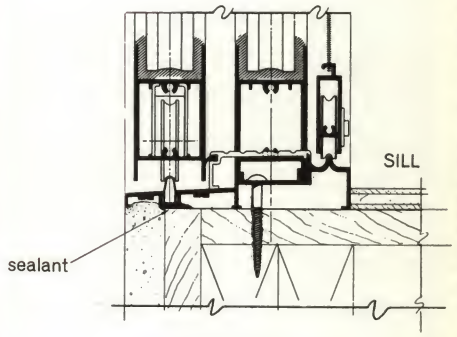




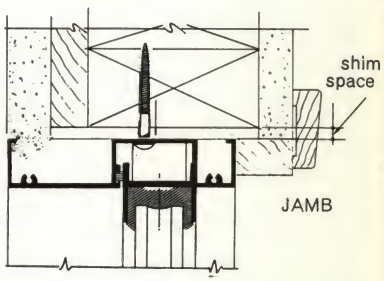


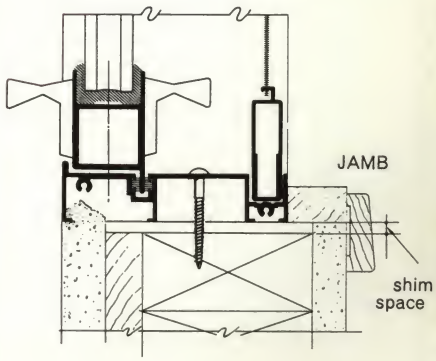
Frame and Stucco / Series 204





SCALE: 3″=1′0″ (Full-size details available)





Chapel, Miramar NAS: Richard Neutra, FAIA, and Robert E. Alexander, FAIA, Architects.

Cover: Eichler Homes, Palo Alto, Calif., merchant-built homes designed by two architectural firms: A. Quincy Jones and Frederick E. Emmons, AIA, of Los Angeles and Anshen & Allen, AIA, of San Francisco. Shown is design by Anshen & Allen.

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OTHER ARCADIA PRODUCTS Arcadia's architectural product line also includes sliding sash and an integrated system of aluminum window wall. See Sweet's File 3d/Ar for catalog description of these products or write for information.

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Patio Magic

TRADE MARK

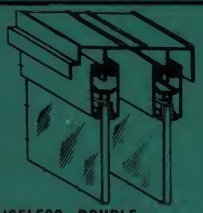
AMERICA'S FINEST

ALUMINUM SLIDING GLASS DOORS

DOUBLE WEATHER-STRIPPING IN JAMB. ADJUSTABLE KEEPER FOR LATCH

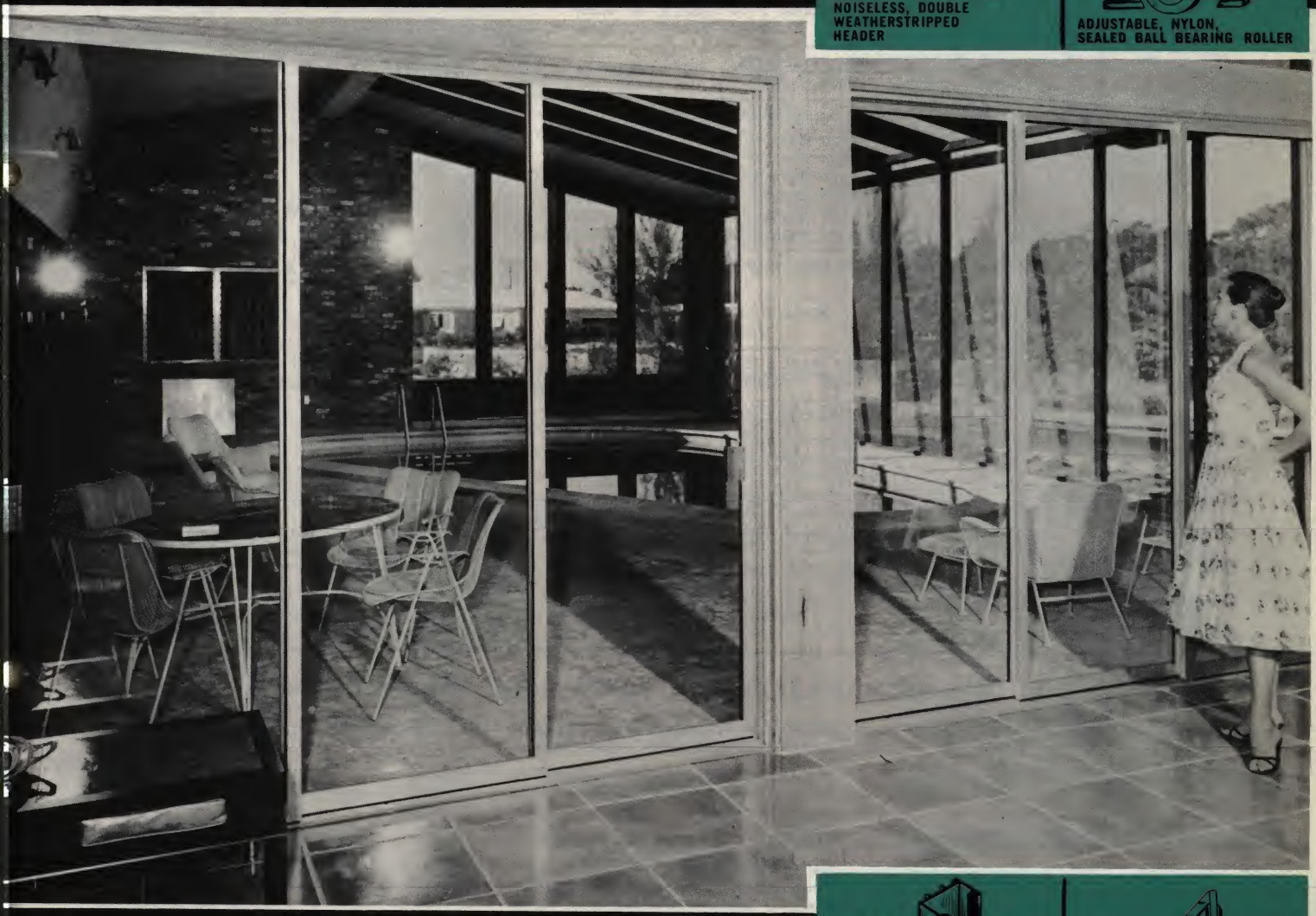
16d
Da

DOUBLE WEATHER-STRIPPED, DEEP INTERLOCKING STILE



NOISELESS, DOUBLE WEATHERSTRIPPED HEADER

ADJUSTABLE, NYLON, SEALED BALL BEARING ROLLER



A.I.A. FILE NO. 19E

NEW

Patio-rama

TRADE MARK

AMERICA'S FINEST

ECONOMY LINE SLIDING GLASS DOORS

TUBULAR LOCKING STILE, WOOL PILE WEATHERSTRIPPED JAMB AT LEADING EDGE

ADJUSTABLE BOTTOM NYLON ROLLER

DEEP JAMB WITH EXCLUSIVE NEW ADJUSTMENT FEATURE

DECORATIVE FUNCTIONAL HANDLE

GOLD ANODIZED, TUBULAR GRIP

KEY LOCK INCLUDED

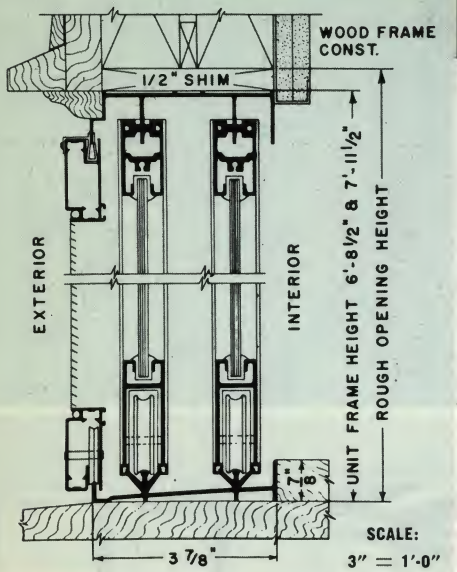
Patio Magic

TRADE MARK

ALUMINUM SLIDING GLASS DOORS

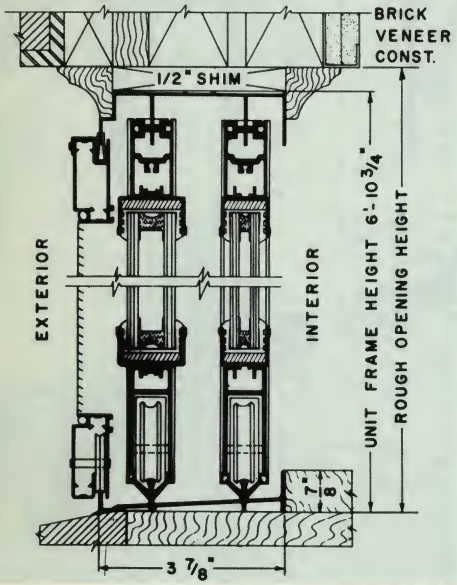
VERTICAL SECTION
FOR 2 DOOR 2 TRACK OR 4 DOOR 2 TRACK

SINGLE GLAZING



VERTICAL SECTION
FOR 2 DOOR 2 TRACK OR 4 DOOR 2 TRACK

DOUBLE GLAZING 5/8" OR 1"

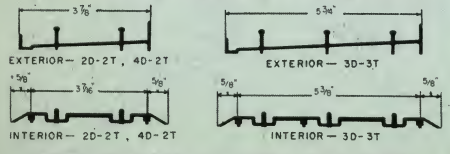


STANDARD 5/8" & 1" DOUBLE GLAZED UNITS

UNIT FRAME SIZES Height	Width	UNIT DESIGNATION
6'-10¾"	6'-11 1/16"	PM (DG) 2D-2T— 6'x6'-10¾"
6'-10¾"	8'-11 1/16"	PM (DG) 2D-2T— 6'x8'-10¾"
6'-10¾"	10'-11 1/16"	PM (DG) 2D-2T—10'x6'-10¾"
6'-10¾"	9'-1 3/16"	PM (DG) 3D-3T— 9'x6'-10¾"
6'-10¾"	12'-1 3/16"	PM (DG) 3D-3T—12'x6'-10¾"
6'-10¾"	15'-1 3/16"	PM (DG) 3D-3T—15'x6'-10¾"
6'-10¾"	12'-2 1/16"	PM (DG) 4D-2T—12'x6'-10¾"
6'-10¾"	16'-2 1/16"	PM (DG) 4D-2T—16'x6'-10¾"
6'-10¾"	20'-2 1/16"	PM (DG) 4D-2T—20'x6'-10¾"

GLASS SIZES: Height 6'-10¾"—76¾" Glass.
5/8" Glass—Widths: 3'—33" Glass; 4'—45" Glass.
1" Glass—Widths: 3'—33" Glass; 4'—45" Glass; 5'—57" Glass.

TYPES OF TRACK AVAILABLE

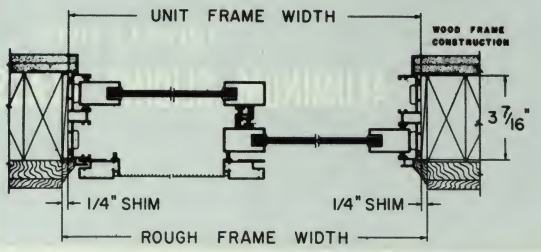


Pocket job details and multiple track details for Patio Magic only available on request.

UNIT FRAME SIZES Height	Width	UNIT DESIGNATION
6'- 8½"	6'- 0 1/16"	PM 2D-2T— 6'x6'- 8½"
6'- 8½"	8'- 0 1/16"	PM 2D-2T— 8'x6'- 8½"
6'- 8½"	10'- 0 1/16"	PM 2D-2T—10'x6'- 8½"
6'- 8½"	12'- 0 1/16"	PM 2D-2T—12'x6'- 8½"
7'-11½"	6'- 0 1/16"	PM 2D-2T— 6'x7'-11½"
7'-11½"	8'- 0 1/16"	PM 2D-2T— 8'x7'-11½"
7'-11½"	10'- 0 1/16"	PM 2D-2T—10'x7'-11½"
7'-11½"	12'- 0 1/16"	PM 2D-2T—12'x7'-11½"

GLASS SIZES: Heights: 6'- 8½"—76" Glass; 7'-11½"—91" Glass.
Widths: 3'—34" Glass; 4'—46" Glass; 5'—58" Glass; 6'—70" Glass.

STANDARD 2 DOOR - 2 TRACK

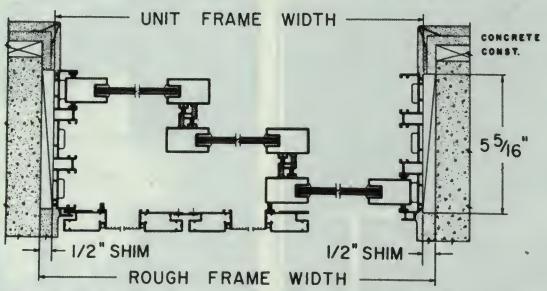


SCALE: 1½" = 1'-0"

UNIT FRAME SIZES Height	Width	UNIT DESIGNATION
6'- 8½"	8'-11 1/16"	PM 3D-3T— 9'x6'- 8½"
6'- 8½"	11'-11 1/16"	PM 3D-3T—12'x6'- 8½"
6'- 8½"	14'-11 1/16"	PM 3D-3T—15'x6'- 8½"
6'- 8½"	17'-11 1/16"	PM 3D-3T—18'x6'- 8½"
7'-11½"	8'-11 1/16"	PM 3D-3T— 9'x7'-11½"
7'-11½"	11'-11 1/16"	PM 3D-3T—12'x7'-11½"
7'-11½"	14'-11 1/16"	PM 3D-3T—15'x7'-11½"
7'-11½"	17'-11 1/16"	PM 3D-3T—18'x7'-11½"

GLASS SIZES: Heights: 6'- 8½"—76" Glass; 7'-11½"—91" Glass.
Widths: 3'—34" Glass; 4'—46" Glass; 5'—58" Glass; 6'—70" Glass.

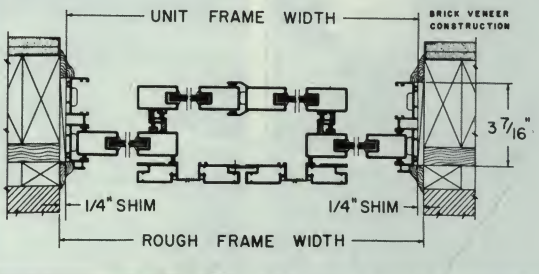
STANDARD 3 DOOR - 3 TRACK



UNIT FRAME SIZES Height	Width	UNIT DESIGNATION
6'- 8½"	12'- 0 1/16"	PM 4D-2T—12'x6'- 8½"
6'- 8½"	16'- 0 1/16"	PM 4D-2T—16'x6'- 8½"
6'- 8½"	20'- 0 1/16"	PM 4D-2T—20'x6'- 8½"
6'- 8½"	24'- 0 1/16"	PM 4D-2T—24'x6'- 8½"
7'-11½"	12'- 0 1/16"	PM 4D-2T—12'x7'-11½"
7'-11½"	16'- 0 1/16"	PM 4D-2T—16'x7'-11½"
7'-11½"	20'- 0 1/16"	PM 4D-2T—20'x7'-11½"
7'-11½"	24'- 0 1/16"	PM 4D-2T—24'x7'-11½"

GLASS SIZES: Heights: 6'- 8½"—76" Glass; 7'-11½"—91" Glass.
Widths: 3'—34" Glass; 4'—46" Glass; 5'—58" Glass; 6'—70" Glass.

STANDARD 4 DOOR - 2 TRACK



PATIO MAGIC SPECIFICATIONS

GENERAL—The aluminum sliding glass doors shall be PATIO MAGIC as manufactured by DARYL PRODUCTS CORP., Miami, Florida.

MATERIAL—Frames and doors shall be of a heavy gauge extruded aluminum of a 6063-T5 alloy. Material may be changed when deemed necessary in order to conform to the best engineering practice.

FINISH—All exposed aluminum shall be satin etched and anodized for corrosion resistance.

CONSTRUCTION—Jamb members shall be so designed as to enable them to be mechanically interlocked and fastened to the header and sill members. All vertical door stiles shall be one-piece tubular extrusions. These vertical stiles shall be machined to receive and overlap the top and bottom rail upon assembly. All doors shall be constructed to slide in two directions.

WEATHERSTRIPPING—The top rail, bottom rail, interlocking stiles and jambs shall be double weatherstripped with continuous Schlegel silicone treated certified wool pile.

HARDWARE—Spring loaded, positive acting door latches shall be provided in each locking stile. The latch lever arm shall be so constructed as to have a safety "no-lock" position. Key locks shall be furnished when specified. Gold finished handles shall be furnished for both inside and outside of all locking stiles. Bottom rollers shall have sealed ball bearings with nylon wheels. One roller in each door shall be mounted in an adjustable wheel bracket.

GLAZING—(By others except when included in original contract.) Doors shall be glazed with 1/4" polished plate, 1/4" or 7/32" heavy sheet with a specially designed vinyl glazing channel furnished by the manufacturer and in accordance with their glazing instructions. (Vinyl glazing channel for 3/16" glass available upon request.) 5/8" and 1" double glazing shall also be in accordance with the manufacturer's instructions.

SCREENS—(Not furnished unless specified.) Frames shall be constructed of an extruded 6063-T5 aluminum alloy. Screen cloth shall be fiberglass, woven in a 14 x 18 mesh.

INSTALLATION—(By others except when included in original contract.) Track, header, and jambs must be set plumb and level, shimming where necessary, into opening prepared in accordance with the manufacturer's drawings.

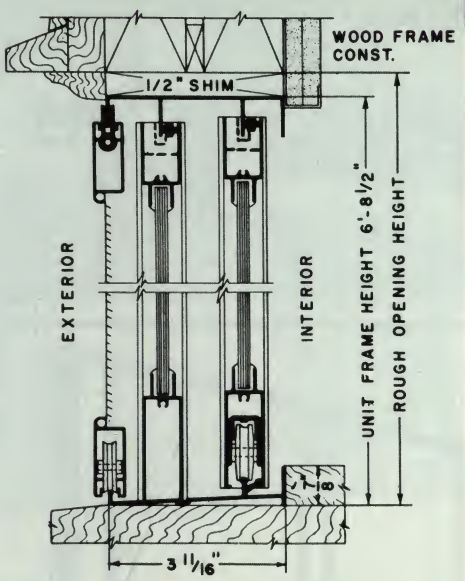
DOUBLE GLAZED HARDWARE— Handle and latch shall be a chrome finished, recessed pull.

Patio-rama

TRADE MARK

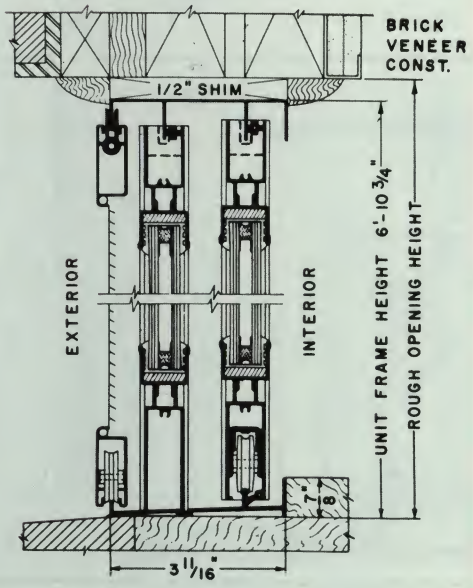
ECONOMY LINE SLIDING GLASS DOORS

VERTICAL SECTION
SINGLE GLAZING



SCALE: 3" = 1'-0"

VERTICAL SECTION
DOUBLE GLAZING 5/8"



STANDARD 5/8" DOUBLE GLAZED UNITS

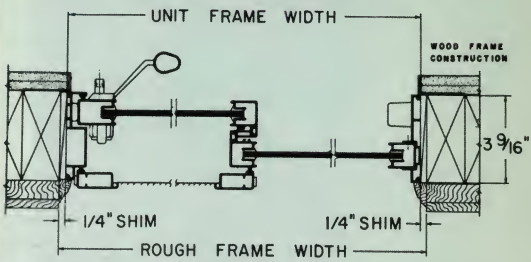
UNIT FRAME SIZES Height	Width	UNIT DESIGNATION
6'-10¾"	6'- 0 1/16"	PR (DG) 6' XO or OX
6'-10¾"	8'- 0 1/16"	PR (DG) 8' XO or OX
6'-10¾"	9'- 0 3/16"	PR (DG) 9' OXO(R) or OXO(L)
6'-10¾"	12'- 0 3/16"	PR (DG) 12' OXO(R) or OXO(L)
6'-10¾"	11'-11 7/16"	PR (DG) 12' OXXO
6'-10¾"	15'-11 7/16"	PR (DG) 16' OXXO

GLASS SIZES: Height 6'-10¾"—76¾" Glass.
Widths: 3'—33" Glass; 4'—45" Glass.

UNIT FRAME SIZES Height	Width	UNIT DESIGNATION
6'- 8½"	5'-10 9/16"	PR 6' XO or OX
6'- 8½"	7'-10 9/16"	PR 8' XO or OX
6'- 8½"	9'-10 9/16"	PR 10' XO or OX

GLASS SIZES: Height: 6'-8½"—76" Glass.
Widths: 3'—34" Glass; 4'—46" Glass; 5'—58" Glass.

STANDARD 2 DOOR UNIT

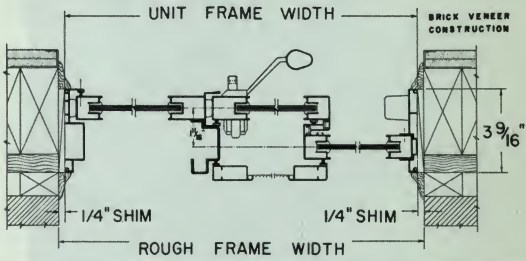


SCALE: 1½" = 1'-0"

UNIT FRAME SIZES Height	Width	UNIT DESIGNATION
6'- 8½"	8'-10 9/16"	PR 9' OXO(R) or OXO(L)
6'- 8½"	11'-10 9/16"	PR 12' OXO(R) or OXO(L)
6'- 8½"	14'-10 9/16"	PR 15' OXO(R) or OXO(L)

GLASS SIZES: Height: 6'-8½"—76" Glass.
Widths: 3'—34" Glass; 4'—46" Glass; 5'—58" Glass.

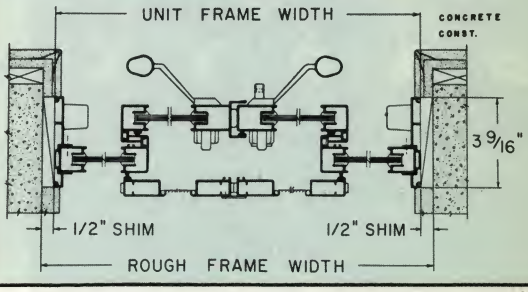
STANDARD 3 DOOR UNIT



UNIT FRAME SIZES Height	Width	UNIT DESIGNATION
6'- 8½"	11'- 8 7/16"	PR 12' OXXO
6'- 8½"	15'- 8 7/16"	PR 16' OXXO
6'- 8½"	19'- 8 7/16"	PR 20' OXXO

GLASS SIZES: Height: 6'-8½"—76" Glass.
Widths: 3'—34" Glass; 4'—46" Glass; 5'—58" Glass.

STANDARD 4 DOOR UNIT



PATIO-RAMA SPECIFICATIONS

GENERAL—The aluminum sliding glass doors shall be PATIO-RAMA as manufactured by DARYL PRODUCTS CORP., Miami, Florida.

MATERIAL—Frames and doors shall be of a heavy gauge extruded aluminum of a 6063-T5 alloy. Material may be changed when deemed necessary in order to conform to the best engineering practice.

FINISH—All exposed door frames and jambs shall be satin etched and anodized for corrosion resistance.

CONSTRUCTION—Jamb members shall be so designed as to enable them to be mechanically interlocked and fastened to the header and sill members. All locking stiles shall be one-piece tubular extrusions.

WEATHERSTRIPPING—The sliding door shall be completely weatherstripped with Schlegel silicone treated, certified wool pile.

HARDWARE—Spring loaded, positive acting door latches shall be provided in each locking stile. The latch lever arm shall be so constructed as to have a safety "no-lock" position. Key locks shall be furnished in one locking stile. Door handles shall be chrome plated with a gold anodized aluminum pull bar. Bottom rollers shall have sealed ball bearings with nylon wheels. All the rollers in a sliding door shall be mounted in an adjustable wheel bracket.

GLAZING—(By others except when included in original contract.) Doors shall be glazed with ¼" polished plate, ¼" or 7/32" heavy sheet with a specially designed vinyl glazing channel furnished by the manufacturer and in accordance with their glazing instructions. Glazing with 5/8" double glass shall also be in accordance with the manufacturer's instructions. (Vinyl glazing channel for 3/16" glass available upon request.)

SCREENS—(Not furnished unless specified.) Frames shall be constructed of an extruded 6063-T5 aluminum alloy. Screen cloth shall be fiberglass, woven in a 14 x 18 mesh.

INSTALLATION—(By others except when included in original contract.) Track, header, and jambs must be set plumb and level, shimming where necessary, into opening prepared in accordance with the manufacturer's drawings.

Superbly Engineered Products by

DARYL

PRODUCTS CORP.

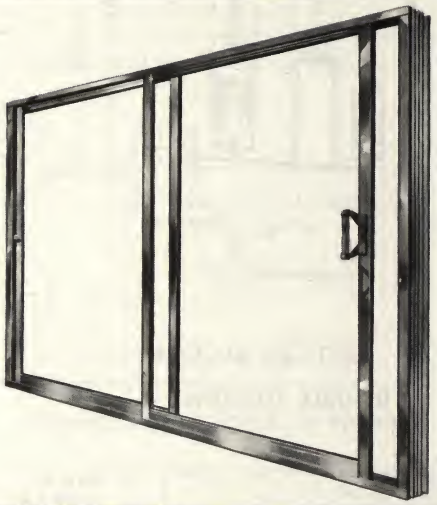
7240 N. E. 4th Avenue
Miami 38, Florida

Patio Magic
TRADE MARK

ALUMINUM SLIDING GLASS DOORS

Patio-rama
TRADE MARK

ECONOMY LINE SLIDING GLASS DOORS



Shower Magic
TRADE MARK

BATH ENCLOSURES

Showerama
TRADE MARK

ECONOMY LINE BATH ENCLOSURES

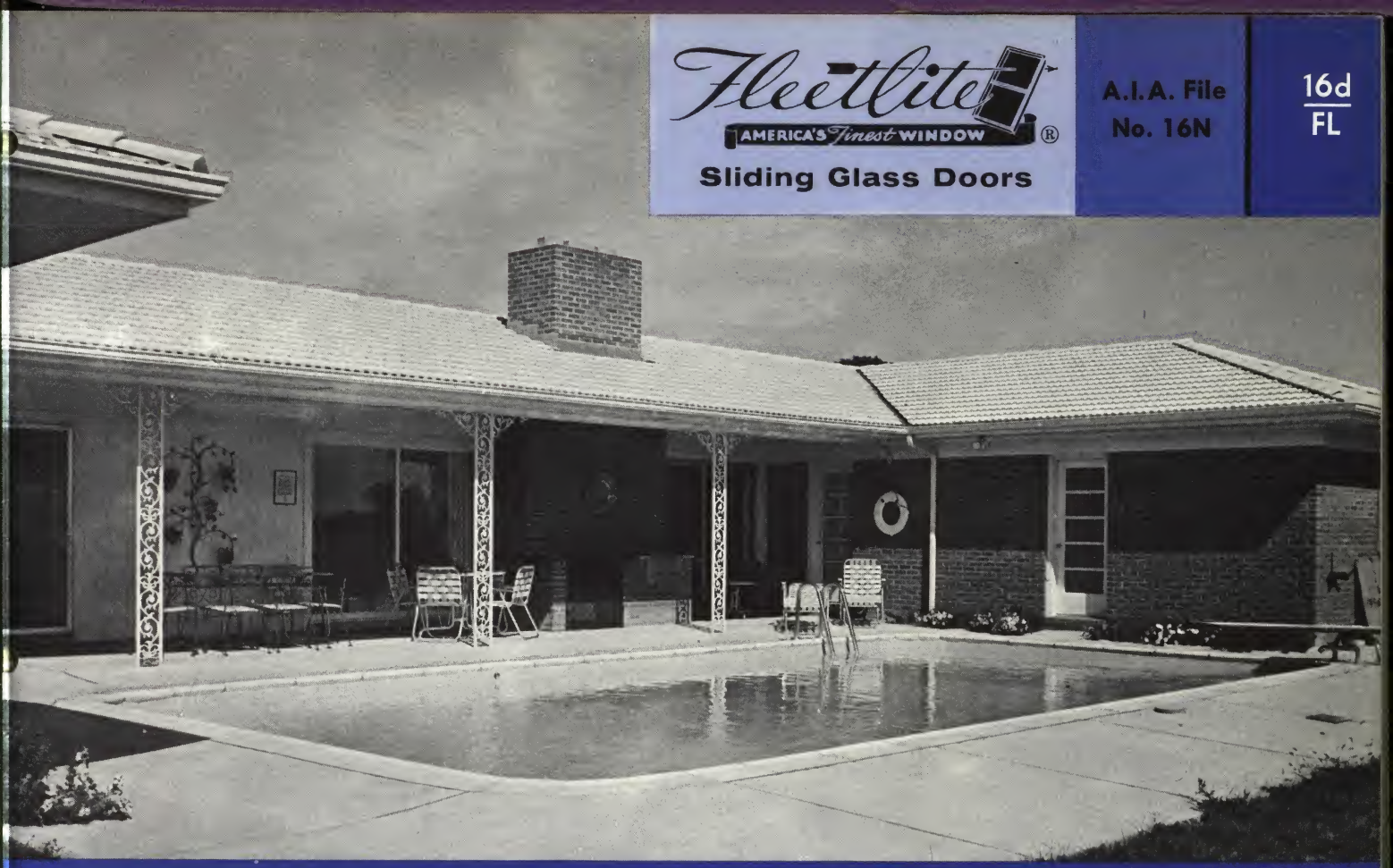
Fleetlite®

AMERICA'S Finest WINDOW

Sliding Glass Doors

A.I.A. File No. 16N

16d
FL



OXXO Exterior Sliding Door opens to the terrace and garden.

A house at home with nature

Spacious . . . casual . . . more livable. That's the new pattern for informal living which sliding glass doors will add to the home you're planning to build or remodel.

With modern Fleetlite Sliding Glass Doors, your indoor and outdoor living areas are integrated to create a seemingly uninterrupted flow of space. Actual floor limits appear to be extended as you frame a pleasant garden setting or open your home to terrace, sunshine and view.

Fleetlite offers a complete line of sliding doors and complementary fixed sash for every architectural application. Exterior doors with the exclusive "J" design threshold are especially engineered to permit easy access to terrace, porch or patio while providing complete protection against wind-blown rain and melting snow. These doors are designed for full inch insulating glass and the protection it affords against heat and cold but may be adapted to plate glass when used in sheltered installations. As sliding partitions within the home, Fleetlite Interior and Wall Pocket sliding doors add a light and airy look of spaciousness while effectively reducing noise and blocking air infiltration.

Beautiful coastal installation of Exterior Sliding Doors stops drifting sand and hurricane force winds and rain.

Weather is no problem

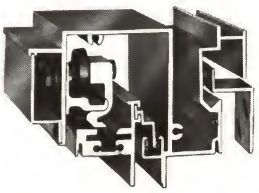
While extensive areas of glass add visual spaciousness and beauty to the modern home, such open planning often leads to weather problems—problems of water and air infiltration, of serious damage to costly carpets and fine floors. With the Fleetlite Exterior Sliding Glass Door, weather is no problem for this door has been especially designed for use under the most rigorous climatic conditions.

Advanced engineering and design make the Fleetlite Exterior Sliding Glass Door the only unit which can provide the positive protection required in northern climates.

Most sliding doors employ a bottom roller and track arrangement with a conventional flat sill protected only by a flexible mohair brush. This is adequate for temperate climates but it is not designed to withstand high winds and driving rains.

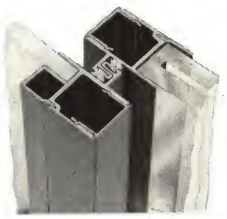
In contrast, Fleetlite Exterior Doors offer amazing all-weather security. An exclusive sill design consists of two full length sections with multiple weep holes for automatic water drainage . . . an adjustable weather sweep to block dirt, sand and air infiltration . . . and a special interlocking "J" design vent rail with an inverted sill cap and double weatherstripping. In recent tests, this sill arrangement not only kept air infiltration to a minimum but completely stopped simulated hurricane-force rains at wind velocities up to 100 mph.

In additional tests, the strength and durability of the top-hung suspension system was proved under weights far in excess of even the largest lites of insulating glass. Track and rollers were operated through more than 100,000 opening and closing cycles with no sign of wear—the equivalent of a lifetime of normal use.



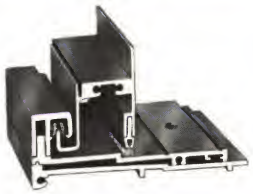
OVERHEAD TRACK

Top-hung design protects rollers and adjustable track from water or dirt, freezing or clogging. Sliding panels glide on steel ball bearing rollers in channel type double weatherstripping. Track also carries full size Fiberglas sliding screen.



TWIN-SEAL INTERLOCK

Double side-contact wool pile between the fixed and sliding panels forms a tight, interlocking seal and cushions against rattles. Air, water or wind-blown dirt and dust cannot infiltrate. Entire door perimeter is double weatherstripped.



EXTERIOR DOUBLE SILL

Double sill combines water drainage weep holes, inverted sill cap, interlocking "J" design vent rail and double weatherstripping to stop even hurricane-force rains and melting snow. Sloping threshold eliminates dirt traps, reduces cleaning.

LUXURY LOOK CUSTOM HARDWARE

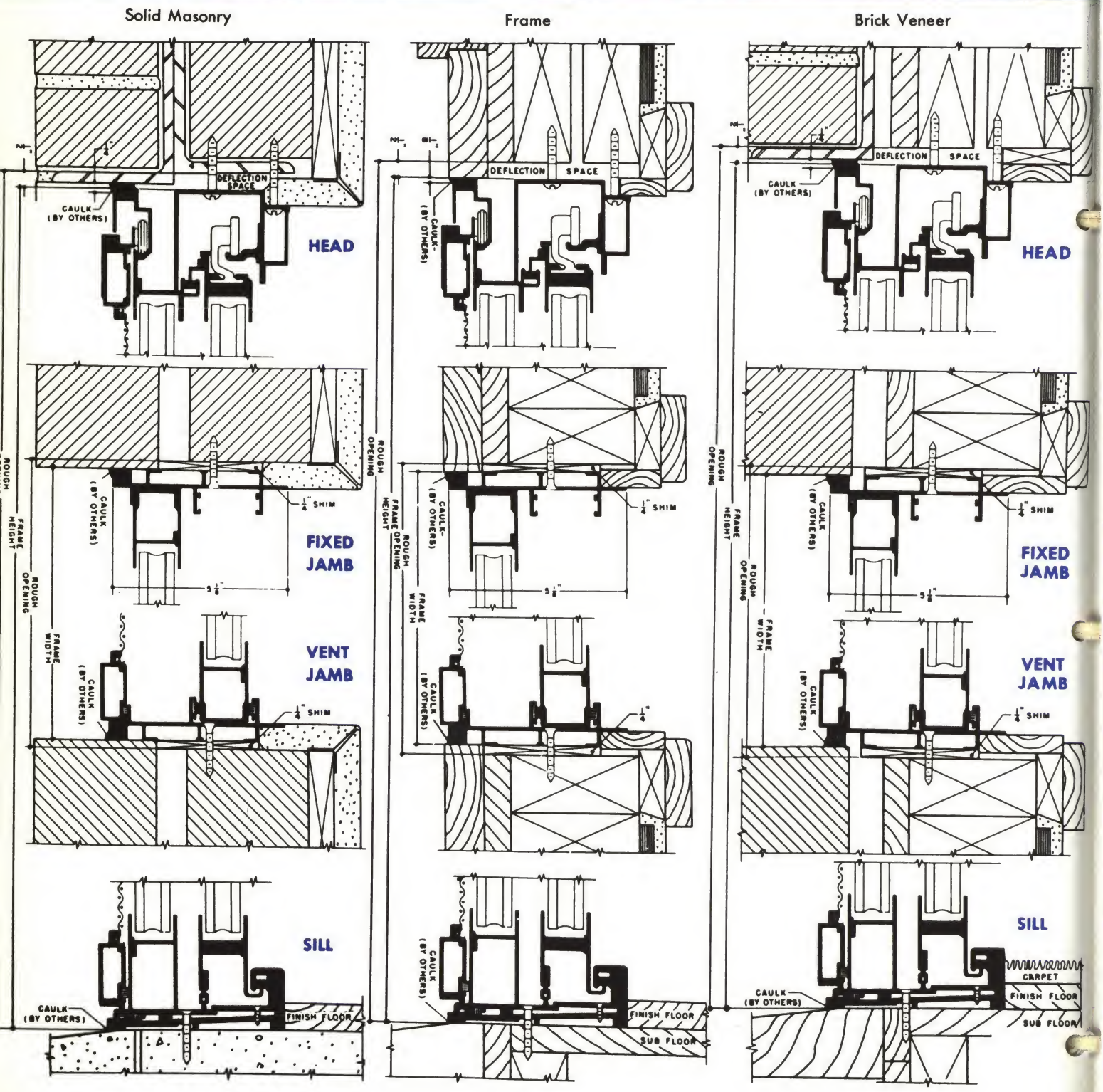
Standard handle of extruded aluminum has satin-like lustrous finish. Deluxe handle features beautiful clear Lucite grip in smartly flared design. All doors have a manually operated lock which can be engaged only from the inside. Exterior cylinder key lock available at extra cost.

FLEETLITE ALUMINUM SLIDING GLASS DOOR — Air Infiltration and Water Tests

Nominal Size	Sash Crack Perimeter	Wind Velocity	Air infiltration cfm/ft. of crack	Duration of test	Simulated Rain	Water Test Results
6′ x 6′10¾″	19.4′	50mph	0.79cfm	6 min.	Not tested	
6′ x 6′10¾″	19.4′	45mph	Not tested	15 min.	2″ per hr.	No water overflowed the Fleetlite exclusive double sill with inverted sill cap
6′ x 6′10¾″	19.4′	100mph	Not tested	15 min.	2″ per hr.	No water overflowed the Fleetlite sill even under simulated hurricane conditions

Fleetlite Exterior Sliding Glass Door

CONSTRUCTION DETAILS scale 3" = 1'0"



Fashion within the home

Pocket doors recess into the wall.

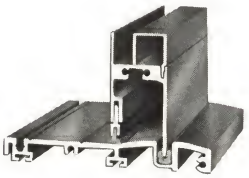
For the homeowner seeking the unusual yet functional in decorating ideas, Fleetlite offers a complete line of Interior and Wall Pocket Sliding Glass Doors for use as partitioning between rooms. These doors dress up any room with that look of added spaciousness and light yet, when closed, effectively reduce noise from adjoining rooms and check air infiltration.

Both the Interior and Pocket Doors are top-hung for silent, smooth operation and have a new flat sill which is level with the floor. Sliding panels of the Pocket Door recess into the wall for a maximum width opening.

Fleetlite Interior and Pocket Doors may be glazed with quarter inch plate or patterned glass or, if used in protected exterior locations, with full inch insulating glass. The Interior Door is available in the same sizes and styles as the standard exterior door; the Pocket Door in the same sizes as the OX, XO and OXXO style doors.

INTERIOR FLAT SILL

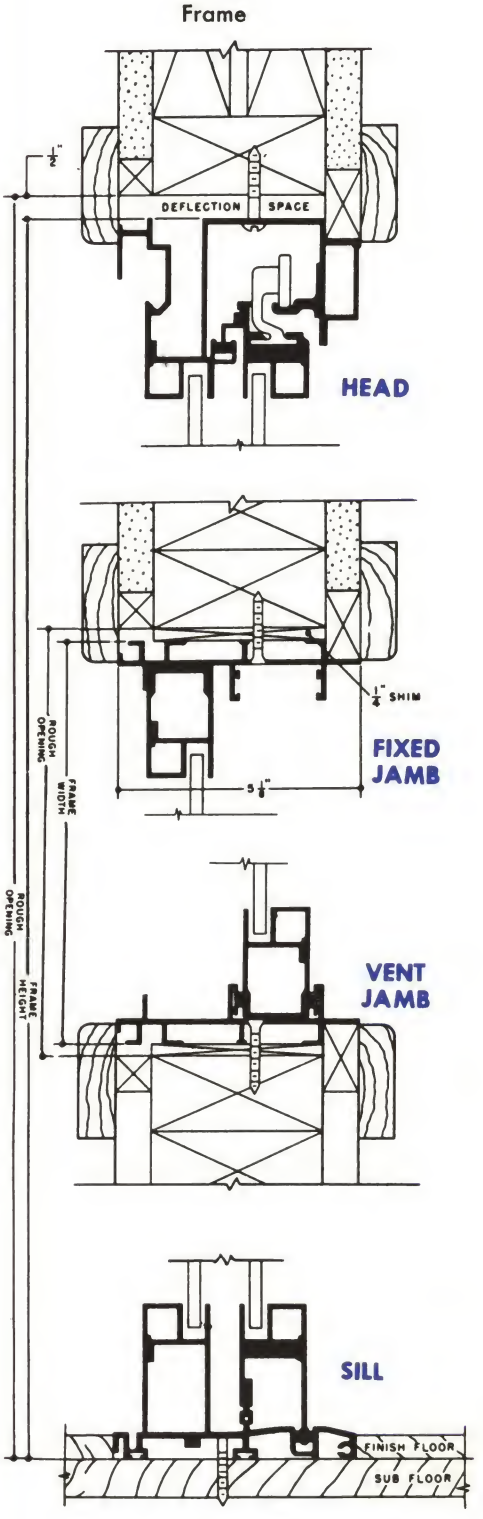
For Interior or Pocket Sliding Doors used within the home, a new flat sill which is level with the floor. Continuous sill weatherseal and double weatherstripping at the header and vent perimeter added if flat sill door is installed in protected exterior locations.



Interior Sliding Door separates living area and family room.

INTERIOR SLIDING DOOR

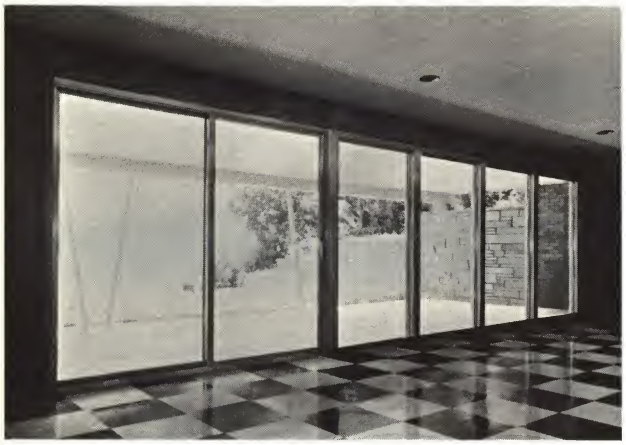
scale 3″ = 1′0″



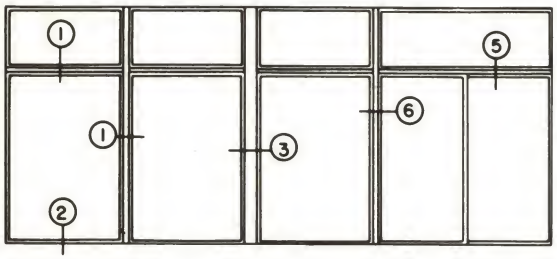
CONSTRUCTION DETAILS

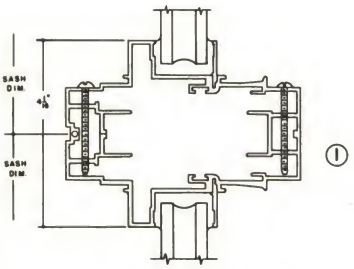
Matching Fixed Sash

Glass walls of any desired length now are practical with the development of an improved Fleetlite Matching Fixed Sash. Unique sill arrangements provide matching glass size and sight lines as well as automatic water drainage in exterior applications or unusually trim lines for interior partition use. Self mulling design assures greater strength. Sash may be glazed with ¼" plate, ⅝" insulating or 1" insulating glass.



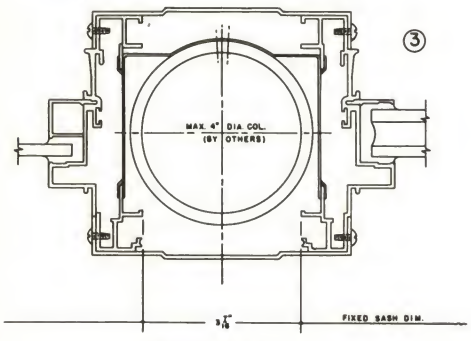
Glass area is extended across an entire wall with four Fixed Sash and a Sliding Door.





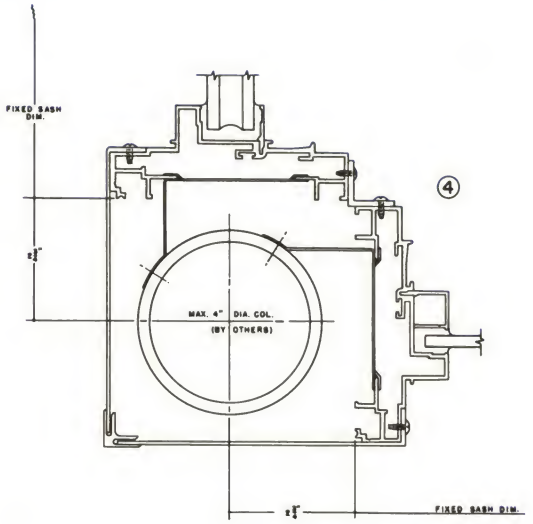
SELF MULLING FOR TRANSOMS OR JAMBS

Fixed Sash mulled together in transom arrangement or at jambs have box type construction for increased rigidity and strength. Self mulling means slim sight lines.



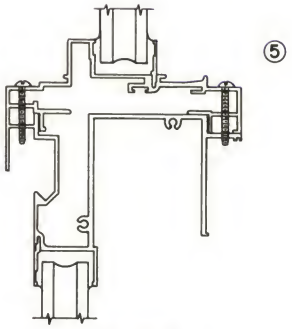
STRUCTURAL MULLION

Cross section of structural mullion used when multiple Fixed Sash require additional structural support. Mullion encases a load bearing column.



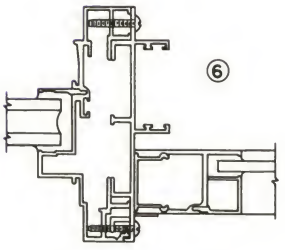
CORNER MULLION

Used with Fixed Sash when large glass area extends around a 90° corner. Corner Mullion encases a load bearing column.



TRANSOM OVER DOOR

When Fixed Sash is used as a transom over a sliding door, the sash is mulled directly to the door header. This increases the rigidity of the header and reduces sight lines.



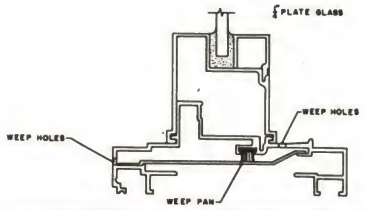
FIXED SASH MULLED TO DOOR

Self mulling jambs of Fixed Sash and Sliding Door form box construction for maximum rigidity. Overlap of ⅜" provides exceptionally trim lines.

Fixed Sash Sills

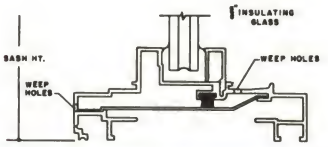
MODEL R SILL

Fixed Sash with adapter takes same glass size and sight lines as adjacent sliding door. Weep holes and pan provide automatic water drainage.



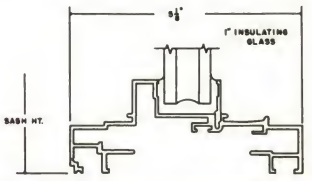
MODEL S SILL

The Model S sill has weep holes and pan for water drainage. Recommended when Fixed Sash is used in exterior locations where glass sight lines are not important. No adapter.



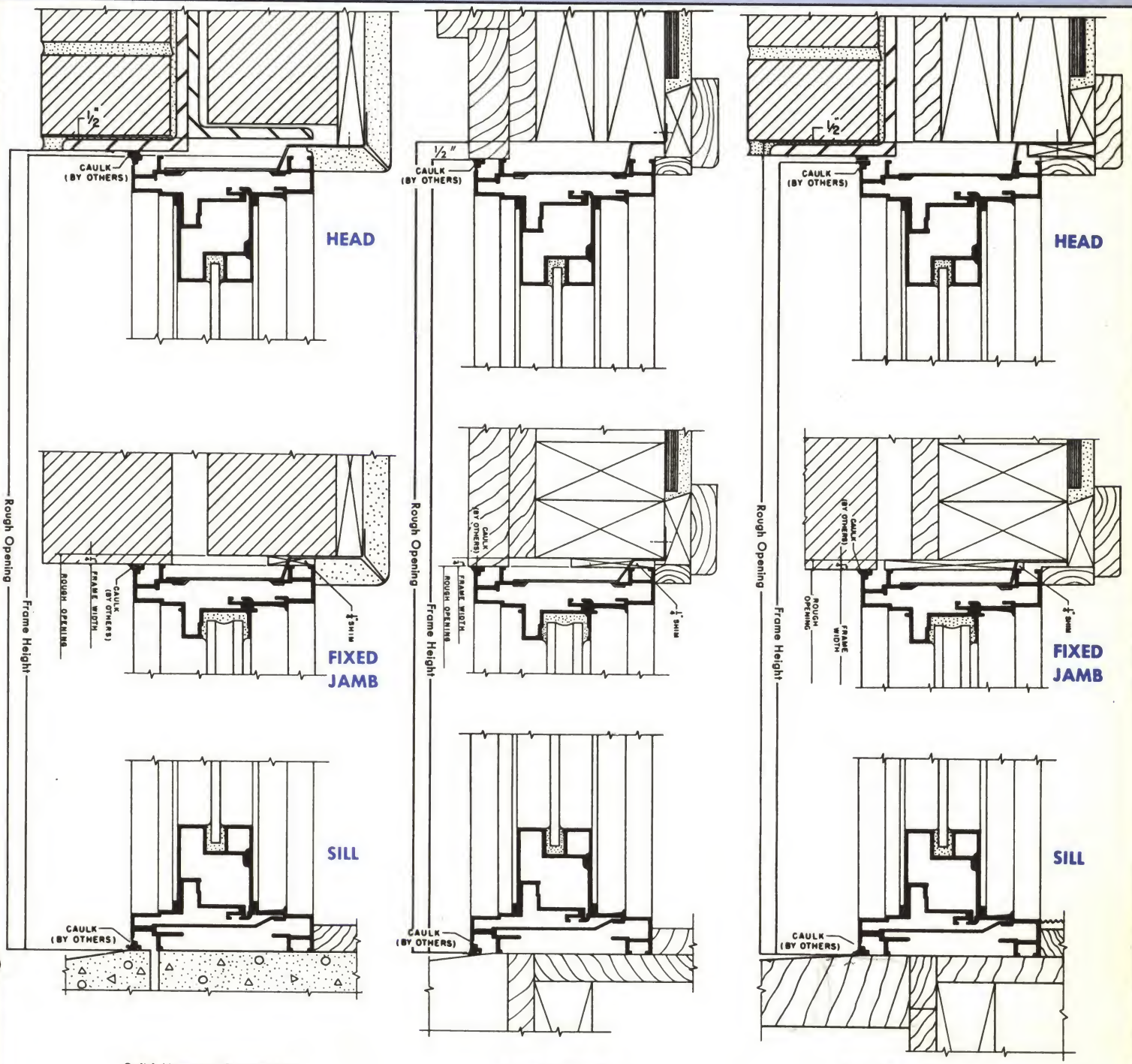
MODEL T SILL

Fixed Sash sill without adapter or weep pan. For interior use where sight lines are not important and moisture is no problem. When glass adapter is desired with interior sash, use Model R sill.



Fixed Sash Construction Details

Scale 3" = 1'0"



Solid Masonry Construction

Frame Construction

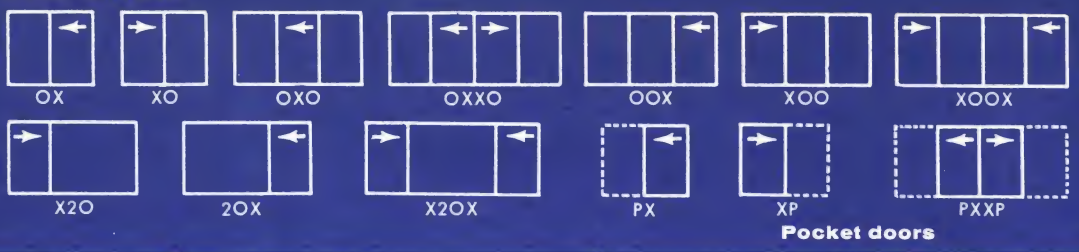
Brick Veneer Construction

Fleetlite®
AMERICA'S finest WINDOW

Sliding Glass Doors

All views from outside looking in.

DOOR STYLES



STANDARD DOOR SIZES

To accommodate standard (stock) Thermopane or Twindow 1″ insulating glass or plate glass.

CATALOG NUMBER	FRAME SIZE Width	Height	ACTUAL GLASS SIZE	ROUGH OPENING Width	Height
OX3376¾	6′	x6′10¾″	33″x76¾″	6′ 0½″	x6′11¼″
OX4576¾	8′	x6′10¾″	45″x76¾″	8′ 0½″	x6′11¼″
OX5776¾	10′	x6′10¾″	57″x76¾″	10′ 0½″	x6′11¼″
XO3376¾	6′	x6′10¾″	33″x76¾″	6′ 0½″	x6′11¼″
XO4576¾	8′	x6′10¾″	45″x76¾″	8′ 0½″	x6′11¼″
XO5776¾	10′	x6′10¾″	57″x76¾″	10′ 0½″	x6′11¼″
OXO3376¾	9′	x6′10¾″	33″x76¾″	9′ 0½″	x6′11¼″
OXO4576¾	12′	x6′10¾″	45″x76¾″	12′ 0½″	x6′11¼″
OXO5776¾	15′	x6′10¾″	57″x76¾″	15′ 0½″	x6′11¼″
OXXO3376¾	11′11″	x6′10¾″	33″x76¾″	11′11½″	x6′11¼″
OXXO4576¾	15′11″	x6′10¾″	45″x76¾″	15′11½″	x6′11¼″
OXXO5776¾	19′11″	x6′10¾″	57″x76¾″	19′11½″	x6′11¼″
OOX3376¾	8′10⅜″	x6′10¾″	33″x76¾″	8′10⅞″	x6′11¼″
OOX4576¾	11′10⅜″	x6′10¾″	45″x76¾″	11′10⅞″	x6′11¼″
OOX5776¾	14′10⅜″	x6′10¾″	57″x76¾″	14′10⅞″	x6′11¼″
XOO3376¾	8′10⅜″	x6′10¾″	33″x76¾″	8′10⅞″	x6′11¼″
XOO4576¾	11′10⅜″	x6′10¾″	45″x76¾″	11′10⅞″	x6′11¼″
XOO5776¾	14′10⅜″	x6′10¾″	57″x76¾″	14′10⅞″	x6′11¼″
XOOX3376¾	11′ 8⅞″	x6′10¾″	33″x76¾″	11′ 9⅜″	x6′11¼″
XOOX4576¾	15′ 8⅞″	x6′10¾″	45″x76¾″	15′ 9⅜″	x6′11¼″
XOOX5776¾	19′ 8⅞″	x6′10¾″	57″x76¾″	19′ 9⅜″	x6′11¼″

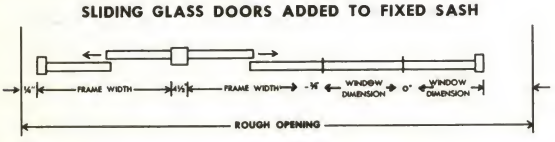
To accommodate plate glass or non-standard full inch Thermopane or Twindow insulating glass.

CATALOG NUMBER	FRAME SIZE Width	Height	ACTUAL GLASS SIZE		ROUGH OPENING Width	Height
X2O3376¾	8′9″	x 6′10¾″	Vent 33″x76¾″ Fixed 66″x76¾″		8′9½″	x6′11¼″
X2O4576¾	11′9″	x 6′10¾″	Vent 45″x76¾″ Fixed 90″x76¾″		11′9½″	x6′11¼″
X2O5776¾	14′9″	x 6′10¾″	Vent 57″x76¾″ Fixed 114″x76¾″		14′9½″	x6′11¼″
2OX3376¾	8′9″	x 6′10¾″	Vent 33″x76¾″ Fixed 66″x76¾″		8′9½″	x6′11¼″
2OX4576¾	11′9″	x 6′10¾″	Vent 45″x76¾″ Fixed 90″x76¾″		11′9½″	x6′11¼″
2OX5776¾	14′9″	x 6′10¾″	Vent 57″x76¾″ Fixed 114″x76¾″		14′9½″	x6′11¼″
X2OX3376¾	11′7½″	x6′10¾″	Vents 33″x76¾″ Fixed 66″x76¾″		11′8″	x6′11¼″
X2OX4576¾	15′7½″	x6′10¾″	Vents 45″x76¾″ Fixed 90″x76¾″		15′8″	x6′11¼″
X2OX5776¾	19′7½″	x6′10¾″	Vents 57″x76¾″ Fixed 114″x76¾″		19′8″	x6′11¼″

FORMULA FOR COMPUTING SPECIAL SIZE SLIDING DOORS

OX & XO frame width = 2 × glass width + 6″
OXO frame width = 3 × glass width + 9″
OXXO frame width = 4 × glass width + 11″
OOX & XOO frame width = 3 × glass width + 7⅜″
XOOX frame width = 4 × glass width + 8⅞″
X2O & 2OX frame width = total glass width + 6″
X2OX frame width = total glass width + 7½″
PX, XP & PXXP Pocket Door frame width = same frame width as OX, XO & OXXO style doors.
Rough opening width = frame width + ½″
Frame height = glass height + 6″ (all door styles)
Rough opening height = frame height + ½″

SLIDING GLASS DOORS ADDED TO FIXED SASH



An economical and practical method of expanding room glass area is to join Fixed Sash to Fleetlite Sliding Glass Doors. The same height glass is used as in the doors.

FIXED SASH SIZES

Catalog Number	Fixed Sash Width	Model R Sill Glass Size Width x Height	Model S & T Glass Size Width x Height
FS3376¾	36″	33″ x 76¾″	33″ x 79¾″
2FS3376¾	70⅜″	33″ x 76¾″	33″ x 79¾″
3FS3376¾	104¾″	33″ x 76¾″	33″ x 79¾″
4FS3376¾	139⅛″	33″ x 76¾″	33″ x 79¾″
FS4576¾	48″	45″ x 76¾″	45″ x 79¾″
2FS4576¾	94⅜″	45″ x 76¾″	45″ x 79¾″
3FS4576¾	140¾″	45″ x 76¾″	45″ x 79¾″
4FS4576¾	187⅛″	45″ x 76¾″	45″ x 79¾″
FS5776¾	60″	57″ x 76¾″	57″ x 79¾″
2FS5776¾	118⅜″	57″ x 76¾″	57″ x 79¾″
3FS5776¾	176¾″	57″ x 76¾″	57″ x 79¾″
4FS5776¾	235⅛″	57″ x 76¾″	57″ x 79¾″

FORMULA FOR COMBINING DOORS AND FIXED SASH

To obtain R.O. in width for any combination, add fixed sash frame widths, sliding door frame widths, mullion dimensions and end clearances as applicable. Fixed sash frame widths (2FS, 3FS, 4FS) = total glass width + 3″ + number of muntins (1⅜″). End clearances and mullion dimensions are charted below.

END CLEARANCES	
Sliding Door Adjacent to wall	¼″
Fixed Sash Adjacent to wall	¼″

Mullion Dimensions	Structural	Standard
Sliding Door mulled to Sliding Door	4½″	1″
Sliding Door mulled to Fixed Sash	4″	minus ⅜″
Fixed Sash mulled to Fixed Sash	3⅞₁₆″	0″

NOTE: When structural mullions are to be used, specify on order if fixed sash is to be mulled to the left or right of door from outside looking in.

ORDERING INSTRUCTIONS

All orders must specify glass to be used —¼″ plate or 1″ insulating glass. Catalog numbers refer to standard exterior doors with inverted sill. Following items, if required, must be specified on order:

Deluxe Lucite Handle — Screen
Cylinder Key Lock — Anodizing
Flat Sill as substitute for inverted sill

See Sweet's or write for information on Fleetlite Aluminum Double-hung or Horizontal Sliding Windows, Jalousie Windows and Doors, Sliding Mirror Doors.

SPECIFICATIONS

GENERAL: Sliding Aluminum framed doors on plans shall be FLEETLITE Sliding Doors as manufactured by FLEET OF AMERICA, INC., 2015 Walden Ave., Buffalo 25, New York.

MATERIALS & CONSTRUCTION: All sections shall be 6063S-T5 tempered heavy-gauge aluminum shapes with all joints accurately machined to insure a perfect fit. Head, sill and jamb sections shall provide a caulking pocket and brick or shingle stop on the exterior side and a plaster return flange on the interior side.

All sash shall be top hung to protect the rollers and track from water and dirt and to provide a flush sill design. Each sliding panel will roll on two grease packed steel ball bearing rollers. Exterior door sill frame shall consist of two full length sections to provide drainage through weep holes in the top sill. Durable rubber bumpers shall be attached to the frame jambs. Frame design shall allow convenient installation and removal of sash and screens at any time.

CUSTOM HARDWARE: Handle shall be of satin-like extruded aluminum finish. Clear Lucite pull-bar at extra cost.

Sliding doors shall have interior manually operated lock which can be engaged only from inside to prevent accidental lockout. Exterior cylinder lock available at extra cost.

WEATHERSTRIPPING: Door shall be double weatherstripped around entire perimeter of vent opening with finest quality wool pile weatherseal. Exterior door sill shall have channel type pile weatherseal in inverted sill cap to positively prevent entrance of blowing water or melted snow in case of snow build-up around door sill.

FINISH: All exposed aluminum shall have a bright smooth finish, free from defects. Alumiliting shall be done at additional cost when specified. All surfaces in contact with masonry or ferrous materials shall be given a coating of heavy zinc chromate primer or asphalt base paint by installer.

ERECTION: Erection shall be done by others under separate contract arrangement. Erect doors in prepared openings according to manufacturer's drawings. All installation screws to be supplied by the manufacturer.

GLAZING: Glazing shall be done by others under a separate contract. Glazing shall be done in accordance with the manufacturer's instructions.

SCREENS: Screens shall be made from aluminum extrusions of tubular box type section with top mounted nylon ball bearing rollers and fitted with Fiberglass screening secured with Vinyl spline. Screens shall be top hung in integral header track to protect rollers from dirt.

FLEET OF AMERICA, INC.
2015 Walden Avenue • Buffalo 25, N. Y.

EXECUTIVE HOUSE CHICAGO *Milton M. Schwartz & Assoc., Inc., Arch.* • *Wacker Const. Co., Contractor*

SLIDING

STATIONARY

INTERIOR - COMMERCIAL

MIRRORED DOORS

EXTERIOR AND INTERIOR

Glass Walls

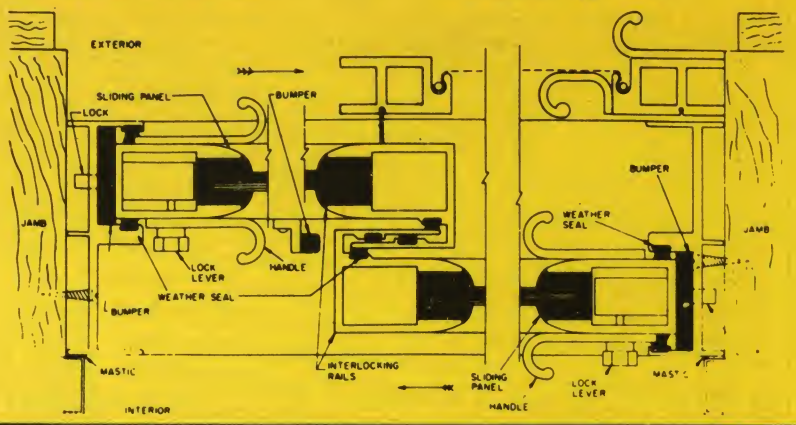
Glass SHOWER DOOR CO., INC. ALL PHONES FRANKLIN 2 0240
105 W. WACKER DRIVE • CHICAGO 1, ILLINOIS

CROSSROADS MOTEL CHICAGO *Robert Blum & Co., Arch. & Builder*

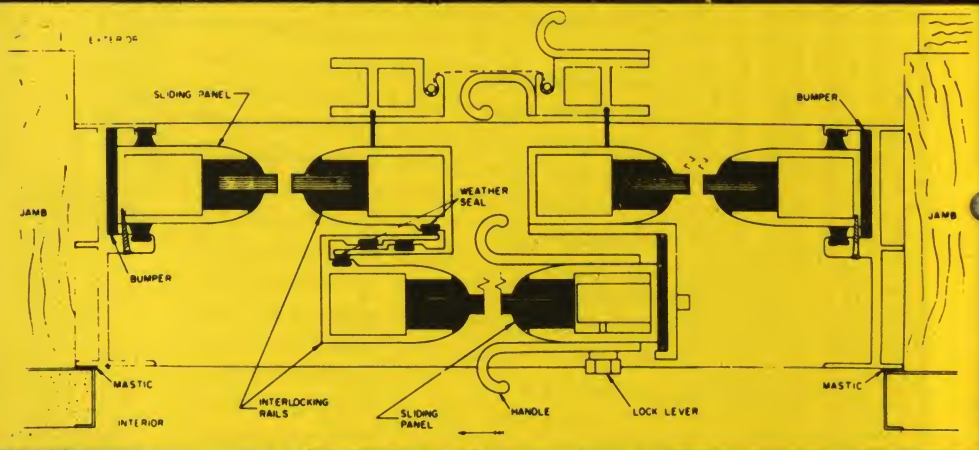
SLIDING GLASS DOORS

GLASS DETAILS • SCALE 3/8" = 1"

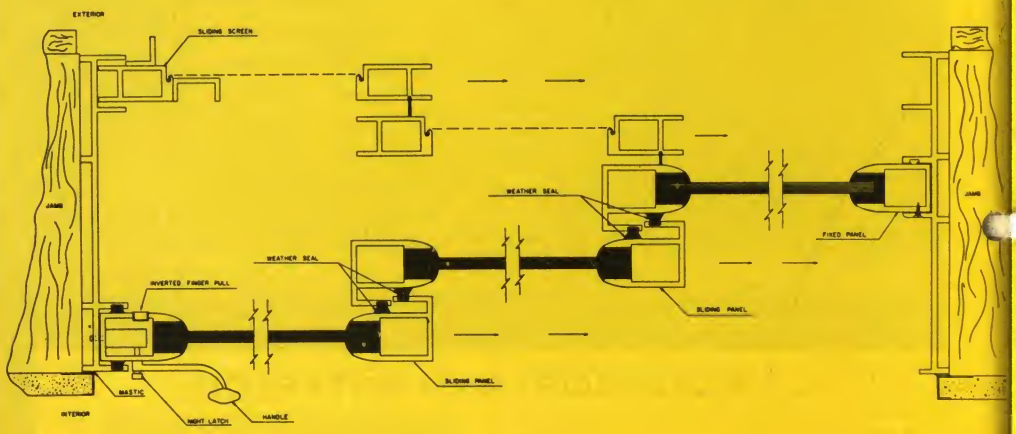
2 DOOR • 2 TRACK
G2 TG2



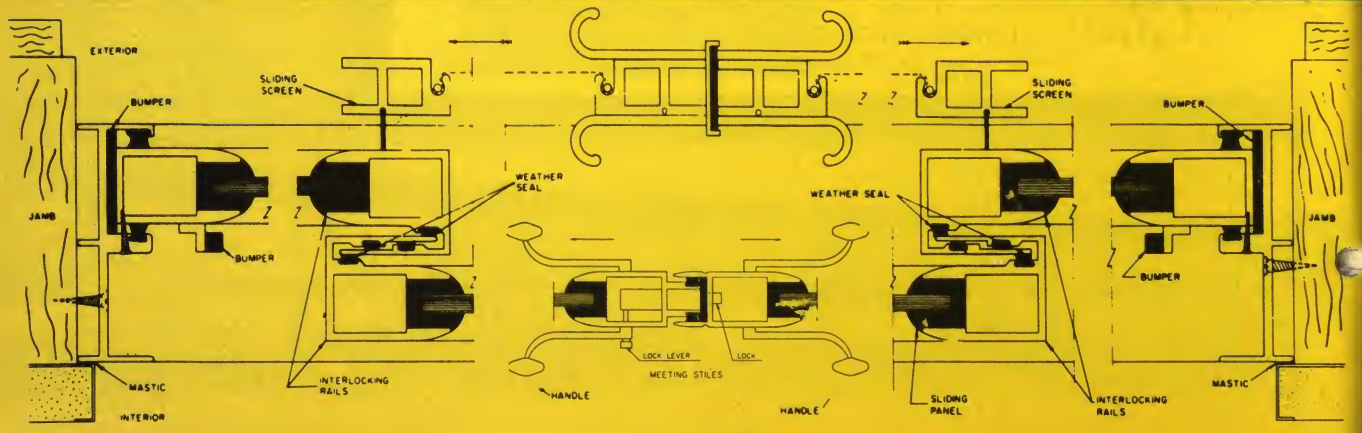
3 DOOR • 2 TRACK
G3 TG3



3 DOOR • 3 TRACK
3G3 3TG3



4 DOOR • 2 TRACK
G4 TG4



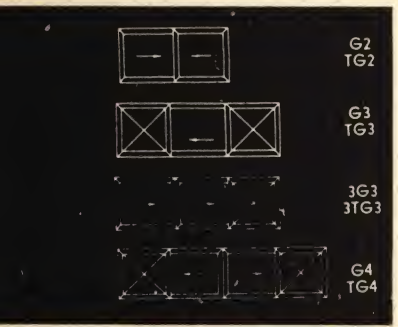
features . . . . . .

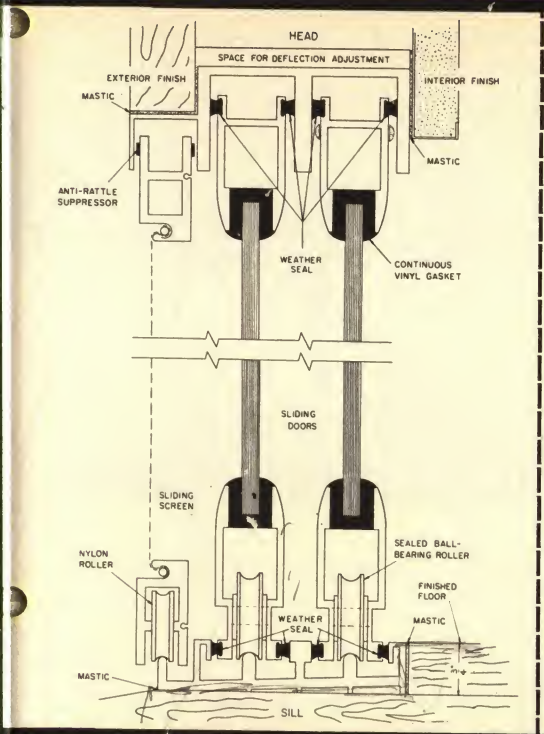
UTILITY: Finger-tip action Panels move silently on heavy duty, stainless steel roller bearings . . . close securely . . . self-locking. Heavy duty screen lifts out for cleaning glass—or for winter storage.

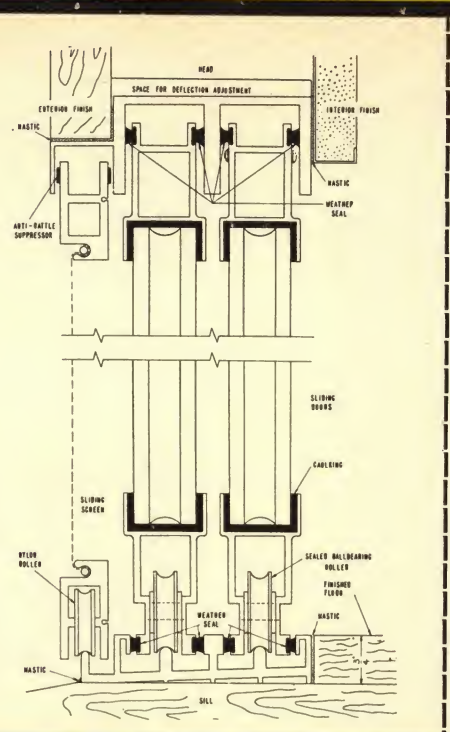
BEAUTY: Slender aluminum members. Modern styling and simplicity of design make GSD glass walls architecturally perfect for any setting.

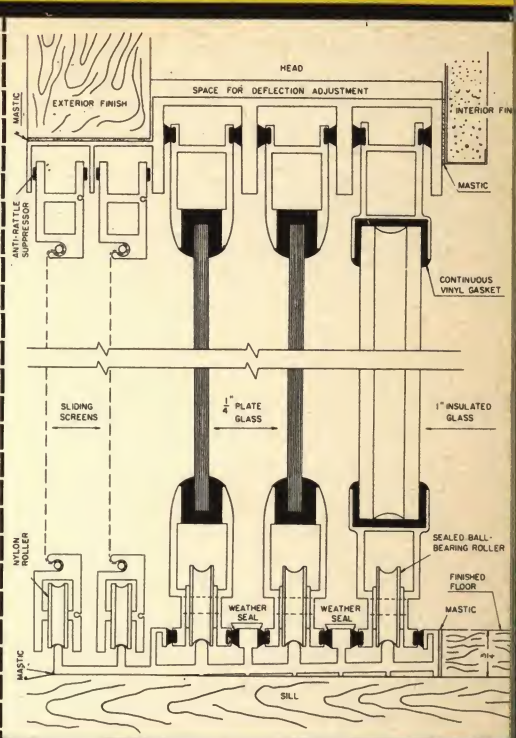
QUALITY: Tested under the most difficult weather conditions, GSD sliding walls prove equal or superior to normal construction in every way. All frame sections of specially engineered Alumilited (heavy anodized) aluminum extrusions for rigidity, smooth operation and permanence. Pressure glazed with lifetime vinyl continuous seal, and weather-sealed with wool pile stripping throughout.

ECONOMY: GSD glass walls start off with surprisingly low initial cost . . . maintenance costs are held to a minimum . . . they never require painting, and cannot rust, warp, swell or split.









For ¼" plate glazing

NO.	WIDTH	HEIGHT	GLASS SIZE
G-2	6'0"	6'8"	33¾"x 75"
G-2	8'	6'8"	45¾"x 75"
G-2	10'0"	6'8"	57¾"x 75"
G-2	12'0"	6'8"	69¾"x 75"
G-2	6'0"	8'2"	33¾"x 93"
G-2	8'	8'2"	45¾"x 93"
G-2	10'0"	8'2"	57¾"x 93"
G-2	12'0"	8'2"	69¾"x 93"
G-3	8'10⅝"	6'8"	33¾"x 75"
G-3	11'10⅝"	6'8"	45¾"x 75"
G-3	14'10⅝"	6'8"	57¾"x 75"
G-3	17'10⅝"	6'8"	69¾"x 75"
G-3	8'10⅝"	8'2"	33¾"x 93"
G-3	11'10⅝"	8'2"	45¾"x 93"
G-3	14'10⅝"	8'2"	57¾"x 93"
G-3	17'10⅝"	8'2"	69¾"x 93"
G-4	11'11⅜"	6'8"	33¾"x 75"
G-4	15'11⅜"	6'8"	45¾"x 75"
G-4	19'11⅜"	6'8"	57¾"x 75"
G-4	23'11⅜"	6'8"	69¾"x 75"
G-4	11'11⅜"	8'2"	33¾"x 93"
G-4	15'11⅜"	8'2"	45¾"x 93"
G-4	19'11⅜"	8'2"	57¾"x 93"
G-4	23'11⅜"	8'2"	69¾"x 93"

For 1" Thermopane or Twindow

NO.	WIDTH	HEIGHT	GLASS SIZE
TG-2	6'4⅜"	6'8"	36"x 75"
TG-2	8'4⅝"	6'8"	48⅛"x 75"
TG-2	10'5⅛"	6'8"	60⅜"x 75"
TG-2	6'4⅜"	8'2"	36"x 93"
TG-2	8'4⅝"	8'2"	48⅛"x 93"
TG-2	10'5⅛"	8'2"	60⅜"x 93"
TG-3	9'5⅜"	6'8"	36"x 75"
TG-3	12'5¾"	6'8"	48⅛"x 75"
TG-3	15'6½"	6'8"	60⅜"x 75"
TG-3	9'5⅜"	8'2"	36"x 93"
TG-3	12'5¾"	8'2"	48⅛"x 93"
TG-3	15'6½"	8'2"	60⅜"x 93"
TG-4	12'8½"	6'8"	36"x 75"
TG-4	16'9"	6'8"	48⅛"x 75"
TG-4	20'10"	6'8"	60⅜"x 75"
TG-4	12'8½"	8'2"	36"x 93"
TG-4	16'9"	8'2"	48⅛"x 93"
TG-4	20'10"	8'2"	60⅜"x 93"

For 1" Thermopane or Twindow

NO.	WIDTH	HEIGHT	GLASS SIZE
3TG-3	9'5⅜"	6'8"	36"x 75"
3TG-3	12'5¾"	6'8"	48⅛"x 75"
3TG-3	15'6½"	6'8"	60⅜"x 75"
3TG-3	9'5⅜"	8'2"	36"x 93"
3TG-3	12'5¾"	8'2"	48⅛"x 93"
3TG-3	15'6½"	8'2"	60⅜"x 93"

For ¼" plate glazing

NO.	WIDTH	HEIGHT	GLASS SIZE
3G-3	8'10⅝"	6'8"	33¾"x 75"
3G-3	11'10⅝"	6'8"	45¾"x 75"
3G-3	14'10⅝"	6'8"	57¾"x 75"
3G-3	17'10⅝"	6'8"	69¾"x 75"
3G-3	8'10⅝"	8'2"	33¾"x 93"
3G-3	11'10⅝"	8'2"	45¾"x 93"
3G-3	14'10⅝"	8'2"	57¾"x 93"
3G-3	17'10⅝"	8'2"	69¾"x 93"

SPECIFICATIONS

GENERAL: All doors and closure panels, both sliding and stationary, shall be as manufactured by GLASS SHOWER DOOR CO.

MATERIAL: All sections shall be of extruded 6063 aluminum. Fasteners shall be of stainless steel or other non-corrosive metal.

FINISH: All units shall be Alumilited (heavy anodized) finish.

HARDWARE: All sliding doors shall be equipped with inner-and-outer lifetime finish gold Anoplated grip-contoured handles and tamper-proof, adjustable, night latch. Cylinder locks optional at additional cost.

CONSTRUCTION: Shall be of uniform and symmetrical design. All sections shall be of continuous lengths within manufacturer's specified limits. All corners shall be precision mitred and held square and rigid with unexposed heavy corner angles and No. 10-32 machine screws. Sliding doors shall be lift-out, bottom-roller type, operating on heavy duty tandem roller bearings. Anti-rattle suppressors shall be mounted on top of sliding panels to insure silent operation. All sliding sections shall be of interlocking design.

INSULATION: All pertinent sections shall be weather stripped with mounted Schlegel mohair piling to insure positive weather seal throughout.

SCREENS: Shall be of extruded aluminum frames with No. 16 mesh aluminum wire screening. Screens shall roll on bottom track on Nylon bearings with Nylon guides at top.

ERECTION: Excluded, except where erection by the manufacturer is specified. All units shall be erected exactly plumb and level in accordance with the manufacturer's instructions. Caulking shall be furnished by others.

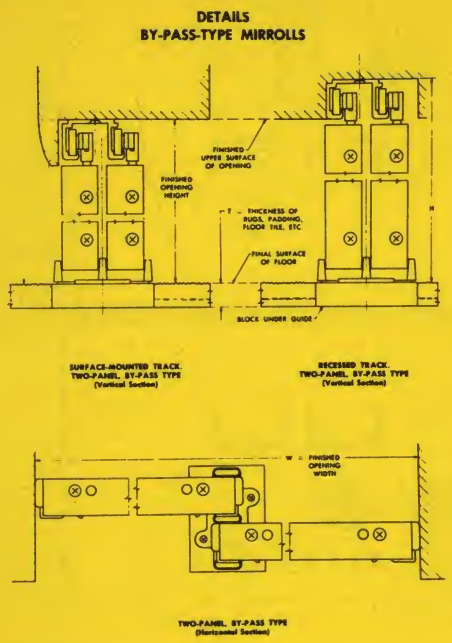
GLAZING: Excluded, except where glazing by the manufacturer is specified. All units shall be glazed by others in accordance with the manufacturer's instructions.

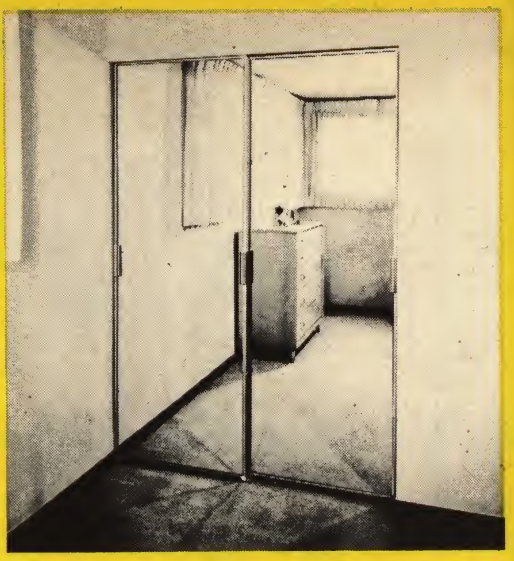
SHIPPING: All units are shipped K.D., ready for field assembly and installation.

SLIDING MIRRORED INTERIOR DOORS

by-passing! for closets! room dividers!

- 100% by-passing — no stops or overlap
- Each panel glides on 4 whisper-quiet, overhead ball-bearing rollers, mounted in pairs on self-levelling brackets
- Vertical roller adjustment 5/8"
- Frames finished in fine mat Anoplate; handles in contrasting bright Anoplate
- Available K.D. (less mirrors and hardboard) or completely assembled
- Standard sizes available from stock; custom sizes on request


DETAILS
BY-PASS-TYPE MIRROLLS
FINISHED UPPER SURFACE OF OPENING
FINISHED OPENING HEIGHT
T = THICKNESS OF RUGS, PADDING, FLOOR TILE, ETC
FINAL SURFACE OF FLOOR
BLOCK UNDER GUIDE
SURFACE-MOUNTED TRACK TWO-PANEL BY-PASS TYPE (Vertical Section)
RECESSED TRACK TWO-PANEL BY-PASS TYPE (Vertical Section)
W = FINISHED OPENING WIDTH
TWO-PANEL BY-PASS TYPE (Horizontal Section)



Standard Sizes

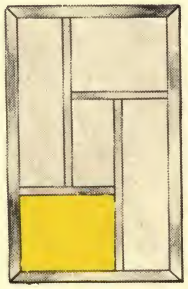
	WIDTH (a)	HEIGHT (b)
	3' — 4' — 5' 6' — 7' — 8' 10' — 12'	6'8" — 6'9¼" 8' or 8'1¼"

(a) Measured as the finished opening.
(b) Measured as top of track (recessed or not) to final floor surface, allowing for floor-tile, rugs, etc

STATIONARY WALLS AND FRAMES

for store fronts • curtain walls • picture walls
residential • commercial • industrial

- Custom symmetrical patterns with application of mullions afford unusual exterior and interior wall design
- Sections match sliding glass walls perfectly
- Custom and standard size in height and width
- Alumilited (heavy anodized) finish
- Furnished K.D. or glazed as specified



PARTIAL LIST OF MAJOR INSTALLATIONS

BISMARCK HOTEL, Chicago
BLACKSTONE HOTEL, Omaha
BURTON DIXIE CO., Chicago
CROSSROADS MOTEL, Chicago
CURTISS HOTEL, Minneapolis
DRAKE HOTEL, Chicago
EXECUTIVE HOUSE, Chicago
KEARNY HOUSING PROJECT, Tucson
MERCHANDISE MART, Chicago
RADISSON HOTEL, Minneapolis
SYLVANIA CORP., Chicago

GSD is a pioneer in the construction of sliding and stationary glass walls, doors and partitions. With years of experience, has come the ability to furnish units of permanent beauty and endurance. Available in stock sizes and custom sizes, and for most custom applications. They afford the user many avenues of distinction and utility.

FOR SHOWER DOORS, TUB ENCLOSURES, AND MEDICINE CHESTS, SEE OUR CATALOG IN SECTION 12c

ALL PHONES FRANKLIN 2-0240

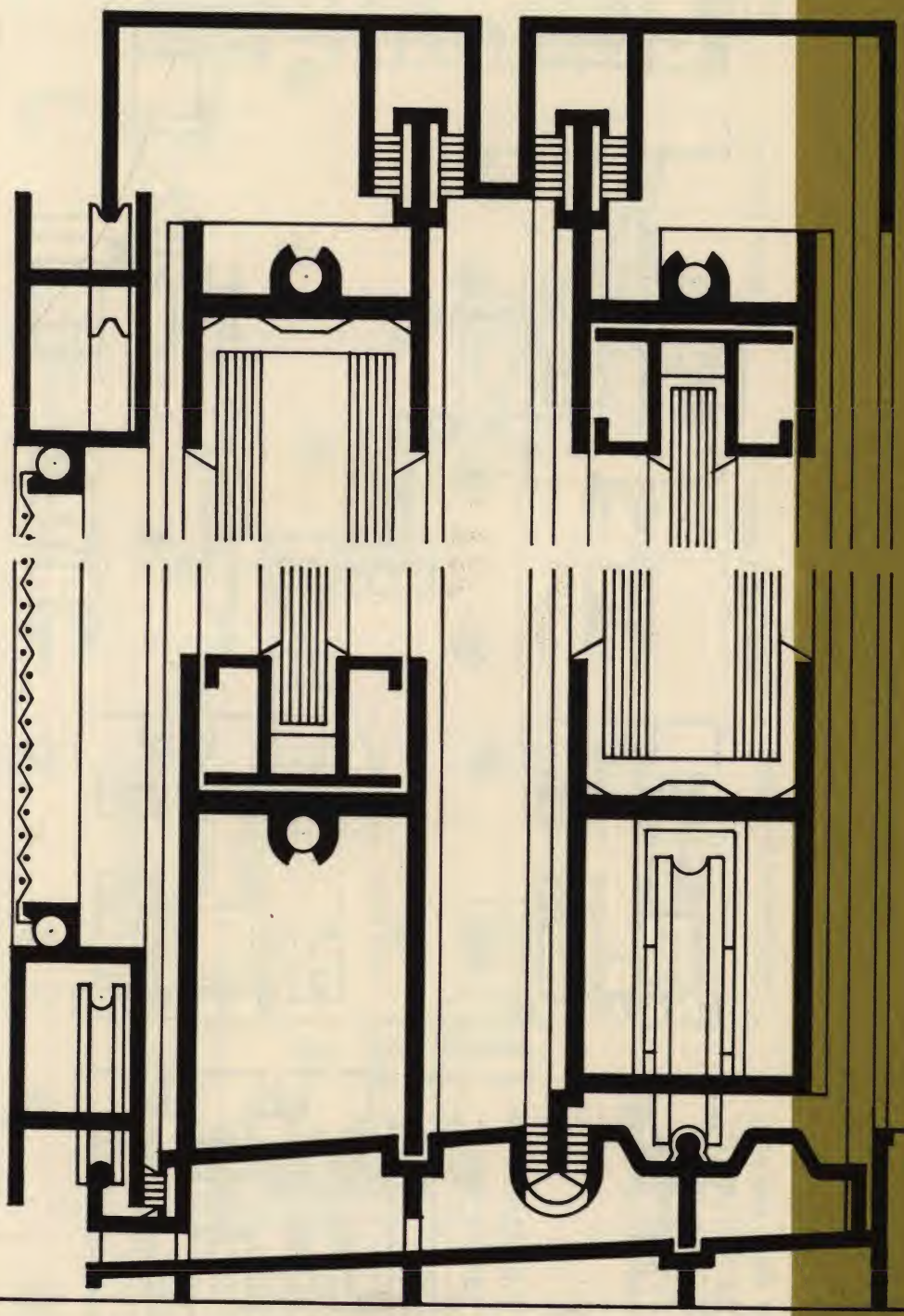
Glass SHOWER DOOR CO., INC. 105 W. WACKER DRIVE • CHICAGO 1

©1960

there is no equal

glide DOORS

16d
GLi



The new 1960 GLIDE door is the culmination of all the best engineering principles evolved, after years of testing and observation in the field, by industrial designer Abe Grossman, who has made GLIDE the touchstone for quality in fenestration.

The new GLIDE door affords the utmost flexibility in sliding and fixed panel combinations and is engineered to exceed 12 ft. in height when required.

The leakproof double sill is an innovation in sliding door construction, providing a track flush with the finish floor or carpet... ideal for use in commercial buildings, hospitals, schools, or the residence where danger of tripping is a consideration.

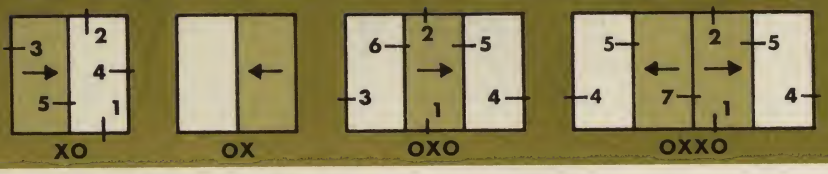
Because of superior weatherstripping, GLIDE has been proven weather-sealed in actual use under the most severe climatic conditions. For those who can afford the best, GLIDE is the soundest investment in economy, permanence and life-time beauty.

A.I.A. FILE No. 16 E

glide DOORS
there is no equal

STOCK TYPES

See chart for sizes on page 4



ADVANTAGES

STRENGTH

Though engineered for rugged use and to exceed 12 feet in height when required, GLIDE doors roll at finger-tip pressure because of the quality of the ball-bearing sheaves and the uniform surface of the scuff-proof stainless steel track.

GLAZING

Sash panes will accommodate single glass from 3/16" to 1/4" thick, and double insulating glass from 5/8" to 1" thick.

BEAUTY OF SIGHT LINE

The aluminum sections forming the sash panels present a clean, rectangular appearance, unmarred by any visible molding or glass bead, as usually is the case.

LEAKPROOF

The double-seal wool pile around the complete perimeter of each sliding panel assures perfect weather control against air and water leakage. The revolutionary double sill, flush with the finish floor, is contoured to receive the weatherstripped tongue on the bottom sash rail. This positively prevents water leakage even under the most severe wind and rain conditions.

STANDARD FINISH

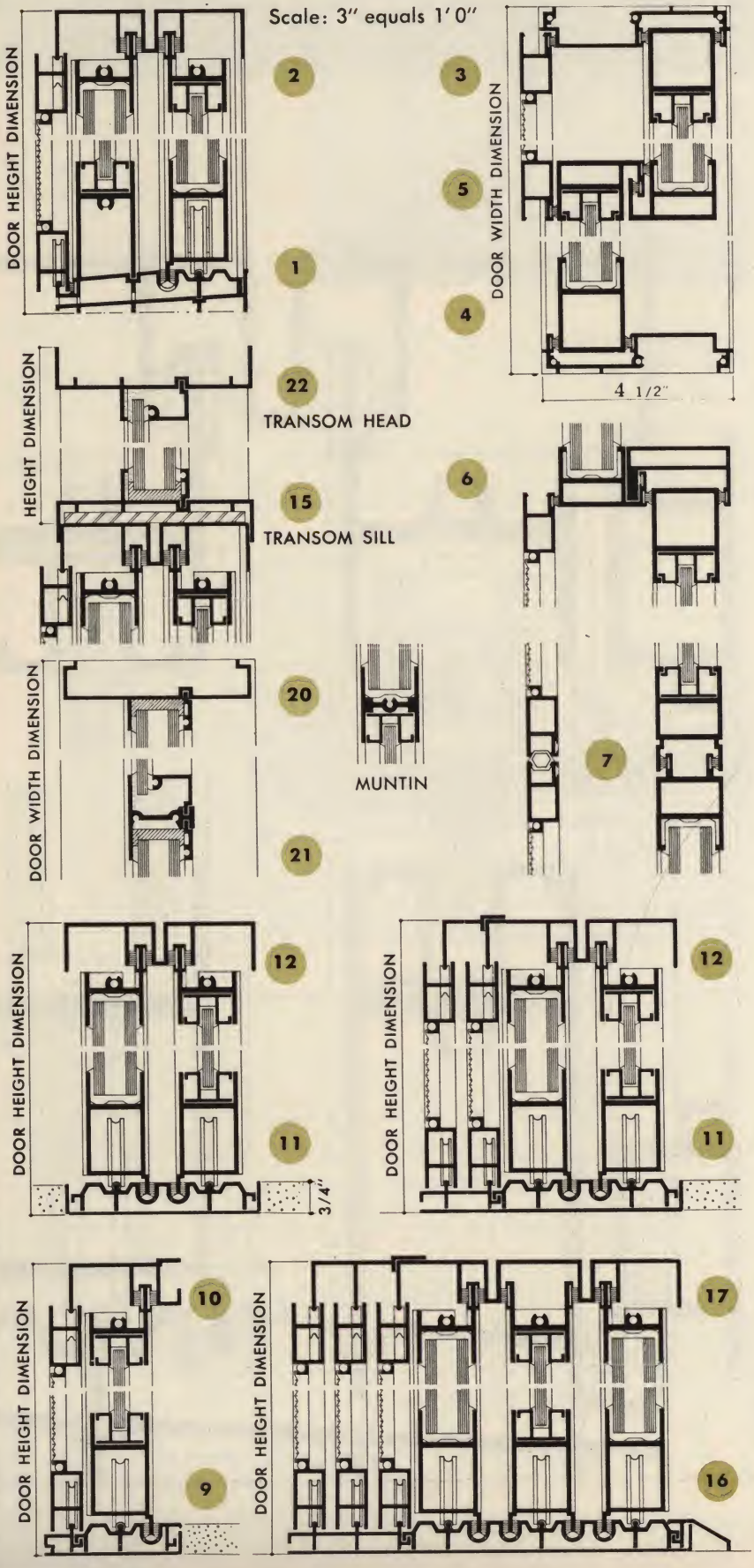
All GLIDE doors are alumilited in accordance with ALCOA specifications 204-R1.

The smartest design in sliding door hardware
EXTERIOR LOCKING HARDWARE designed for compatible appearance with interior hardware

TYPICAL DETAILS

Full size details available on request

Scale: 3" equals 1' 0"

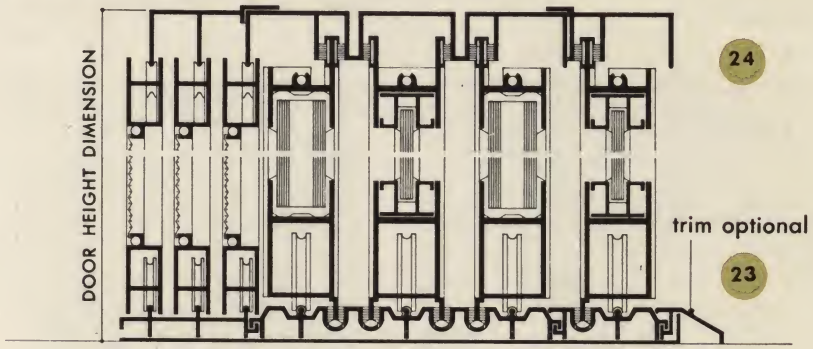


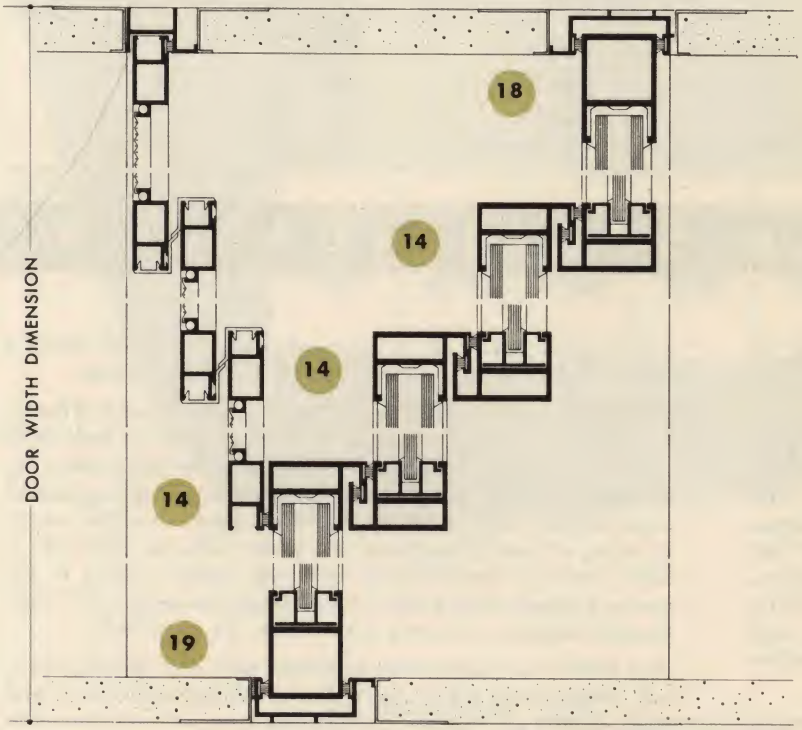
glide DOORS
there is no equal

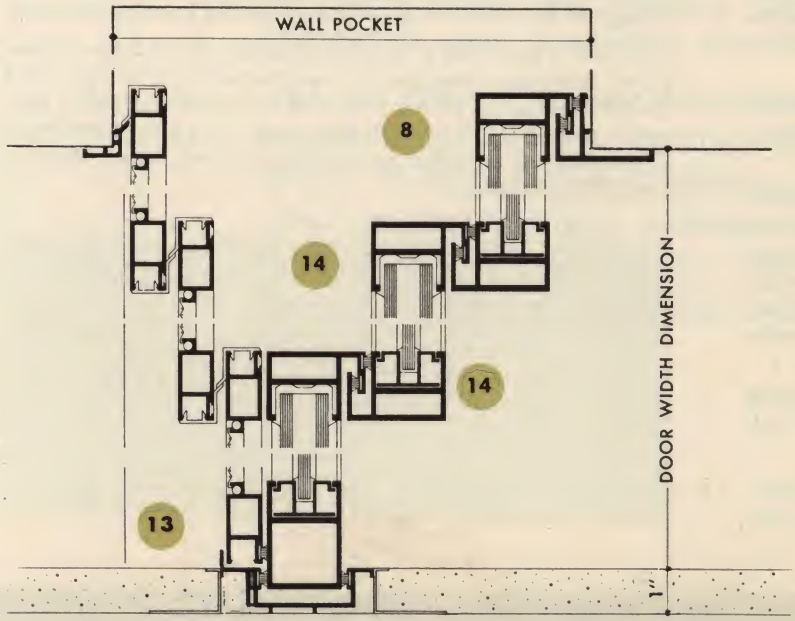
SIZES FOR ALL CUSTOM DOOR TYPES ON THIS PAGE MFGD. TO ORDER

TYPICAL DETAILS

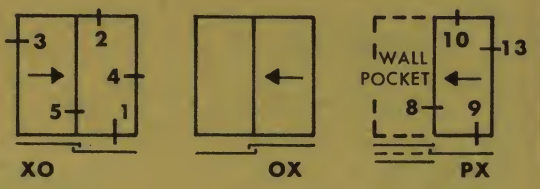
Scale: 3" equals 1' 0"

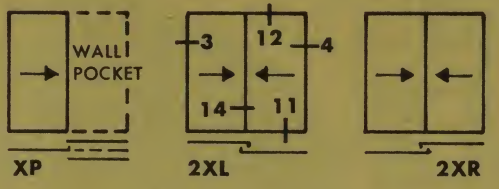


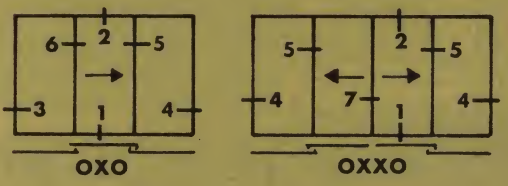


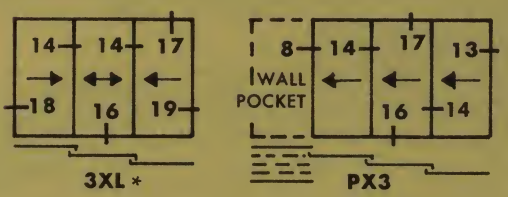


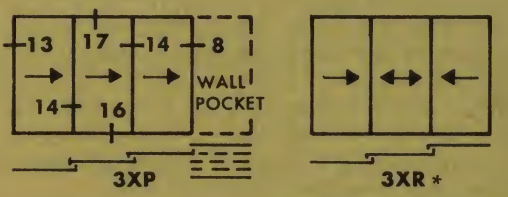
CUSTOM TYPES

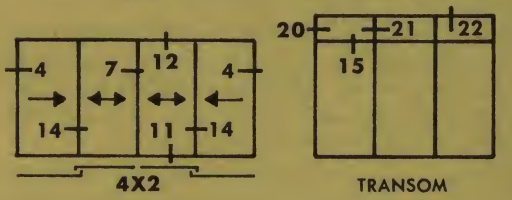


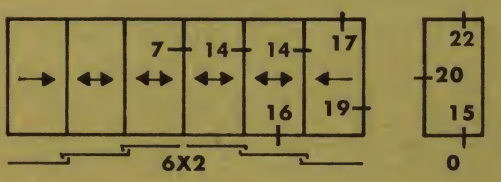


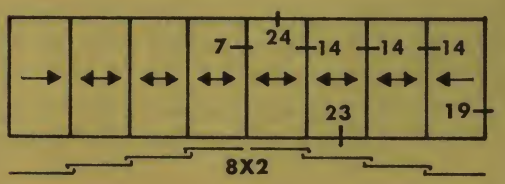












* available **4XL** **4XR**

STOCK TYPES AND SIZES

DOOR TYPES viewed from exterior	DOOR SIZE width	DOOR SIZE height	STOCK NO.	GLASS SIZE width only all heights 76¾"	ROUGH OPENING all heights 6'-10½"
XO	5'-11"	6'-10"	G2- 6	33"	5'-11½"
	7'-11"	6'-10"	G2- 8	45"	7'-11½"
	9'-11"	6'-10"	G2-10	57"	9'-11½"
OX	5'-11"	6'-10"	G2- 6	33"	5'-11½"
	7'-11"	6'-10"	G2- 8	45"	7'-11½"
	9'-11"	6'-10"	G2-10	57"	9'-11½"
OXO	8'-10¼"	6'-10"	G3- 9	33"	8'-10¾"
	11'-10¼"	6'-10"	G3-12	45"	11'-10¾"
	14'-10¼"	6'-10"	G3-15	57"	14'-10¾"
OXXO	11'- 8⅞"	6'-10"	G3-12	33"	11'- 9⅜"
	15'- 8⅞"	6'-10"	G3-16	45"	15'- 9⅜"
	19'- 8⅞"	6'-10"	G3-20	57"	19'- 9⅜"

U.S. Patents 2627092 and 2704866

Copyright, 1959, Glide Windows, Inc.
Printed in U.S.A.

ARCHITECTURAL SPECIFICATIONS

GENERAL: Aluminum sliding doors shown on plans shall be manufactured by GLIDE WINDOWS, INC.

MATERIAL AND CONSTRUCTION: GLIDE doors shall be constructed of heavy gauge extruded aluminum 6063-T5 alloy. Frame members, consisting of sill, head and jamb sections, shall be so joined that they will be water-proof and twist-proof. The sill shall consist of an upper and lower section, the upper section receiving the weatherstripped tongue of the bottom sash rail and provided with weep-holes for vertical water drainage to the lower sill section then to the exterior. Top of sill shall be flush with the finish floor. The stainless steel track cap shall be roll-formed 22-gauge type 302 stainless steel and shall be securely snap-fitted to the sill track.

Door stiles shall be constructed of tubular extruded sections, of .095 average thickness, coped at each end to receive the top and bottom rail members, which are thus telescoped to a depth equaling the width of the stiles. The stiles shall then be bolted securely to the ends of the rails.

Sliding panels shall roll on sealed and packed ball-bearing sheaves with nylon rims. One sheave shall be adjustable without removing panel from frame.

WEATHERSTRIPPING: Weatherstripping in jambs, interlocking stiles, top and bottom rails shall be metal-backed, moth and mildew-proof silicoted wool pile, *double-set* in continuous lengths so that all weatherstripping is under equal compression the complete perimeter of the sash. Telescopic corner joints shall allow the weatherstripping in the top and bottom rails to maintain contact with tracks along the entire width of sash.

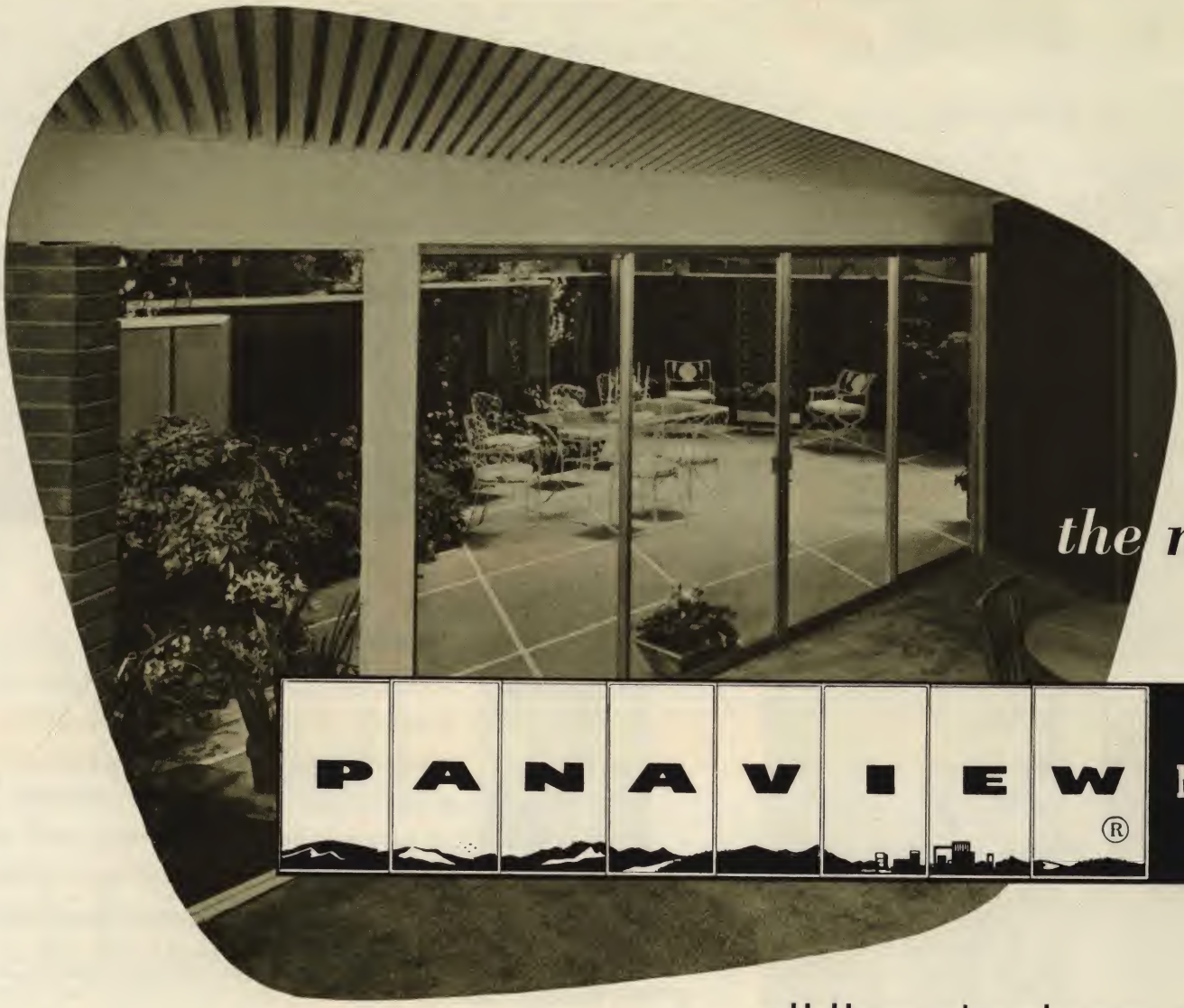
HARDWARE: Sliding panels shall be provided with a GLIDE jam-proof, manually operated latch (Schlage cylinder lock provided when specified).

FINISH: All exposed aluminum on GLIDE doors shall be Alumilited in accordance with Aluminum Company of America's specification 204-R1. All unexposed steel components shall be stainless steel or aircraft specification cadmium plated.

SCREENS: GLIDE door screens shall be manufactured of heavy duty, tubular extruded frames, with a ¾" depth of web fitted with 18 x 14 aluminum wire mesh and shall roll horizontally on bottom track and be guided on top track by spring-loaded nylon rollers. Screens shall have metal-back wool pile insect-proofing at interlocking stiles and jambs. (Screens over 6' 2" in width must be manufactured with one vertical muntin in the center because screen mesh is not available over 6' 0" wide. Special location of screen muntin may be specified.)

GLAZING: All panels shall be glazed with vinyl glazing channel, vulcanized at the corners to form a continuous band around the perimeter of the glass. GLIDE sash panels will accommodate glass from 3/16" to 1" thick, as specified, with no dimensional change in the cross-section of the aluminum framing members.

ERECTION (included in another contract). Erect doors in prepared openings according to manufacturer's drawings. Door frames must be set plumb and level so that sliding panel shall retain proper weathering contact with the frame. Installation screws shall be provided by the manufacturer. Mastic shall be furnished by others.



the new

PANAVIEW®

MARK III

sliding aluminum doors

GLIDE WINDOWS, INC., manufacturer of the famous GLIDE and PANAVIEW doors and windows, introduces with pride the new PANAVIEW Mark III sliding door.

This unit achieves the near impossible by employing, with very little modification, all of the important patented features of the high-quality PANAVIEW Mark IV series at a price competitive with any other metal sliding door. Available in panels with single glass or ⅝" Thermopane, the Mark III is sold as a complete shop glazed package, avoiding the additional expense of field glazing.

SALIENT FEATURES OF PANAVIEW MARK III

AVAILABLE IN SINGLE OR DOUBLE GLAZED UNITS.

100% DOUBLE WEATHERSTRIPPING THROUGHOUT.

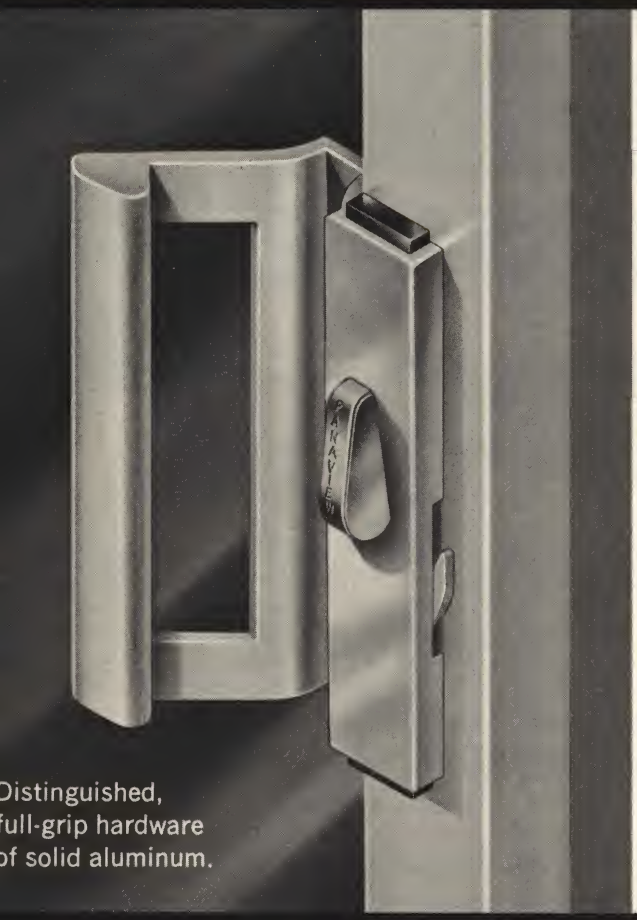
BALL BEARING ROLLERS
ADJUSTABLE without removing sash from frame.

PATENTED, TELESCOPIC SASH JOINT CONSTRUCTION.

CONDENSATION GUTTER AT SILL.

INTEGRAL SILL EXTENSION for stucco ground.

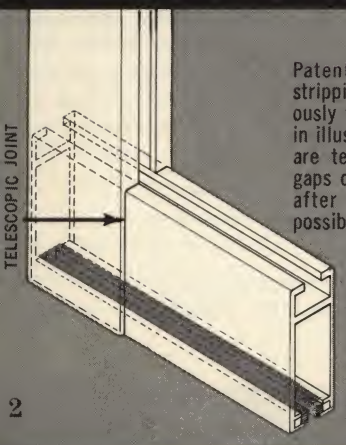
ANODIZED SATIN FINISH.



Distinguished,
full-grip hardware
of solid aluminum.

The PANAVIEW line was designed and engineered by Abe Grossman, who created the famed GLIDE windows and doors and GRID-WALL curtainwall products now used and acclaimed the world over. Mr. Grossman, an industrial designer with many years of architectural training, first produced the GLIDE line in 1946. GLIDE WINDOWS, INC., was the first company in the United States to mass-produce aluminum horizontal sliding windows and doors. Since the beginning, the GLIDE line has been regarded as unequalled for quality of workmanship and engineering. It is this background plus the intimate understanding of these architectural products in relation to building construction that has enabled Mr. Grossman to create the PANAVIEW door with the outstanding qualities that have made it **the most imitated door on the market.**

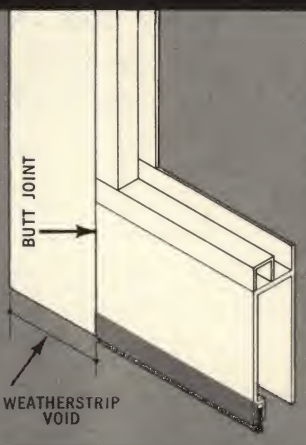
COMPARE THIS PATENTED PANAVIEW FEATURE WITH CONVENTIONAL CONSTRUCTION



Panaview

Patented telescopic joint permits weatherstripping in top and bottom rails to run continuously for the full width of sash (see gray area in illustration at left). Because the ends of rails are telescoped completely into the stiles, no gaps can possibly appear at these joints, even after years of hard usage, eliminating the possibility of leakage.

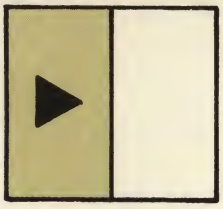
Patent No. 2704866



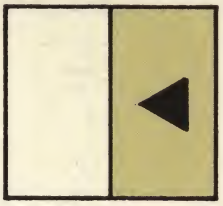
Conventional

In conventional sash construction, rails butt-join to stiles. Weather stripping, housed in rails, also stops at this joint or is left to protrude unsupported. This creates a weatherstrip void the complete width of the stile. The void is left as is, or patched in an effort to provide continuous weatherstripping. This makeshift detail is the basic reason for air and water infiltration at these areas.

Exposed butt joint between rails and stiles of sash is not waterproof. After a short period of normal use, this joint will widen and cause perpetual trouble.



TYPE XO



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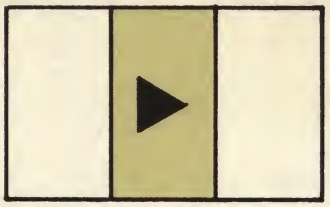

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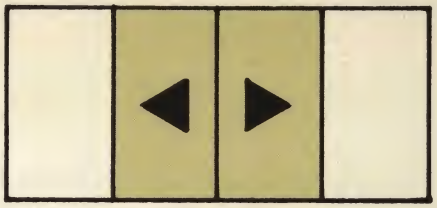
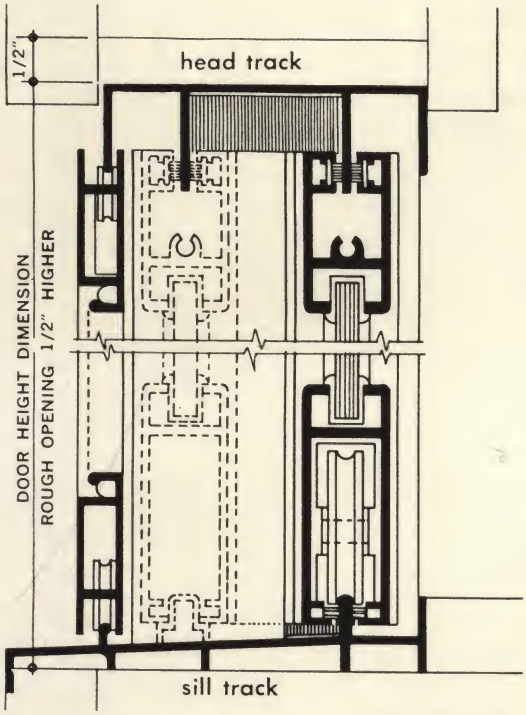
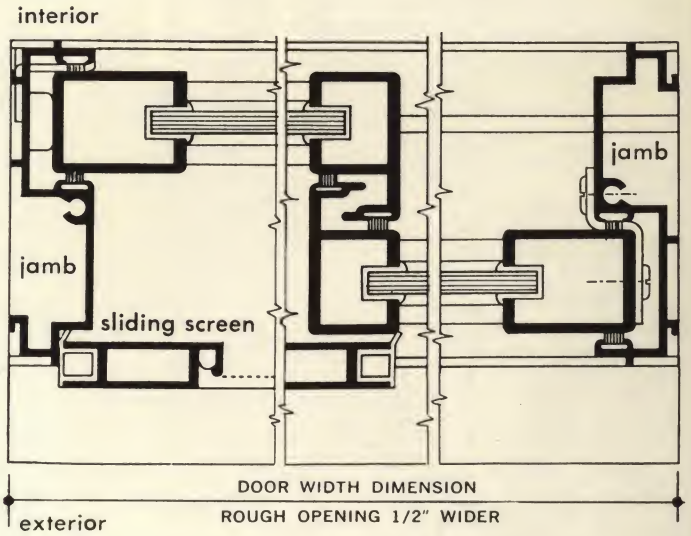


TYPE OXXO

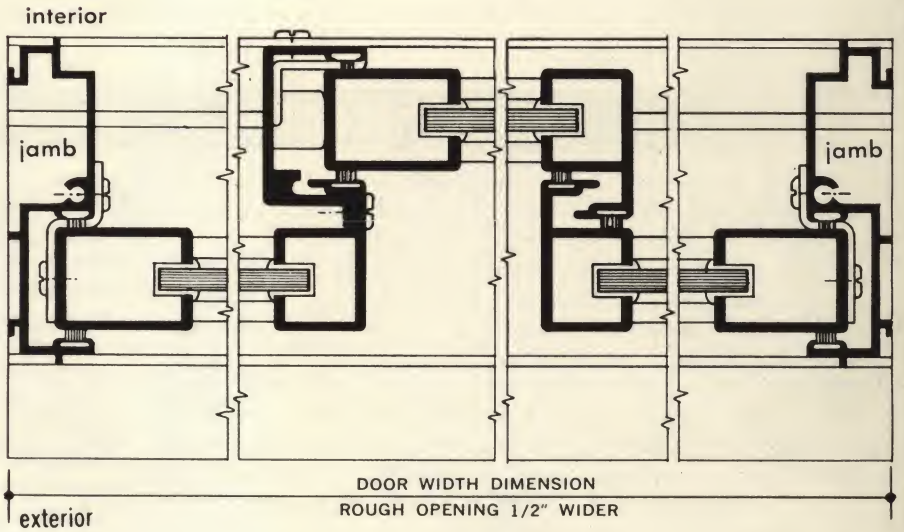


½ FULL SIZE DETAILS

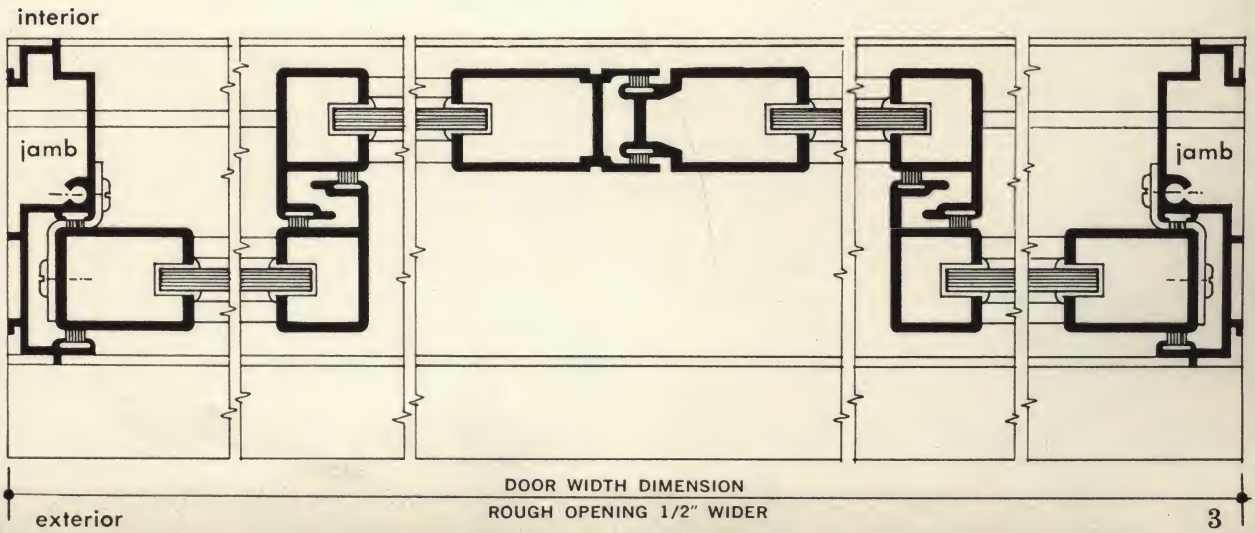
Full size details
available upon request.



plan section
TYPE XO



plan section
TYPE OXO



plan section
TYPE OXXO

PANAVIEW® MARK III

STOCK TYPES AND SIZES

DOOR TYPES viewed from exterior	DOOR SIZE width only all heights 6′-9″	STOCK NO. single crystal glass	STOCK NO. 5/8″ double crystal glass	GLASS SIZE width only all heights 76″	ROUGH OPENING all heights 6′-9½″
XO	5′-11½″ 7′-11½″ 9′-11½″	C2- 6 C2- 8 C2-10	CC2- 6 CC2- 8	34″ 46″ 58″	6′- 0″ 8′- 0″ 10′- 0″
OX	5′-11½″ 7′-11½″ 9′-11½″	C2- 6 C2- 8 C2-10	CC2- 6 CC2- 8	34″ 46″ 58″	6′- 0″ 8′- 0″ 10′- 0″
OXO	8′-10¾″ 11′-10¾″ 14′-10¾″	C3- 9 C3-12 C3-15	CC3- 9 CC3-12	34″ 46″ 58″	8′-11¼″ 11′-11¼″ 14′-11¼″
OXXO	11′-10⅞″ 15′-10⅞″ 19′-10⅞″	C4-12 C4-16 C4-20	CC4-12 CC4-16	34″ 46″ 58″	11′-11⅜″ 15′-11⅜″ 19′-11⅜″

*U.S. Patent No. 2704866

Copyright, 1958, Glide Windows, Inc. (Panaview)
Printed in U.S.A.

Architectural Specifications

GENERAL: Aluminum sliding doors shown on plans shall be PANAVIEW Mark III Doors* as manufactured by Glide Windows, Inc., North Hollywood, California.

MATERIAL AND CONSTRUCTION: PANAVIEW Mark III doors shall be constructed from heavy gauge extruded aluminum of 6063-T5 alloy. Frame members shall consist of sill track, head track and jamb sections. Jamb sections shall be coped to interlock with sill and head tracks so that when these sections are secured within wall opening, the joints shall be waterproof and twistproof.

SASH: Stiles shall be milled at ends to receive bottom and top rails, which are overlapped the complete width of the stiles. The stiles, thus housing the ends of rails in this overlapping joint, shall be bolted securely to rails. Sash shall roll on sealed and packed ball bearing rollers with nylon rims. One roller shall be adjustable without removing sash from frame. Minimum sash wall thickness shall be .080 inches.

WEATHERSTRIPPING: Weatherstripping in jambs and interlocking stiles shall be metal-backed mohair pile set in continuous lengths. Weatherstripping in sash shall consist of metal-backed mohair pile, set in continuous strips on *both sides* of top and bottom rails, so that complete weather contact with tracks is maintained along full width of sash.

HARDWARE: Sliding sash shall be provided with locking hardware manually operated by a lever. (Cylinder locks, if desired, available at additional cost.)

FINISH: All exposed aluminum shall have an anodized satin finish. All surfaces in contact with ferrous materials of masonry shall be given a protective coating of asphalt base paint by installer.

SCREENS: Door screens shall be made of hollow extruded frames fitted with 18 x 14 mesh aluminum wire cloth and shall roll horizontally on bottom track and be guided to top track by spring-loaded rollers to prevent screen from jumping the track. Screens shall have vinyl insect-proofing at interlocking stiles and jambs.

ERECTION: (Included under another contract.) Erect doors in prepared openings, according to manufacturer's drawings. Door frames must be set plumb and level so that sliding sash shall retain proper weathering contact with the frames. Installation screws shall be provided by the manufacturer. Mastic shall be furnished by others.

GLAZING: All units shall be shop glazed, with continuous vinyl glazing bead unless otherwise specified.

Some prominent Panaview installations

- President Eisenhower's Gettysburg home
- President's Palace, Panama
- Executive House (40 stories) Chicago, Ill.
- Liberace residence, Sherman Oaks, Calif.
- El Cortez Hotel, San Diego, Calif.
- Riviera Hotel, Las Vegas, Nev.
- Alcoa's office bldg., Los Angeles, Calif.
- Univ. of Florida—Lab. School, Gainesville, Fla.
- Fremont Hotel, Las Vegas, Nev.
- Dinkler Plaza Hotel, Atlanta, Ga.

Kaiserhof®

A New Concept in

ALUMINUM SLIDING GLASS DOORS

AIA FILE NO. 16-D

K-7 AND K-14 SERIES

Kaiserhof®

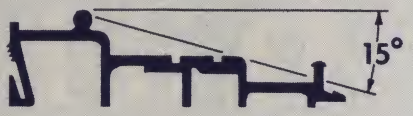
Patents Pending

Kaiserhof now brings you the industry's most desirable features in sliding glass doors, skillfully engineered to meet the demand of the nation's economy minded building program and carefully crafted to meet the approval of the most discriminating buyer.

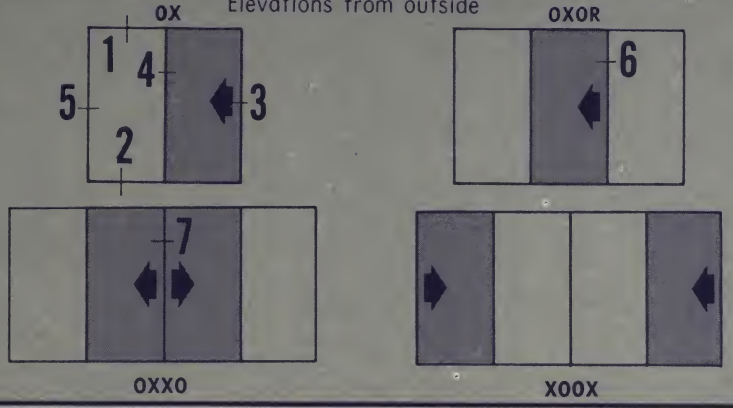
Complete pest protection is now assured by Kaiserhof's new top hung screen that cannot jump the track.

EXCLUSIVE KAISERHOF STEP-DOWN SILL

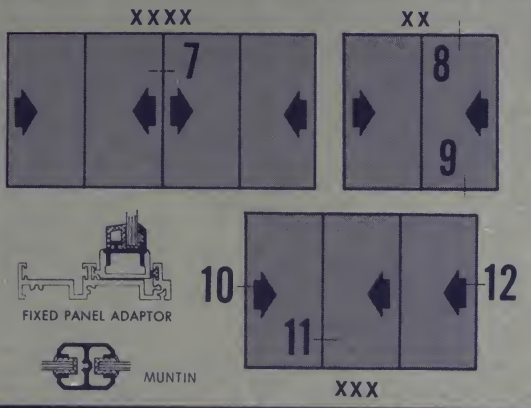
Kaiserhof's step-down sill utilizes a 15° weather angle to insure complete water infiltration resistance.



Elevations from outside

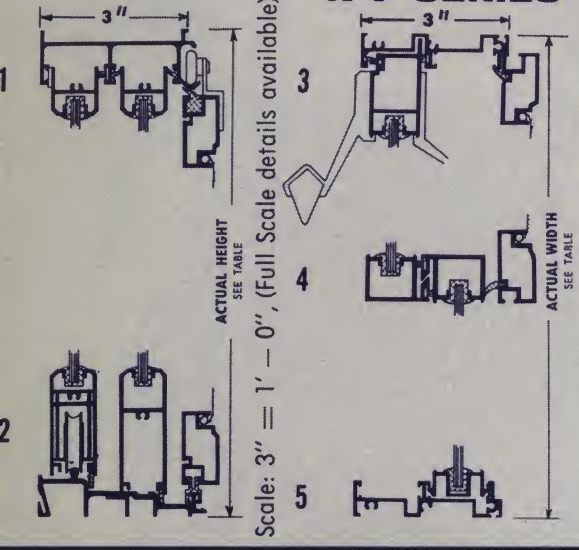


* Available in all series.

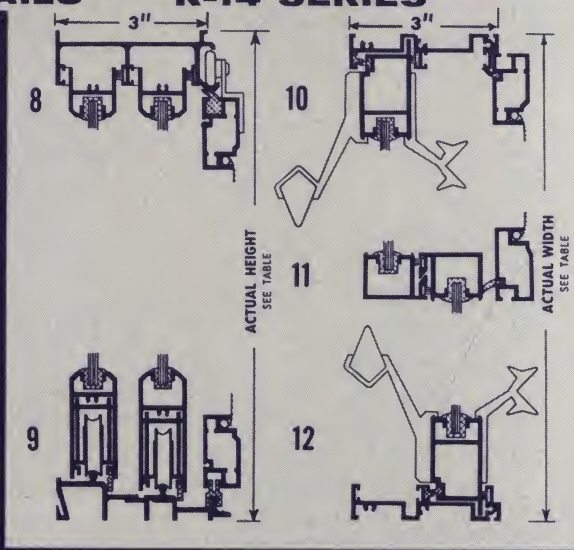


DETAILS

K-7 SERIES



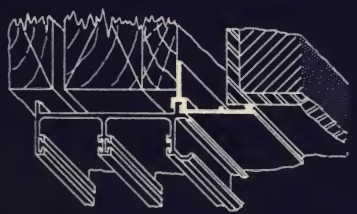
K-14 SERIES

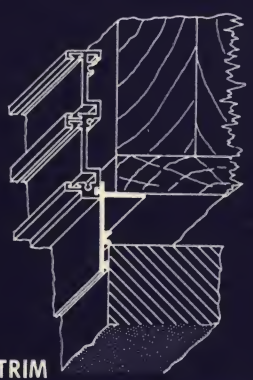


CHECK THESE ADDITIONAL FEATURES EXCLUSIVE WITH KAISERHOF

HEAD FIN TRIM

Slides on to create an integral flashing at the head. Breakaway provides adaptability for frame houses.



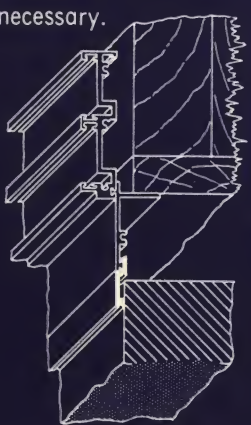


JAMB FIN TRIM

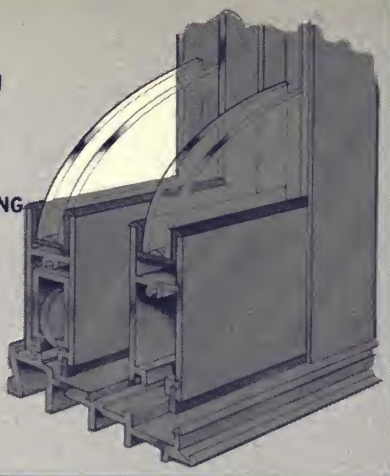
Slides on to close cold air barrier at the jamb and serves as brick trim out. Has same breakaway feature.

FIN TRIM EXTENSION

For adaptability in areas where a greater air barrier depth is necessary.



THERMAL PROTECTION SAVES HEAT AND AIR CONDITIONING COSTS



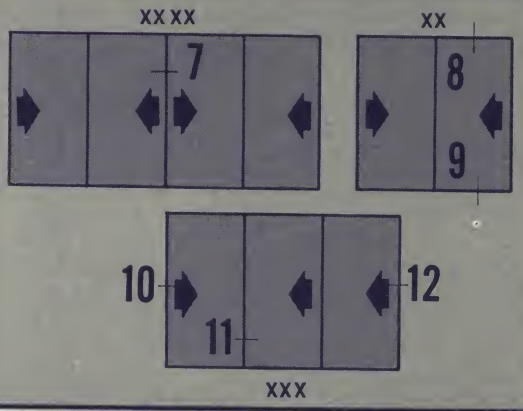
K-12 AND K-24 SERIES

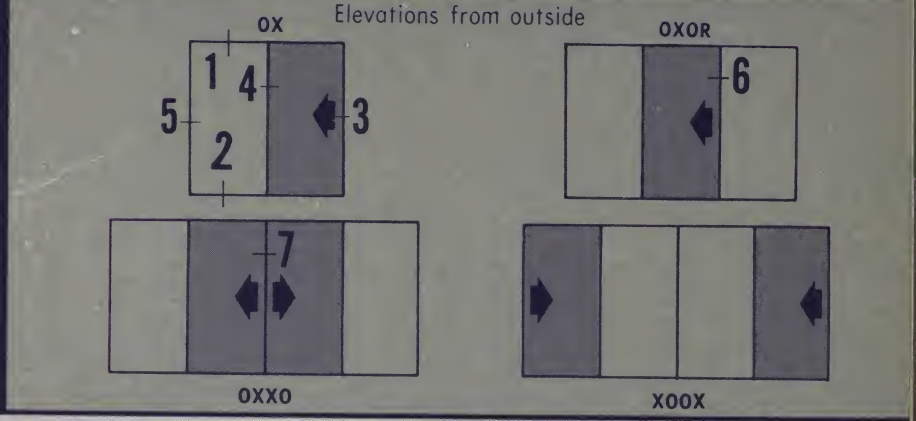
Kaiserhof®

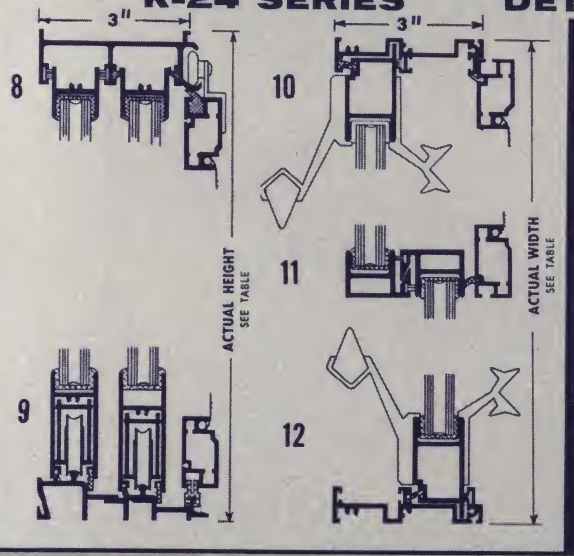
Kaiserhof's K-12 and K-24 Series Thermal Door offers maximum insulation for heat and air conditioning situations. It is double weatherstripped with continuous wool pile at head, jamb, interlock and sill to insure absolute weather sealing and is built to receive ⅝" Thermo-pane, Twindow or other insulating glass. The sill track is capped with stainless steel to eliminate wear due to excessive glass load.

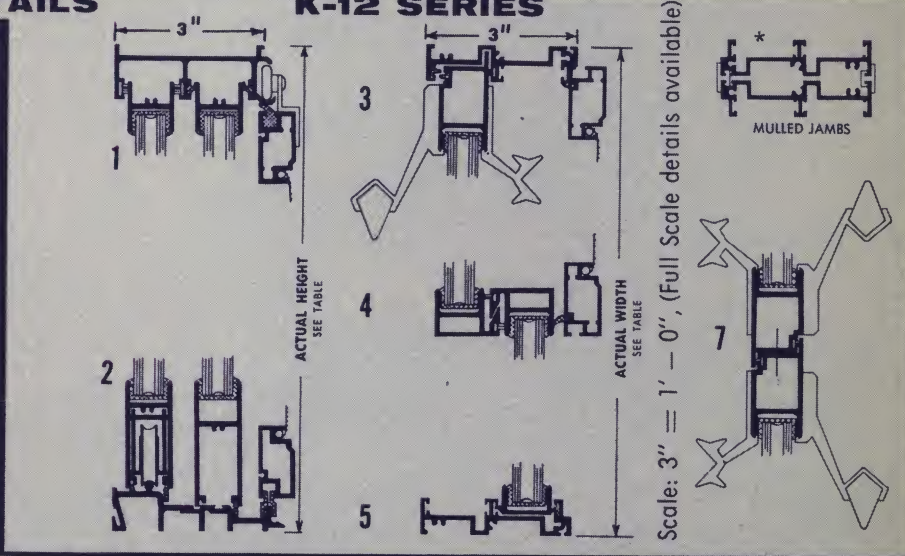
Kaiserhof features versatility . . .

The K-7 single glass panels may be exchanged for K-12 dual glass panels at any time without altering frame installation. Stainless steel track cap snaps on to complete changeover.









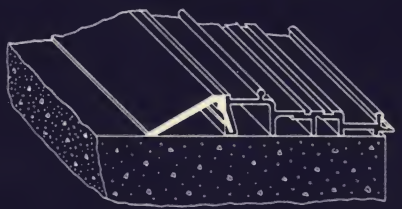
CHECK THESE ADDITIONAL FEATURES EXCLUSIVE WITH KAISERHOF

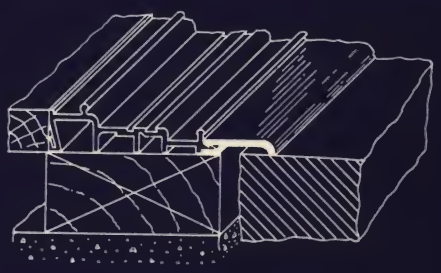
LATCH

Kaiserhof's quality latch is the famous Adams Rite rugged dead-lock offering a life-time of trouble-free operation.

SILL KICK PLATE

This may be used on surface mounted installations. Positive snap lock feature eliminates screws and allows Kick Plate to be installed at any time.





SILL EXTENSION

Engineered to span the extra width in all wall constructions. Snap lock feature provides same ease of installation.

K-7 AND K-12 SERIES — STANDARD TYPES AND SIZES — KD (NO GLASS)

DOORS VIEWED FROM OUTSIDE	CATALOG NUMBER H=6'-8¼"	CATALOG NUMBER H=8'-0¼"	Door Width	GLASS SIZE Width	GLASS SIZE H=6'-8¼"	GLASS SIZE H=8'-0¼"
OX	K7-0X-6	8K7-0X-6	5'-10¾"	34"	76"	92"
	K7-0X-8	8K7-0X-8	7'-10¾"	46"	76"	92"
	K7-0X-10	8K7-0X-10	9'-10¾"	58"	76"	92"
	K12-0X-6		5'-10¾"	34"	76"	92"
	K12-0X-8		7'-10¾"	46"	76"	92"
XO	K7-X0-6	8K7-X0-6	5'-10¾"	34"	76"	92"
	K7-X0-8	8K7-X0-8	7'-10¾"	46"	76"	92"
	K7-X0-10	8K7-X0-10	9'-10¾"	58"	76"	92"
	K12-X0-6		5'-10¾"	34"	76"	92"
	K12-X0-8		7'-10¾"	46"	76"	92"
OXOL	K7-0X0L-9	8K7-0X0L-9	8'- 9⅜"	34"	76"	92"
	K7-0X0L-12	8K7-0X0L-12	11'- 9⅜"	46"	76"	92"
	K7-0X0L-15	8K7-0X0L-15	14'- 9⅜"	58"	76"	92"
	K12-0X0L-9		8'- 9⅜"	34"	76"	92"
	K12-0X0L-12		11'- 9⅜"	46"	76"	92"

DOORS VIEWED FROM OUTSIDE	CATALOG NUMBER H=6'-8¼"	CATALOG NUMBER H=8'-0¼"	Door Width	GLASS SIZE Width	GLASS SIZE H=6'-8¼"	GLASS SIZE H=8'-0¼"
OXOR	K7-0X0R-9	8K7-0X0R-9	8'- 9⅜"	34"	76"	92"
	K7-0X0R-12	8K7-0X0R-12	11'- 9⅜"	46"	76"	92"
	K7-0X0R-15	8K7-0X0R-15	14'- 9⅜"	58"	76"	92"
	K12-0X0R-9		8'- 9⅜"	34"	76"	92"
	K12-0X0R-12		11'- 9⅜"	46"	76"	92"
OXXO	K7-0XX0-12	8K7-0XX0-12	11'- 8½"	34"	76"	92"
	K7-0XX0-16	8K7-0XX0-16	15'- 8½"	46"	76"	92"
	K7-0XX0-20	8K7-0XX0-20	19'- 8½"	58"	76"	92"
	K12-0XX0-12		11'- 8½"	34"	76"	92"
	K12-0XX0-16		15'- 8½"	46"	76"	92"
XOOX	K7-X00X-12	8K7-X00X-12	11'- 8½"	34"	76"	92"
	K7-X00X-16	8K7-X00X-16	15'- 8½"	46"	76"	92"
	K7-X00X-20	8K7-X00X-20	19'- 8½"	58"	76"	92"
	K12-X00X-12		11'- 8½"	34"	76"	92"
	K12-X00X-16		15'- 8½"	46"	76"	92"

Add ½" to door width and height for rough opening size.
Special sizes may be made to order.
All doors may be assembled for either right or left slide.
Doors shipped K.D. in separate frame and panelkit cartons with easy to read assembly instructions.

Addition of the new "in stock" 8' height catalog of standard sizes allows greater flexibility in design.

Note: To obtain rough opening widths for K-14 and K-24 Series add 1⅞" to K-7 actual width for 2-panel, 4⅝" for 3-panel, 3¼" for 4-panel.

ARCHITECT'S SPECIFICATIONS

Note: Since Kaiserhof engineers are continually working to improve the quality and features of our door, specifications will be subject to change without notice.

K-7 AND K-14 SERIES

GENERAL: All aluminum sliding glass doors as shown on plans shall be Kaiserhof K-7 (K-14) Series Sliding Glass doors as manufactured by Kaiserhof Industries, Inc., Houston, Texas.

MATERIAL: All sliding door sections shall be of rigid aluminum extruded sections of 6063-T5 alloy.

CONSTRUCTION: Frame consisting of heavy extruded aluminum sections including head, sill and two jambs shall be machined to make tight fitting joints with each corner fastened together by three screws.

Panels shall be designed with a hollow extruded locking stile and two wedge type interlocking stiles. Fixed stile at jamb shall be snapped in and held by vinyl without use of screws.

Rollers — sliding panel shall glide on pre-greased ball bearing rollers with nylon tires. Rollers shall be adjustable (at both ends of sliding panel) without removing panel from frame.

HARDWARE: A mortise lock, retractable type, shall be installed. Lock cannot lock automatically when door is closed. Cylinder lock available at extra cost. Inside handle shall be crystal styled lucite pull. Outside handle shall be aluminum butterfly design.

SCREEN: Screen shall be top hung and shall glide on ball bearings with nylon tires. Screen wheels shall roll in track designed so that it is unable to jump out of head section. Screen mesh shall be of 18 x 24 aluminum wire. Fiberglass cloth is available at no extra cost. Screen frame shall be bug stripped with vinyl on both sides, top and bottom.

WEATHERSTRIPPING: Kaiserhof K-7 shall be completely weatherstripped. The slide panel shall be weatherstripped with continuous wool pile at the head, jamb and interlocking stile. The bottom rail shall be weatherstripped with vinyl type composition for quiet, smooth operation and permit sealing on sill step. Outside panel shall be weatherstripped at head and jamb by vinyl.

FINISH: All aluminum frame and panel sections shall receive Kaiserhof's satin finish Alumalok insuring protection against corrosive forces.

GLAZING: All panels shall be designed for vinyl plastic wrap-around bead to be used on 3/16", 7/32" or 1/4" glass. (For 5/8" dual glass, see Kaiserhof K-12 Series Thermal Door.)

ERECTION: All erection shall be included under another contract. Doors shall be erected by others in openings prepared according to manufacturer's drawings. All necessary screws are furnished by the manufacturer.

WARRANTY: All Kaiserhof products are guaranteed against factory defect. General Contractor is responsible for erection and protection of doors by other trades.

K-12 AND K-24 SERIES

GENERAL: All aluminum sliding glass doors as shown on plans shall be Kaiserhof Thermal Door K-12 (K-24) Series as manufactured by Kaiserhof Industries, Inc., Houston, Texas.

MATERIAL: All sliding door sections shall be of rigid aluminum extruded sections of 6063-T5 alloy. Minimum wall thickness .062; Maximum .125.

CONSTRUCTION: Frame consisting of heavy extruded aluminum sections including head, sill and two jambs shall be machined to make tight fitting joints with each corner fastened together by three screws. Panels shall be designed with a hollow extruded stile and two hollow wedge type interlocking stiles. Fixed stile at jamb shall be snapped in and held by vinyl without use of screws.

Sill track section shall be capped with stainless steel to prevent wear.

Rollers — sliding panel shall glide on pre-greased steel ball bearing rollers. Rollers shall be adjustable (at both ends of sliding panel) without removing panel from frame.

HARDWARE: A mortise lock, retractable type, shall be installed. Lock cannot lock automatically when door is closed. Cylinder lock available at extra cost. Inside handle shall be crystal styled lucite pull. Outside handle shall be aluminum butterfly design.

SCREEN: Screen shall be top hung and shall glide on ball bearings with nylon tires. Screen wheels shall roll in track designed so that it is unable to jump out of head section. Screen mesh shall be of 18 x 24 aluminum wire. Fiberglass cloth is available at no extra cost. Screen frame shall be bug stripped with vinyl on both sides, top and bottom.

WEATHERSTRIPPING: Kaiserhof K-12 shall be double weatherstripped. The slide panel shall be weatherstripped with continuous wool pile at the head, jamb and interlocking stile. The bottom rail shall be weatherstripped outside with vinyl type composition and inside with wool pile for quiet, smooth operation and to permit double sealing on sill and step. Outside panel shall be weatherstripped at head and jamb by vinyl.

FINISH: All aluminum frame and panel sections shall receive Kaiserhof's satin finish Alumalok insuring protection against corrosive forces.

GLAZING: All panels shall be designed for vinyl plastic wrap-around bead to be used on 5/8" dual glass.

ERECTION: All erection shall be included under another contract. Doors shall be erected by others in openings prepared according to manufacturer's drawings. All necessary screws are furnished by the manufacturer.

WARRANTY: All Kaiserhof products are guaranteed against factory defect. General Contractor is responsible for erection and protection of doors by other trades.

There's a distributor near you. Addresses available upon request.

Distributed by:

Kaiserhof®

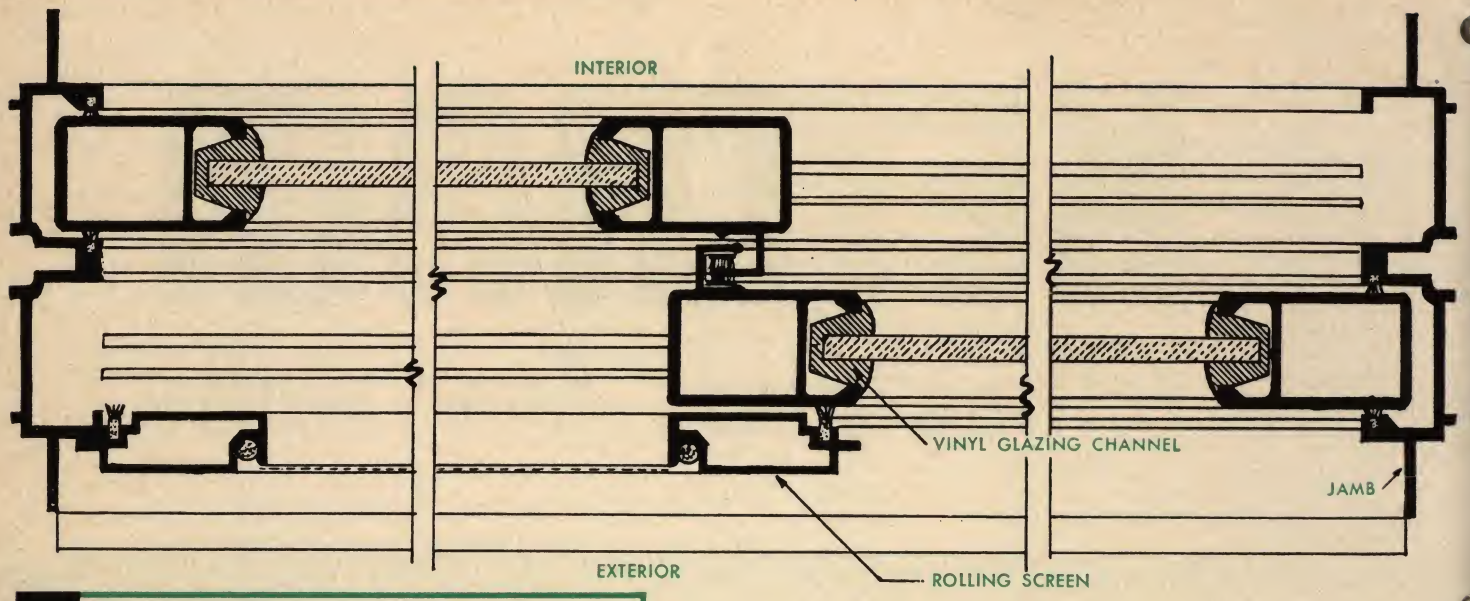
Manufactured by **KAISERHOF INDUSTRIES, INC.** Phone UN 9-4525 • 512 West 23rd • Houston 8, Texas

A.I.A. FILE NO. 16-E

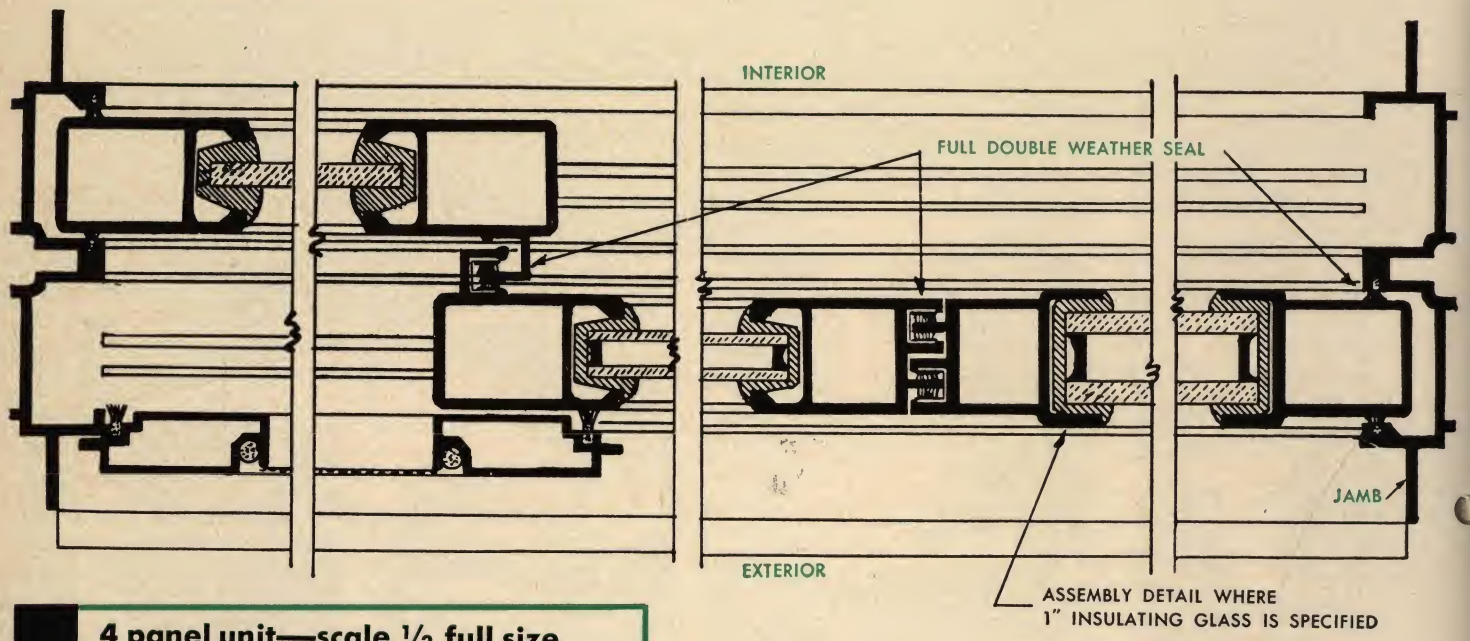
KETCHAM

rolling glass door walls

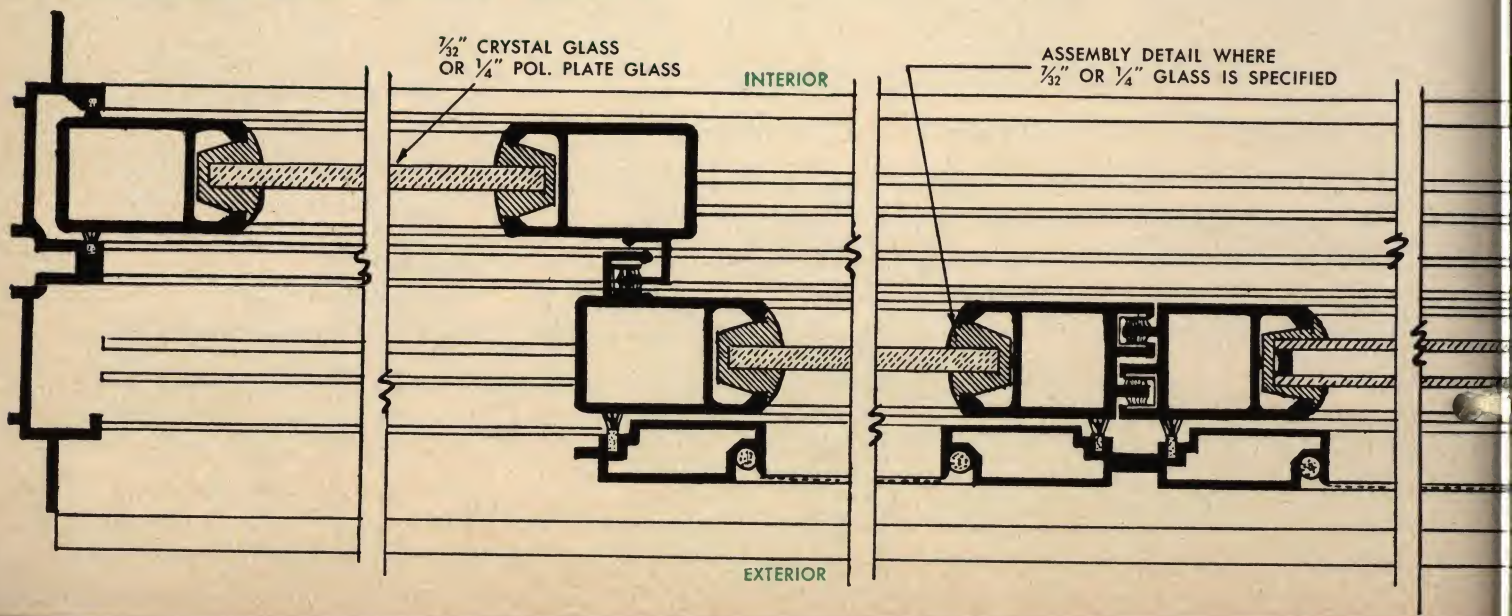
2 panel unit—scale 1/2 full size



3 panel unit—scale 1/2 full size

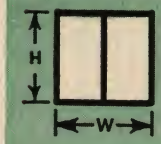
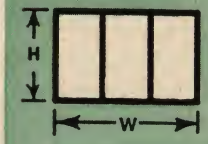
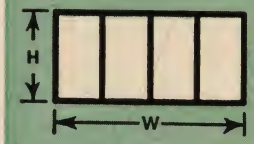


4 panel unit—scale 1/2 full size

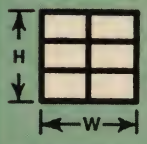
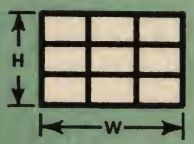
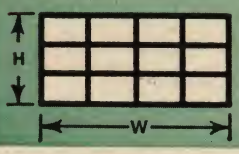


available stock sizes

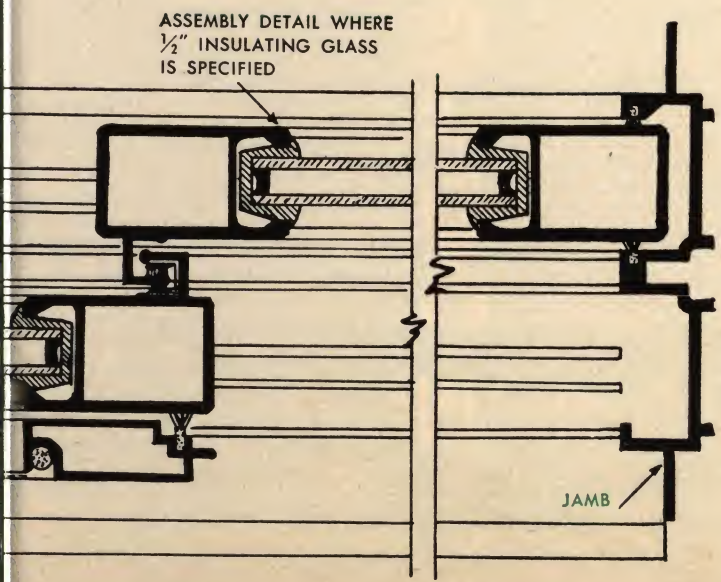
for contemporary homes

7/32" Crystal Glass (C) 1/4" Polished Plate Glass (P) 1" Insulating Glass (T)	Nominal Width Feet	Model No.	Width of Rough Opening Req'd	Height of Rough Opening Req'd
	6	A23	6'-1"	6'-10¼"
	8	A24	8'-1"	6'-10¼"
	10	A25	10'-1"	6'-10¼"
	12	A26	12'-1"	6'-10¼"
	9	A33	9'-1"	6'-10¼"
	12	A34	12'-1"	6'-10¼"
	15	A35	15'-1"	6'-10¼"
	18	A36	18'-1"	6'-10¼"
	12	A43	12'-¼"	6'-10¼"
	16	A44	16'-¼"	6'-10¼"
	20	A45	20'-¼"	6'-10¼"

for traditional homes

7/32" Crystal Glass (C) 1/4" Polished Plate Glass (P) 1/2" Insulating Glass (T)	Nominal Width	Model No.	Width of Rough Opening Req'd	Height of Rough Opening Req'd
	6	A233	6'-1"	6'-10¼"
	8	A243	8'-1"	6'-10¼"
	10	A253	10'-1"	6'-10¼"
	12	A263	12'-1"	6'-10¼"
	9	A333	9'-1"	6'-10¼"
	12	A343	12'-1"	6'-10¼"
	15	A353	15'-1"	6'-10¼"
	18	A363	18'-1"	6'-10¼"
	12	A433	12'-¼"	6'-10¼"
	16	A443	16'-¼"	6'-10¼"
	20	A453	20'-¼"	6'-10¼"

Specify type of glass (C, P, or T) after model number.



specifications

General—Rolling glass doorwalls shown on plans are to be Ketcham Model A as manufactured by the G. M. Ketcham Mfg. Corp., Glendale 27, New York.

Material & Construction—Doorwall units shall be fabricated of extruded aluminum sections, Alloy 63S-T5. Frame members shall consist of sill track, head and jamb members interlocked and securely fastened into a single unit providing maximum resistance to twist. Stainless steel rolling surface to be provided by sheath on roller track in sill.

Panels shall be constructed with full fitted joints at the corners mechanically secured with stainless steel fastenings.

Glass shall be set in one continuous strip of vinyl glazing channel. Glass shall be as specified, (7/32" Crystal, ¼" Polished Plate, ½" Insulating or 1" Insulating). Rolling glass doors are supplied factory glazed but are so designed that field glazing is practical if replacement of glass is necessary. Panels can be supplied for field glazing by others when so specified.

Weatherstrip—Weatherstripping shall be mohair pile lining of highest quality so installed as to provide a complete weather seal on interior and exterior of each panel.

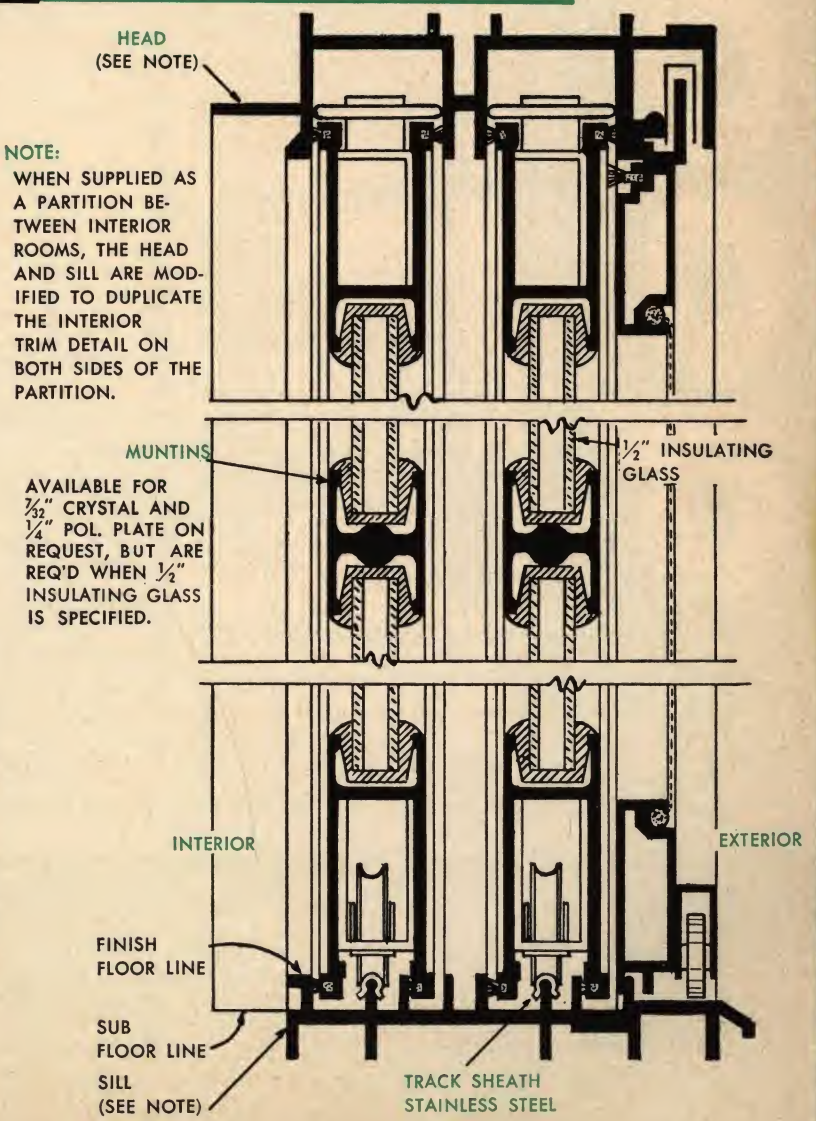
Hardware—Rolling panels shall be provided with flush hardware. Units glazed with 1" insulating glass shall be supplied with one (1) pull handle on inside of inner panel. (Cylinder locks are available.)*

Screens—Rolling screens shall be fabricated of extruded aluminum frames fitted with 16-18 mesh aluminum wire cloth. Screens shall roll horizontally on rollers with guides in the sill track.

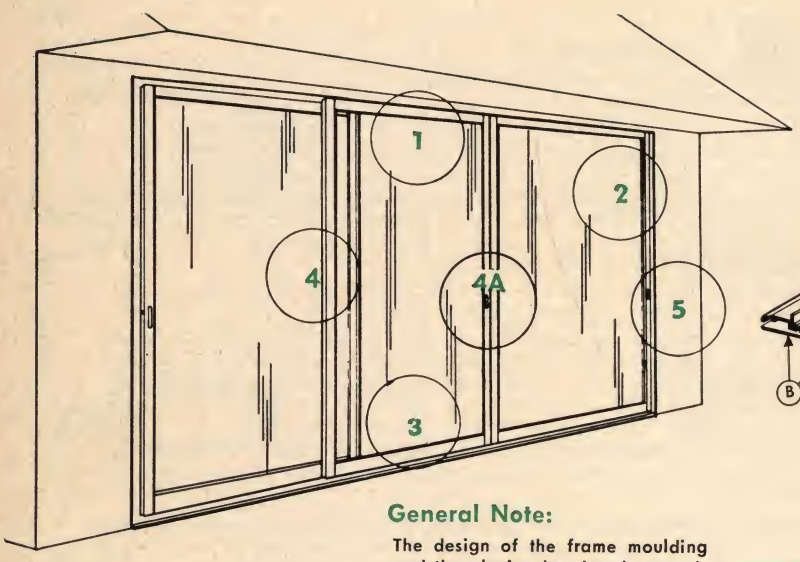
Finish—Aluminum frames of rolling panels shall have corrosion resistant Alumilite satin finish. Buck frames can be supplied with Alumilite finish where specified.*

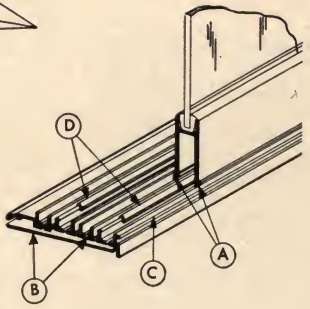
* At additional cost—See price list.

vertical sections—½ full size


HEAD
(SEE NOTE)
NOTE:
WHEN SUPPLIED AS A PARTITION BETWEEN INTERIOR ROOMS, THE HEAD AND SILL ARE MODIFIED TO DUPLICATE THE INTERIOR TRIM DETAIL ON BOTH SIDES OF THE PARTITION.
MUNTINS
AVAILABLE FOR 7/32" CRYSTAL AND ¼" POL. PLATE ON REQUEST, BUT ARE REQ'D WHEN ½" INSULATING GLASS IS SPECIFIED.
½" INSULATING GLASS
INTERIOR
EXTERIOR
FINISH FLOOR LINE
SUB FLOOR LINE
SILL
(SEE NOTE)
TRACK SHEATH
STAINLESS STEEL

features





3

A Sill-Track provides the contact surface for the double weatherstrip, which faces the inside of the partition and is thus protected from ice and snow. The multi-ribbed contour of the sill presents a substantially even tread surface.

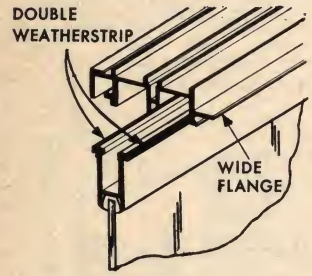
B Condensation and drainage is runoff outside through weepholes and drainage channel under the sill.

C For flush floor finish lines on both sides of partition an interior trim moulding replaces the exterior threshold.

D A stainless steel sheath is mounted on the sill for a smooth, long wearing rolling surface.

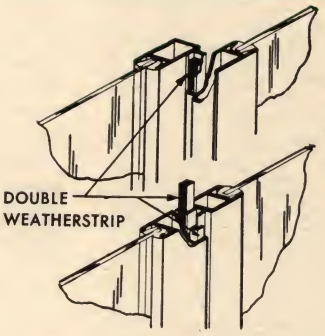
General Note:

The design of the frame moulding and the glazing bead makes possible the change from crystal or plate to ½" insulating glass at some future time.



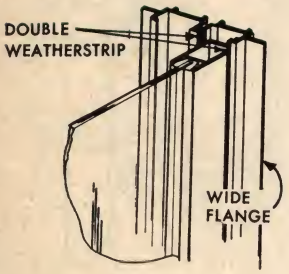
1

Rigid head member provides continuous contact surface for double mohair pile weatherstripping. Wide flange on interior side of buck frame serves as a casing bead.



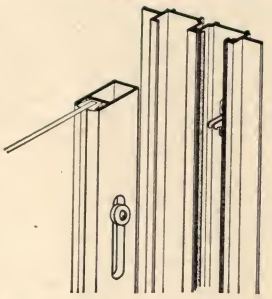
4 - 4A

Interlocking and butting stiles are fitted with double faced, mohair pile, rigid channel type, weatherstrip.



2

Latching jambs retain mohair pile weatherstrip giving a wiping action weather seal. Like the head member the wide flange provides a casing bead convenient for interior finishing.



5

Latch and pull are combined in recessed finger grip. Latch operates automatically when panel is opened or closed, and is provided with a check button to disengage auto-latch to permit opening of panel from the outside.

SALES OFFICES

Warehouse stock carried in these cities

PHILADELPHIA 40, PA. 1022 West Thayer St.
Tel.: Walnut 5-9287

BALTIMORE 12, MD. 206 Dumbarton Road Tel.: Valley 3-2540

WASHINGTON 7, D.C. 3417 M St., N.W. Tel.: FEderal 3-7716

MIAMI BEACH, FLA. 1426 Alton Road Tel.: Jefferson 4-2092

REPRESENTATIVES

THOMAS F. CORAN	406 Wimar Drive, Pittsburgh, Pa.	Tel.: FOrest 4-1063
ROBERT E. HEINL JR.	3417 M. St., N.W., Washngton, D.C.	Tel: FEderal 3-7716
LESTER D. HOEBER	3580 So. W. 13 Court, Fort Lauderdale, Fla.	Tel.: Ludlow 3-7234
INSTITUTIONAL EQUIPMENT CO.,	5701 Detroit Ave., Cleve. 2, O.	Tel.: UTah 1-5582
A. TAYLOR KENNEDY	729 Boylston St., Boston16, Mass.	Tel.: Commonwealth 6-1862
LITENING SALES CO.	4242 Salem Ave. So., Minneapolis, Minn.	Tel.: WAlnut 7-9191
LUNNY & COMPANY	403 W. Baltimore, Detroit 2, Michigan	Tel.: TRI-0540
BERNARD M. MEYERS	5652 Diamond St., Philadelphia, Pa.	Tel.: TRinity 7-4931
GEORGE H. WALPER	206 Dumbarton Rd., Baltimore, Md.	Tel.: Valley 3-2540

See Catalog 27d/Ke

For Ketcham Medicine Cabinets, Bathtub, and Shower Enclosures

Printed in U.S.A.

G. M. KETCHAM MANUFACTURING CORP.

Plant and Showroom: 70-70—80th Street, Glendale, L. I., N. Y.

Mailing Address: 70-70—80th Street, Brooklyn 27, N. Y. • *Telephone:* TWining 4-9000

23P—Nov. 1959

LOF GLASS

TUF-FLEX®

tempered polished plate glass

doors

doors

AIA File No. 16N-1950

LIBBEY · OWENS · FORD GLASS COMPANY

TUF-FLEX doors of tempered polished plate glass

Tuf-flex tempered polished plate glass doors are the designer's answer to his need for building entrances offering an unobstructed, inviting view of the interior. They are durable and strong enough to withstand heavy traffic, yet provide more than normal protection against burglary or vandalism.

Tuf-flex is tempered polished plate glass made by a process of reheating and sudden cooling. As a result, the outer surfaces are in a state of high compression while the central portion remains in tension, producing a condition highly resistant to breakage.

Tuf-flex is 3 to 5 times stronger than plate glass of the same area and thickness. Yet it retains the same appearance, clarity, hardness and coefficient of expansion as regular polished plate glass.

complete hardware available

Continuous fittings, corner fittings, or combinations of both at top and bottom in aluminum, bronze or stainless steel are applied to the *Tuf-flex* glass to create the type or style of door desired.

Locks and/or bolts indicated on pages 6 to 9 inclusive, may be inserted into these fittings.

Tuf-flex Doors are installed on center hung or offset floor checking hinges with top pivots in head jamb or transom bar. *Tuf-flex* Doors can be adapted to electric floor mat openers, photo-electric controls or electric controlled push-pull bars. Most types of panic hardware can be used with *Tuf-flex* Doors.

push-pull bars

Attractive and distinctive custom made push-pull bars like those shown on pages 10 and 11 add a great deal to the appearance and character of any building entrance using *Tuf-flex* Doors. All bars shown can be used on ½"- and ¾"-thick doors.

Holes in the glass to receive these bars are ⅞" minimum diameter, 6⅞" minimum for center to center and 3½" minimum from edge of door to center of holes.

index

fitting sections	3
physical characteristics	3
door swing	4
sidelights	4
sizes and types	4
hole limitations	5
bolt designations	5
typical combinations	5
fittings and details	6-7
transom and pivot bracket	7
locking hardware	8-9
operating hardware	8-9
push-pull bars	10-11

specifications

Tuf-flex doors and sidelights (½" or ¾" thickness) manufactured by the Libbey·Owens·Ford Glass Company shall be furnished and installed by this contractor. Doors and sidelights to be of the size and type indicated with fittings of bronze, aluminum or stainless steel as specified.

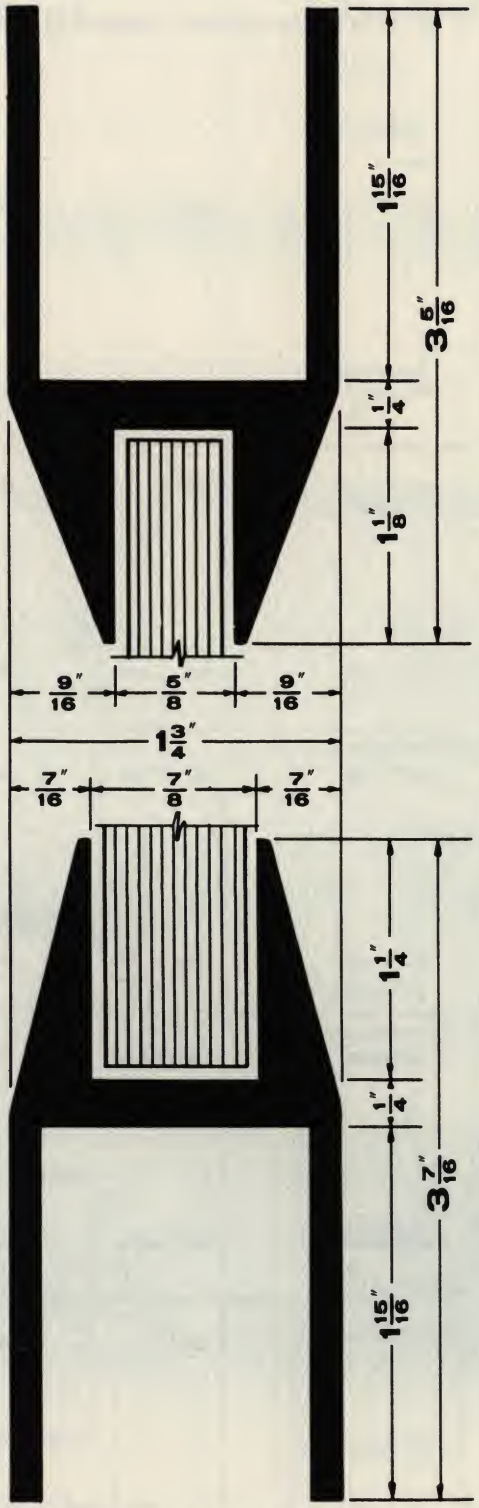
Each door, where noted on plans, to have lock and/or bolt supplied and installed by the manufacturer and to be fabricated to accommodate push-pull bars, checking pivot hinges, door holders, etc. as specified.

All items to be installed as per the manufacturer's recommendations and to the satisfaction of the owner and architect. Libbey·Owens·Ford assumes no responsibility regarding breakage or installation.

TUF-FLEX doors

fitting sections (full size)

S-06 fittings for 1/2" glass



S-08 fittings for 3/4" glass

metals —solid bronze, aluminum or stainless steel

finishes—polished or brushed bronze
polished or brushed chrome
alumilited aluminum
gold anodized aluminum

physical characteristics

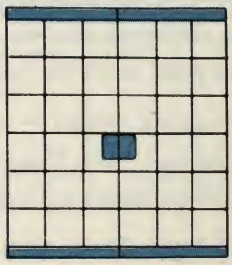
strain pattern The high-heat tempering process to which *Tuf-flex* Glass is subjected results in high tension stresses in the center of the glass and high compression stresses in the exterior surfaces. These compressive and tensile stresses balance each other and are noticeable when the glass is subjected to polarized light. Sunlight from some angles produces polarized light. Therefore, at times and under some conditions the strain pattern may be visible as multi-colored iridescence.

flatness Because of the method of manufacture, *Tuf-flex* Glass is not as flat as ordinary plate glass, particularly along the exposed edges. The warpage tolerance of doors and sidelights is 1/8" up to 84" in height.

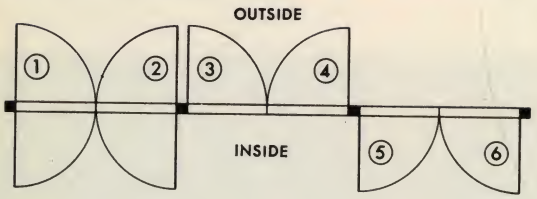
insurance A definite schedule of *Tuf-flex* Door insurance rates may be secured from any insurance agency.

fire retardment Although *Tuf-flex* Glass withstands temperature differentials up to 450° F. it cannot be considered a fire retardment and does not qualify for a Fire Door in the Underwriters' Laboratory Code.

decorative treatment Sandblast designs may be used on *Tuf-flex* Doors but cannot be deeper than 1/64" below the surface of the glass. Full size templates must be furnished when such designs are required.



door swing



The swing of *Tuf-flex* Doors, as shown above, should be indicated when placing orders.

sidelights

Sidelights are available in ½" and ¾" *Tuf-flex* Plate Glass with or without fittings. Maximum size 72" x 108". Minimum width with center strike fittings 10" and plain 7".

standard door sizes

(Types p and b-p)

30" x 84" — $29^{13}/_{16}$" x $83^{11}/_{16}$"

36" x 84" — $35^{13}/_{16}$" x $83^{11}/_{16}$"

$29^{13}/_{16}$" x $83^{3}/_{16}$"*

$35^{13}/_{16}$" x $83^{3}/_{16}$"*

*used with threshold

Fittings — Alumilited Aluminum.

Locks — Locks in bottom fitting only. These can be keyed alike if noted on order.

Bolts — None are included.

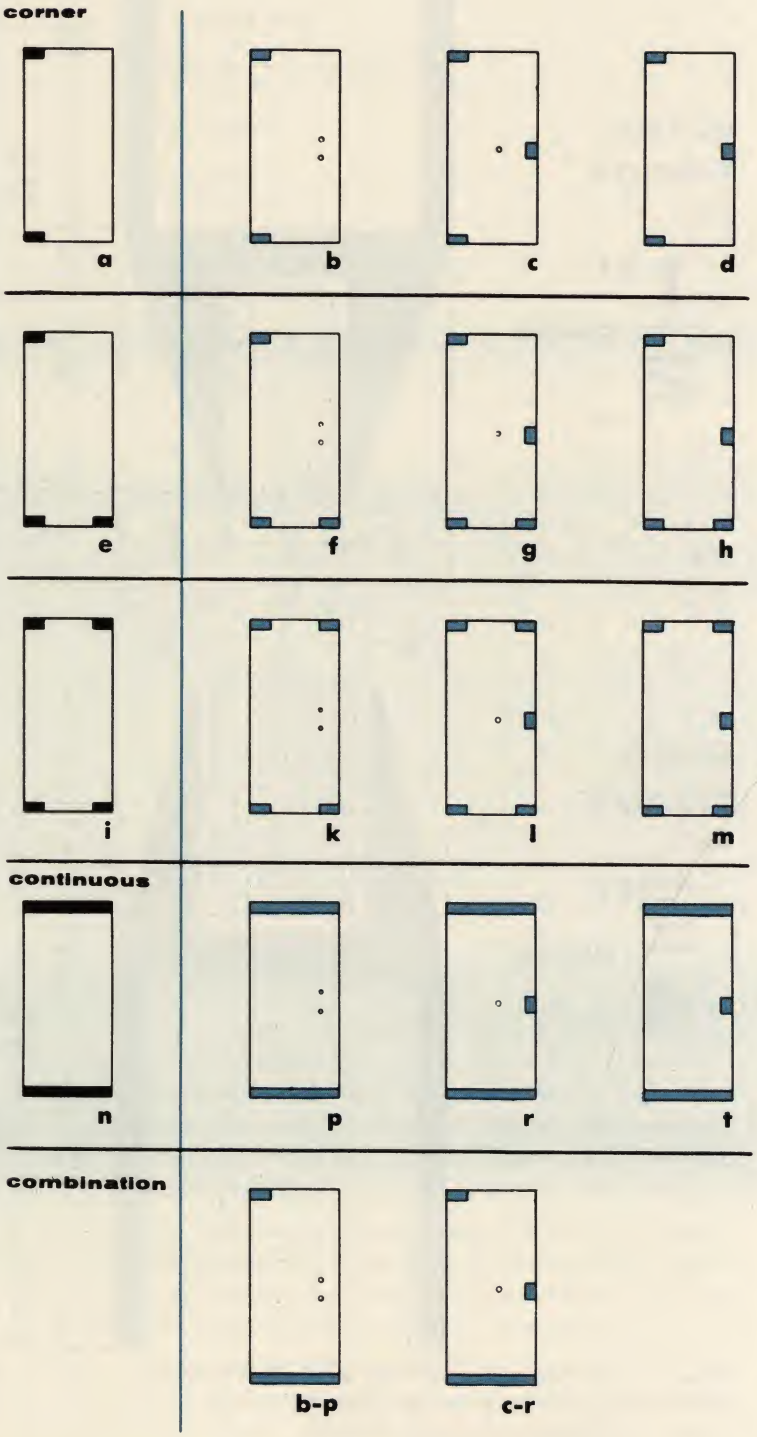
Push and Pull Bars — Holes are for 12" vertical bars only.

Door Holders — No cut-outs or drilling for adapter plates for holders included.

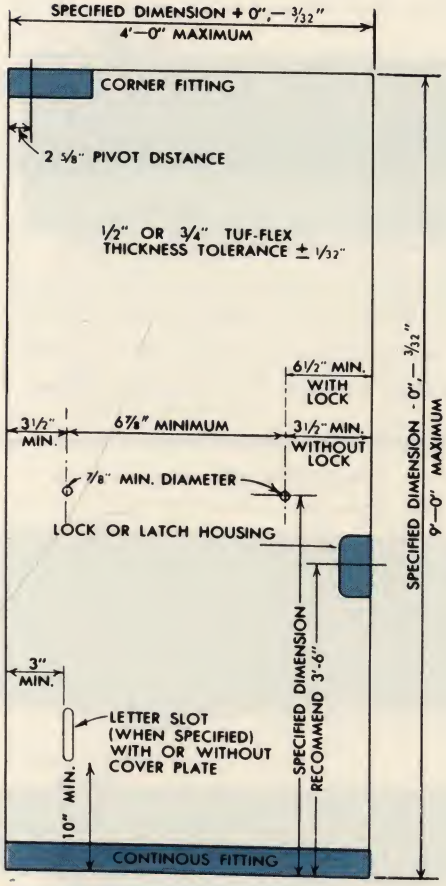
Checking Hinges — All fittings prepared for any type floor hinge excepting LCN Closers. (Off-set hinges not included)

Swing — These doors can be used for all door swings shown in diagram above.

suggested designs

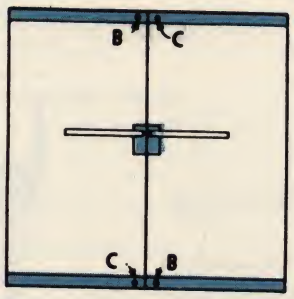


■ hole limitations



TYPICAL DOOR SHOWING DESIGN LIMITATIONS AND HARDWARE

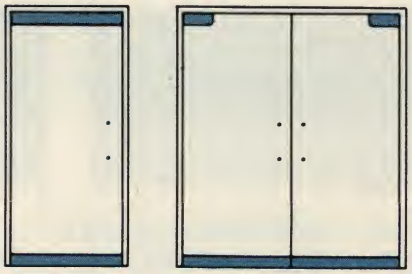
■ bolt designations



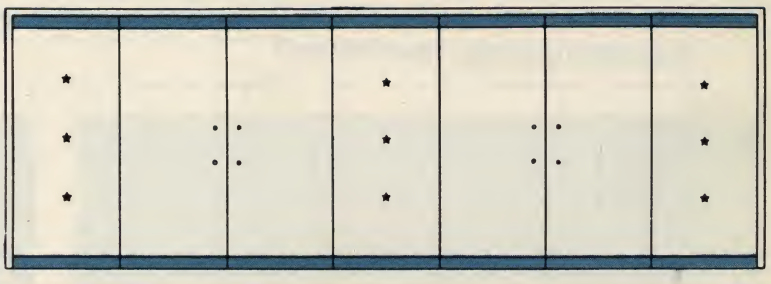
TO DETERMINE "B" or "C" BOLTS: Whether view is looking from outside or inside the B or C bolt designation olwoys coincides with the diagram which shows the side of the door from which the thumb screw bolt heods protrude. Therefore, sketch your door to show bolt heods and compare with diagrom. Designate eàch bolt os in diogram.

■ typical combinations

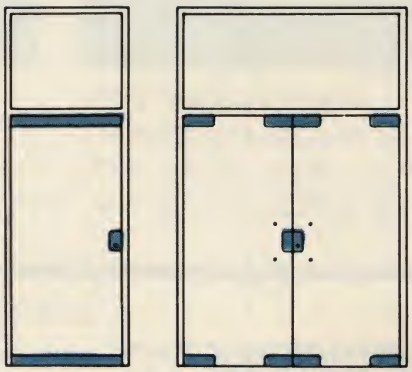
doors



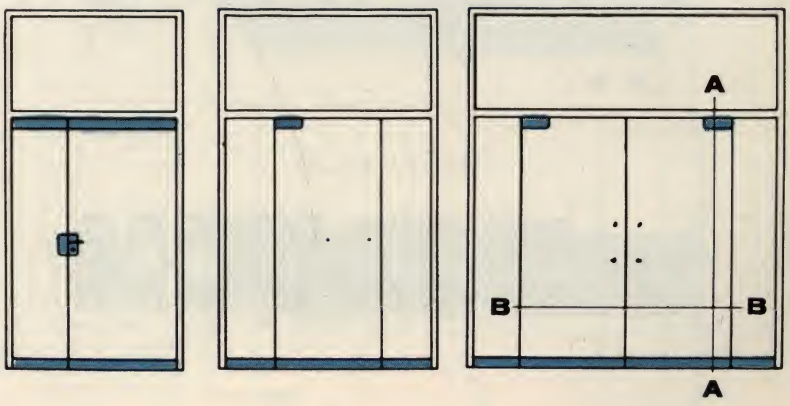
doors and sidelights



with transoms

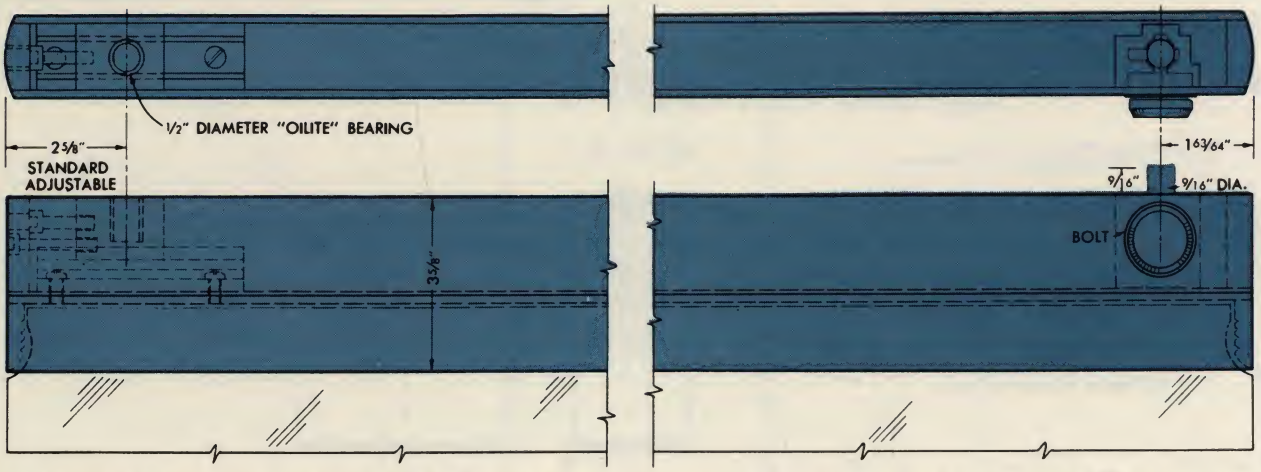


with transoms and sidelights



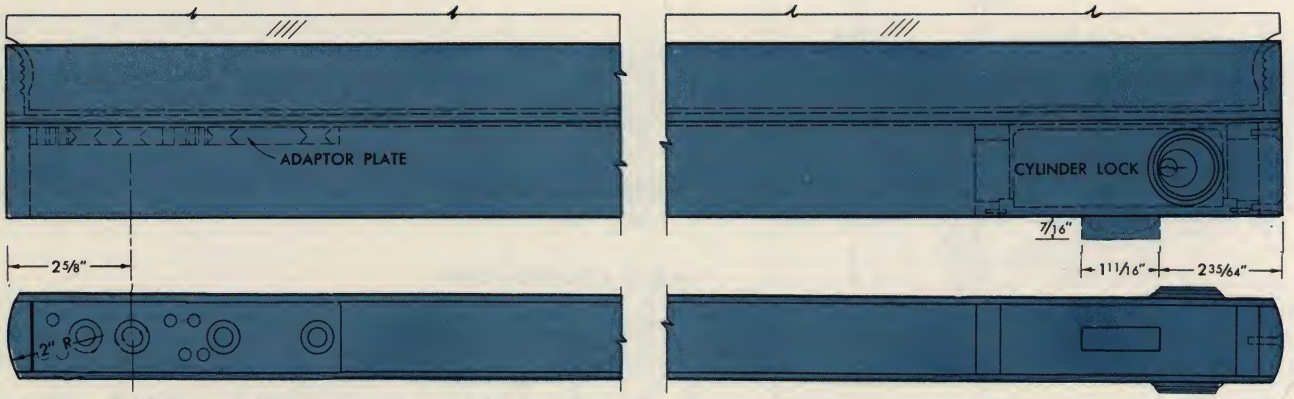
fittings

continuous (top)



S-06 or S-08 top fitting contains the ½" diameter adjustable "Oilite" bearing for the top pivot and may also contain a flush bolt or lock as required. They can also be notched and fitted for Glynn Johnson door holders.

continuous (bottom)



S-06 or S-08 bottom fitting contains an adapter plate which is made to receive the floor type pivot specified. It also may contain flush bolt or lock as required. Both top and bottom fittings can be fitted for time locks when requested.

fitting designations:

	½" door	¾" door
Top Fittings	S-06-T	S-08-T
Bottom Fittings	S-06-B	S-08-B

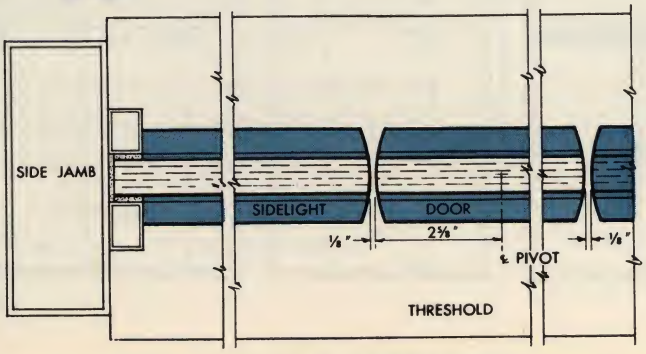
details of typical section

The established clearance at top, sides and between doors and sidelights is 1/8" at each edge. At the bottom of the doors the clearance may be as much as ¼" although 3/16" is preferred.

The dimensional tolerance of *Tuf-flex* glass doors and sidelights is plus nothing, minus 3/32" of the actual over-all size of the doors as ordered.

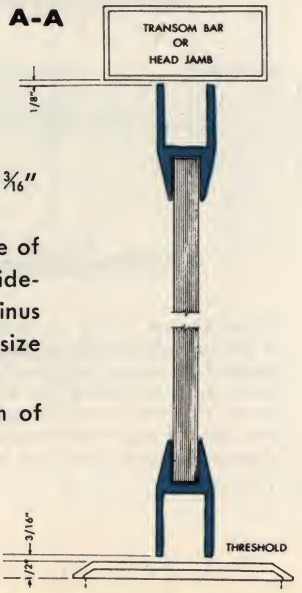
See illustration at bottom of page 5.

B-B



PLAN SECTION

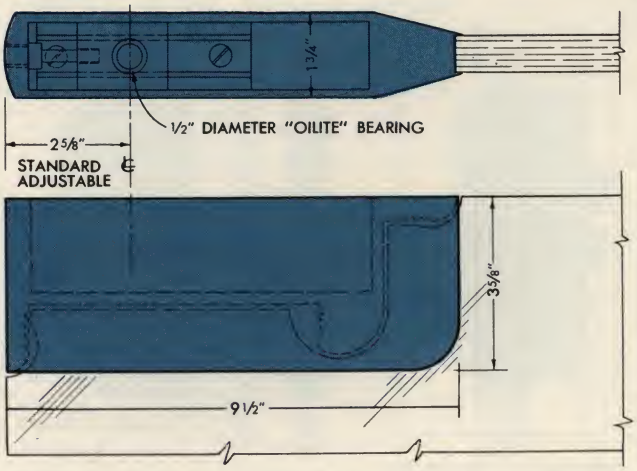
A-A



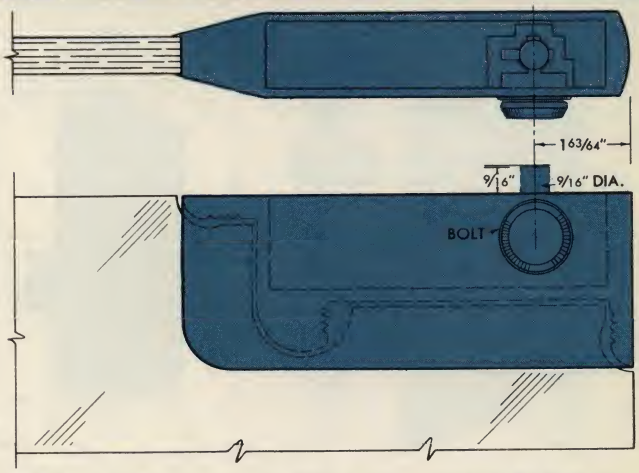
VERTICAL SECTION

TUF-FLEX doors

corner (top)

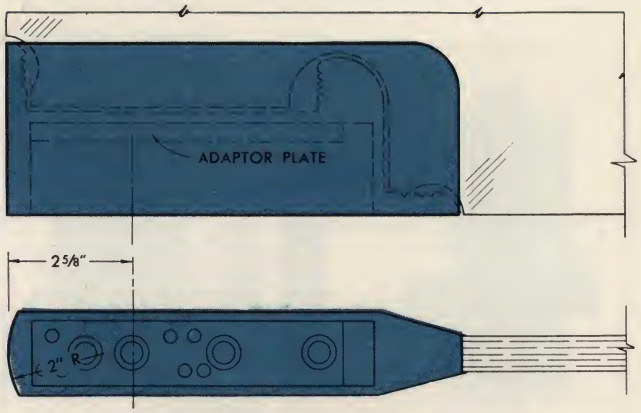


S-21 or S-22 top corner fitting contains adjustable "Oilite" bearing.



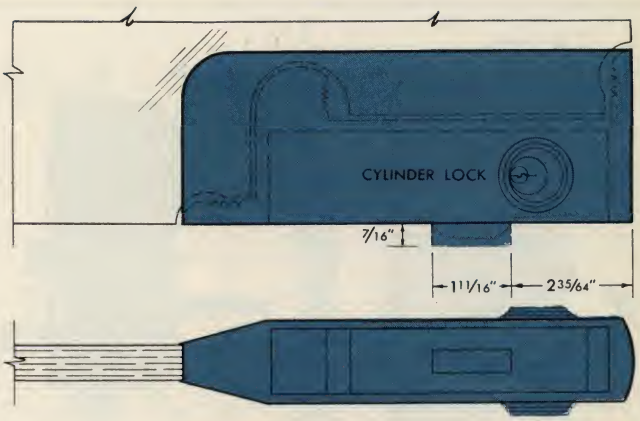
S-21 or S-22 top corner fitting may contain flush bolt or lock as requested.

corner (bottom)



S-21 or S-22 bottom corner fitting contains adapter plate for floor type pivot.

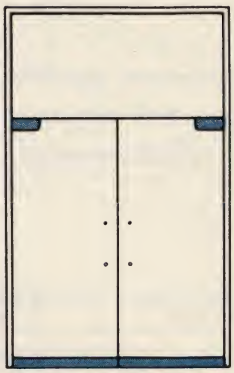
S-21 or S-22 bottom corner fitting may contain flush bolt or lock as required.

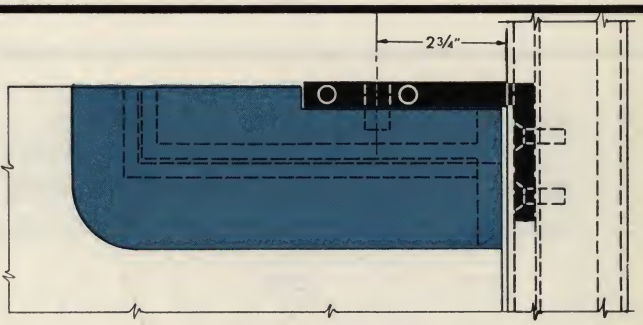


fitting designations:

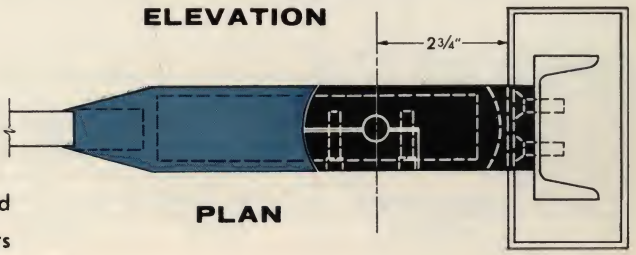
	½" door	¾" door
Top and Bottom Fittings	S-21	S-22

■ transom and pivot bracket





ELEVATION

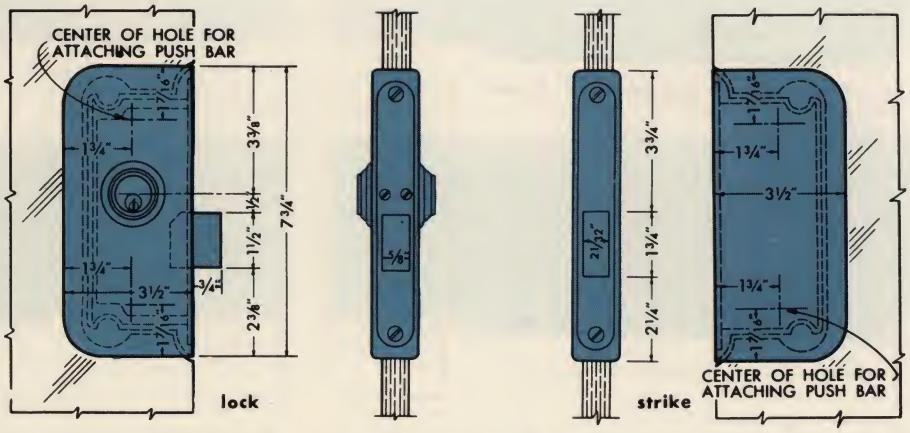


PLAN

The transom pivot brackets support the transom glass and serve as the top pivot for the doors when transom bars are eliminated.

locking hardware *

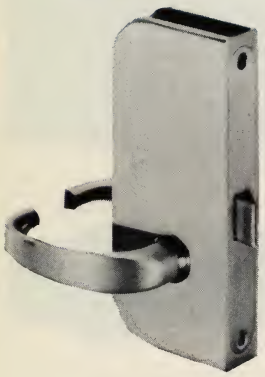
dead lock

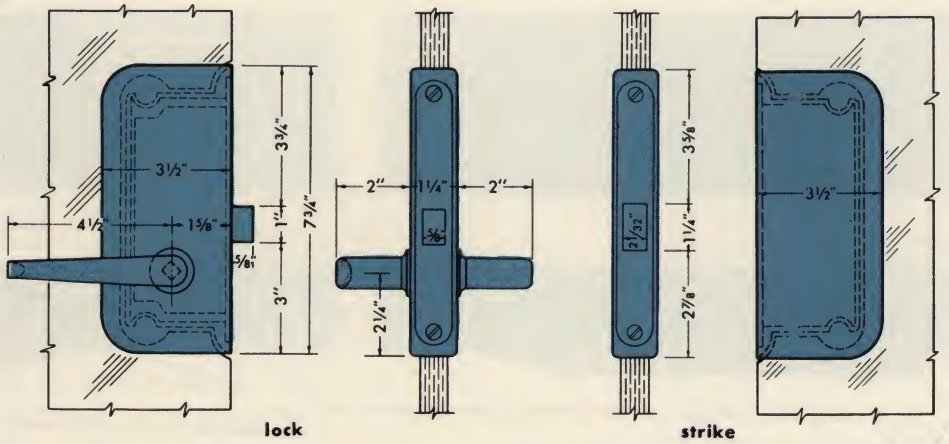


door	lock	strike
¾"	S-10-A	S-11-A
½"	S-12-A	S-13-A

This dead lock fitting has a dead bolt operated by cylinders from both sides and is the only center lock on which one end of a horizontal push bar may be fastened.

latch





door	latch	strike
¾"	S-10-B	S-11-B
½"	S-12-B	S-13-B

This latch fitting operates with lever handles both sides.

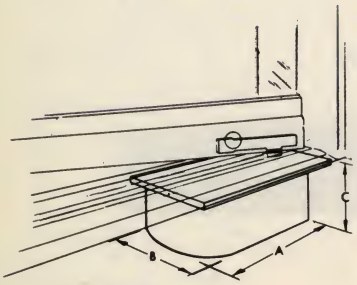
*All locks including S-04 and S-06 locks may be masterkeyed.

operating hardware

floor checking hinges

center hung

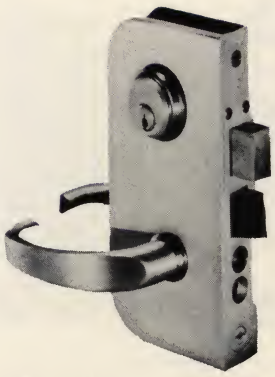
Tuf-flex Doors are installed with floor or overhead checking hinges. Listed are some of the floor type hinges generally used.

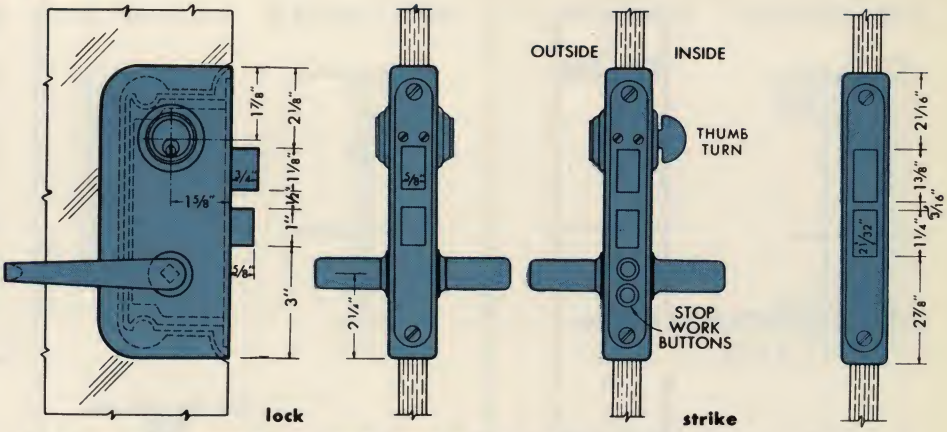


	single acting				double acting				pivot distance
	medium	a	b	c	heavy	a	b	c	
Bommer Spring	C-88-½	10¼"	5 1/16"	3 11/16"	C-87	17"	6⅛"	4 1/16"	2 7/16"
Dor-o-matic	260	12¼"	6 1/16"	3⅞"	400	17"	6 1/16"	4⅛"	2⅝"
LCN Closers	6CP	12½"	5⅛"	3⅞"					1⅞"
Rixson Co.	126	11⅛"	5⅞"	4 1/16"	140	17"	6¾"	4 1/16"	2⅝"

TUF-FLEX doors

latch and dead lock

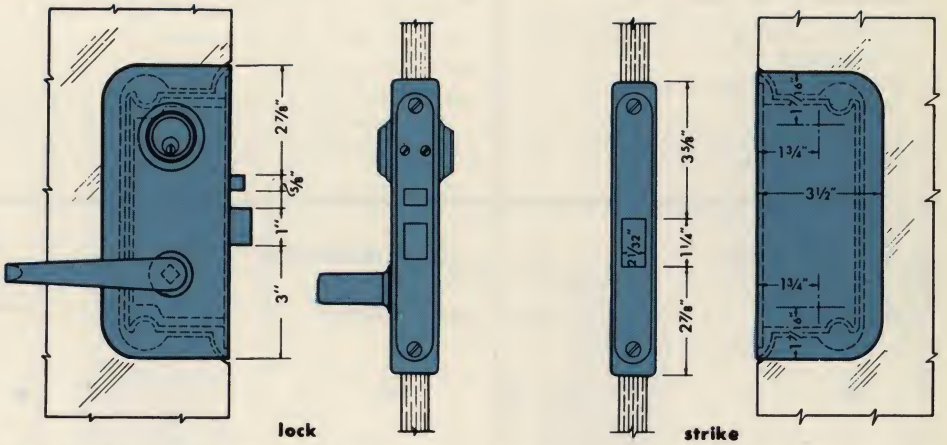




door	lock	strike
¾"	S-10-C	S-11-C
½"	S-12-C	S-13-C

Latch bolt is operated by lever handle both sides and dead bolt is operated by cylinders both sides. (Thumb turn will be furnished on inside face to operate dead bolt in lieu of cylinder when so specified). "Stop Work Button" will be added on special order only. These will lock outside handle only and cylinder key will withdraw both bolts.

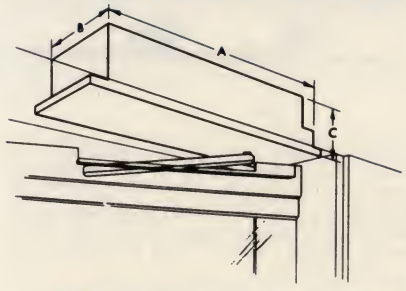
bank lock



The HS4250A — This lock has auxiliary latch with cylinder outside, lever handles both sides and stop work buttons in the edge. For ½" or ¾" doors.

HS4250½A — This lock has auxiliary latch, cylinder both sides, lever handle inside only and no stop work buttons in face. For ½" or ¾" doors.

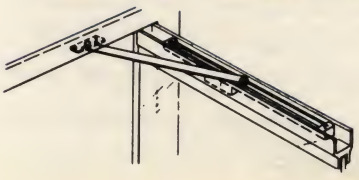
overhead checking hinges center hung



Where floor conditions do not permit the space required for the conventional floor pivot then the overhead type of pivot may be used.

	exterior single acting			exterior double acting				interior double acting			pivot distance
	No.	a	b	c	No.	a	b	c	a	b	c	
LCN Closers	206CP	14½"	3⅞"	4¼"	666	19¼"	4	4½"	16¹⁄₁₆"	3½"	4⅛"	1⅞"

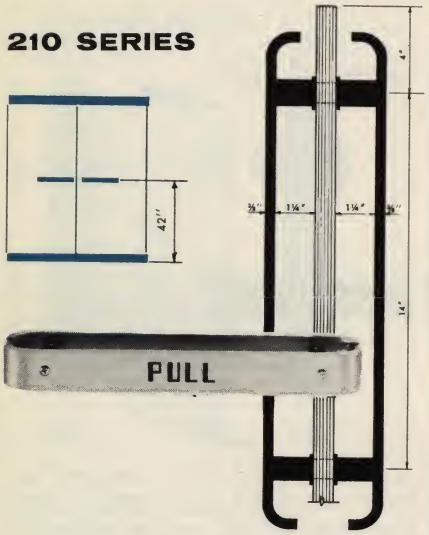
door holder overhead—concealed



While some manufacturers of door pivots can furnish the holdopen feature, we will furnish and install in *Tuf-flex* Doors the Glynn Johnson door holder when so ordered.

	single acting	double acting
Glynn Johnson	#140	#240

210 SERIES

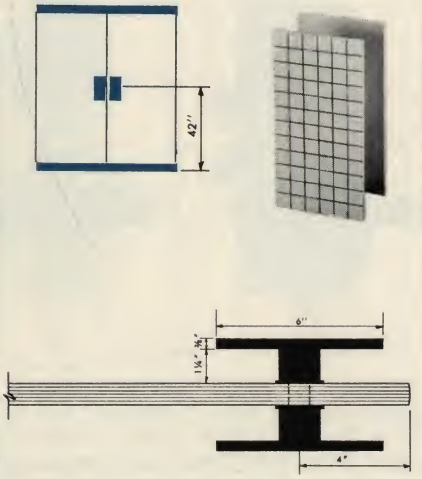


This strong, rather simple bar 2″ wide in alumilited aluminum finish can be used either horizontally or vertically on single acting or double acting doors. The words "push" and "pull" with letters 1″ high may be inscribed on each set of bars.

210 As shown with inscribed letters. When ordering, designate if bar is to be used vertically or horizontally.

211 As shown without letters inscribed.

220 SERIES



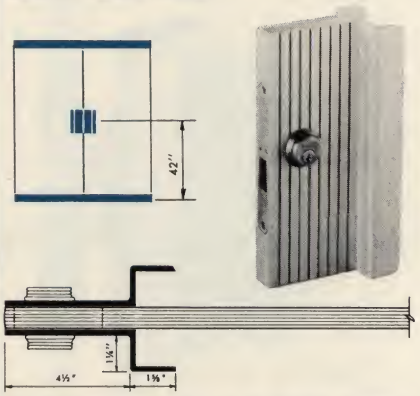
A neat, attractive bar consisting of two flat plates 6″ x 12″ in alumilited aluminum for use on S/A or D/A doors. This bar has hole location of 8″ on center and can be used vertically or horizontally.

220 Scored with 1″ squares as shown.

221 Plain — no scoring.

222 Plain with "push" and "pull" inscribed.

230 SERIES



This eye-catching fitting, in alumilited aluminum finish, combines the use of a lock or strike with a push-pull bar. All of the types of locks for center fitting doors shown in our **Tuf-flex** Door Booklet may be used with it. This fitting is 6″ x 12″ and may be used on ½″ or ¾″ doors.

230 Center lock push-pull bar combination, scored as shown.

231 Same as #230 without scoring—(plain).

232 Same as #231, but inscribed "push" and "pull".

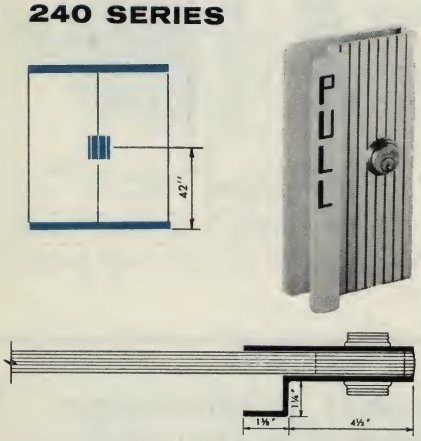
233 Center strike push-pull bar combination, scored as shown to be used with #230 for a pair of doors.

234 Same as #233 without scoring—(plain).

235 Same as #234, but inscribed "push" and "pull".

NOTE: Prices for locks, latches, stop-work buttons, etc., can be obtained from **Tuf-flex** Door Schedule #7, page 6.

240 SERIES



This combination lock or strike push-pull bar center fitting is very similar to #230 except that it can be used **only** on single acting doors. Like its counterpart, it will accommodate all the types of locks used for any of our center fitting doors. Its size is 6″ x 12″ in alumilited aluminum and can be used on ½″ or ¾″ doors.

240 Center lock push-pull bar combination, scored and inscribed as shown.

241 Same as #240 without scoring (plain)—but inscribed.

242 Same as #240 without inscription or scoring—(plain).

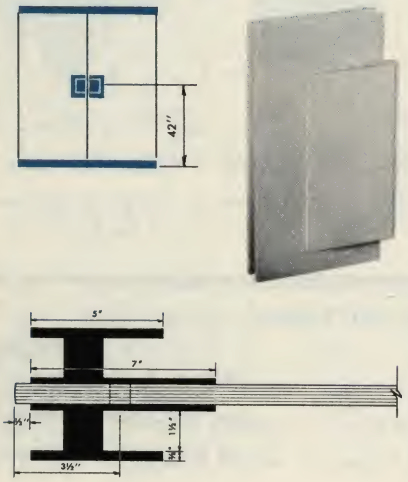
243 Center strike push-pull bar combination scored and inscribed as shown to be used with #240 for a pair of doors.

244 Same as #243 without scoring—(plain)—but inscribed.

245 Same as #243 without inscription or scoring—(plain).

NOTE. Price for locks, latches, stop-work buttons, etc., can be obtained from **Tuf-flex** Door Schedule #7, page 6.

250 SERIES



A distinctively attractive push-pull bar made in several variations of finish. It can be obtained with the face plate insert of alumilited aluminum or brushed bronze. This bar may be installed vertically or horizontally on single acting or double acting doors. The size is 7″ x 13½″.

250 Plain alumilited aluminum, as shown.

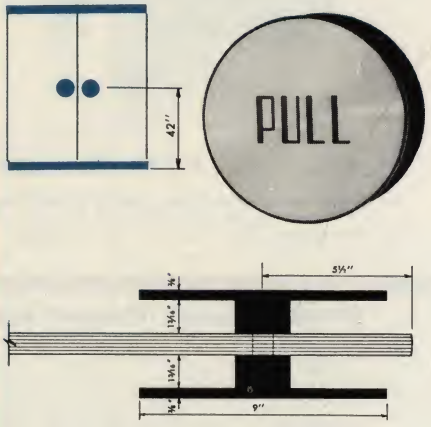
251 Push plate insert same as #250 but inscribed "push" and "pull".

252 Push plate insert scored vertically or in 1″ squares. No inscription.

253 Push plate insert of brushed bronze—(plain).

254 Push plate insert same as #253 but inscribed "push" and "pull".

260 SERIES



This 9″ diameter disc type bar is made in a number of variations. While the one shown is of alumilited aluminum, the face plate insert can be of brushed or polished bronze, inscribed "push" and "pull" or scored with 1″ squares, and can be used on single acting or double acting doors. When ordering, indicate swing of doors and whether they are ½″ or ¾″ thick.

260 As shown, of alumilited aluminum, with 2″ high letters inscribed "push" and "pull".

261 Alumilited aluminum plain—(no inscription).

262 Same as #261 but scored in 1″ squares—(no inscription).

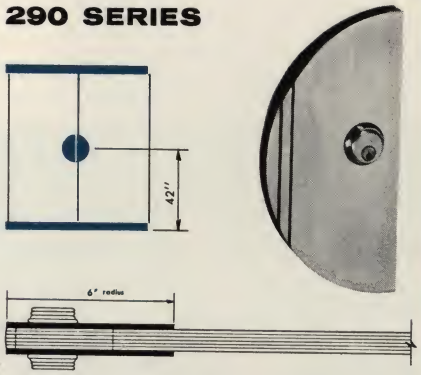
263 Alumilited aluminum backing with brushed bronze, plain plate insert.

264 Same as #263 with 2″ high letters inscribed "push" and "pull".

265 Same as #263, but scored in 1″ squares.

TUF-FLEX doors

290 SERIES



This center push plate fitting is a combination of push plate and center lock fitting, 12″ in diameter, in which may be installed any of our center locks. This fitting may be used on double acting doors without push-pull bars, but if installed on single acting doors, push-pull bars must be used.

NOTE: When inscribed and used on single acting doors, one side will be inscribed "pull" and the other side "push".

290 Center lock push plate scored as shown.

291 Same as #290 but plain—(without scoring).

292 Same as #291 but inscribed "push" both sides.

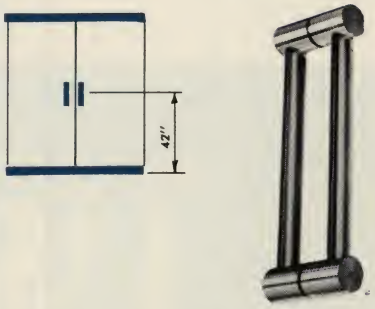
293 Center strike push plate scored and to be used with #290 for a pair of doors.

294 Same as #293 but plain—(without scoring).

295 Same as #294 but inscribed "push" both sides.

NOTE. Price for locks, latches, stop-work buttons, etc., can be obtained from **Tuf-flex** Door Schedule #7, page 6.

A SERIES



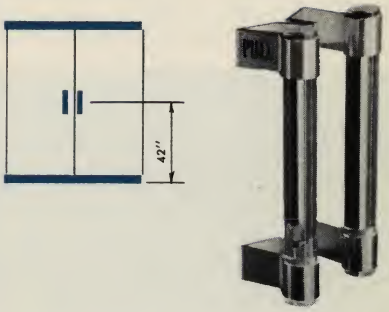
These simple, eye-appealing bars fit into durable aluminum brackets which have been machined to a neat finish. The handles can be attached in either a horizontal or vertical position on **Tuf-flex** Doors.

model	length	bar
A12	12″	Lucite
A14	14″	
AL12	12″	Aluminum
AL14	14″	
AX12	12″	Lucite
AX14	14″	
*ALX12	12″	Aluminum
*ALX14	14″	

*To be used horizontally on doors having S10A or S12A locks and S11A or S13A strikes.

NOTE: All "A" bars may be engraved with words "Push" or "Pull" if desired.

C SERIES

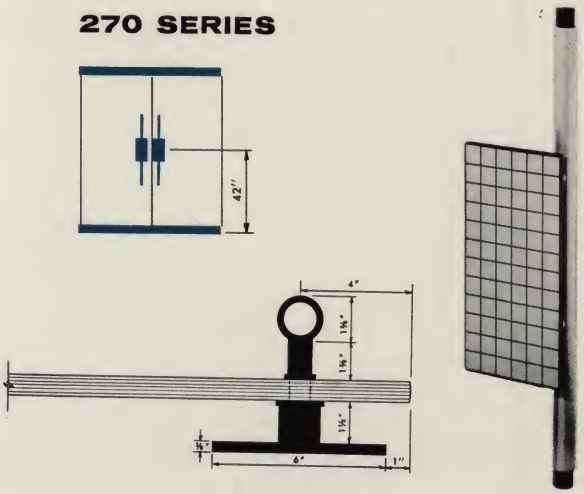


An attractive companion to the "A" bar is this "C" bar, which also can be installed in either a vertical or horizontal position and fits into durable aluminum brackets.

model	length	bar
C12	12″	Lucite
C14	14″	
CA12	12″	Aluminum
CA14	14″	
*CE12	12″	Lucite
*CE14	14″	
*CAE12	12″	Aluminum
*CAE14	14″	

***NOTE:** When ordering engraved bars, the swing of the door must be indicated. The engraving can be furnished on vertical bars only.

270 SERIES



This unique push-pull bar has a long vertical handle for the pull side and a flat push plate for the push side. It is made primarily for single acting doors, but by substituting the long handle for the push plate, it can be used for double acting doors.

It is of alumilited aluminum and can be furnished for ½″ or ¾″ doors. Push plate is 6″ x 12″ and the vertical handle is 26″ long.

270 Scored push plate with plain anodized vertical handle, as shown.

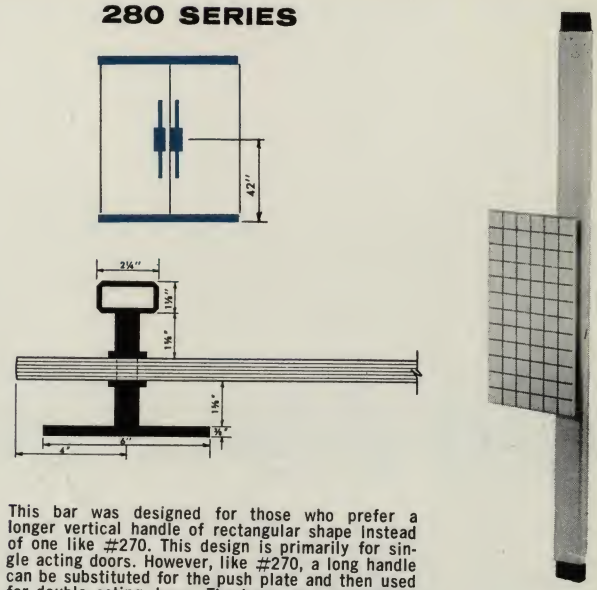
271 Same as #270 excepting push plate is plain—(not scored).

272 Same as #271 excepting push plate is brushed bronze instead of aluminum.

273 Same as #272 excepting push plate is scored with 1″ squares.

274 The vertical push bar may be eliminated and any of the above push plate inserts substituted. Consult L-O-F's Toledo Office for special quotation.

280 SERIES



This bar was designed for those who prefer a longer vertical handle of rectangular shape instead of one like #270. This design is primarily for single acting doors. However, like #270, a long handle can be substituted for the push plate and then used for double acting doors. The bars are of alumilited aluminum and can be used on 1½″ or ¾″ doors. The push plate is 6″ x 12″ and the vertical bar is 36″ long.

280 Scored push plate with anodized vertical handle, as shown.

281 Same as #280 excepting push plate is plain—(not scored).

282 Same as #281 but inscribed "push" and "pull".

283 Same as #281 excepting push plate is brushed bronze instead of aluminum.

284 Same as #283 excepting push plate is inscribed "push" and "pull".

285 Same as #283 excepting push plate is scored with 1″ squares.

286 The push plate may be substituted for the vertical bar in any of the above types. Consult L-O-F's Toledo Office for special price.

district offices

ATLANTA 3, GEORGIA
1001-1007 Whitehead Bldg.,
223 Peachtree Street N.E.
Jackson 4-5239

BOSTON 16, MASSACHUSETTS
526 Statler Building,
20 Providence St., Park Sq.
Hubbard 2-0100

BUFFALO 3, NEW YORK
2010 Rand Building,
14 Lafayette Square
Mohawk 7656

CHICAGO 3, ILLINOIS
Room 1400-1410,
120 So. LaSalle St.
Central 6-2490

CINCINNATI 3, OHIO
912 Enquirer Building,
617 Vine Street
Main 1-6174

CLEVELAND 13, OHIO
1302 Terminal Tower Bldg.
Main 1-7180

DALLAS 1, TEXAS
1403 Tower Petroleum Bldg.
Riverside 1-4026

DAYTON 2, OHIO
901 Third National Bldg.
Baldwin 4-8315

DENVER 2, COLORADO
1414 Mile High Center Bldg.,
Alpine 5-0395

DETROIT 2, MICHIGAN
610 Fisher Building
Trinity 5-0080

INDIANAPOLIS 4, INDIANA
625 Circle Tower Building,
5 East Market Street
Melrose 7-1363

KANSAS CITY 5, MISSOURI
910 Dwight Building,
1004 Baltimore Street
Victor 2-5360-61

LOS ANGELES 5, CALIFORNIA
1101 Tishman Building,
3440 Wilshire Boulevard
Dunkirk 8-0641

MEMPHIS 3, TENNESSEE
837 Sterick Building,
8 North Third Street
Jackson 7-7589

MILWAUKEE 3, WISCONSIN
5154 Plankinton Building,
161 West Wisconsin Avenue
Broadway 2-2887

MINNEAPOLIS 2, MINNESOTA
506 WCCO Building
Federal 2-8429

NEW YORK 16, NEW YORK
99 Park Avenue
Murrayhill 2-6511

PHILADELPHIA, PENNSYLVANIA
121 Coulter Ave.,
Ardmore, Pennsylvania
Greenwood 7-4120, 7-4121,
7-4122

RICHMOND 19, VIRGINIA
1122 Mutual Assurance
Society Bldg.,
909 East Main Street
Milton 3-3034

ST. LOUIS 1, MISSOURI
Ambassador Building,
411 N. 7th Street
Central 1-9863

SAN FRANCISCO 5, CALIF.
635 Rialto Building,
116 New Montgomery Street
Sutter 1-4360

SEATTLE 1, WASHINGTON
1301 Tower Building,
Mutual 2-7047

TOLEDO 3, OHIO
608 Madison Avenue
Cherry 2-5781

WASHINGTON 6, D. C.
806 Connecticut Avenue
Sterling 3-4472

LIBBEY · OWENS · FORD GLASS CO.

a Great Name in Glass

608 MADISON AVENUE
TOLEDO 3, OHIO

AIA File No. 16N-1960

AIA File No. 16N-1960

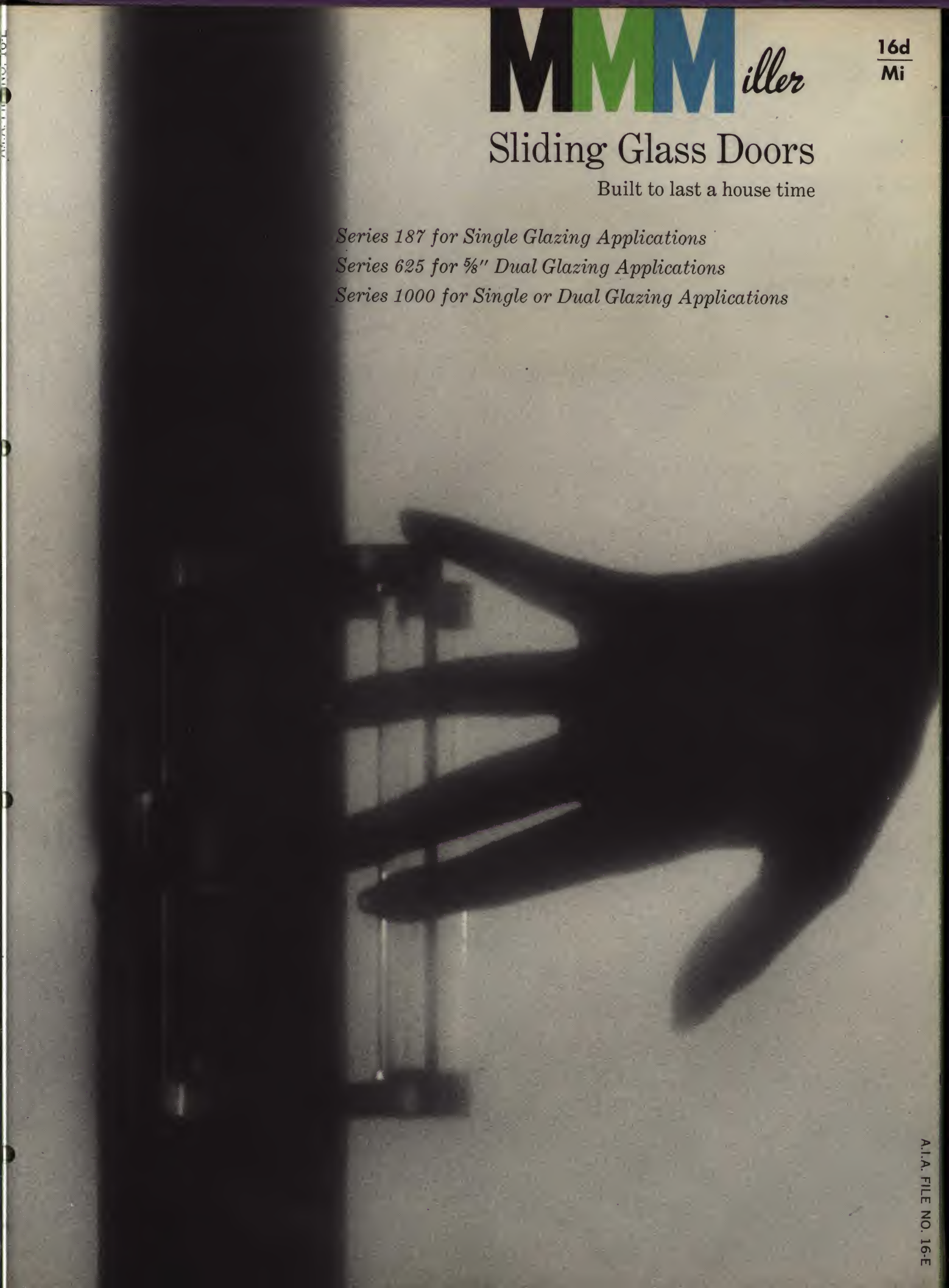
Litho in U.S.A. — Sept. '59 — GL

Miller

Sliding Glass Doors

Built to last a house time

Series 187 for Single Glazing Applications
Series 625 for ⅝" Dual Glazing Applications
Series 1000 for Single or Dual Glazing Applications



To Help You Compare

Wide vistas, lasting beauty, a product worthy of my design... these are the demands of the architect. Reasonable cost, simple installation, no call-backs, features that will help sell... this is what the builder desires. The owner wants them all plus year in and year out dependable use... for as long as the structure stands. This is what has guided us in the design and manufacture of Miller Sliding Glass Doors.
This is what has produced the housetime features presented below for your comparison.

House Time Comparables 1 2 3 4 5 6 7

1. FRAME CONSTRUCTION: Heavy-walled, box-type aluminum extrusions are used throughout. Corners are reinforced and squared for easy installation. Stationary and sliding members have a common sight line and are mitered for attractive appearance.

2. HEAVY TRED THRESHOLD: Full length reinforcing ribs resist prolonged heavy loads and maintain slider track stability for smooth operation. Threshold slants to outside for proper drainage of moisture.

3. ALL SEASON WEATHER SEAL: Silicone treated certified woven pile is used inside and out at the vent jamb, interlocker, header and threshold. The seal "surrounds" rollers, prevents leaks in severest weather.

4. FULL GRIP HARDWARE: Attractive, functional design assures easy movement of sliders. Convenient latch provides full security, yet is easily dis-engaged with finger-tip action. Cylinder key lock optional.

5. TRACK HUGGING ROLLERS: Heavy gage, wrap around ball bearing rollers provide full support for sliding members. Accurate balance permits effortless opening and closing. Adjustment is simple from convenient "hidden" adjusting hole at rear of slider.

6. INSECT RESISTANT, EXTERNAL SCREEN: Full box type construction. Supported with nylon ball bearing rollers. Mounted outside so it will not rub on drapes or trap insects between slider.

7. LUSTROUS, PERMANENT FINISH: Approved alumilite process is used on all parts. Anodized coat makes the metal corrosion resistant in all climates. Occasional cleaning with warm soap and water keeps surfaces new looking for years.

To Help You Specify

Miller offers great freedom of design within these broad applications:

The single-glazed Series 187 aluminum sliding glass door

For all types of construction where 3/16″ or 1/4″ glass is required in heights up to 8′6″ with sliding sections up to 6′ in width. Also, for either interior or exterior pocket installations.

Ideal for single glass special applications such as front doors, entrances, bathrooms, private walled solariums, etc.

Wrap around, vulcanized vinyl with unbroken corners permits either shop or field glazing. Can be converted to 5/8″ dual glass by substituting Series 625 panels in the same frame.

The Series 1000 aluminum sliding glass door line for interchange single or dual glazing

An ideal multi-purpose door that is designed for all types of construction, residental, commercial, or institutional, where 1″ dual glazing (or less) is specified.

Series 1000 features an interchangeable glazing bead which permits use of 3/16″ sheet, 1/4″ plate, 5/8″ or 1″ dual glass. Single glass original installation can be changed later to 5/8″ or 1″ dual.

Recommended for extra high or wide doors and walls whether single or dual glazed.

This series can incorporate mullion load-bearing columns to support framing header in cases where proper height header cannot be used without changing roof line, or causing door height to be too low. Also used with transoms, either regular or tapered, cathedral type.

Series 1000 is recommended for double track or triple track doors and for exterior pocket doors requiring 5/8″ or 1″ dual glass. This design is specially adaptable for auto showrooms, department stores, exterior walls, large display areas, etc. It incorporates wrap-around glazing and can be shop glazed in standard sizes and field glazed on special installations.

FOR STOCK SIZES AND TYPE OF ALL SERIES DOORS, SEE PAGE 8.

Miller proves itself in Air and Water Infiltration Test at the Sliding Glass Door and Window Institute Test Facility, Santa Maria, Calif.

Air infiltration shall not exceed 0.65 cu. ft. per minute per foot of sliding panel perimeter when full size unit is subjected to a dynamic pressure of a 25 mile per hour wind.

The water infiltration shall not permit any water to overflow any part of the sill on interior face of unit when tested for a 15 minute period in a simulated rain fall of 2 inches of water per hour per square foot of area and subjected to a 45 mile per hour wind.

Tests certified by A. F. Jones Testing Laboratory.

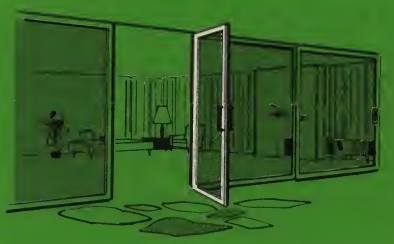
6 Miller

SPECIAL APPLICATIONS

CUSTOM TRANSOMS

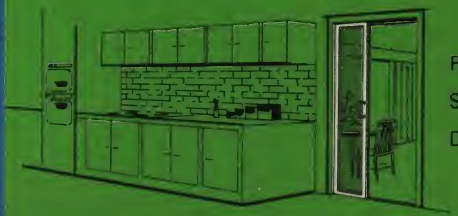
MULLION LOAD BEARING COLUMN

DOOR MULLED TO FIXED FRAME



SWINGING DOOR INCORPORATED IN SLIDING FRAME

MULTIPLE TRACK SLIDING DOOR



POCKET SLIDING DOOR

To Help You Confirm

A. Designers who reach for the sky find the construction of Miller extra height rigidity and special module tramsom design a practical and attractive solution.

B. Panoramic scenes get full scale treatment when Miller load bearing columns wed roof and glass wall. Slim sturdy supports permit floor to ceiling, inside and out, wide screen living.

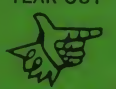
C. For the elegant utilitarian touch, Miller sliding glass doors "fit"...good design and the promise of day in and day out, year in and year out effortless operation.

D. The rough and ready application calls for Miller features, too. Heavier construction throughout protects the not-so-thoughtful and leaves the designer room for new concepts in construction.

E. When it comes to the unique application, Miller sliding glass doors free the imagination. A wide expanse over a swimming pool with protecting plastic bottom or a 100′ opening...these are the challenges we like.

F. Commercial designers, builders and owners know the importance of maintenance free products. Hundreds have selected Miller sliding glass doors for their touch of elegance and practical longevity.

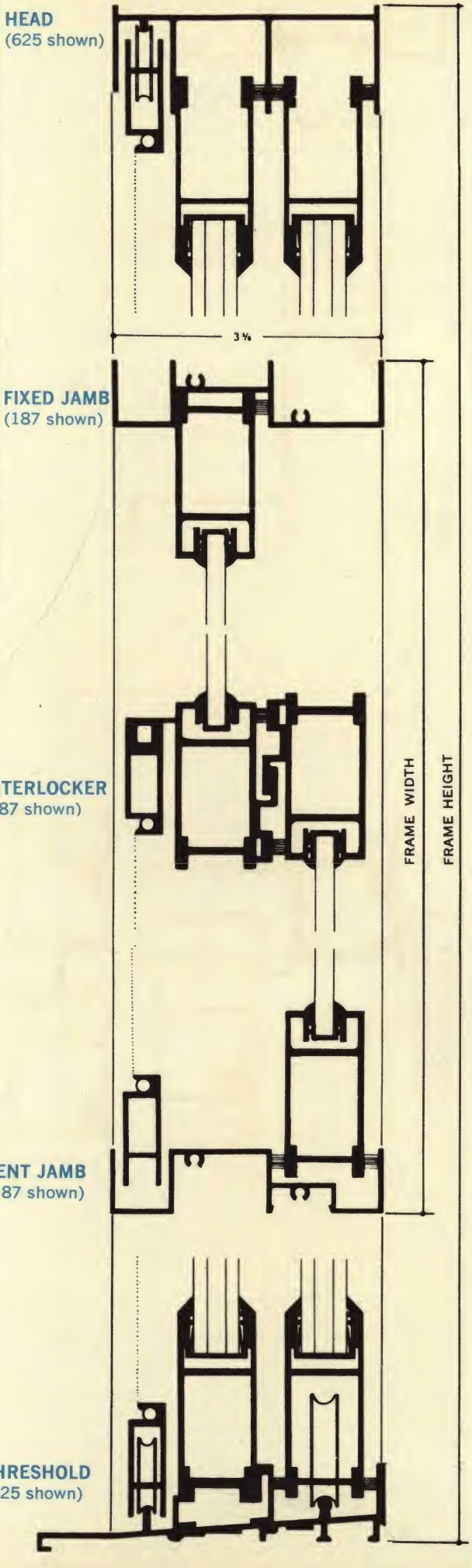
TEAR OUT



AND TRACE

Additional ½, ¼ and full-size detail sheets or catalogs available from your dealer or Miller.

Additional ½, ¼ and full-size detail sheets or catalogs available from your dealer or Miller.



187 & 625 SERIES ARCHITECTS SPECIFICATIONS

GENERAL: Sliding Aluminum Framed Doors shall be Miller Series #187 and #625 Sliding Aluminum Doors as manufactured by Miller Sliding Glass Door Co., 3216 Valhalla Dr., Burbank, Calif.

MATERIAL: All sections shall be 6063-T5 extruded aluminum alloy. Sections shall have satin Alumilite coating. Component parts and accessories shall be aluminum alloy, cadmium plated or non metallic materials which will neither deteriorate nor promote corrosion. Weatherstripping shall be dense silicoted, fungus, mildew and moth resistant woven wool pile.

DESIGN: Vertical members of sash shall be of one piece, hollow sections of adequate stiffness to insure strength and rigidity. Frame and panels shall, when assembled, present a neat finished appearance and water-tight joints. Weatherstripping shall be double and continuous around entire sash section. Vented or sliding sections are to move horizontally upon bottom mounted ball bearing grooved rollers. Adjustment to be provided in roller assembly for squaring of vent in frame where indicated by irregularities in rough opening. All doors are designed to accommodate 3/16", 1/4" or 5/8" dual glass with both the fixed section and sliding section removable for glazing and maintenance. Sill member shall provide for adequate drainage to outside. All door frames are designed with provision for installing bottom roller horizontal sliding screens.

HARDWARE: Hardware shall be of full grip design with positive, one action, magic touch latch with provision for locking from inside. When specified, exterior locks shall be Weiser, five pin cylinder, or other make as may be required. Receiver in jamb provides for adjustment.

WEATHERSTRIPPING: Weatherstripping shall be installed in such manner as to make a positive unbroken double seal around entire vent section. All weatherstripping shall be dense silicoted, fungus, mildew and moth resistant woven wool pile.

SCREENS: Screen sections shall be 6063-T5 extruded aluminum alloy tubular box type sections. Screens shall have adjustable bottom ball bearing nylon sheaves. Top of screen shall have spring loaded ball bearing nylon guide rollers. Screen frame members shall be accurately cut and assembled to form neat mitered corners. Frame shall be wired with 14 x 18 mesh fiberglass cloth. All screens shall have insect closure on trailing stile of frame. Screen to have hook type lock.

ASSEMBLY: Doors shall be shipped in knocked down condition. Factory sub-assembly shall include attachment of all accessory parts such as weatherstrip, latch, roller assemblies, corner connecting brackets, bumpers, etc. No special tools required for final assembly. Assembly instructions supplied with each frame.

GLAZING: The fixed and sliding panels shall be constructed to allow for either shop or field glazing. Vinyl glazing channels for 3/16", 1/4" or 5/8" glass shall be furnished with each frame. **Specify when ordering.** All corners of vinyl channels shall be vulcanized to form watertight joints around glass.
Glass and glazing shall be furnished by others under separate contract arrangement.

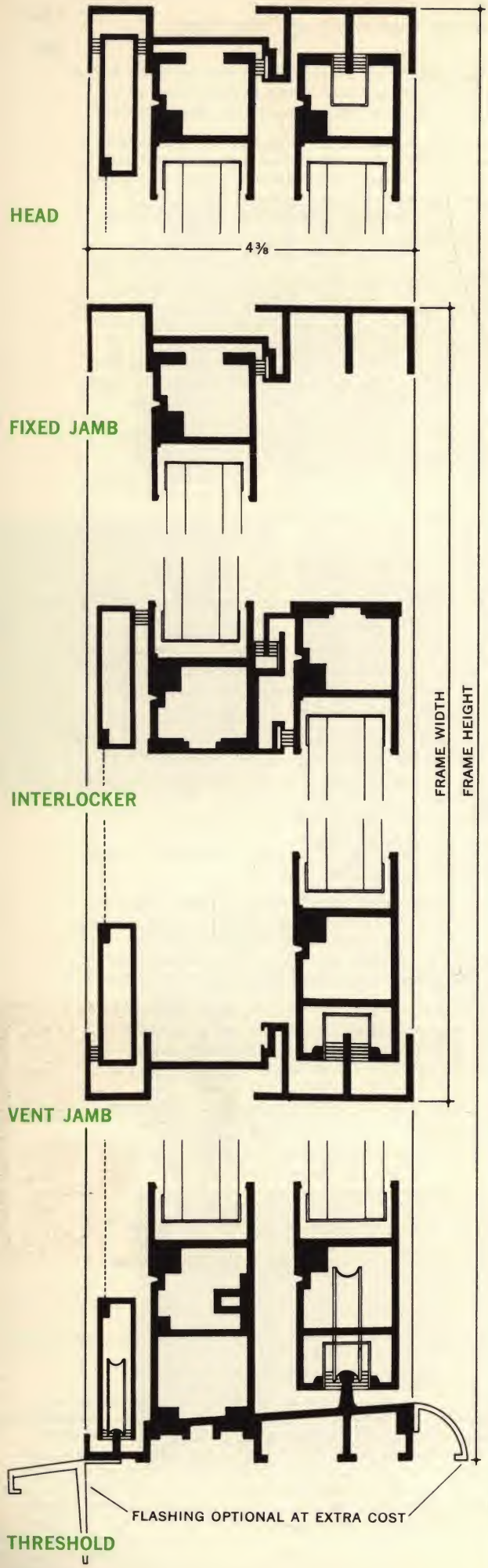
INSTALLATION: Installation shall be done by others under separate contract arrangement. Complete instructions supplied by manufacturer.

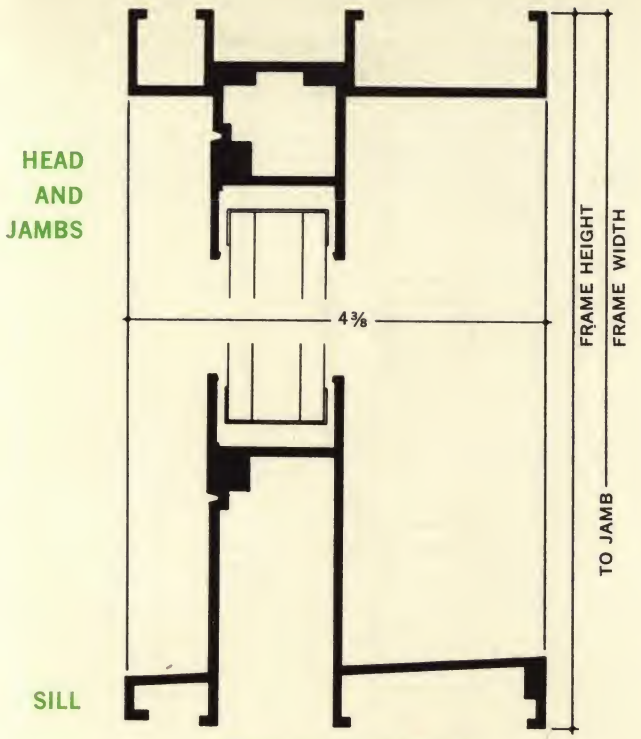
GUARANTEE: All "Miller" products are guaranteed against factory defect. Responsibility is assumed for satisfactory functioning of sliding door provided installation instructions are observed.

Miller Aluminum 187 and 625 Series, ½ size details

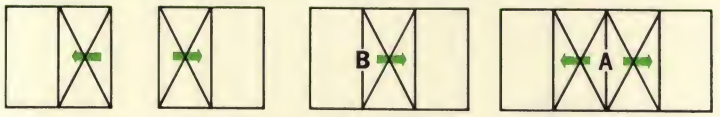
SPECIFICATIONS FOR SPECIFYING:

Aluminum sliding doors and frames shall be "Miller No. 187 or 625 Series" as manufactured by Miller Sliding Glass Door Co. Inc., 3216 Valhalla Dr., Burbank, Calif. **MATERIAL:** All sections shall be .072 average wall thickness, 6063-T5 extruded aluminum alloy with Alumilite finish. **DESIGN:** Vent or sliding sections are to move horizontally on bottom mounted, ball bearing grooved brass rollers. Adjustment to be provided in roller assembly for squaring of vent in frame. **HARDWARE:** Shall be full grip design with "Magic Touch" night latch engaging adjustable receiver mounted in jamb. (Cylinder locks optional at extra cost.) **WEATHERSTRIP:** Shall be silicone treated woven wool pile mounted in channels to form double seal all four sides of vent with unbroken seal in vent corners. **SCREENS:** Shall be aluminum tubular box section, 18-14 mesh fiber glass cloth. Wool pile insect guards all four sides. Hook type latch.

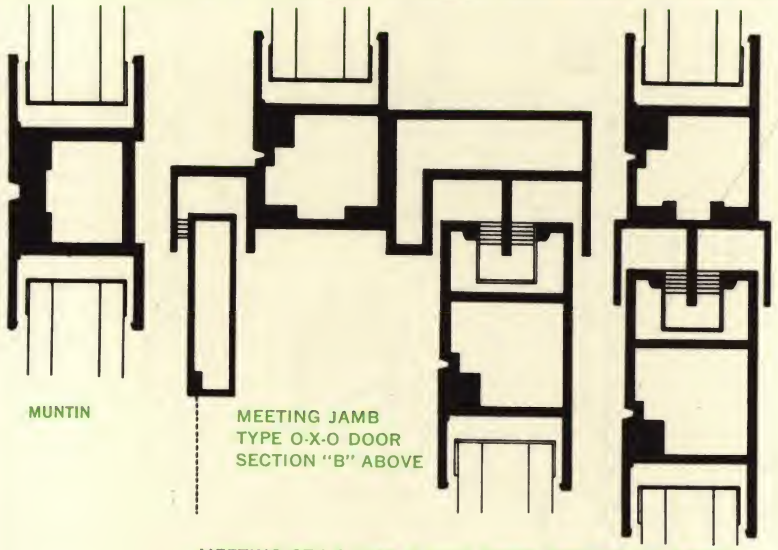




FIXED FRAME DETAILS



	TYPE O-X	TYPE X-O	TYPE O-X-O	TYPE O-X-X-O
WIDTH:	6, 8, 10 & 12 FT.	6, 8, 10 & 12 FT.	9, 12 & 15 FT.	12, 16 & 20 FT.
HEIGHT:	6 FT.–10 IN.	6 FT.–10 IN.	6 FT.–10 IN.	6 FT.–10 IN.



MEETING STILE TYPE O-X-X-O DOOR SECTION "A" ABOVE

1—Layout as shown accommodates 1" insulating glass, but can also be adapted to 5/8" insulating glass, or 1/4" plate or sheet by exchanging glazing bead only.

2—Standard frames are glazed from exterior.

Miller Aluminum 1000 Series, ½ size details

SPECIFICATIONS FOR SPECIFYING:

Aluminum sliding doors and frames shall be "Miller No. 1000 Series" as manufactured by Miller Sliding Glass Door. Co. Inc. 3216 Valhalla Dr., Burbank, Calif. **MATERIAL:** All sections shall be .094 average wall thickness, 6063-T5 extruded aluminum alloy with Alumilite finish. **DESIGN:** Vent or sliding sections are to move horizontally on bottom mounted, ball bearing grooved brass rollers. Adjustment to be provided in roller assembly for squaring of vent in frame. **HARDWARE:** Shall be full grip design with "Magic Touch" night latch engaging adjustable receiver mounted in jamb. (Cylinder locks optional at extra cost.) **WEATHERSTRIP:** Shall be silicone treated woven wool pile mounted in channels to form double seal all four sides of vents, with unbroken seal in vent corners. **SCREENS:** Shall be aluminum tubular box section, 18-14 mesh fiber glass cloth. Wool pile insect guards all four sides. Hook type latch.

Additional ½, ¼ and full-size detail sheets or catalogs available from your dealer or Miller.

Additional ½, ¼ and full-size detail sheets or catalogs available from your dealer or Miller.

TEAR OUT AND TRACE

MILLER SLIDING GLASS DOORS 1000

SERIES FOR DUAL OR SINGLE GLAZING

The line known as "top quality" in the industry...the first door basically designed for 1" dual glazing. All No. 1000 Series doors are made of heavy-walled tubular aluminum extrusions. They can be shop glazed or field glazed. Moreover, the glass can be changed anytime without disturbing the framing installation. Ingeniously weathersealed, lustrous Alumilite finish, superior in every way.

Specifications

MATERIALS: All sections shall be .094 average wall thickness, 6063-T5 extruded aluminum alloy. Sections shall have Alumilite coating.

DESIGN: All extruded aluminum shapes are so designed as to give maximum strength, smooth quiet operation, and trim appearance. Vented or sliding sections are to move horizontally upon bottom mounted, ball bearing grooved brass rollers. Adjustment to be provided in roller assembly for squaring of vent in frame where indicated by irregularities in rough opening. All frames are designed for shop or field glazing. They accommodate 1" dual, 5/8" dual, 1/4" plate or sheet glass. (Specify when ordering.) Glass to be installed from outside on standard units. However, design permits availability of frames to be glazed from inside for use in multiple story buildings. All door frames are designed with provision for installing bottom roller, horizontal sliding screens.

HARDWARE: Hardware shall be of a full grip design as illustrated and specified on page 3 of this catalog. Cylinder optional at extra cost and may be installed at any time by exchanging handles only. Adjustable receiver in jamb provides perfect alignment for latching.

WEATHERSTRIPPING: Weatherstripping material shall be of Schlegel certified woven wool pile (silicone treated) mounted in channels to form continuous double seal, and is installed in such a manner as to make a positive, unbroken seal in vent corners.

SCREENS: Screens shall be made from aluminum tubular box type section with bottom rollers and fitted with 18-14 mesh fiber glass cloth, and shall slide horizontally on bottom track.

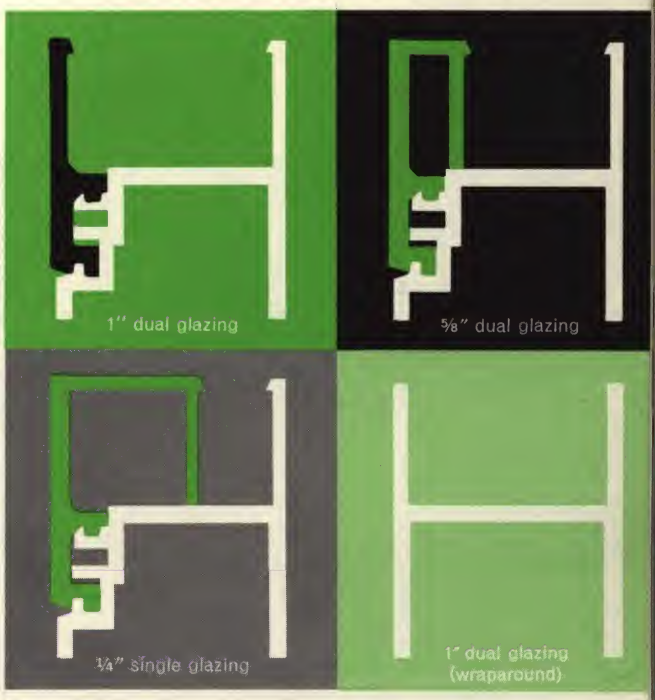
ASSEMBLY: Doors shall be shipped in knocked-down condition. Factory sub-assembly shall include attachment of all accessory parts such as weatherstrip, latch, roller assemblies, corner connecting brackets, bumpers, etc. No special tools required for final assembly. Assembly instructions supplied with each frame.

INSTALLATION: Installation shall be done by others under separate contract arrangement. Complete instructions supplied by Manufacturer.

GLAZING: Glass and glazing shall be furnished by others under separate contract arrangement.

GUARANTEE: All "MILLER" products are guaranteed against factory defect. Responsibility is assumed for satisfactory functioning of sliding door provided installation instructions are observed.

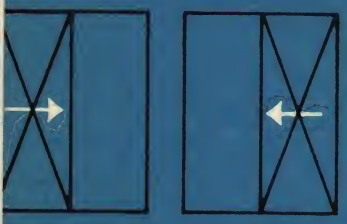
See how the No. 1000 Series lets you install any standard glass—or convert to a different thickness later—without affecting the framing. An exclusive bead design permits either shop or field glazing.



#187 & #625 FRAME SIZES	ACTUAL GLASS SIZE (SLIDING OR FIXED)
6'0" x 6'10"	33" x 76¾" (2 pcs.)
8'0" x 6'10"	45" x 76¾" (2 pcs.)
10'0" x 6'10"	57" x 76¾" (2 pcs.)

#1000 FRAME SIZES	ACTUAL GLASS SIZE (SLIDING OR FIXED)
6'0" x 6'10"	33" x 76¾" (2 pcs.)
8'0" x 6'10"	45" x 76¾" (2 pcs.)
10'0" x 6'10"	57" x 76¾" (2 pcs.)

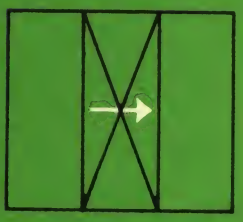
O-X & X-O



#187 & #625 FRAME SIZES	ACTUAL GLASS SIZE (SLIDING OR FIXED)
9'½" x 6'10"	33" x 76¾" (3 pcs.)
12'½" x 6'10"	45" x 76¾" (3 pcs.)
15'½" x 6'10"	57" x 76¾" (3 pcs.)

#1000 FRAME SIZES	ACTUAL GLASS SIZE (SLIDING OR FIXED)
9'0" x 6'10"	33" x 76¾" (3 pcs.)
12'0" x 6'10"	45" x 76¾" (3 pcs.)
15'0" x 6'10"	57" x 76¾" (3 pcs.)

O-X-O

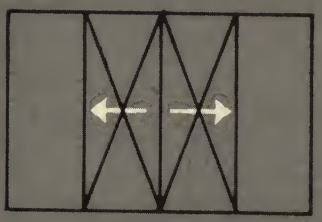


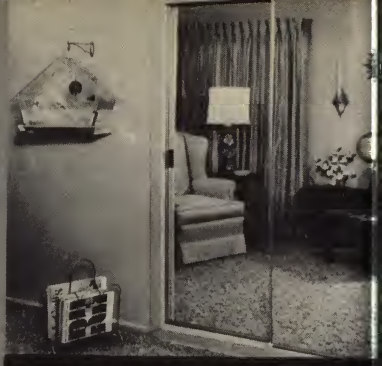
X—Slide
O—Stationary

#187 & #625 FRAME SIZES	ACTUAL GLASS SIZE (SLIDING OR FIXED)
11'11½" x 6'10"	33" x 76¾" (4 pcs.)
15'11½" x 6'10"	45" x 76¾" (4 pcs.)
19'11½" x 6'10"	57" x 76¾" (4 pcs.)

#1000 FRAME SIZES	ACTUAL GLASS SIZE (SLIDING OR FIXED)
11'10⅝" x 6'10"	33" x 76¾" (4 pcs.)
15'10⅝" x 6'10"	45" x 76¾" (4 pcs.)
19'10⅝" x 6'10"	57" x 76¾" (4 pcs.)

O-X-X-O





MirroGlide is another Miller quality product... an aluminum framed sliding *mirror* door for wardrobes, hall closets, dividers, etc. Multi-purpose MirroGlide "opens up" rooms, replaces plain surfaces with a custom-mirror look. Write for information.

Aluminum Framed Unglazed Doors 187, 625 and 1000 Series Stock Door Sizes and Types

187 Series frame sizes accommodate 1/4 or 3/16" plate or crystal.
625 Series accommodates standard (stock) 5/8" only dual insulated glass.
1000 Series accommodates either standard (stock) 1"dual or 5/8" dual, or 1/4" plate or 3/16" crystal.

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ho in U.S.A. 9/59

Miller SLIDING GLASS DOOR CO., INC.
3216 Valhalla Drive, Burbank, California / VIctoria 9-1357

A.I.A. FILE NO. 16-N-1960

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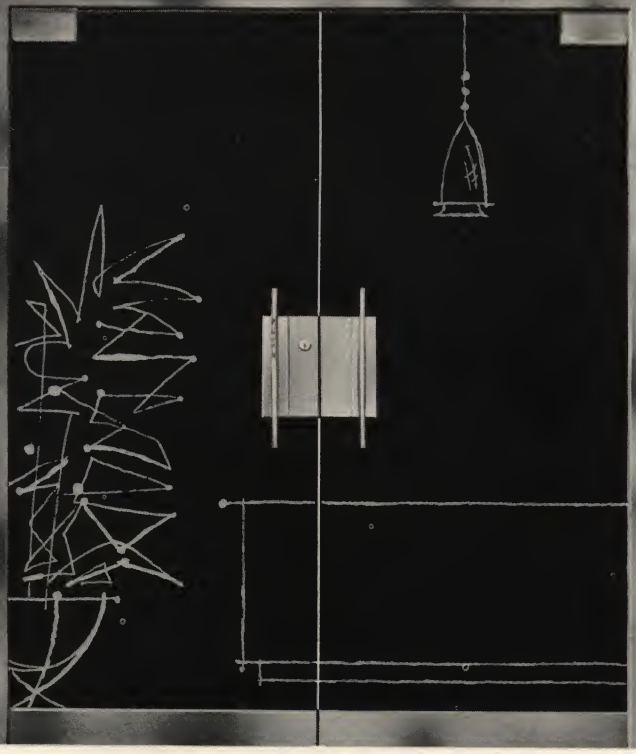
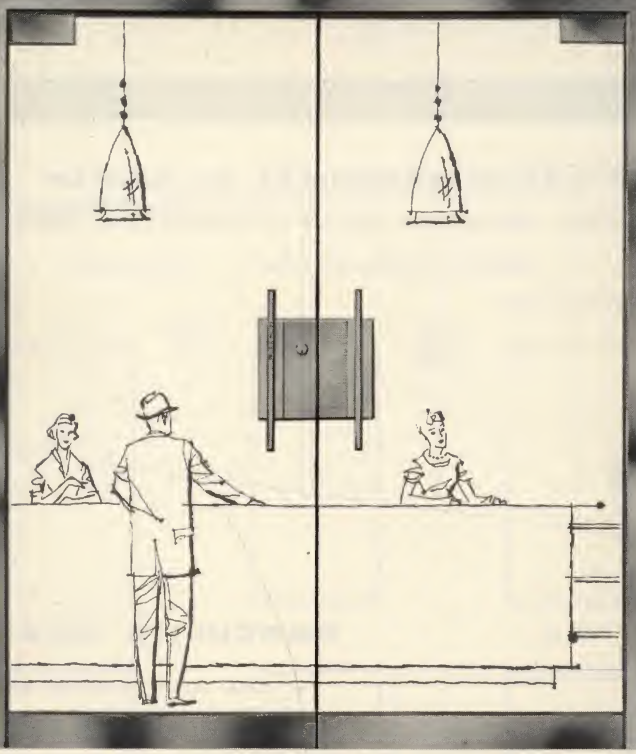
Pittsburgh

DOORWAYS





A.I.A. FILE NO. 16-N-1960

Pittsburgh offers the most complete doorway package including
HERCULITE® DOORS • WEST DOORS • HERCULITE® DOOR FRAMES
PITTCOMATIC® HINGE • PITTCO® HINGE and Accessories for Doors

PITTSBURGH PLATE GLASS COMPANY

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HERCULITE DOORS

GENERAL INFORMATION

Since their introduction in 1938, HERCULITE Doors have contributed importantly to the modern architecture of public, commercial and industrial buildings.

Design possibilities with HERCULITE Doors are practically unlimited.

Sturdiness, strength and endurance are among their outstanding characteristics.

The uninterrupted transparency of HERCULITE Doors allows the exterior and interior architecture of entrances to be harmonized and coordinated. Effective daylighting and illumination can be obtained in entrances with HERCULITE Doors.

Characteristics of HERCULITE . . . HERCULITE Tempered Plate Glass has approximately four to five times the strength of normal Plate Glass of the same thickness. It is more resistant to impact and pressure and has greater flexibility under strain than normal Plate Glass. There is no guarantee against breakage as conditions in the field cannot be controlled.

Temperatures up to 550°F. or a thermal shock of approximately 400°F. may be encountered without a serious loss of temper. Nevertheless, HERCULITE should not be used as a fire-retardant material.

HERCULITE cannot be cut, drilled or altered after the glass has been tempered.

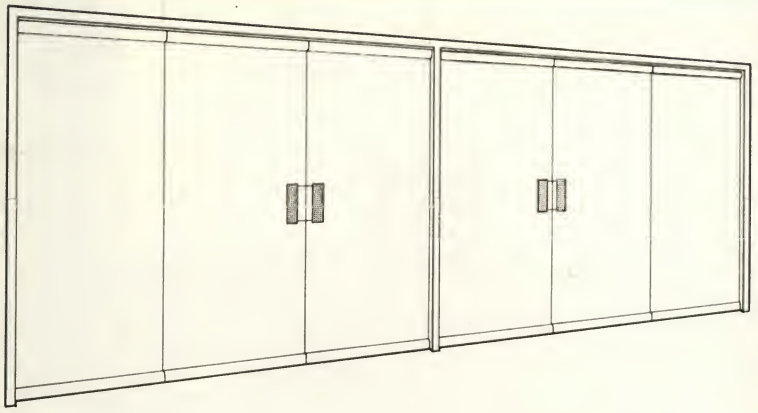
During the tempering process a slight bow or warp may occur. Normally this will not be noticeable or objectionable.

Rough-textured HERCULITE Plate Glass can be supplied for obscure doors.

The process by which tempered glass is made causes a strain pattern in the glass. Although not normally visible, it may be noticeable under certain conditions of illumination by polarized light.

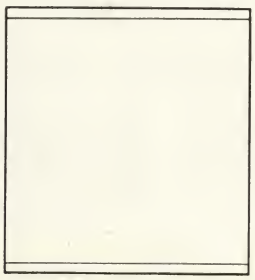
Applied Hardware . . . The aluminum, bronze, or stainless steel door hardware is cemented to the tempered glass at the factory. The hardware has been designed to receive top and bottom pivot parts, locks and bolts, and builders hardware items. When hardware must be drilled in the field, caution must be used to avoid damaging the glass. Depth limit collars should be attached to drills and taps when drilling the web of applied hardware.

Locks, Flush Bolts and Strikes . . . When specified, locks, bolts and strikes will be supplied with HERCULITE Doors. The Russwin S-4255 mortise dead locks can be supplied with a turn-piece on the inside cylinder instead of a key.



VISIBILITY
STRENGTH
DURABILITY
SECURITY
SAFETY
EASY OPERATION
LOW MAINTENANCE
VARIABLE DESIGNS

HERCULITE SIDELIGHTS



1/2" AND 3/4" THICKNESS TEMPERED POLISHED PLATE GLASS
AVAILABLE WITH OR WITHOUT HARDWARE TO MATCH HERCULITE DOORS
DIMENSIONAL TOLERANCE PLUS NOTHING, MINUS 1/16"
MAXIMUM GLASS SIZE—72" x 108"
MINIMUM WIDTH WITH S-100 HOUSING—13"
MINIMUM WIDTH WITH S-010 HOUSING—10"
MINIMUM WIDTH PLAIN SIDELIGHT—6"

NO SCALE

The S-05 Flush Bolts have a positive locking action through use of a spring-loaded cam.

Center locks for dead bolt latch or combinations will be installed in the center S-010 housing. The Russwin center locks can be adapted for use with fire exit bolts.

Master keyed cylinders can be supplied.

Door Handles . . . a complete line of stock design push-pull handles is available for use on HERCULITE Doors. Custom-style handles can be made to specification.

Weather Stripping . . . Weather Seal, a woven pile weather stripping, is available for application to the edges of HERCULITE Doors. It can also be attached to the face of door jambs of HERCULITE Door Frames. Adjusto-Seal strips can be used on top and bottom channel fittings.

Decoration . . . Various decorative treatments can be obtained by sandblasting, fused-on color designs, applied materials, etc. Trade-marks of company insignia and other decorations are one of many ways to add to the distinguished appearance of HERCULITE Doors.

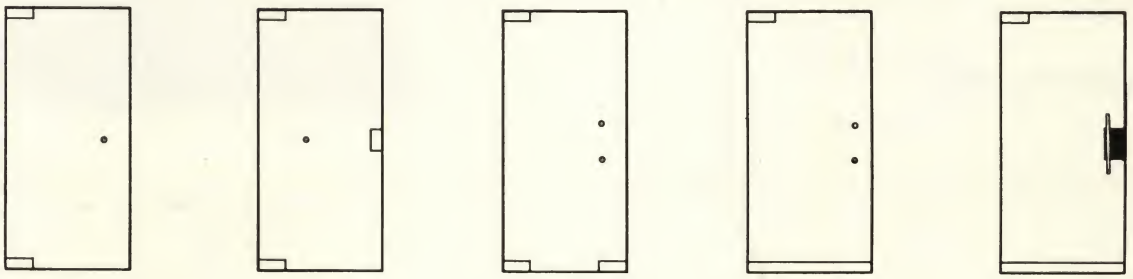
Builders Hardware . . . HERCULITE Doors can be adapted to receive concealed door holders, time locks, burglar alarms, emergency exit devices and other builders hardware items.

STANDARD TYPES OF 1/2" AND 3/4" HERCULITE TEMPERED GLASS DOORS

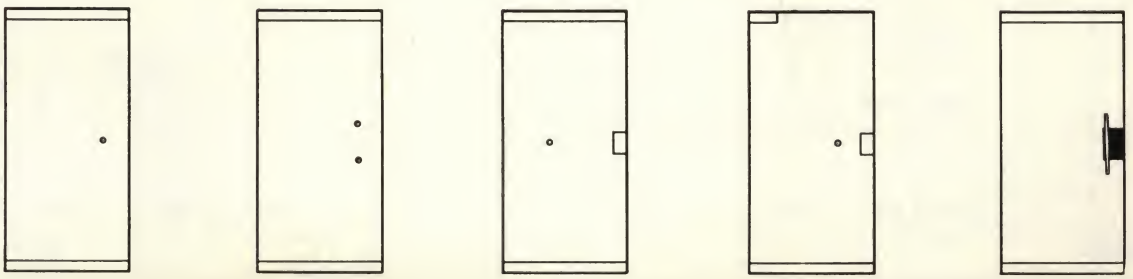
WIDTHS UP TO 48" • HEIGHTS UP TO 108"—TOLERANCE PLUS NOTHING, MINUS 1/16"

HARDWARE OF ALUMINUM • *BRONZE • *STAINLESS STEEL

**Sections Similar to Aluminum*



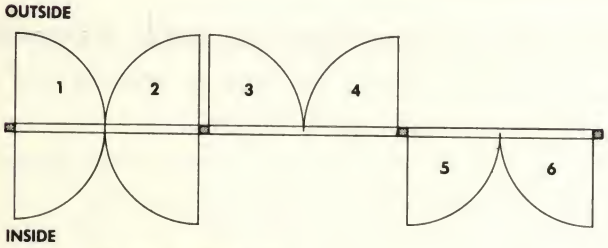
A C F B-P S-1



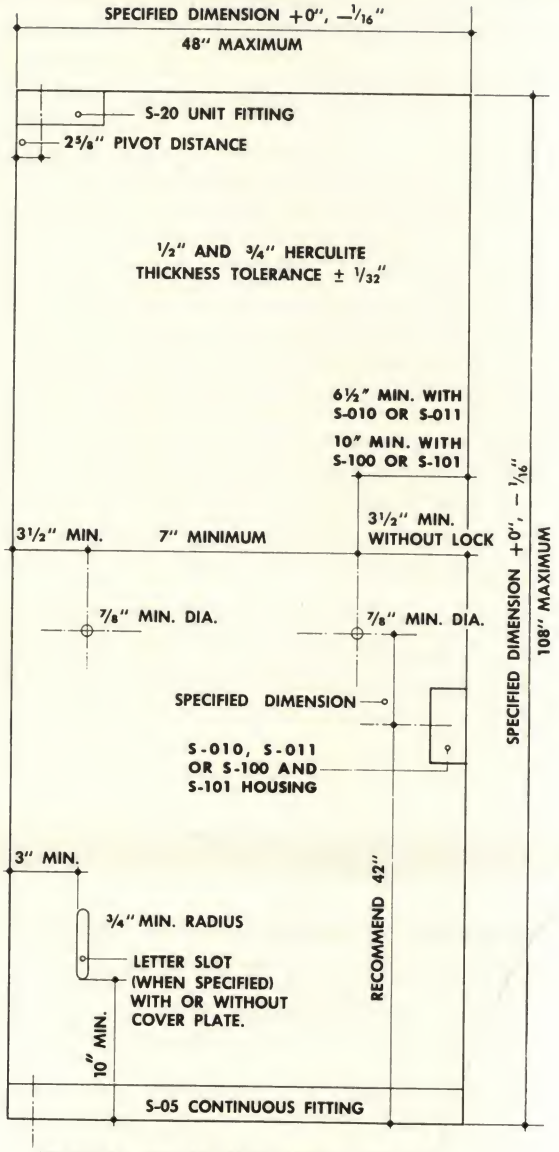
N P R C-R S-2

TYPICAL INTERIOR ELEVATIONS

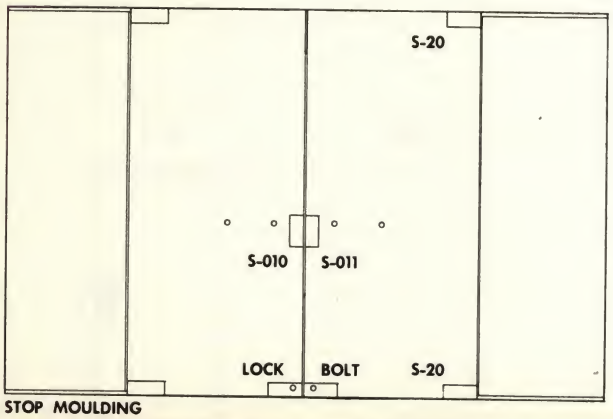
- **DOOR SIZE:**
  ½″ thickness up to 42″ x 96″.
  ¾″ thickness up to 48″ x 108″.
- **TOLERANCE:**
  Dimension plus 0, minus 1/16″.
- **EDGEWORK:**
  All exposed long edges polished 2″ radius, others 1/16″ bevel.
- **PIVOT DISTANCE:**
  2⅜″ standard, adjustable to 1⅛″.
- **CLEARANCE:**
  Generally a ⅛″ minimum clearance at the top and each long edge and 3/16″ at the bottom. The clearance can be slightly less when the doors are to be used in HERCULITE Door Frames which are made to accurate dimensions.



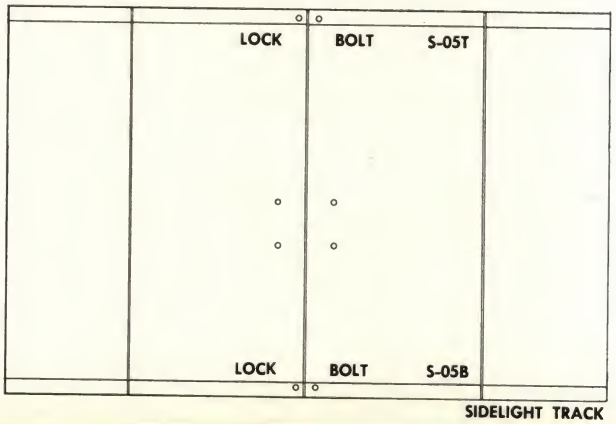
DOOR SWING DIAGRAM



TYPICAL DOOR SHOWING DESIGN LIMITATIONS AND HARDWARE



STOP MOULDING



SIDELIGHT TRACK

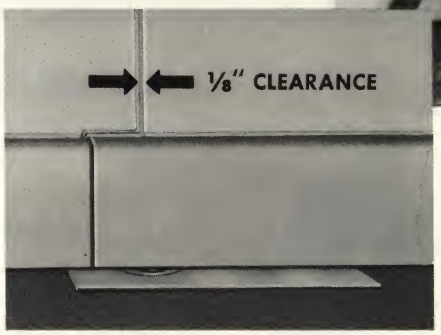
WITH UNIT FITTINGS

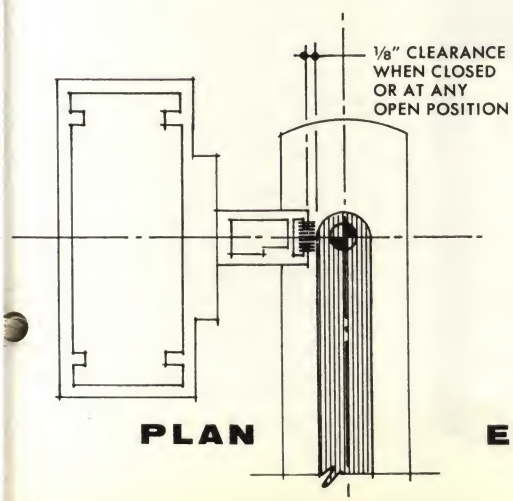
WITH CONTINUOUS FITTINGS

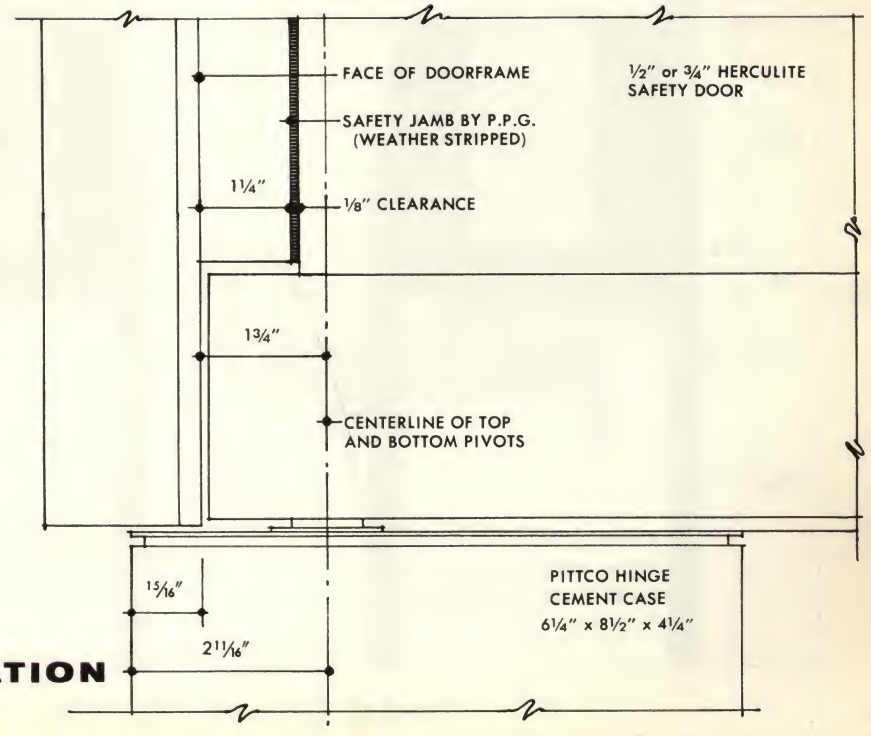
PITTSBURGH SAFETY DOOR

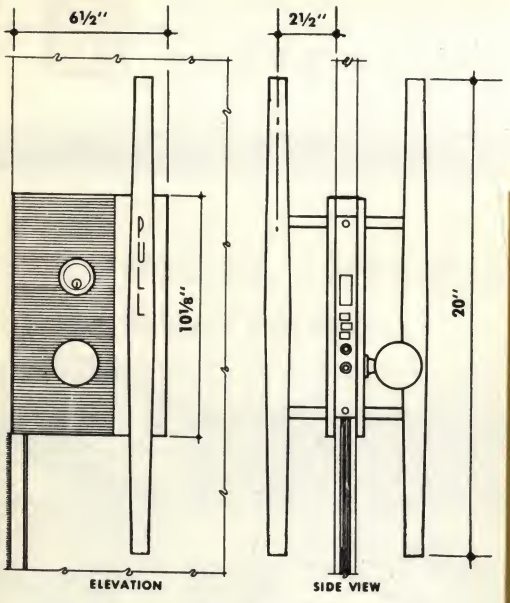
The Pittsburgh Safety Door is a specially constructed door for use on either a manual PITTCO Hinge or a PITTCOMATIC Hinge. Its components are arranged and installed so as to reduce to ⅛" the opening or gap between the hinge edge of the door and door jamb or adjoining door or sidelight. The ⅛" clearance at the hinge edge of the door when closed or open is obtained by the use of a HERCULITE Safety Door, a safety jamb molding and a PITTCO Hinge or a PITTCOMATIC Hinge. The design of the PITTCO Hinge and the PITTCOMATIC Hinge enables the mechanism to be removed from the cement case when used with Safety Doors. Specifications on request.

Close-up shows offset detail of Pittsburgh Safety Door.

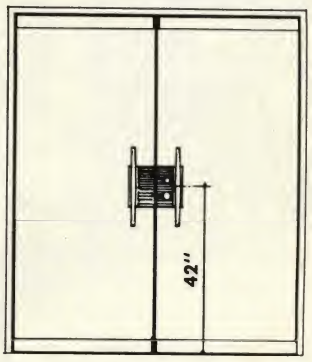








DETAILS OF S-100 HOUSING
SCALE 1½"—1'-0"



ELEVATION
OF DOORS WITH
S-100 HOUSING
NO SCALE

THE S-100 CENTER-HOUSING
ALUMINUM BRONZE STAINLESS STEEL

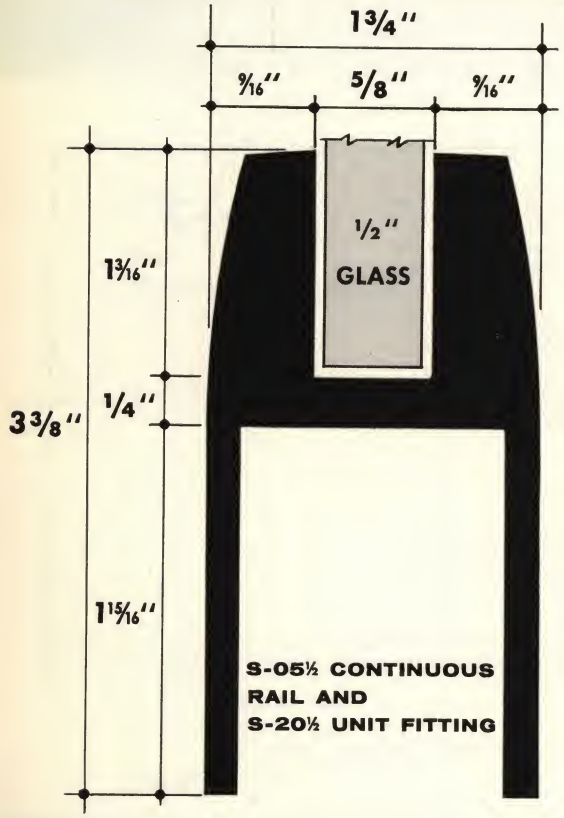
The multi-purpose S-100 is a standard housing for use with ½" or ¾" HERCULITE doors. A Russwin ten strike lock, an electric strike, or a panic device can be contained within the ribbed-face section of the housing. The smooth-faced area accommodates a manual push-pull bar or the PITTCOMATIC handle switch. An edge molding running from the bottom of the door to the S-100 is supplied on doors with an electric strike or PITTCOMATIC handle switches concealing the wires. This molding can be supplied on the entire free edge of the door to carry out the design.

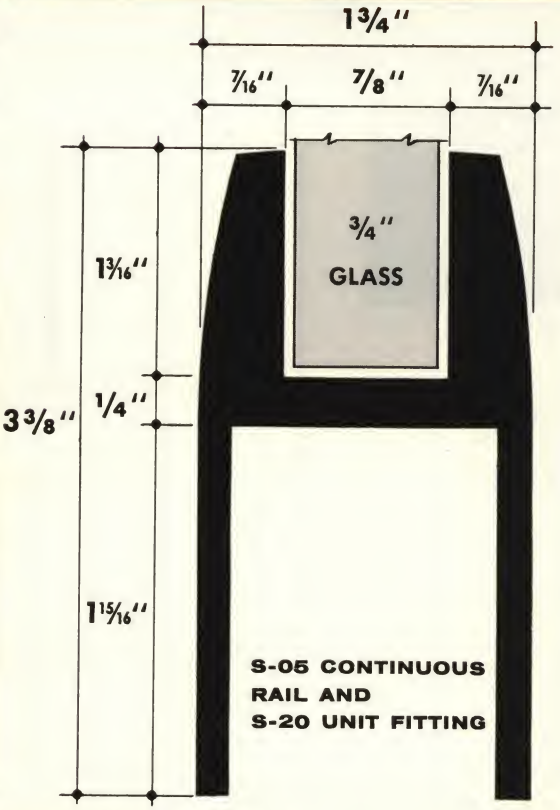
LOCKS . . . The type "E" combination dead-bolt and latch lock with the latch hold-back feature or the type "A" dead-bolt lock can be used in the housing.

ELECTRIC STRIKE . . . A Reliance electric strike for remote control after closing hours can be supplied with S-101 housings. The "E" lock must then be used in the S-100. An edge molding is supplied for the low voltage wires.

PITTCOMATIC . . . A special "Ace" handle switch is available for use with the S-100 housing. A rectangular push-pull is supplied to operate the switch. An "A" or "E" lock or an electric strike can be supplied in the same housing.

PANIC DEVICE . . . A surface applied Russwin "52 x 57" device is supplied on specification. A simple paddle handle or a crossbar is available to operate the device at all times from within the building. A tapered push-pull is supplied on the exterior face of the housing.





TYPICAL SECTIONS FULL SIZE

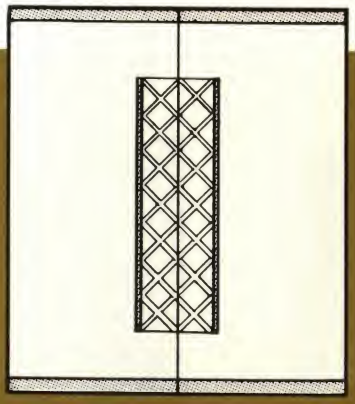
HARDWARE DETAILS

ALUMINUM
BRONZE
STAINLESS STEEL

The sturdy top and bottom rails accommodate pivot-arm fittings, locks or bolts and commonly used builders' hardware items. The unit fittings are nine inches long and accommodate pivot-arm fittings, locks or bolts and transom-pivot brackets.

The aluminum is 63ST-5 and the bronze is American Brass architectural bronze alloy #280. Stainless steel members consist of a 22-gauge stainless steel 18-8 alloy with a #4 finish over an aluminum core. All corners are welded.

DECORATION



SANDBLAST

Decorative effects similar to those illustrated are possible only with an all-glass door.

APPLIED MATERIALS

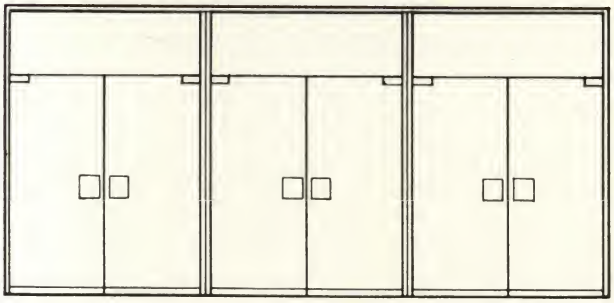
The door can become the focal point of the store. It can be the decorative touch that architects and designers use to lighten or give sparkle to a plain front or design.

FUSED COLORS

Now, for the first time, one can have decoration in true ceramic colors (fired-on, permanent colors) as well as sandblasted decoration.

TYPICAL DESIGN TREATMENTS

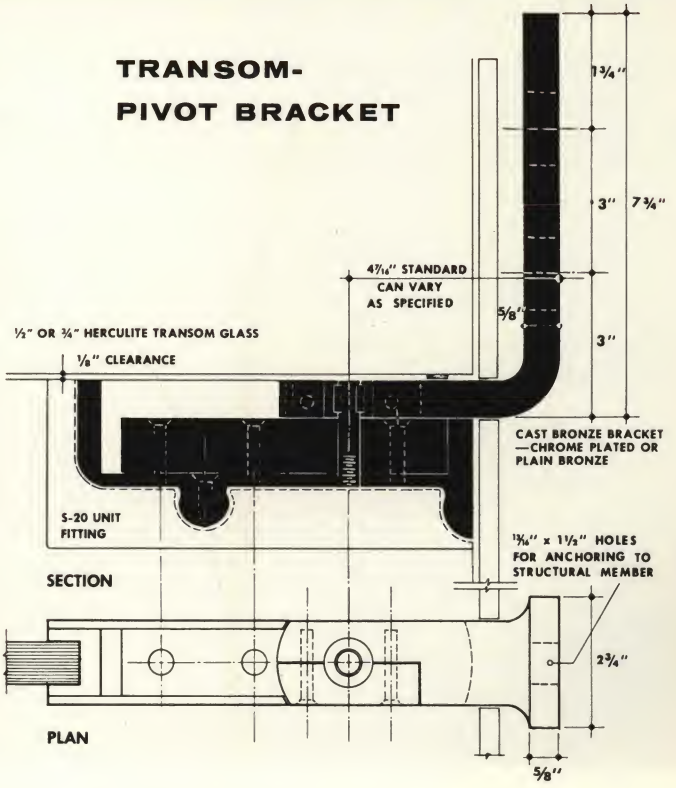
- Color may be on both sides of door. For example, the background may be on one side with the design on the other. Remember, however, that when viewed from an angle, certain designs may appear to be off register.
- Ceramic colors cannot match water color or paint samples exactly.
- Sandblasted designs may be done in various tones, or with certain parts of the design cut slightly below the surface — somewhat less than 1/32".
- Keep shapes as simple as possible.
- Avoid superimposing one color on another.
- If possible, avoid close register of colors.



NOTE:

The transom-pivot bracket serves as a dual support for the top pivot of the door and for the transom glass.
For single-acting door entrances, a special door stop can be attached to the 3/4" or 1/2" thickness HERCULITE transom glass.
Specify on orders when required, giving the dimension from center line of pivot to back of bracket.

TRANSOM-PIVOT BRACKET

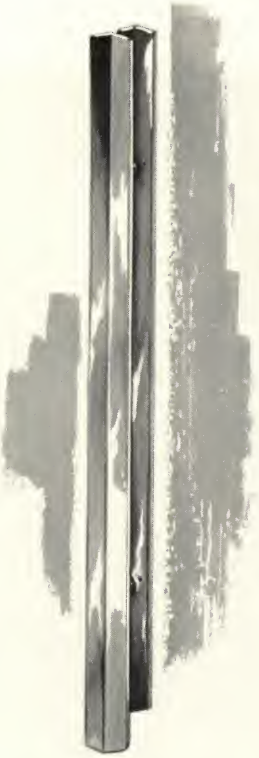


QUARTER FULL SIZE

HANDLES

Here are some of the new HERCULITE Door Handles. These supplement the existing line.

The Belmont
Style 7 v



The Edgemont
Style 8 v

The Century
Style 12 v

HERCULITE DOOR FRAMES

· ALUMINUM · BRONZE · STAINLESS STEEL · STANDARD OR CUSTOM DESIGN

- **Factory-built—simple in design; construction sturdy and dependable**
- **Quality in every detail—finish, styling, accuracy of dimensions**
- **Complete with PITTCO Hinges installed at factory (See page 22)**
- **Easy to detail, specify, install**

The Pittsburgh HERCULITE Door Frame is factory-built by metal craftsmen using checking gauges to determine accuracy of all dimensions. The frame is ruggedly reinforced with steel channels and tie rods. It is constructed of heavy extruded aluminum, highly polished and anodized; bronze; or stainless steel. (Stainless steel frames have an appearance similar to aluminum and bronze but are not of extruded metal.)

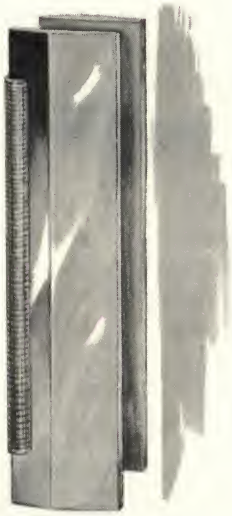
The Pittsburgh HERCULITE Door Frame is equipped with PITTCO Checking Floor Hinge, molding for transom glass, supports for sidelights, strikes for locks, sockets for bolts, and thresholds when specified.

Automatic door controls, emergency exit devices, door handles and burglar alarm devices can be used with Pittsburgh HERCULITE Door Frames.

The anodized finish protects all aluminum members, and a special coating protects the frame during shipment and on the job until installation is completed and the doorway is ready for use.

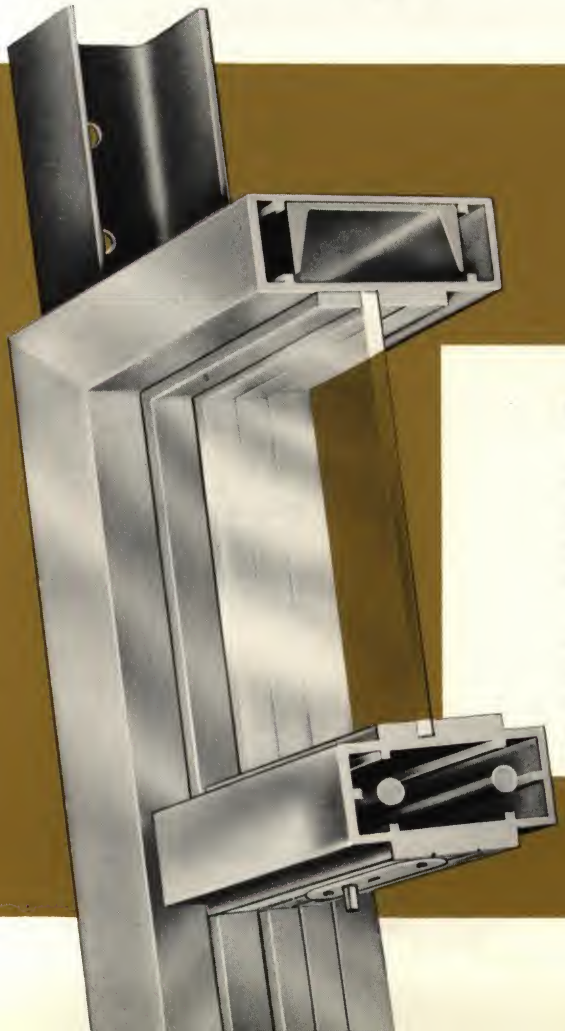
The frame itself is easily installed. HERCULITE Doors and Sidelights for installation in the frame are carefully checked to the frame dimensions at the factory. Installation of the doors in the frames on the job is simple and quick. The completed doorway is outstanding in appearance and dependable in service.

The Rondell
Style 5 v



The Cambridge
Style 1 v

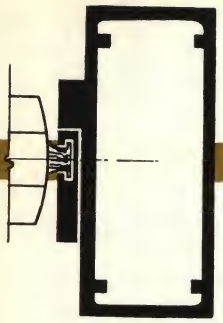
The Criterion
Style 3 v



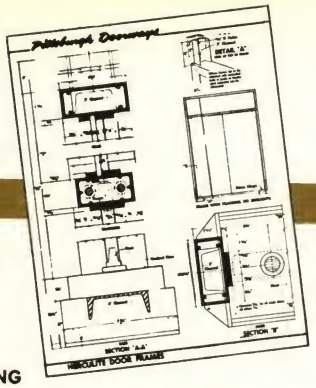
STANDARD FRAMES

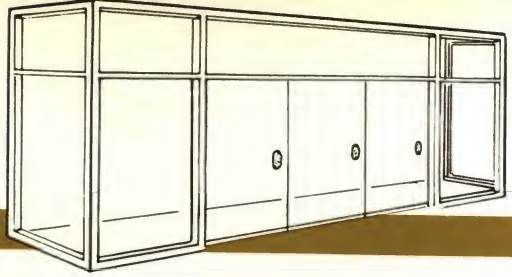
12 standard style frames to accommodate single doors, a door with 2 sidelights or a pair of doors and with height up to 12′ 0″ are available for prompt shipment. Four free-standing door frames, for single doors or a pair of doors, are also available. Standard frames used individually or in combination can be used in both entrances.

The economy of standard frame construction, availability and the ease of design and detailing with this group of frames makes them leaders in their field. When the design of an entrance requires special sizes and construction, custom frames can be fabricated from all of the standard frame sections and custom sections as illustrated.

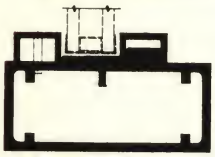


WEATHER STRIPPING

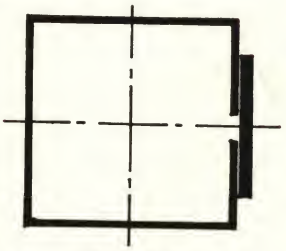




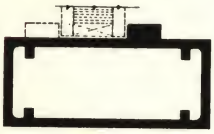
CUSTOM HERCULITE DOOR FRAMES



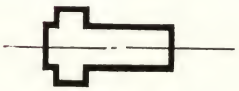
TWINDOW GLAZING



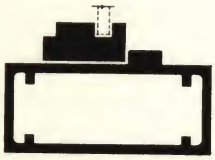
CORNER POST



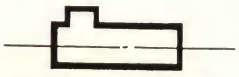
INSULATED CARRARA PANELS



JUNIOR MULLION



PIVOTED TRANSOM WITH OPERATOR

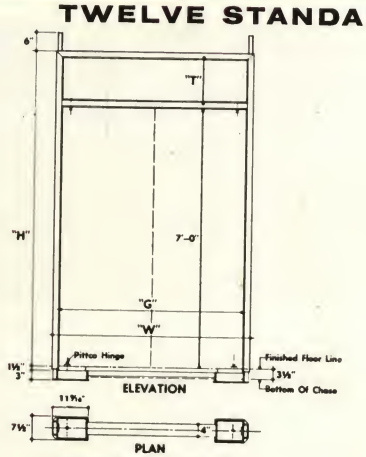


JUNIOR JAMB OR HEAD

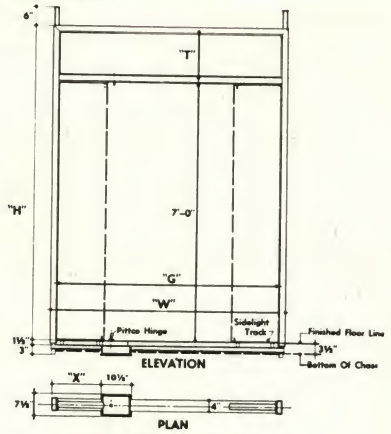
HERCULITE Door Frame Sections offer unlimited design possibilities for custom-designed frames

- **Combine Sections** . . . Free-Standing, Standard, Junior Sections, Corner Posts and PITTCO Store Front Metal to create custom designs.
- **Factory Engineering** . . . Specially designed connectors (with the same concealed reinforcing steel and heavy-duty bolts used in the Standard construction) make assembly easy and construction rugged.
- **Transom-Pivot Brackets** . . . Use to support doors as well as HERCULITE Transom Glass for an all-glass appearance.
- **Curved Frames** . . . Headers or plan members can be bent to follow contours of entrances.
- **CARRARA®, TWINDOW®, Corrugated Glass** . . . can be used with HERCULITE Doors in custom frames.
- **Simple Field Assembly** . . . Frames are first assembled at the factory for testing and disassembled for shipment to the job. All sections are color-coded for easy assembly.

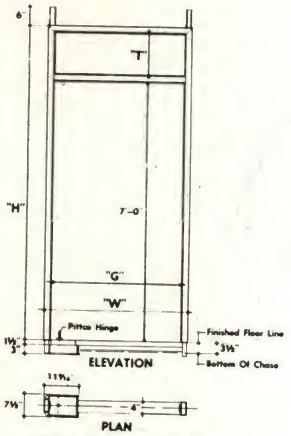
TWELVE STANDARD STYLES



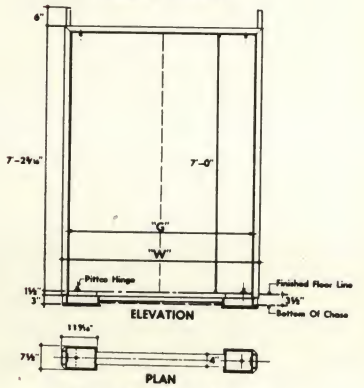
STYLE NO. 1 OR 7
DOUBLE DOORS



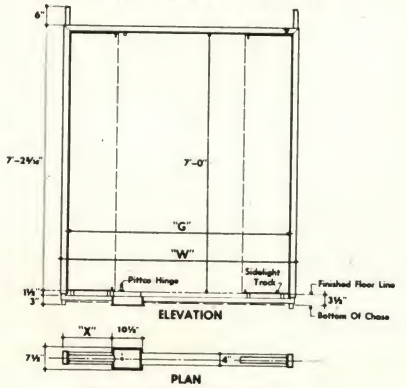
STYLE NO. 2 OR 8
SINGLE DOOR WITH SIDELIGHTS



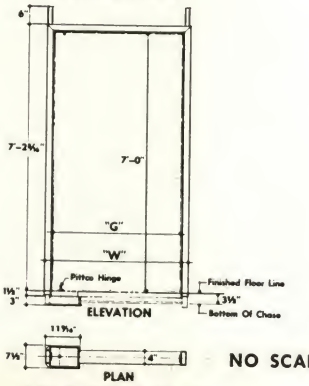
STYLE NO. 3 OR 9
SINGLE DOOR



STYLE NO. 4 OR 10
DOUBLE DOORS



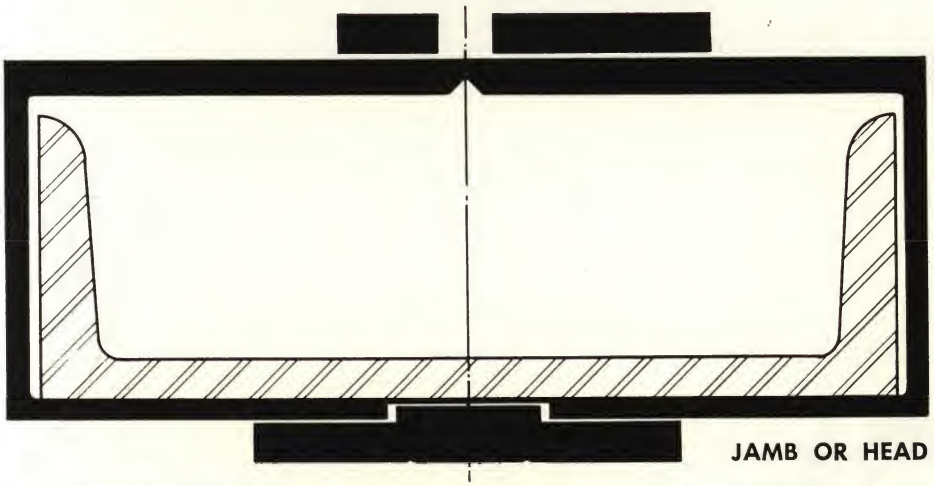
STYLE NO. 5 OR 11
SINGLE DOOR WITH SIDELIGHTS



STYLE NO. 6 OR 12
SINGLE DOOR

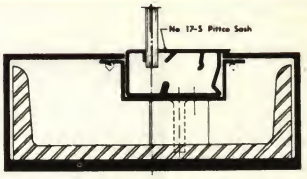
NO SCALE

FREE-STANDING HERCULITE DOOR FRAMES



JAMB OR HEAD

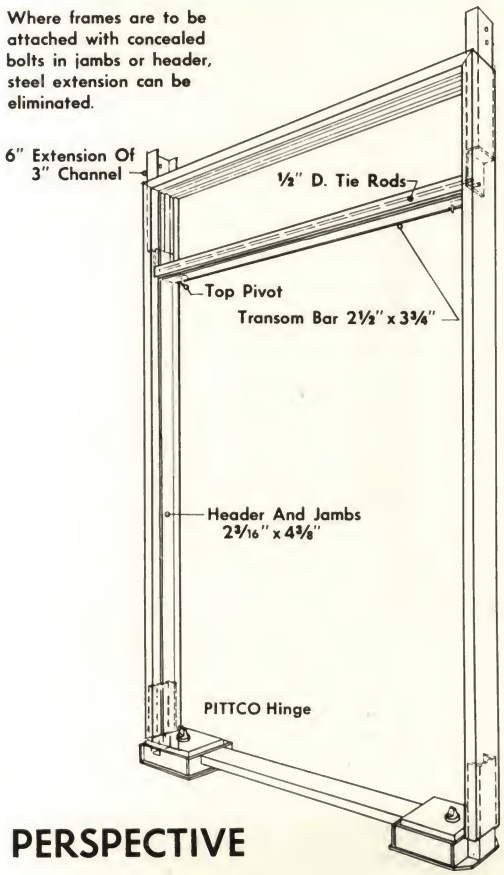
This three quarter-size section of the free-standing frame illustrates the rugged construction of this type framing. All supporting members are in the base of the frame as illustrated on page 14.



ALTERNATE JAMB OR HEAD With No. 17-S sash

Custom-built free-standing frames can be made with PITTCO Store Front Metal No. 17-S sash recessed into the framing.

Where frames are to be attached with concealed bolts in jambs or header, steel extension can be eliminated.



PERSPECTIVE

STANDARD DIMENSIONS

DOOR FRAME	DIMENSIONS			DOOR		SIDELIGHTS	
Style No.	"W"	"G"	"X"	Quantity	Size	Quantity	"S" (Size)
1	5'- 4 3/8"	5'-0"	.....	2	29 13/16" x 83 11/16"	..	
2	5'- 4 3/8"	5'-0"	13½"	1	35 13/16" x 83 11/16"	2	12 5/16" x 83 11/16"
3	3'- 4 3/8"	3'-0"	.....	1	35 13/16" x 83 11/16"	..	
4	5'- 4 3/8"	5'-0"	.....	2	29 13/16" x 83 11/16"	..	
5	5'- 4 3/8"	5'-0"	13½"	1	35 13/16" x 83 11/16"	2	12 5/16" x 83 11/16"
6	3'- 4 3/8"	3'-0"	.....	1	35 13/16" x 83 11/16"	..	
7	6'- 4 3/8"	6'-0"	.....	2	35 13/16" x 83 11/16"	..	
8	6'- 4 3/8"	6'-0"	16½"	1	41 13/16" x 83 11/16"	2	15 5/16" x 83 11/16"
9	3'-10 3/8"	3'-6"	.....	1	41 13/16" x 83 11/16"	..	
10	6'- 4 3/8"	6'-0"	.....	2	35 13/16" x 83 11/16"	..	
11	6'- 4 3/8"	6'-0"	16½"	1	41 13/16" x 83 11/16"	2	15 5/16" x 83 11/16"
12	3'-10 3/8"	3'-6"	.....	1	41 13/16" x 83 11/16"	..	

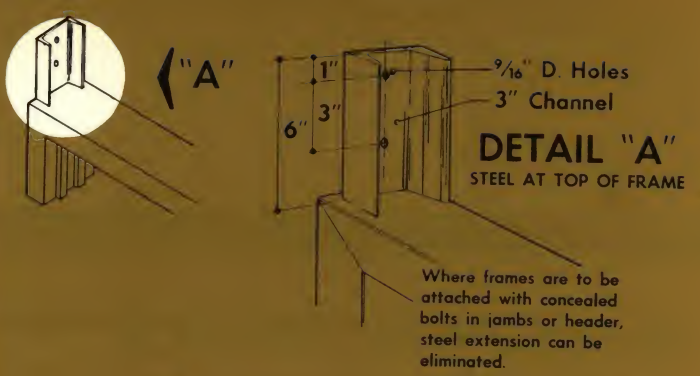
VARIABLE DIMENSIONS

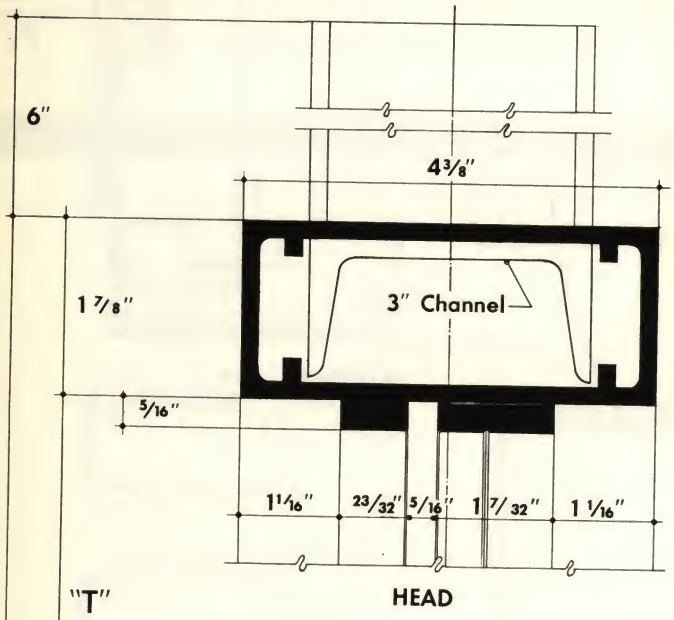
"H"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"
"T"	13 5/16"	19 5/16"	25 5/16"	31 5/16"	37 5/16"	43 5/16"	49 5/16"	55 5/16"

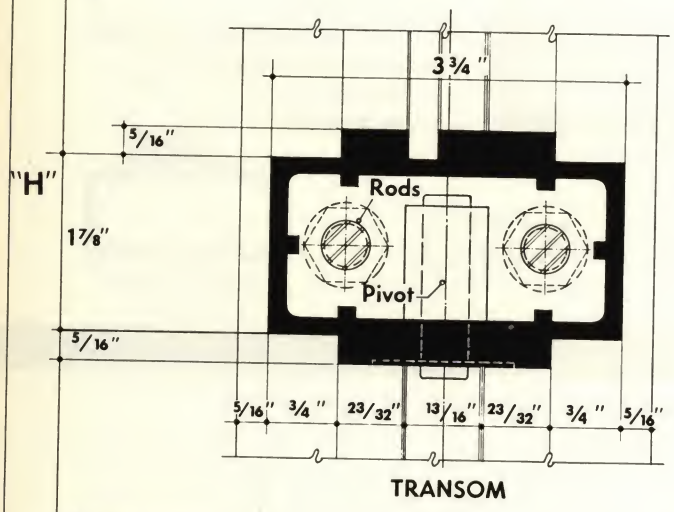
Frames can be supplied with thresholds.
Door and sidelight heights will be adjusted to 83 1/16".

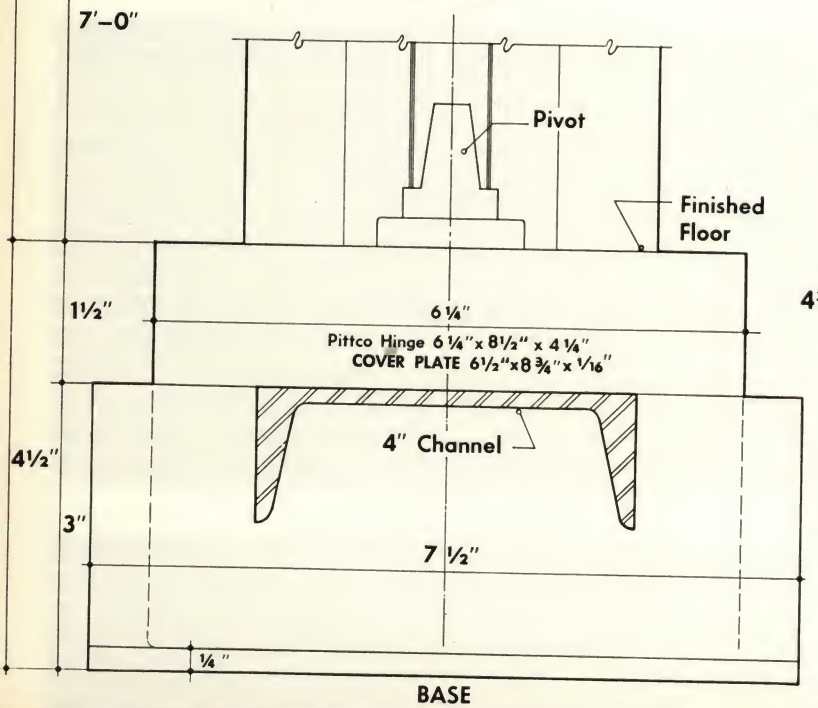
LEGEND

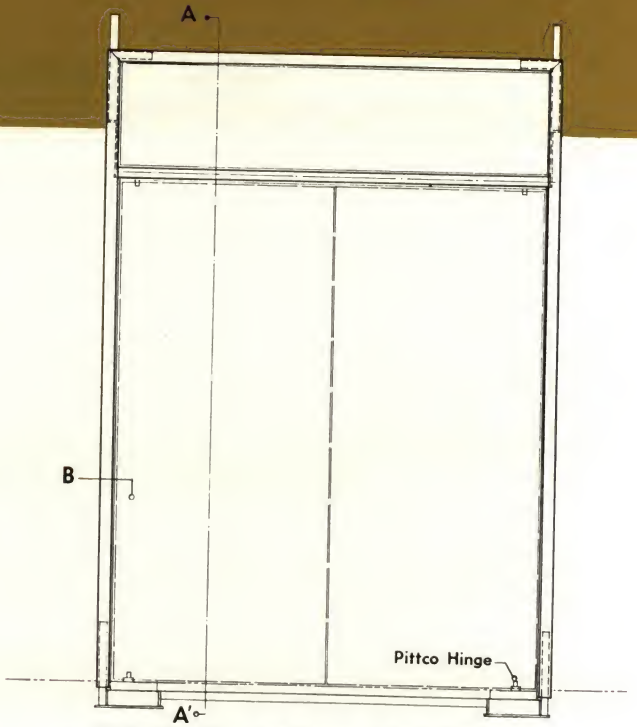
W—Over-all width of frame.
G—Clear opening width between jambs.
X—Outer face of jamb to hinge box.
H—Over-all height of opening from finished floor line to top of frame.
T—Clear opening height of transom.

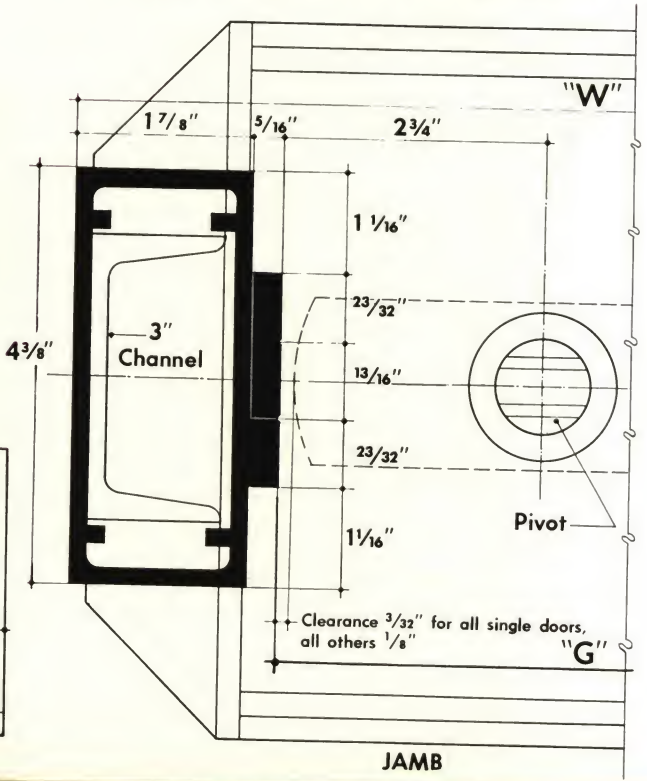










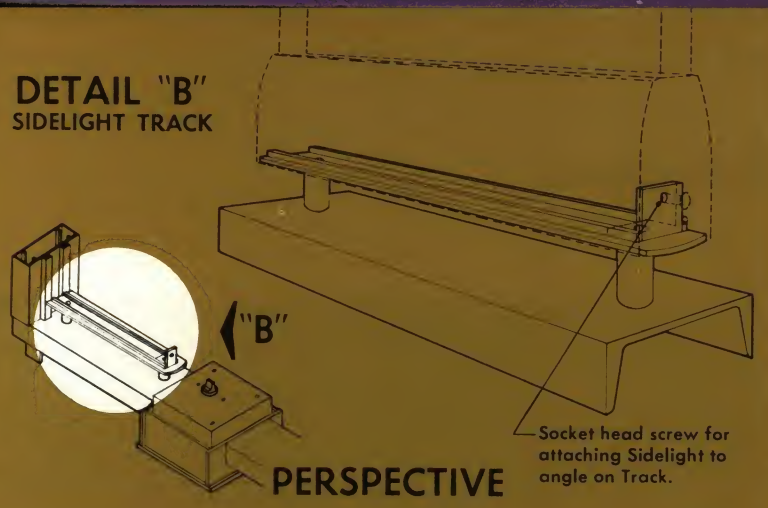


SECTION A-A'

SECTION B

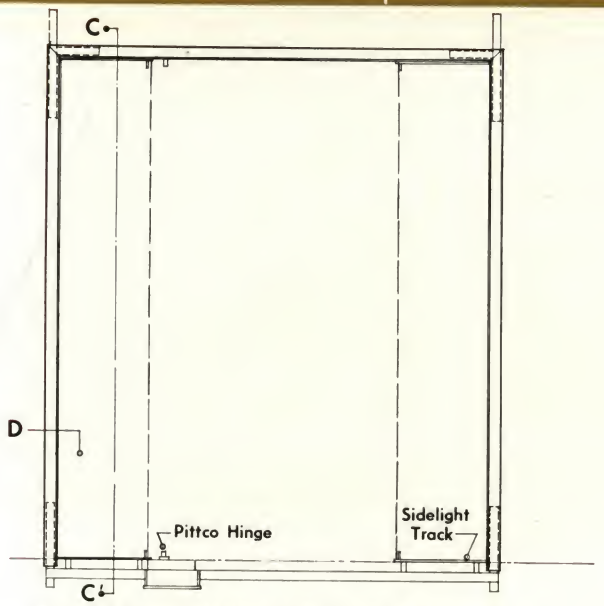
SECTIONS AND DETAILS

DETAIL "B"
SIDELIGHT TRACK

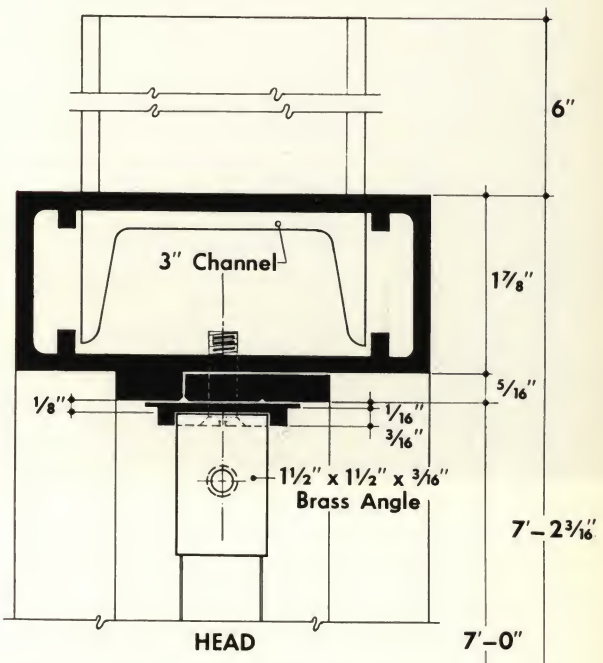


PERSPECTIVE

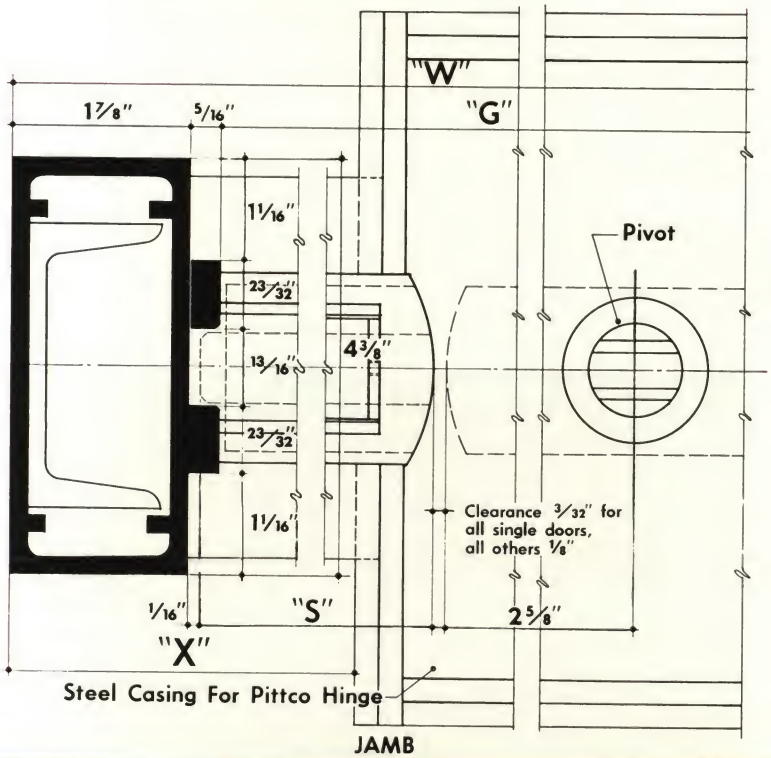
Note:
Sidelight tracks are pivoted at hinge side to simplify installing sidelight without disturbing hinge.



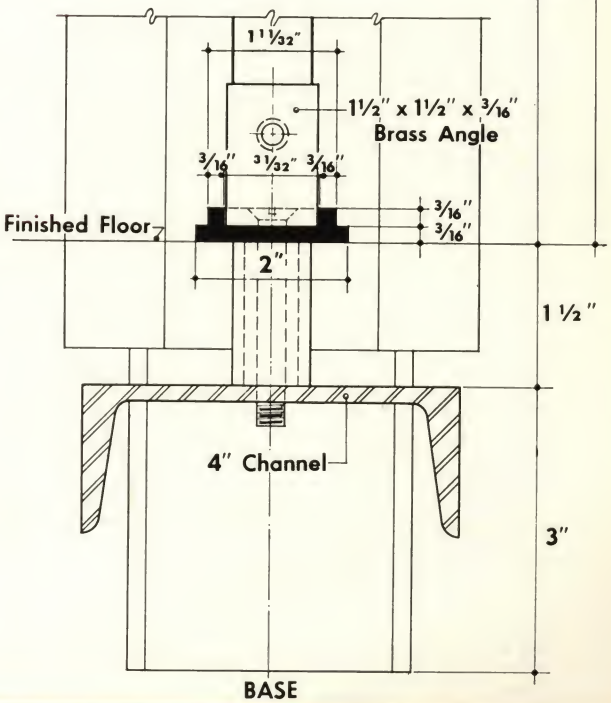
FRAME WITH SIDELIGHTS, NO TRANSOM



HEAD



JAMB



BASE

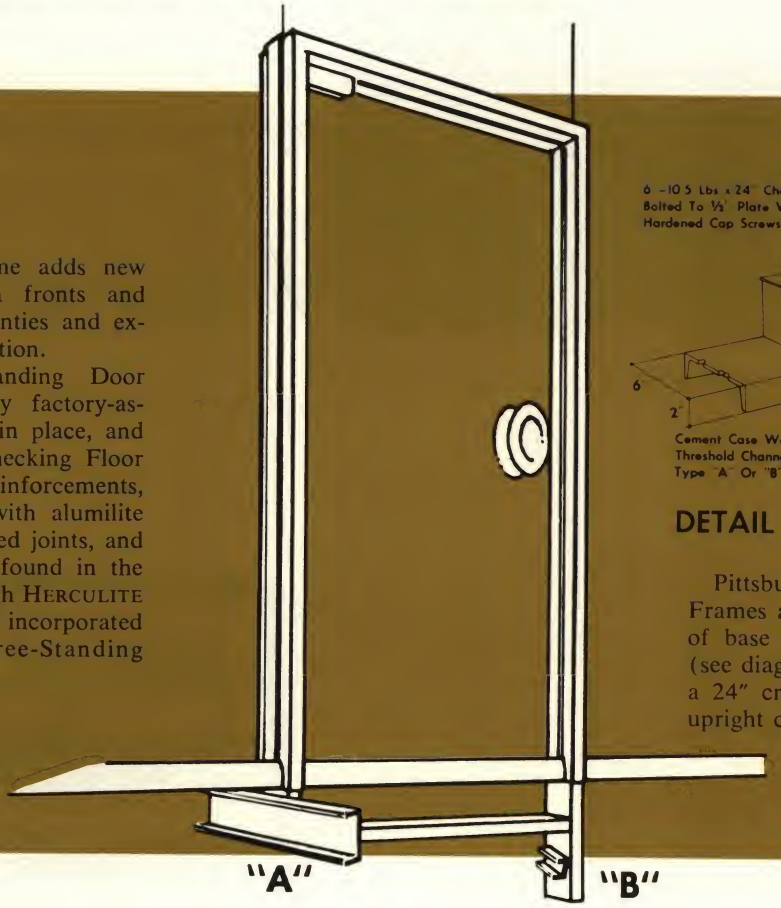
SECTION D **SECTION C-C'**

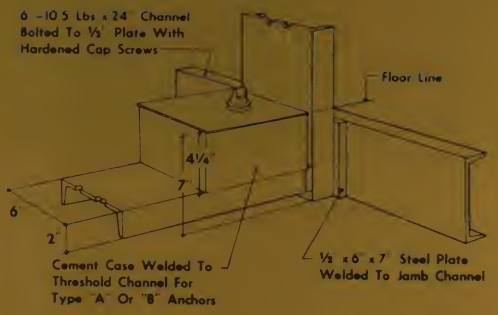
SECTIONS HALF FULL SIZE

FREE-STANDING DOOR FRAMES

A Free-Standing Frame adds new beauty to open-vision fronts and eliminates the uncertainties and expense of local construction.

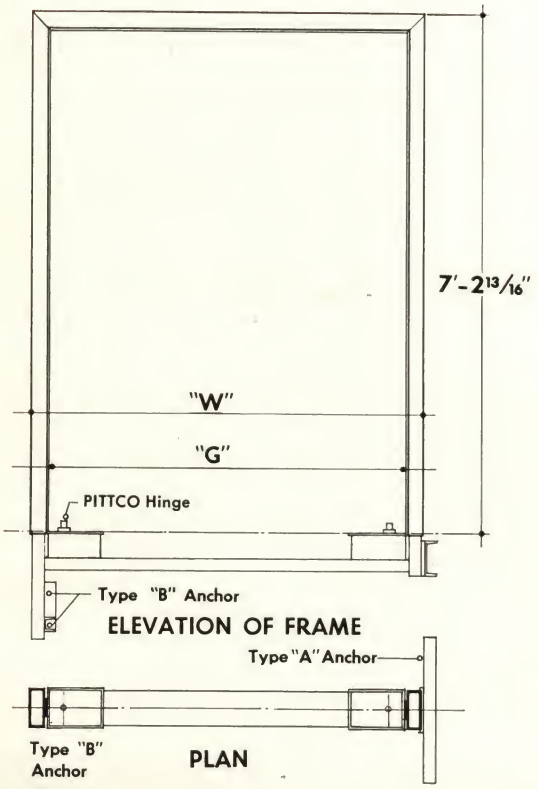
Pittsburgh Free-Standing Door Frames are completely factory-assembled, ready to set in place, and include the PITTCO Checking Floor Hinge. Heavy steel reinforcements, aluminum extrusions with alumilite finish, accurately mitered joints, and other quality features found in the regular line of Pittsburgh HERCULITE Door Frames have been incorporated in this group of Free-Standing Frames.

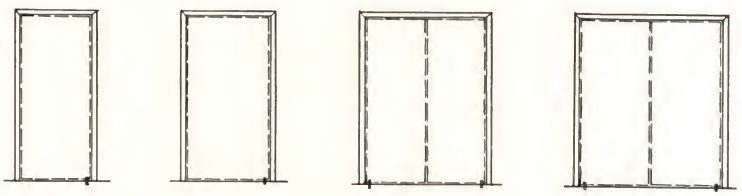



6 -10 5 Lbs x 24" Channel Bolted To ½" Plate With Hardened Cap Screws
Floor Line
4½"
7"
6
2"
Cement Case Welded To Threshold Channel For Type "A" Or "B" Anchors
½" x 6" x 7" Steel Plate Welded To Jamb Channel

DETAIL OF ANCHOR TYPE "A"

Pittsburgh Free-Standing Door Frames are available with two types of base construction for anchorage (see diagrams here): Type "A" with a 24" cross member bolted to each upright channel and anchored in the



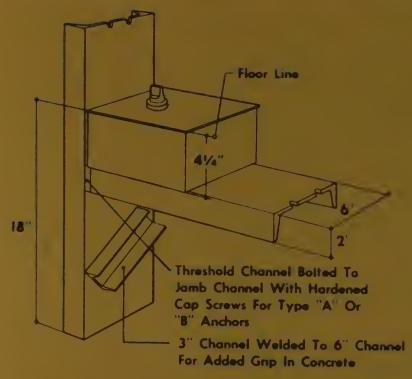


13 14 15 16

STYLE NUMBERS

DOOR FRAME	DIMENSIONS		DOOR	
STYLE No.	"W"	"G"	QUANTITY	SIZE
13	3'- 5⅝"	3'-0"	1	35 13/16" x 83 1/16"
14	3'-11⅝"	3'-6"	1	41 13/16" x 83 1/16"
15	5'- 5⅝"	5'-0"	2	29 13/16" x 83 1/16"
16	6'- 5⅝"	6'-0"	2	35 13/16" x 83 1/16"

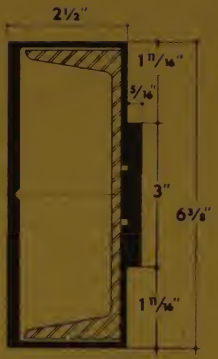
Frames can be supplied with thresholds. Door height will be adjusted to 83 3/16".


Floor Line
4¼"
18"
6"
2"
Threshold Channel Bolted To Jamb Channel With Hardened Cap Screws For Type "A" Or "B" Anchors
3" Channel Welded To 6" Channel For Added Grip In Concrete

DETAIL OF ANCHOR TYPE "B"

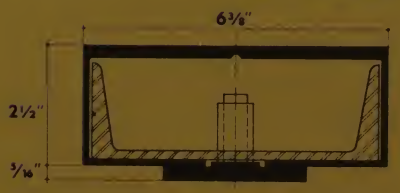
door slab; Type "B" with upright channels extending 18" below the finished floor line and anchored in reinforced concrete. All frames are provided with a steel stretcher between the uprights.

The steel channel cores of both Pittsburgh Free-Standing Door Frames (Types A and B) were set in concrete and tested to determine accurately the amount of deflection caused by a HERCULITE Door when opened to 90°. The deflection at the top of the frame proved to be only .015"—a figure far below the allowable. And the test also demonstrated that repeated openings of the doors caused absolutely no movement of the steel in the anchorage. It should be noted that the aluminum casing of the door frame, although not considered in the design and testing of the steel cores, would increase still further the resistance of the frame to deflection.



DETAIL OF JAMB

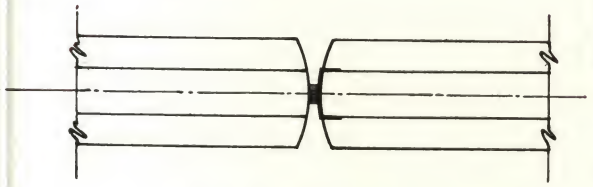
DETAIL OF HEAD



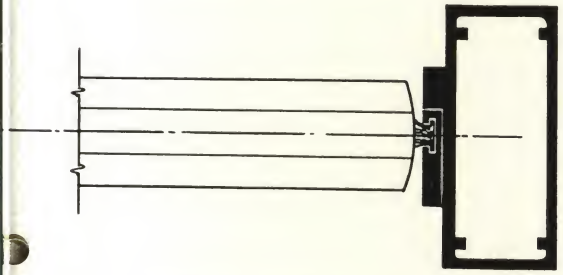
SECTION QUARTER FULL SIZE

WEATHER STRIPPING

Weather stripping is available for all edges of HERCULITE Doors. When specified, frames will be supplied with weather stripping in the jamb members. The brush-type fabric flexes easily with the operation of the doors. Weather stripping for top and bottom rails, not shown here, is also available.



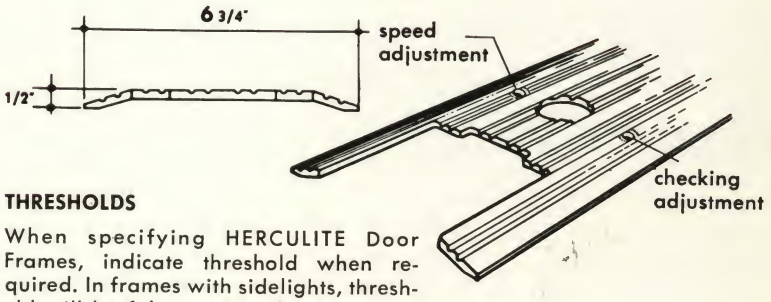
Between two doors or between door and sidelight



Between sidelight and jamb

ACCESSORIES

Available for use with HERCULITE Door Frames

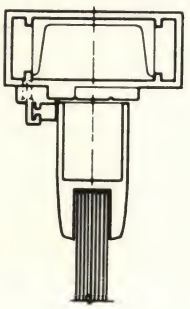


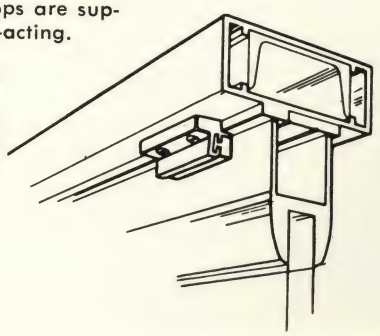
THRESHOLDS

When specifying HERCULITE Door Frames, indicate threshold when required. In frames with sidelights, threshold will be fabricated in three sections.

DOOR STOPS

PITTCO Checking Floor Hinges used in frame can be either single- or double-acting as specified. Door stops are supplied when doors are single-acting.





STILE CAPS AVAILABLE WITH
OR WITHOUT WEATHER STRIPPING

THE WEST TENSION DOOR

ALUMINUM 6063T5
BRONZE . . . . . ALLOY 280
STAINLESS STEEL . . . SERIES 302 #4 FINISH

Narrow stiles and rugged strength make the West Tension Door the quality metal-framed door.

Strength is provided by ½" thickness glass held under compression by a thin metal frame. The frame is drawn together by concealed bolts and compression applied by means of heavy leaf springs in the lower glazing channel. The principle of this new patented door results in a solid unit with increased glass area that can never sag, rack or get out of alignment.

The West Tension Door lends itself to unlimited variations in design. Handles can be applied directly to the glass. It is available with either polished or rough plate glass. With center locks the door can be adapted for almost any type of locking requirement. Locks can be in either the top or bottom rails. It is suitable for operation with any type of automatic opening device.

HINGING ARRANGEMENTS

Can be center- or offset-mounted for PITTCO Hinge, adapted to other hinges or furnished with an offset built-in hinge. (Offset built-in hinge contains no checking action. Containing a roller bearing and ball-type socket, it is intended for use with an overhead closer.)

STANDARD SIZES—Standard door is built to fit openings of 30", 36" and 42" by 84".

SIDELIGHTS—Furnished in ½" plate glass with trim to match door. Sidelight tracks are pivoted top and bottom on side adjoining door.

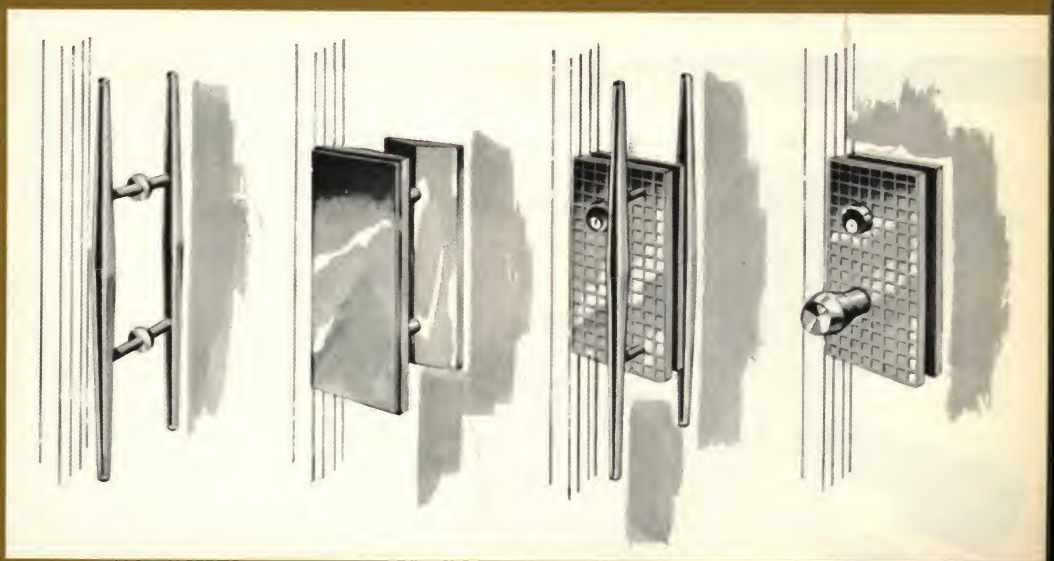
ACCESSORIES—The West Door can be adapted for the following accessories: Weather Stripping • Panic Device • Electric Strike • Time Lock • Full Width Horizontal Push-Pull Bar.

DOOR FRAMES—The West Door can be used with HERCULITE Door Frames.

FULL SIZE SECTIONS

HANDLES

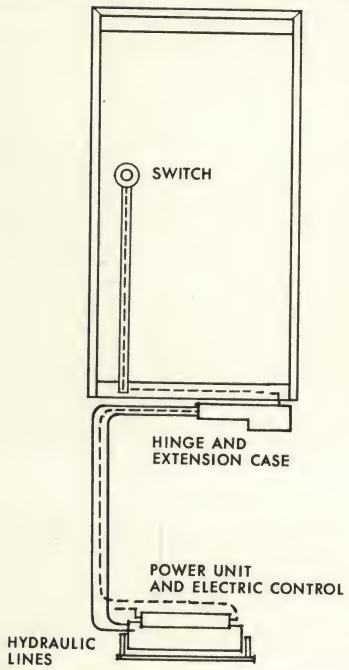
Handles can be mounted directly on the glass. Many combinations of handles are available with finishes to match the metal trim of the door. Push plates can have inserts of stainless steel, CARRARA, and certain other materials.

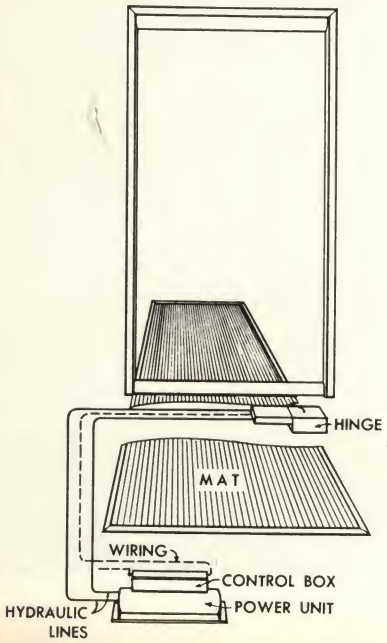


THERE'S A PITTCOMATIC SUITED TO

With the PITTCOMATIC, doors can be activated by handle, mat or remote control switch.

In commercial buildings, handle operation is often utilized. In stores, where carrying of purchases and pushing of shopping carts





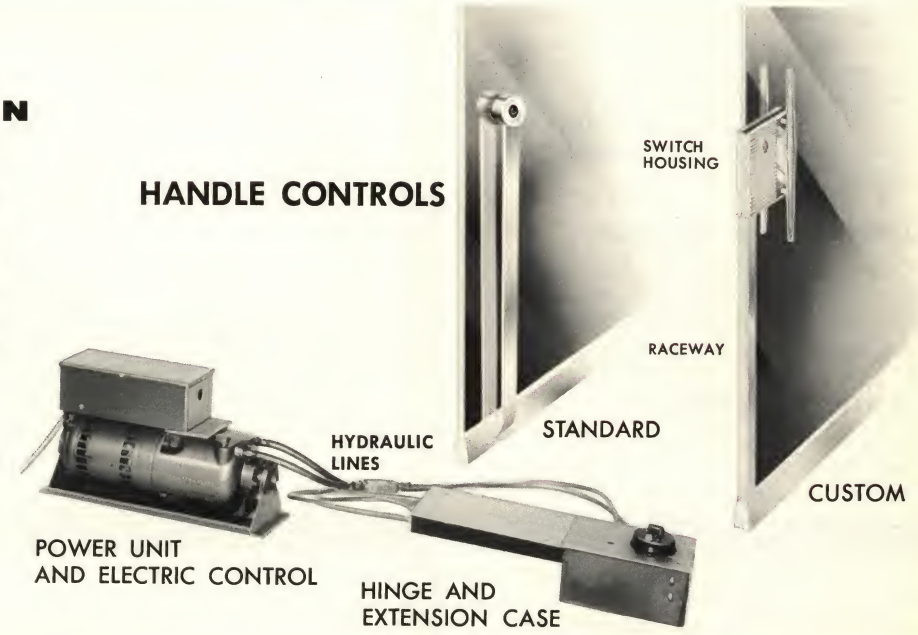
EVERY ENTRANCE REQUIREMENT

are involved, mat operation is most desirable. Handles can be used on double- or single-acting doors, while mats or other remote controls are for use on single-acting doors only.

HANDLE OPERATION

Handles can be standard or custom to meet architect's requirements. The standard vertical and vertical-horizontal handles have been widely accepted. Custom handles with unlimited design possibilities can be supplied. A new compact size handle switch is used in custom handles.

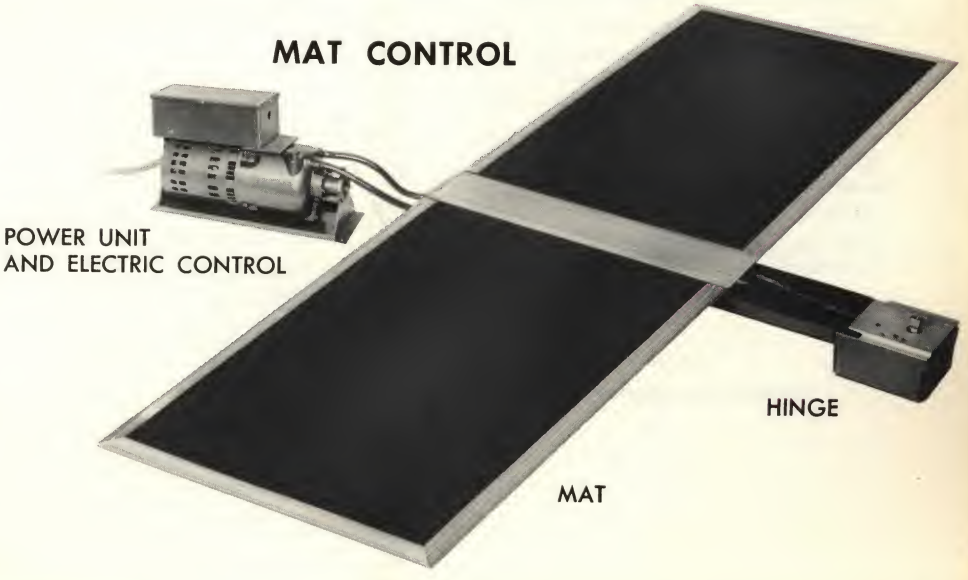
HANDLE CONTROLS



MAT OPERATION

Mat controls are for use on single-acting doors only. This type equipment is therefore limited to buildings having more than one doorway. For the best traffic flow, it is advisable to use one mat-operated "In" door and one "Out" door. Some buildings will benefit by using a handle-operated door for inbound traffic and a mat-operated door for outbound traffic. The standard mat colors are Dark Blue, Seal Brown, Pewter Gray and Meadow Green.

MAT CONTROL



TECHNICAL INFORMATION

SAFETY

The smooth hydraulic action is carefully regulated from start to stop. When the electric power in the building is off, doors can be operated manually. A safety valve in the power unit prevents a build-up of pressure when a pedestrian or obstacle obstructs the opening of the door. A snubbing action slows the opening of the door before it reaches the extreme open position.

APPROVED RATING

Underwriters Laboratories, Incorporated has approved PITTCOMATIC under File No.-23782. Canadian Standards Association Approval Number is 11162.

MAINTENANCE

The PITTCOMATIC is easy to service. All adjustments and controls for hinges and timers are accessible without removing other equipment. All hinge units are provided with "self-sealing" quick-disconnect hydraulic connections. Although normally not needed, additional hydraulic fluid is added at the power unit. This eliminates the possibility of oil being spilled on the floor.

ACTIVATOR

With the PITTCOMATIC, there is a choice of handle, mat or remote controls available to meet the requirements of individual entrances. The handle activator can be used on single- and double-acting doors. The mat activator is used for single-acting doors only. The handle control should be used where there is only one door in an entrance. The low-voltage protected electrical circuit is not affected by rain, snow or moisture.

HANDLE OPERATOR

HANDLE OPERATION. The operation of a PITTCOMATIC Hinge with a handle control is very simple. The electrical system is activated by pushing or pulling on the handle which contains a 6V-AC spring-loaded contact switch. The direction of the door can thereby be controlled by pedestrians going through the doorway.

The PITTCOMATIC Hinge with push-pull handles is the only automatic door opener for use on double-acting doors. Push-pull handles should be used on entrances having only one door, doors at the building line, or wherever traffic conditions require close control over the door.

DIMENSIONS

POWER UNIT	20" x 9" x 12"
HINGE CASE	8½" x 6¼" x 4¼"
EXTENSION CASE	10-15/16" x 6¼" x 1½"
HYDRAULIC LINES	Std. 6' long. Additional lengths as specified
MOTOR	⅓ HP, 115 volt, 60 cycle, single phase, 1725 RPM. Capacity start, induction run
ELECTRIC CONDUIT	By others

HANDLES

Aluminum-bronze-stainless steel. Lettering: "Push-Pull" or plain. Doors 36" or wider are supplied with 24"-wide horizontal handles. Doors narrower than 36" are supplied with 18"-wide horizontal handles.

MAT OPERATOR

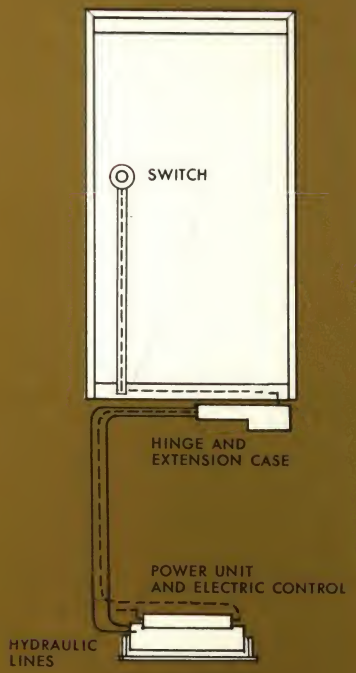
MAT OPERATION. The operation of a PITTCOMATIC Hinge with a mat is also very simple. The electrical system is activated by a 24V-AC circuit in the mat. The mat has a lead end at the approach to the door which opens the door away from the pedestrian, and a safety end which holds the door open while he is on the mat. When someone is on the safety end, the lead end will not activate the hinge. Mat operation can be used where there are both IN and OUT single-acting doors.

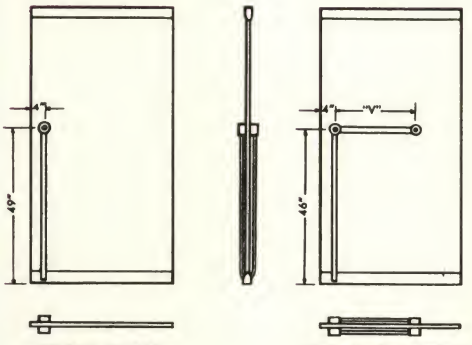
DIMENSIONS

POWER UNIT	20" x 9" x 12"
HINGE CASE	8½" x 6¼" x 4¼"
EXTENSION CASE	10-15/16" x 6¼" x 1½"
HYDRAULIC LINES	Std. 6' long. Additional lengths as specified
MOTOR	⅓ HP, 115 volt, 60 cycle, single phase, 1725 RPM. Capacity start, induction run
MAT COLORS	Blue, Brown, Gray, Green
ELECTRIC CONDUIT	By others
MAT	Refer to details

MAT

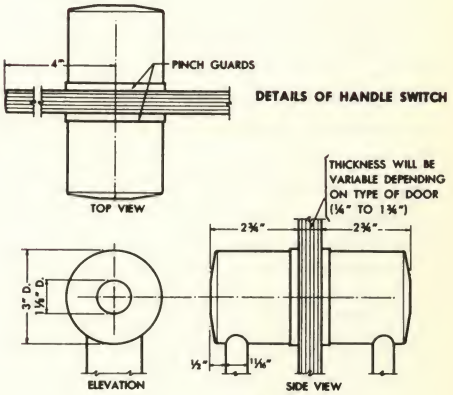
Made of half-inch-thick molded plastisol, the 24V-AC circuit is a sealed unit with moisture-sealed wires leading to a weatherproof terminal box. The circuit is not affected by rain, snow or moisture.





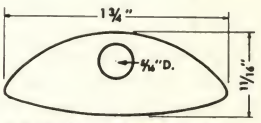
VERTICAL HANDLE

COMBINATION VERTICAL-HORIZONTAL HANDLE

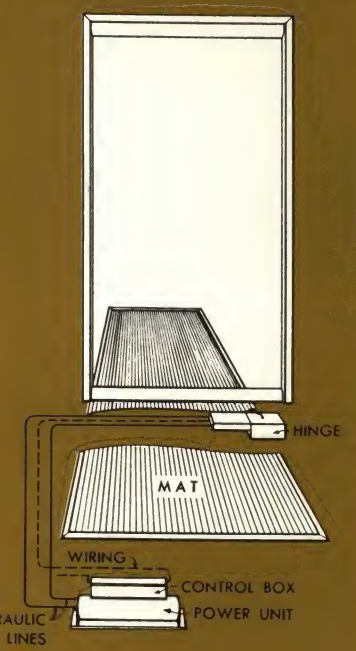


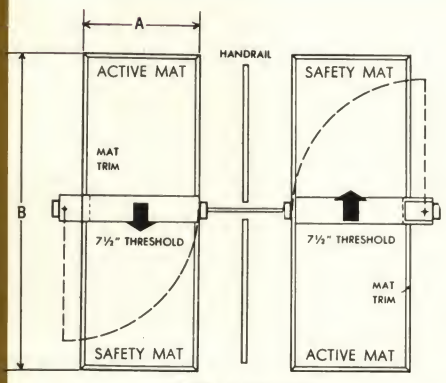
DETAILS OF HANDLE SWITCH

DOOR WIDTH	DIMENSION "V"
30"	18"
36" to 48"	24"



F. S. SECTION OF DOOR HANDLE

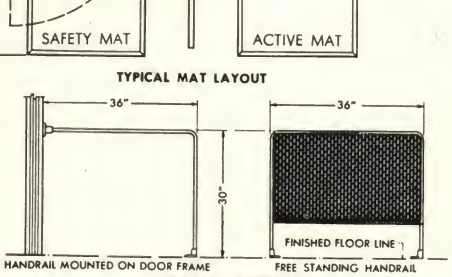




TYPICAL MAT LAYOUT

SURFACE		RECESSED		MAT SIZE
A	B	A	B	
33½	98½	32	97	30 x 44⅝
33½	122½	32	121	30 x 56⅝
39½	98½	38	97	36 x 44⅝
39½	122½	38	121	36 x 56⅝

Mats are also available either 30" or 36" wide by 32 5/16" in all four colors for custom layouts. The active mat must be a minimum of 48" long and the length of safety mat at least equal to width of door.

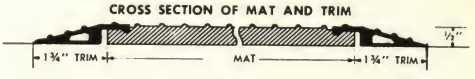


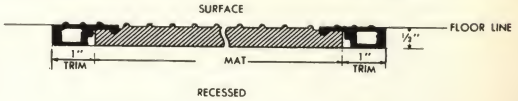
TYPICAL HANDRAILS

NOTE: HANDRAILS FURNISHED WITH FEET FOR ATTACHING TO THE FLOOR.

Handrails are supplied in aluminum only. A brochure on the complete line of handrails is available upon request.

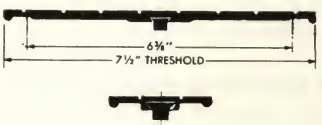
CROSS SECTION OF MAT AND TRIM





RECESSED

THRESHOLD



FILLER STRIP

PITTCO CHECKING FLOOR HINGE

ADVANTAGES

- Positive door speed control
- Separate checking control
- Built-in hold-open feature
- Small size (only 6¼" x 8½" x 4¼")
- Adjustable controls without removing door or threshold
- Special screws for precision leveling
- Upper pivot with instantaneous and positive engagement
- Engineered cycle for opening
- Sealed in oil for life
- Can be supplied as either single- or double-acting

The PITTCO Checking Floor Hinge is a product of the most advanced engineering, plus the best manufacturing practices. High quality roller bearings are used in PITTCO Hinges. Precision workmanship upon the finest metals results in durability, efficiency, and trouble-free operation.

Essentially, the operation of the PITTCO Hinge is a combined mechanical and hydraulic action. The closing speed and checking are controlled by hydraulic action regulated by control screws on the top face of the hinge. Every PITTCO Hinge is tested at 300 pounds per square inch pressure to assure that all hydraulic gaskets are properly sealed. The special hydraulic fluid used enables the hinges to perform correctly at the extreme high and low temperatures encountered at varying geographic locations.

PITTCO Hinges are furnished complete with cement case, top pivot assembly, and fittings required to secure a tempered glass door to the hinge. When PITTCO Hinges are to be used on doors other than tempered glass doors, indicate that fact, when specifying, to obtain the correct hinge arm.

SELECTION OF TYPE OF HINGE

Before selecting a hinge, analyze the entrance requirements according to the following:

- Type of door—tempered glass, metal or wood.
- Center or offset pivot.
- Single or double action.
- Hinge-opening action or degree of swing.
- Hold-open or no hold-open.

Ten types of PITTCO Hinges are available. Select the type according to entrance requirements.

No. 10-120—Double Acting (Swing 1 and 2) Hold-Open at 95°.
No. 10-125—Double Acting (Swing 1 and 2) No Hold-Open. Opens to 85°.
No. 10-100—Single Acting (Swing 3 and 6) No Hold-Open. Opens to 90°.
No. 10-105—Single Acting (Swing 4 and 5) No Hold-Open. Opens to 90°.
No. 10-110—Single Acting (Swing 3 and 6) Hold-Open at 95°.
No. 10-115—Single Acting (Swing 4 and 5) Hold-Open at 95°.
No. 10-150—Single Acting (Swing 3 and 6) Hold-Open at 105°.
No. 10-155—Single Acting (Swing 4 and 5) Hold-Open at 105°.
No. 10-180—Single Acting (Swing 3 and 6) No Hold-Open. Opens to 100°.
No. 10-185—Single Acting (Swing 4 and 5) No Hold-Open. Opens to 100°.

Models 10-120, 10-125, 10-100 and 10-105 have resistance to opening at 70°. All others have resistance at 90°.

TENSION SELECTION

PITTCO® Hinges are available with light or heavy spring tension in numbers 2, 4, 6, or 8. Select the tension to satisfy the entrance requirements.

OPENING ACTION

This diagram shows the action of the PITTCO Checking Floor Hinge in opening the door and illustrates the thinking that has gone into its design. Area "A" has the greatest spring load to prevent opening from wind pressure. Area "B"—the arc of greatest use—has a materially reduced spring load, giving the PITTCO Hinge the utmost ease of operation. In Area "C" the spring load gradually builds up to give snubbing action against occasional violent opening. At 90° there is a hold-open position that only goes into operation when extra pressure is slowly applied at this point. When specified, PITTCO Hinges can be furnished without the hold-open device. Also, they can be furnished with proper accessories for use with wood or other type doors normally installed on pivot hinges.

PITTSBURGH DOORWAYS SPECIFICATIONS

GENERAL CONDITIONS: *The "General Conditions" of the contract are a part of these specifications.*

HERCULITE DOORS AND SIDELIGHTS

This contractor shall furnish and install ½" or ¾" thickness Tempered Polished Plate Glass HERCULITE Doors and Sidelights as made by the Pittsburgh Plate Glass Company. Doors to be of the type and size shown on drawings or specified hereinafter. Integral hardware to be of aluminum, bronze, or stainless steel with an aluminum core as specified according to metal and finish. Sidelights to be to the size as shown or specified and to be furnished with hardware to match the doors or as shown on the drawings.

Each door is to be equipped with a lock and/or bolt as supplied by the manufacturer, or as noted on the drawings.

Each door is to be manufactured to accommodate builders hardware items, such as push-pull bars, checking floor hinges, alarm systems and other accessory items as specified.

The installation of the doors and sidelights to be in accordance with the manufacturer's recommendations, and to the satisfaction of the architect.

THE WEST DOOR

Same as HERCULITE Doors (except glass is ½" untempered polished plate. Integral hardware can be aluminum, bronze or stainless steel).

HERCULITE DOOR FRAMES

This contractor shall furnish and install HERCULITE Door Frames, a product of the Pittsburgh Plate Glass Company, as shown on the drawings or specified hereinafter. Frames to be standard style number .... to height shown on the drawings, made of aluminum, bronze, or stainless steel as specified. Custom frames, where shown on the drawings, shall be constructed similarly to the standard frames. Thresholds are to be supplied where shown on the drawings or specified hereinafter. The Door Frames shall be fabricated and assembled at the factory, ready for erection as a single unit at the building. Custom frames that are too large for shipment as a single unit shall be constructed at the factory as assembled frames and then shipped in units so that they can be assembled at the job site.

Aluminum frames shall be fabricated from hollow extruded sections of 63ST-5 alloy with a wall thickness of not less than 3/32". Brake metal or tubing will not be acceptable. They shall be reinforced with 3" steel channels (6"—10.5# in free-standing frames), steel plates, and ½" tie rods wherever required to assure rigidity of the frame. Internal reinforcing steel to be welded at corners and secured with machine screws to aluminum sections. Frames to have 6" extensions to the 3" steel channels at the top of the jambs to fasten to structural steel of the rough opening, or to be provided with concealed anchor bolt holes in the jambs and header. All exposed aluminum faces to be smoothly polished and anodized. HERCULITE Door Frames of bronze or stainless steel to have sectional contours, dimensions, and construction similar to and the equivalent of aluminum frames. Bronze metal to be 85-15 alloy and to have a satin brushed finish. Stainless steel to be 18-8 alloy with a No. 4 brushed finish.

PITTCO Checking Floor Hinges and top pivots shall be furnished and shall be properly located and securely fastened to the framing. The hinge boxes are to be welded to the 4" steel (6" on free-standing frames) channels connecting the jambs at the base. All necessary moldings and tracks shall be provided and installed for setting ¾" tempered glass sidelights. All moldings for installing ¼" transom glass shall be provided and installed.

Frames requiring tempered glass doors with locks, bolts, PITTCOMATIC Hinges, panic devices, or other special builders hardware items, as noted on the drawings or specified hereinafter, shall be fabricated to receive this equipment.

All exposed faces of the framing shall be provided with a suitable protective covering to protect the finish until the installation is completed.

The installation of the HERCULITE Door Frames is to be in accordance with the manufacturer's recommendations, and to the satisfaction of the architect.

PITTCOMATIC HINGES

This contractor shall furnish all material, labor and service to properly install PITTCOMATIC Hinges, a product of the Pittsburgh Plate Glass Company, as shown on the drawings or specified hereinafter.

This contractor shall verify all dimensions at the building, prepare shop drawings, and furnish three sets of prints to the architect for approval.

Other contractors shall furnish and install platforms or racks to accommodate the power unit and control box. Also, other contractors shall provide 110V-AC electric power with an electric fused safety switch, and ½" thin wall electric conduit from the PITTCOMATIC Hinge case to the control box and thence to the power unit.

Each set of PITTCOMATIC equipment for a door shall consist of a hydraulic-operated checking floor hinge, a power unit with hydraulic pump and a ⅓ HP, 110V motor, an electronic control box, hydraulic lines of ⅜" copper tubing to connect the hinge and power unit located as shown on drawing, and handle or mat activating controls as shown on the drawings, or specified hereinafter. Hinges shall be for single- or double-acting doors as shown on the drawings. Where handles are used, they shall be vertical or vertical and horizontal style, and provided with push-pull lettering as shown on the drawings or specified hereinafter.

The installation of the PITTCOMATIC Hinges shall be in accordance with the manufacturer's recommendations, and to the satisfaction of the architect.

PITTCO HINGES

This contractor shall furnish and install PITTCO Checking Floor Hinges, a product of the Pittsburgh Plate Glass Company.

The hinge shall be complete with welded steel cement case, top pivot assembly, and check arm with plate for attachment to the door. The hinge dimensions shall be 6¼" x 8½" x 4¼". Speed and checking valve controls shall be on the top of the hinge for easy access. Four precision leveling screws shall be provided as an integral part of the hinge.

The hinge shall be provided with (or without) built-in hold-open devices. Hinges shall be suitable for use with single- or double-acting doors as shown on the drawings.

The installation of the hinges shall be in accordance with the manufacturer's recommendations, and to the satisfaction of the architect.

NOTE: PITTCO *Hinges are acceptable for Federal Buildings under Specification FF-H-121A.*

ACCESSORIES FOR HERCULITE DOORS

This contractor shall furnish and install accessories for HERCULITE Doors as shown on the drawings or specified hereinafter. Under this classification are items such as: Indiana-style stock push-pull handles of the designated style number, with metal and finish as specified; Glynn-Johnson door holders for single- or double-acting doors as shown on the drawings; thresholds and door stops of aluminum or bronze when HERCULITE Door Frames are not used; custom-designed push-pull plates or handles as shown on the drawings; and Adjusto-Seal weather stripping for HERCULITE Doors.

Russwin Fire Exit Bolts or electric strikes, where shown on the drawings or specified hereinafter, are to be included in this contract.

Accessory items shall be installed according to the manufacturer's recommendations, and to the satisfaction of the architect.

PITTSBURGH DOORS are unsurpassed in their handsome appearance, long and dependable life, ease of installation and architectural flexibility. This doorway to the First National Bank in Dallas includes four HERCULITE Doors with PITTCOMATIC operation. Architect: George L. Dahl, Dallas, Texas.

CRIPPLED CHILDREN'S HOSPITAL, New Orleans, Louisiana. Mat-operated HERCULITE Doors with PITTCOMATIC Hinges are installed to provide a completely automatic doorway that can be safely and easily operated by crippled patients. Architects: Ricciuti, Stoffle & Associates, New Orleans.

FROM THE LARGEST SKYSCRAPERS, like this office building of the Aluminum Company of America at Pittsburgh, Pa., to the smallest structure—PITTCOMATIC Hinges and HERCULITE Doors combine to create entrances of enduring architectural appeal. Architects: Harrison and Abramovitz, New York City; Associate Architects: Altenhof & Bown; Mitchell and Ritchey, Pittsburgh.

PITTSBURGH HERCULITE Tempered Plate Glass Doors mark the entrance to St. Luke's Chapel in the Bishop Clarkson Memorial Hospital in Omaha, Nebraska. Designed by the Leo A. Daly Co., of Omaha, Nebraska, this was selected as the best-designed hospital in United States in 1956.

Pittsburgh Glass Products are available through

290 branches of the Pittsburgh Plate Glass Company;

Pittsburgh Glass Distributors;

On the Pacific Coast through 58 branches of W. P. Fuller & Co.;

In Canada through Canadian Pittsburgh Industries Limited.

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QUALITY PRODUCTS

ROMAN METAL PRODUCTS

OF DISTINCTION

STEEL SLIDING GLASS DOORS AND WINDOWS

RESIDENTIAL • COMMERCIAL

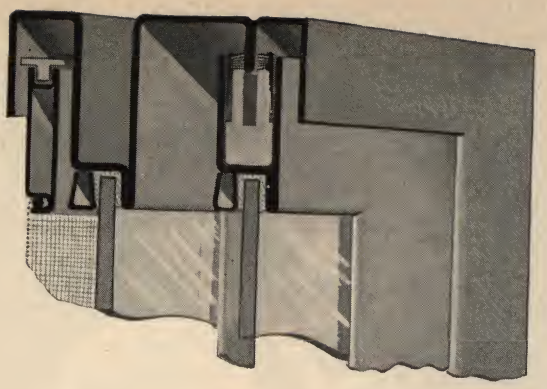
Sliding Doors and Window Walls
Arizona Land Title Building, Tucson, Arizona
Architect: Place & Place, Tucson
Contractor: James A. Stewart Construction Co.

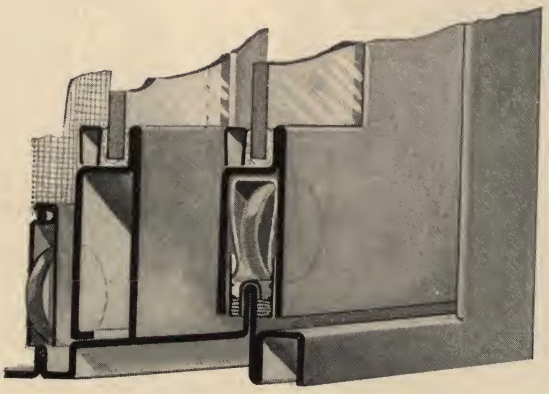
1960

ROMAN METAL PRODUCTS, INC.

ROMAN DOORS are meticulously designed and fabricated to meet the most exacting requirements for use in commercial, industrial and residential type construction.

Rigid frames are made of #14-gauge cold and/or hot rolled steel. All steel components are exclusively finished with a double vinyl chloride coating which is alkaline and acid-resistant and virtually scratchproof.



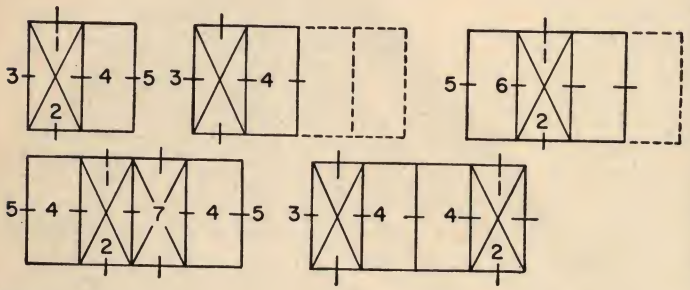


door features

- **weatherstripping:** Double "all around" weatherstripping consists of continuous lengths of Schlegel woven pile which assures protection against rain, snow, wind and dust. The weatherstripping is easily and accurately adjusted to provide a positive seal at all moving and intersecting areas. Retaining clips holding the weatherstripping in place are cad-plated.
- **guides:** Micarta "anti-rattle" top guides are features of all sections. These guides, combined with steel reinforced head, stainless steel sill tracks and adjustable brass-tired sheaves, insure enduring, smooth sliding action.
- **hardware:** Solid bronze hardware, both inside and outside, features the newest advances in safe, custom-designed lock mechanisms.

door types and sizes

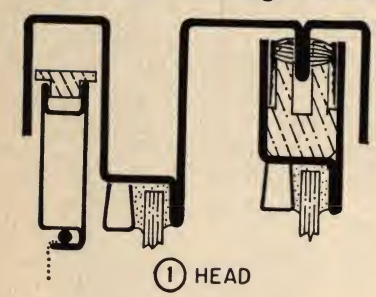
All views from exterior. Stock sizes are available for immediate shipment. Special sizes to order.



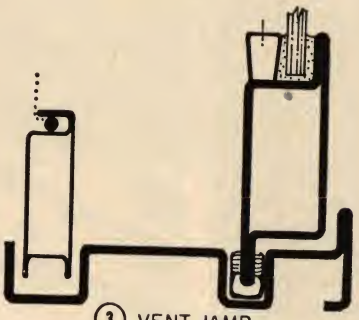
ROMAN DOOR (all dimensions in inches)

door type	door size	glass size		rough opening
		fixed	sliding	
XO and OX	72 x 82	35¼ x 77¼	33⅛ x 76⅞	72½ x 82½
	96 x 82	47¼ x 77¼	45⅛ x 76⅞	96½ x 82½
	120 x 82	59¼ x 77¼	57⅛ x 76⅞	120½ x 82½
OXO (r and l)	108 x 82	35¼ x 77¼	33⅛ x 76⅞	144½ x 82½
	144 x 82	47¼ x 77¼	45⅛ x 76⅞	
OXXO	144 x 82	35¾ x 77¼	33⅛ x 76⅞	144½ x 82½
	192 x 82	47¾ x 77¼	45⅛ x 76⅞	192½ x 82½
XOOX	144 x 82	35¼ x 77¼	33⅛ x 76⅞	144½ x 82½
	192 x 82	47¼ x 77¼	45⅛ x 76⅞	192½ x 82½

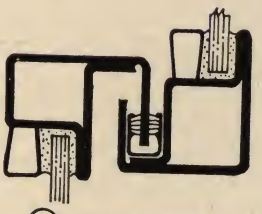
detail drawings—scale: 6" = 1'-0"



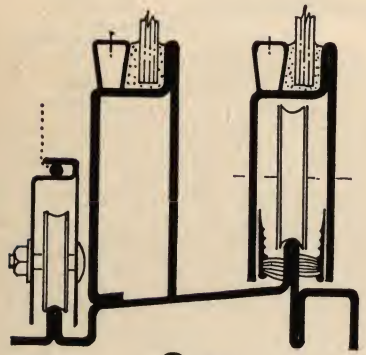
① HEAD



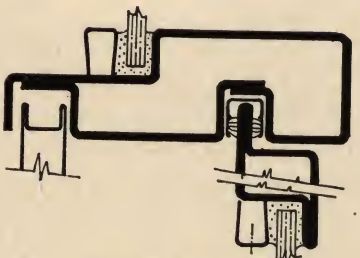
③ VENT JAMB



④ INTERLOCKERS

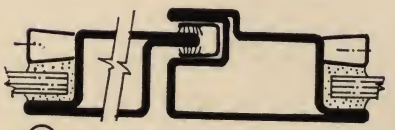


② SILL



⑥ OXO VENT JAMB

⑤ STATIONARY JAMB



⑦ OXO CENTER CLOSING STILES

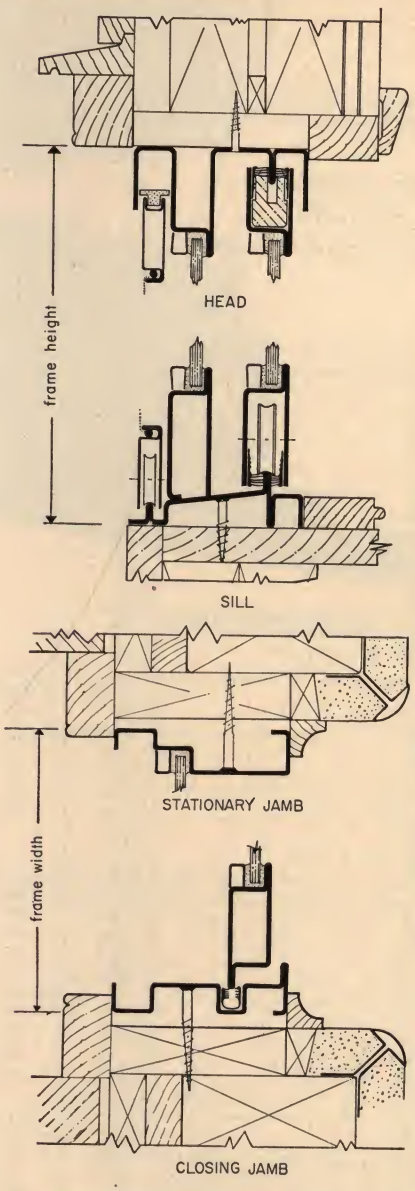
ROMAN WINDOWS ARE ALSO AVAILABLE IN ALUMINUM

WINDOW SPECIFICATIONS ON PAGE 4

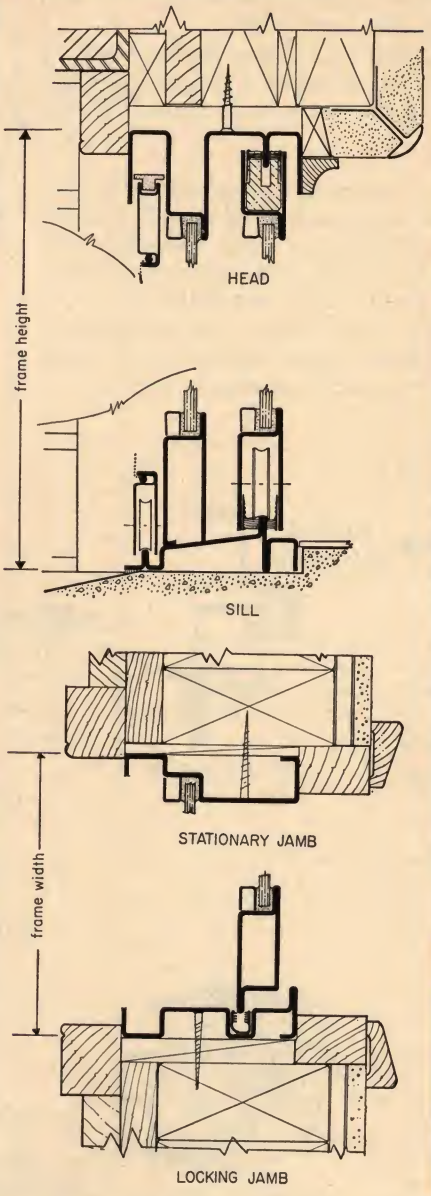
installation details—scale: 3" = 1'-0"

full size details available

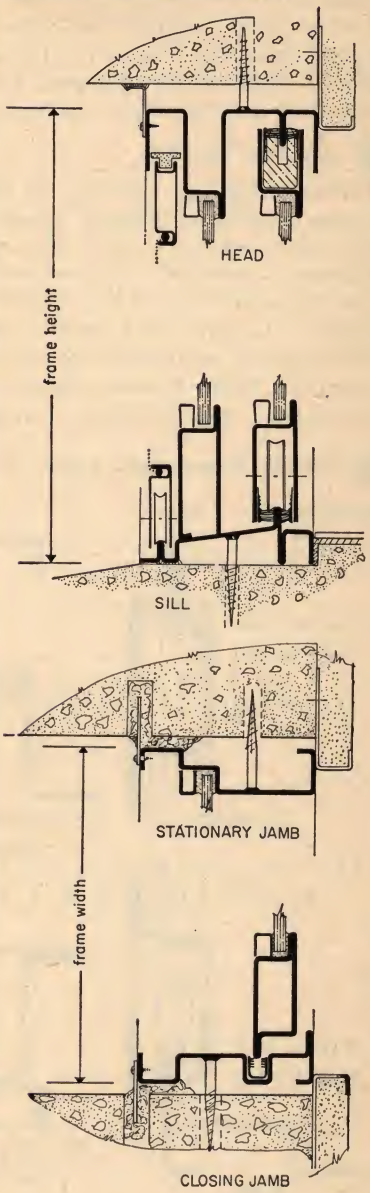
• frame construction



• brick veneer construction



• concrete construction



suggested specifications for Roman Doors

- **general**—All steel horizontal doors and/or windows shown on the drawings or herein specified, or both, shall be ROMAN DOORS and/or windows, as manufactured by the ROMAN METAL PRODUCTS, INC., P. O. Box 4477, University Station, Tucson, Arizona. *(Location: 3768 East 37th Street.)*

- **design**—All doors and/or windows shall be horizontal sliding, bottom rolling, employing the latest features of certified woven pile weatherstripping throughout. All sliding sections to be equipped with Micarta anti-rattle top guides, double adjustable Nylon tired ball bearing sheaves, stainless steel track and removable sliding sections. Doors also to be equipped with screen pockets at both jambs, screen track and guide. Top guides to be installed front and rear of sliding sections to eliminate all rattle, side-play and insure perfect alignment and ease of operation.

  Frames shall have the latest features of top and bottom guide track, all according to Roman details.

- **material**—All frames to be made of #14-gauge cold rolled and/or hot rolled steel, accurately formed and smoothly finished as per Roman details. Glazing bead to be made of 20-gauge cold rolled accurately formed steel, drilled and screwed to each section.

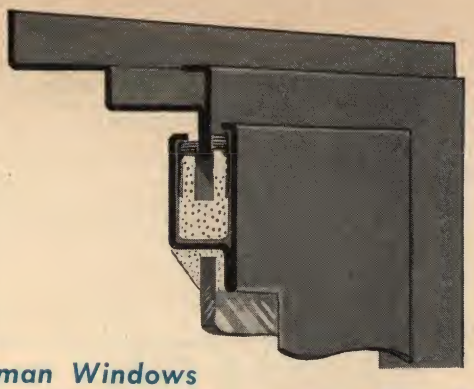
- **construction**—Frames and sliding sections to be made in jigs to insure that all tolerances and clearances are accurate and true to prevent binding and rubbing. All sections shall be continuous, jamb-to-jamb and head-to-threshold. All units to be stamped for erection screws and installation of standard hardware.

- **weatherstripping**—Doors and/or windows shall have threshold, head, vent-jamb, and interlockers completely weatherstripped with continuous lengths of certified woven pile with double weatherstripping at top and bottom of moving sections to assure double protection. Weatherstripping shall be held in place by spring steel retaining clips, cad-plated. Weatherstripping shall be easily and accurately adjustable to provide continuous seal at all points, all according to Roman details.

- **hardware**—All doors and/or windows shall be equipped with solid bronze (inside/outside) door pulls. Inside night latch shall be standard on all units. *(Schlage cylinder lock optional at extra cost).* All doors and/or windows shall be equipped with custom-designed locking device which is adjustable so that the door can always be securely locked.

  Because of our continued effort to improve our doors, modifications will be made without notice.

STEEL SLIDING GLASS WINDOWS



ROMAN STEEL SLIDING GLASS WINDOWS are meticulously designed and fabricated to meet the most exacting requirements for use in commercial, industrial and residential type construction.

Rigid frames are made of #16-gauge cold and/or hot rolled steel. All steel components are exclusively finished with a double vinyl chloride coating which is alkaline and acid-resistant and virtually scratchproof.

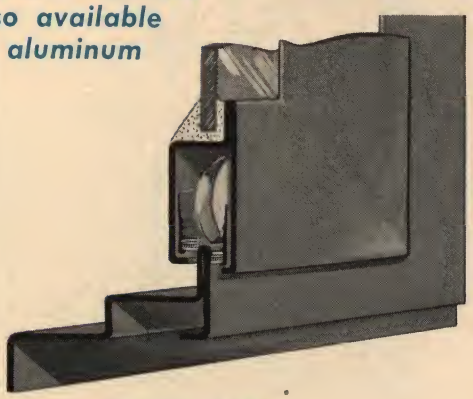
window details

weatherstripping: Double "all around" weatherstripping consists of continuous lengths of Schlegel woven pile which assures protection against rain, snow, wind and dust. The weatherstripping is easily and accurately adjusted to provide a positive seal at all moving and intersecting areas. Retaining clips holding the weatherstripping in place are cad-plated.

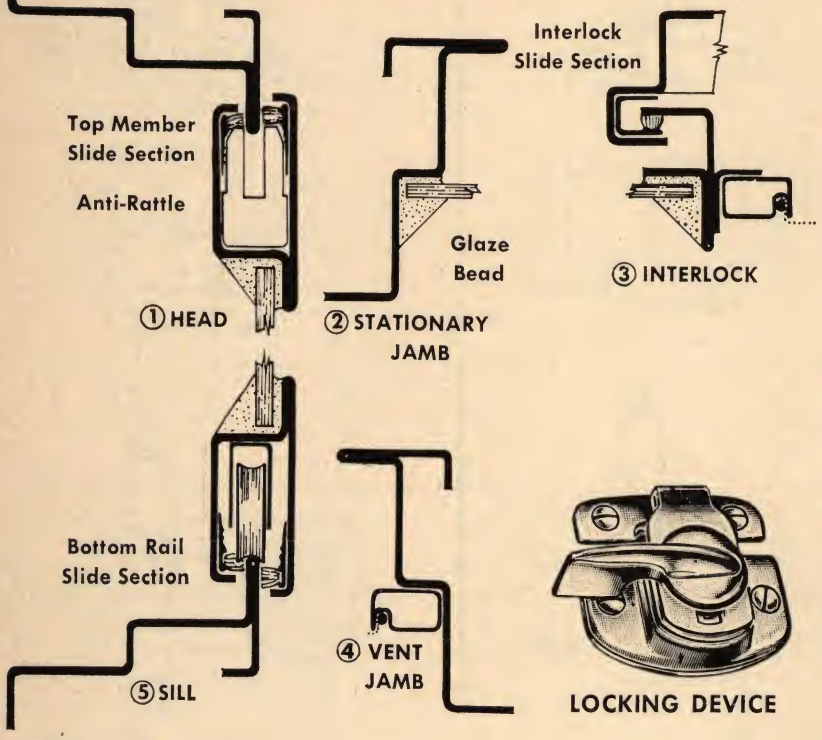
guides: Micarta "anti-rattle" top guides are features of all sections. These guides, combined with steel reinforced head, steel sill tracks and adjustable Nylon sheaves, insure enduring, smooth sliding action.

hardware: Bronze locking device.

Roman Windows also available in aluminum

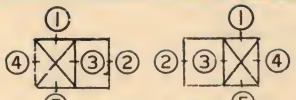
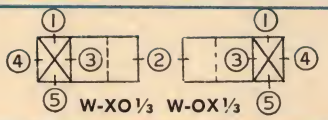
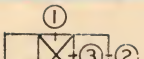
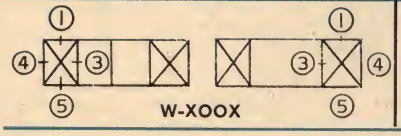


detail drawings—scale: 6"=1'-0"



window types and sizes

All views from exterior.

window types	width in.	height in.
 W-XO W-OX	36 48 60 72 84 96	24 36 48 60
 W-XO⅓ W-OX⅓	72 84 96 108 120	24 38 48 60
 W-OXO LEFT OR RIGHT	72 84 96 108 120	24 36 48 60
 W-XOOX	96 108 120 132 144	24 36 48 60

specifications

general: All steel horizontal windows shown on drawings or herein specified shall be Roman windows as manufactured by Roman Metal Products, Inc., 3768 East 37th Street—P.O. Box 4477 University Station, Tucson, Arizona.

design: All windows shall be horizontal sliding, bottom rolling employing the latest features of certified woven pile weatherstripping throughout. All sliding sections to be equipped with micarta anti-rattle top guides, adjustable sheaves, and removable sliding sections. Windows to be equipped with screen pockets at both jamb and interlocker. Top guides installed front and rear of sliding sections eliminate all rattle, side-play and insure perfect alignment and ease of operation.

material: All frames are made of 16 gauge cold rolled and/or hot rolled steel, accurately formed and smoothly finished as per Roman details.

construction: Frames and sliding sections are made in jigs which insures all tolerances and clearances to be accurate and true, and prevents binding and rubbing. All sections to be continuous jamb to jamb and head to threshold. All units to be stamped for erection screws and installation of standard hardware—fins available if for masonry.

weatherstripping: Window threshold, head, vent, jamb, and interlockers shall be completely weatherstripped with continuous lengths of certified woven pile; silicone treated which eliminates water infiltration. Double weatherstripping at top and bottom and front and rear of moving section assures double protection. Held in place by spring steel retaining clips, cad plated. Weatherstripping is easily and accurately adjusted to provide continuous seal at all points, all according to Roman details.

hardware: Windows to be equipped with custom designed locking device which is adjustable so that window can always be locked securely.

screens: Screen frames shall be made from aluminum tubular box type section and screens filled with 18 x 24 aluminum or fibreglass insect wire mesh—bronze wire extra.

ROMAN METAL PRODUCTS, INC.

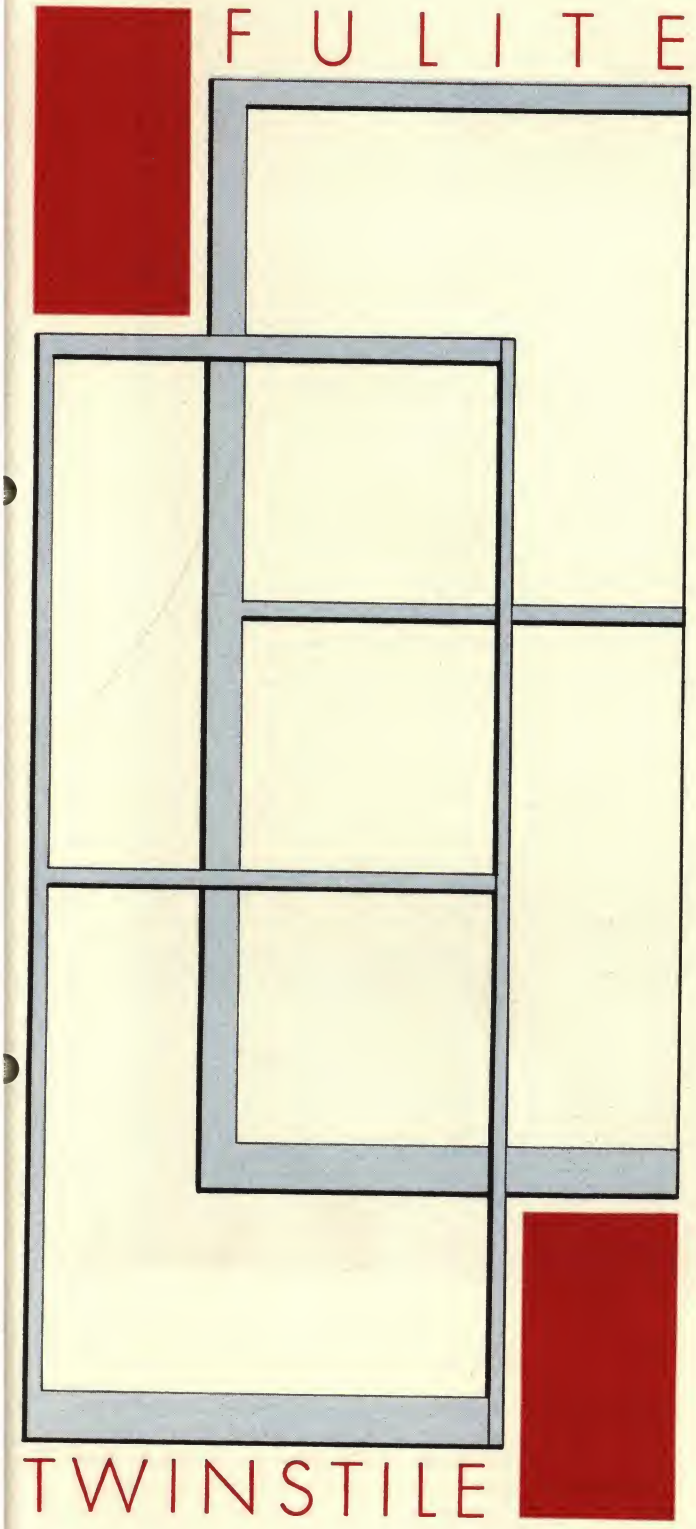
Sales Office: 3768 East 37th Street, Tucson, Arizona

Post Office Address: Box No. 4477, University Station, Tucson, Arizona

Telephone: EAst 7-6891

Printed in U.S.A.

1960



EXCEL-FRAMING®
STAINLESS OR BRONZE

ERECTO-FRAMING®
STAINLESS STEEL

FULITE®
IN STAINLESS OR BRONZE

TWINSTILE®
IN STAINLESS STEEL

FINGER-GUARDS
STAINLESS OR PLASTIC

SCHACHT ASSOCIATES, INC.
1175 E. 156th ST.
TURNBULL 7-2500
NEW YORK 59, N.Y.

TWINSTILE® STAINLESS

Specifications—

DOORS—shall be TWINSTILE as manufactured by Schacht Associates, Inc., New York City, and be made entirely of stainless steel, Type 302-18/8, satin finished, fully welded at all junctions, and be complete with push and pull bars as structural members. Each door to have top and bottom bolts operated simultaneously through the meeting stile by cylinder locks set in the push and pull bars. Doors shall be glazed with ¼" polished plate glass, set in glazing tape as provided by manufacturer of doors.

FLOOR CHECKS—Rixson #30 & #40. Door-O-Matics #300 & #400 Series.

SADDLES—(if any) of aluminum, 6" wide by ½" high, bevelled and shop prefitted to doors.

PANIC DEVICE—shall be as manufactured by Schacht Associates, Inc., entirely of stainless steel and factory installed. It shall operate to release concealed top and bottom bolts when any pressure is applied against the horizontal bar. It shall be "dogged" by a turn of key in the cylinder set in inside push and pull bar. Turning of key in cylinder set in outside handle shall release bolts for opening. Withdrawal of this key shall automatically release bolts for their latching operation.

LATCH LOCK—Door/s shall be equipped with latch-type lock. Release of bolted lock shall be made by depressing hand-hold of "push and pull bar" which should be pivoted for this operation. "Dogging" of latch-lock shall be made by key on side of latching device.

FULITE® STAINLESS OR BRONZE

Specifications—

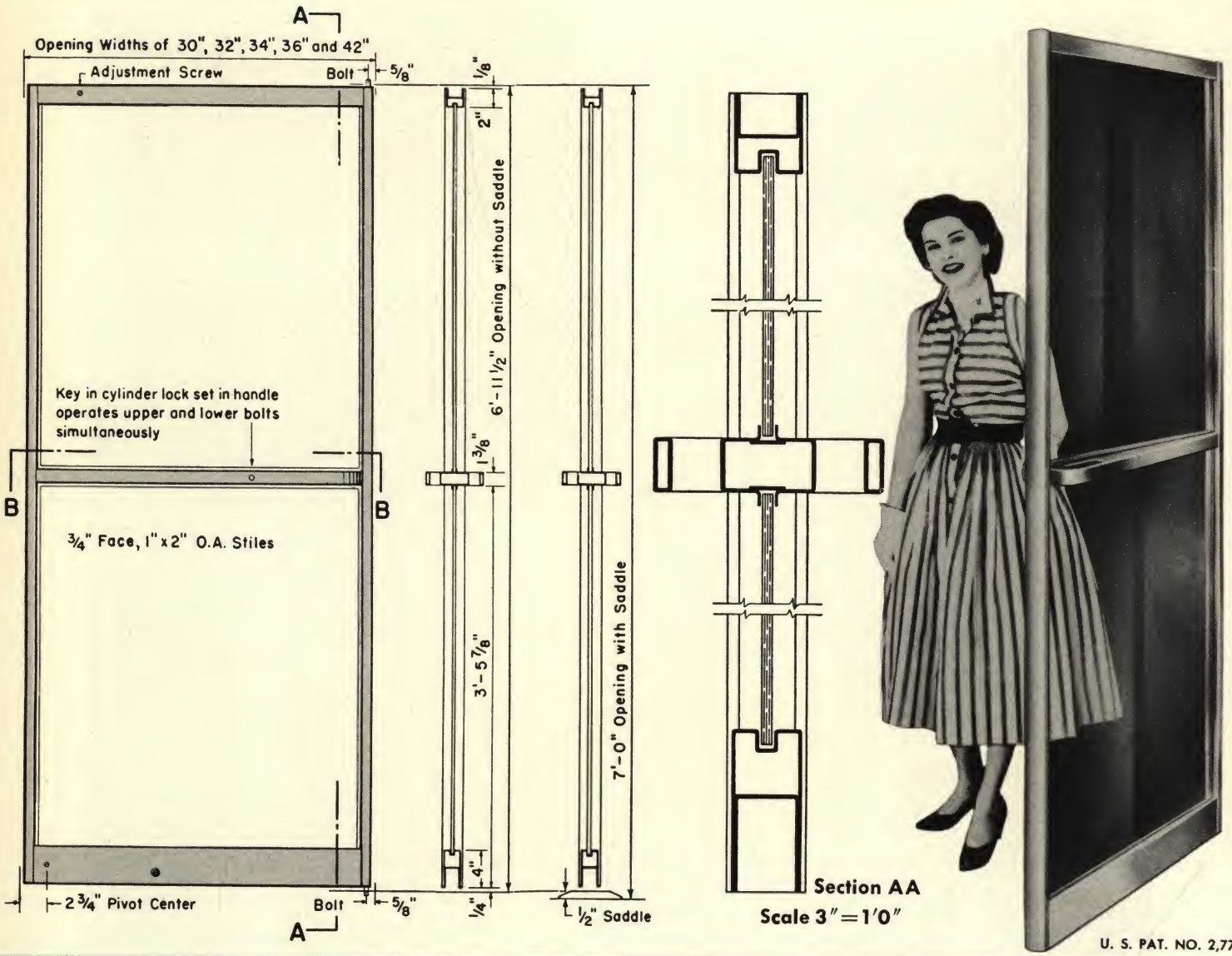
DOORS—shall be FULITE Glass Doors as manufactured by Schacht Associates, Inc., New York City. Doors shall be satin finished in stainless steel, Type 302-18/8, (or bronze), glazed with ½" polished plate glass with exposed edge pencil-polished. Doors shall be equipped with push and pull bars as structural members fitted with cylinder lock set therein, flush bolts, and center-pivoting floor checks as manufactured by Rixson (or Dor-O-Matic).

SADDLES—(if any) of aluminum or bronze, 6" wide by ½" high, bevelled and shop prefitted to doors.

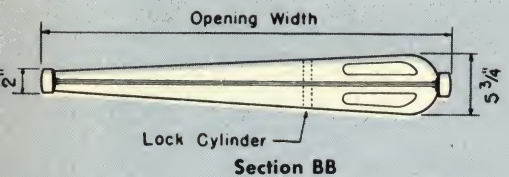
LATCH-LOCK—Door/s shall be equipped with latch-type lock. Release of bolted lock shall be made by depressing hand-hold of "push and pull bar" which should be pivoted for this operation. "Dogging" of latch-lock shall be made by key on side of latching device.

LOCK CYLINDERS — Rim type cylinders operate the locks of both the TWINSTILE and the FULITE doors. The TWINSTILE doors require 2 cylinders for each door (one on each side) or four cylinders for each pair of doors. . .
The FULITE requires only one cylinder for a pair of doors or for a single door.
Masterkeyed Cylinders, installed, if furnished by others.

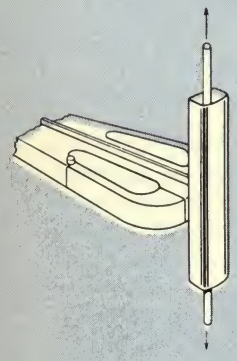
TWINSTILE® STAINLESS

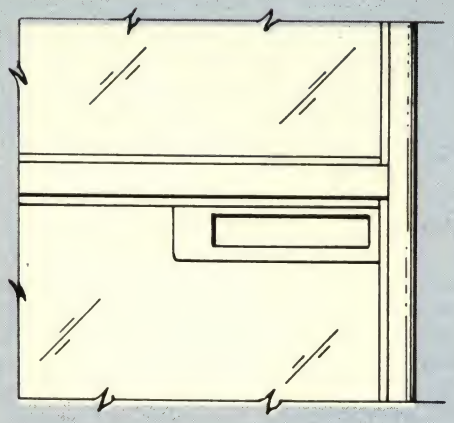


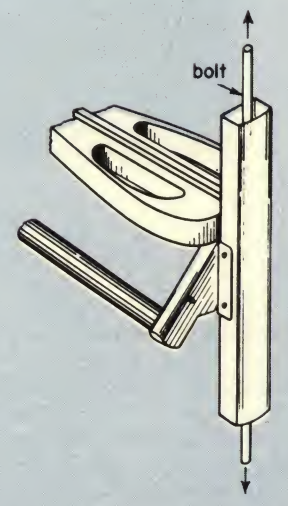
U. S. PAT. NO. 2,772,554



Section BB







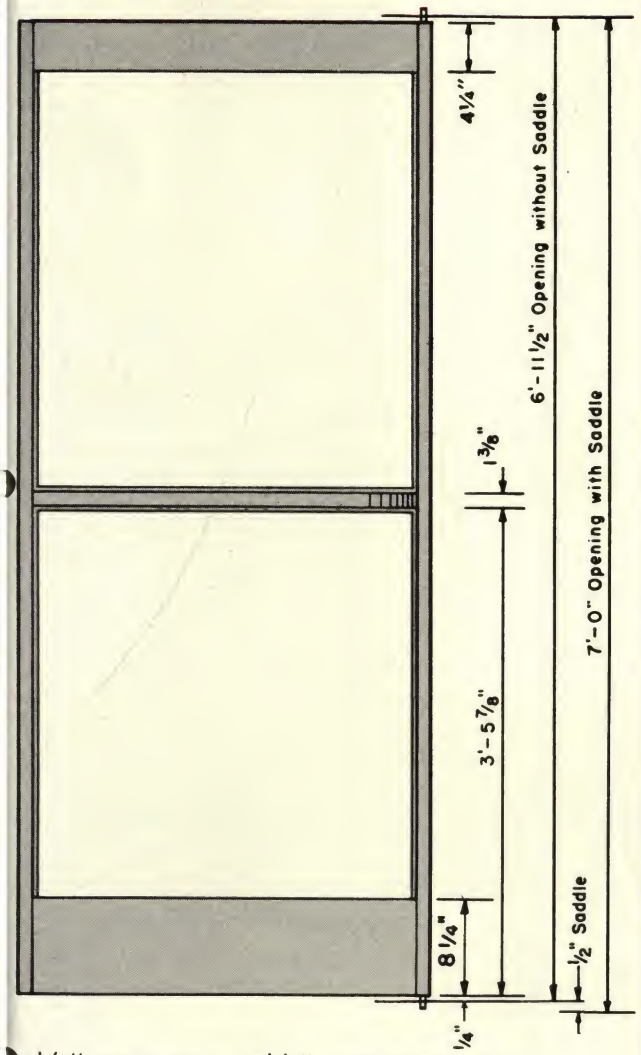
Latching Device – (if required) – TWINSTILE Doors can be equipped with latch-bolt type of lock. Depressing hand-grip of the Push and Pull bar releases the bolt from a locked position. Latch can be held in a withdrawn position or "dogged" by turning key in cylinder on the latching side. Release can be installed from either side or both.

Panic Device – shall be as manufactured by Schacht Associates, Inc., entirely of stainless steel, and factory installed. It shall operate to release concealed top and bottom bolts when any pressure is applied against the horizontal bar. It shall be "dogged" by a turn of key in the cylinder set in inside push and pull bar. Turning of key in cylinder set in outside handle shall release bolts for opening. Withdrawal of this key shall automatically release bolts for their latching operation.

SCHACHT ASSOCIATES INC. 1175 E. 156th ST. NEW YORK 59, N. Y.

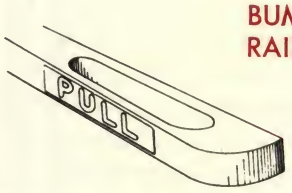
TWINSTILE® "48"

OFFERED FOR SPECIAL USE

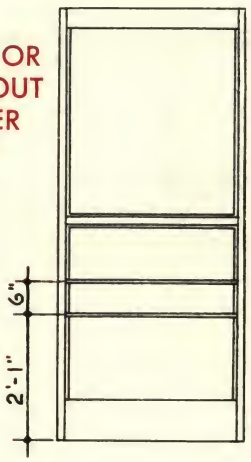


4¼" TOP RAIL, 8¼" BOTTOM RAIL

WITH OR WITHOUT BUMPER RAILS



PUSH and/or PULL plates with incised letters in black or red may be ordered.



TO SPECIFY DOORS

LEFT HAND — OR — RIGHT HAND

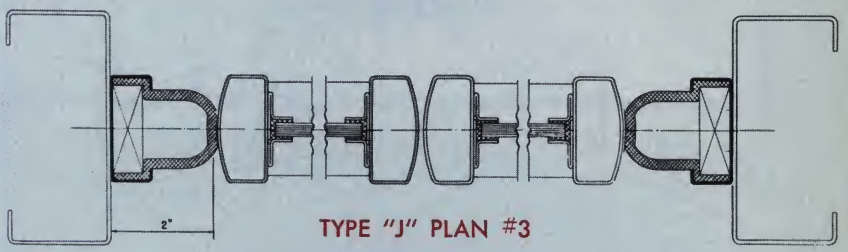
HINGE AT LEFT

HINGE AT RIGHT

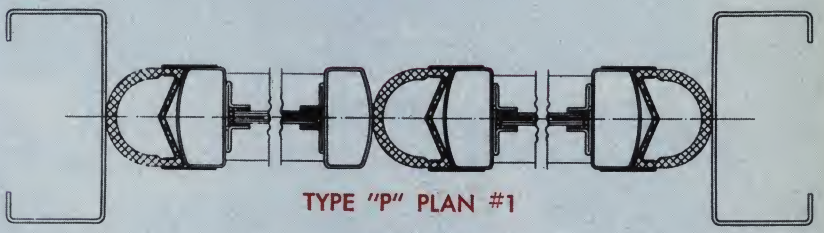
ENTERING

FINGER-GUARDS

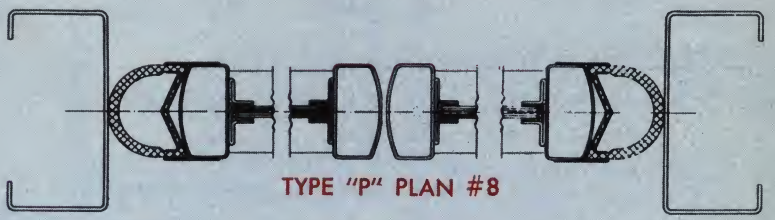
• PUBLIC LIABILITY EXPERIENCE HAS PROVEN THAT WHERE DOORS ARE INSTALLED IN PUBLIC SHOPPING UNITS —*ESPECIALLY WHERE CHILDREN MIGHT WANDER*— GUARDING AGAINST CRUSHED FINGERS HAS BECOME OF PRIME IMPORTANCE.



TYPE "J" PLAN #3

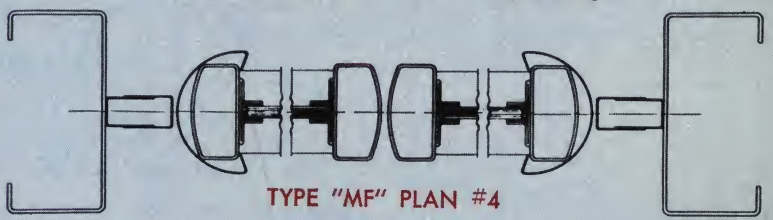


TYPE "P" PLAN #1

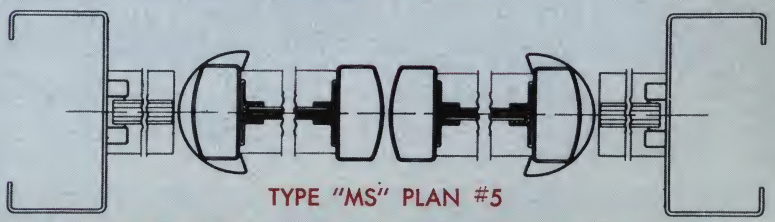


TYPE "P" PLAN #8

ALL METAL FINGER-GUARDS



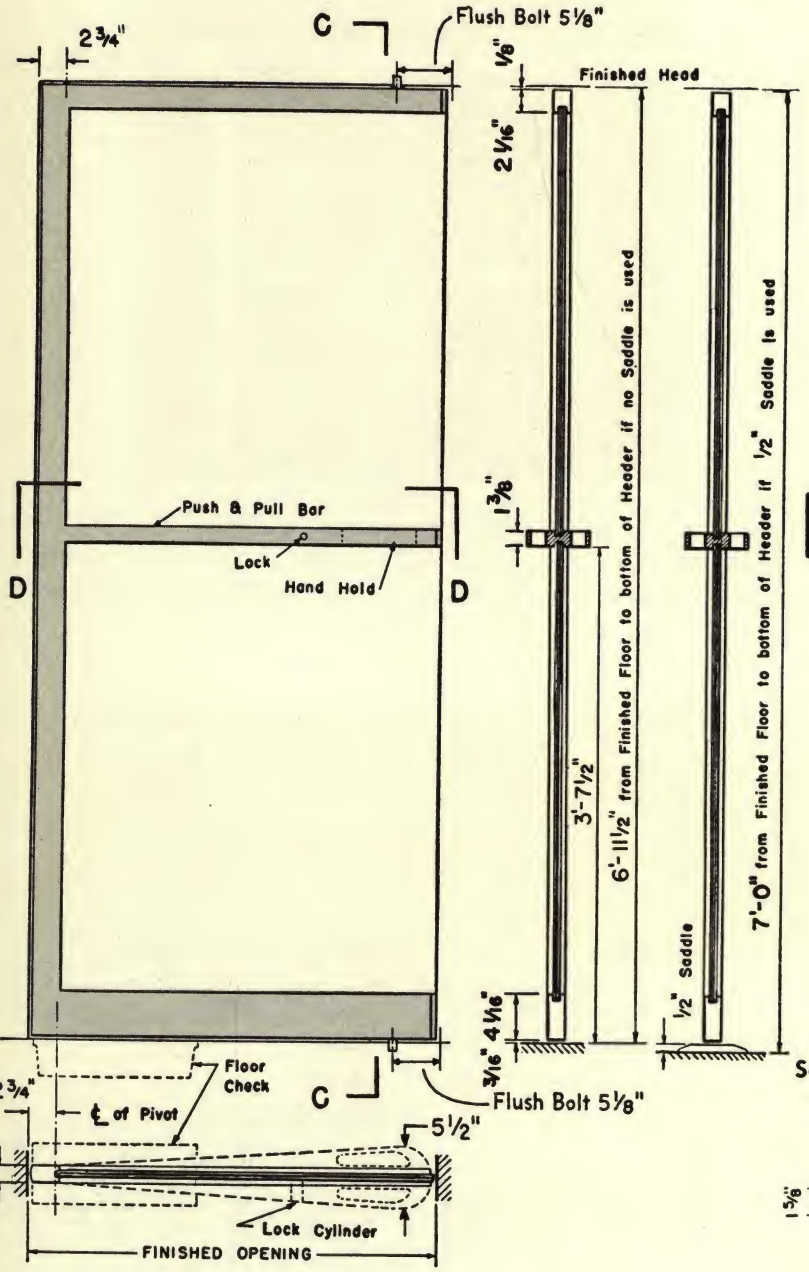
TYPE "MF" PLAN #4



TYPE "MS" PLAN #5

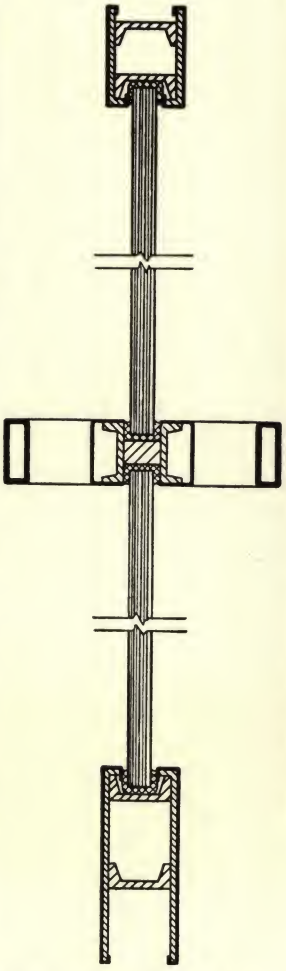
FINGER-GUARD CATALOG OF 16 PAGES AWAITS YOUR REQUEST.

FULITE® STAINLESS OR BRONZE

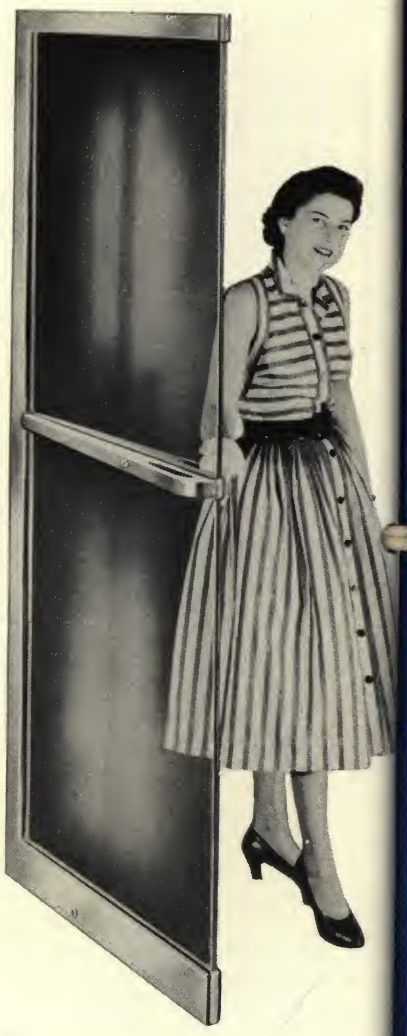


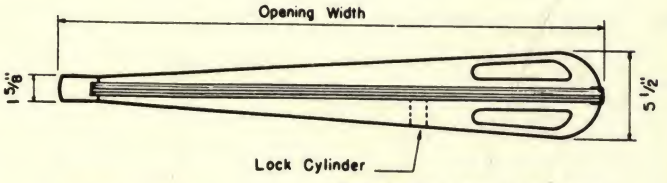
30", 32", 34" and 36"

⅛"
Finished Head
2 1/16"
1⅜"
3'-7½"
6'-11½" from Finished Floor to bottom of Header if no Saddle is used
7'-0" from Finished Floor to bottom of Header if ½" Saddle is used
½" Saddle
3/16" 4 1/16"

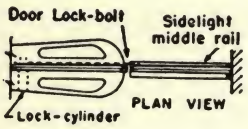


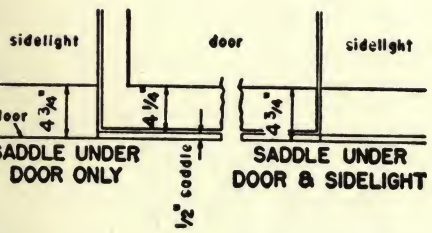
Section CC Scale 3"=1'0"

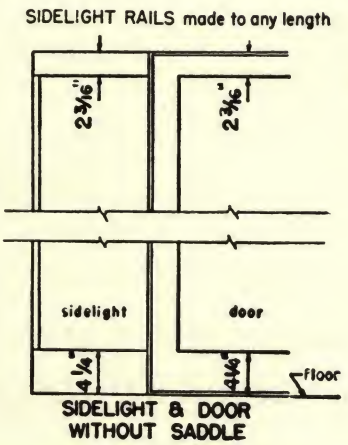




Section DD Scale 1½"=1'0"

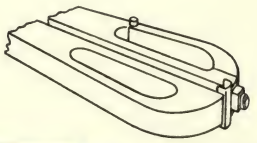






Flush bolts are set in top and bottom rails of doors, operating from inner side of doors.

Mail slot with hinged closure. If desired, can be set either in lower rail of door or in low rail of sidelight.



Latching Device - (if required)—FULITE Door can be equipped with latch-bolt type of lock. Depressing the hand-grip of the Push and Pull bar on the inside will release the bolt from a latched position. The latch can be held in a withdrawn position by turning key in the cylinder on the inside.

SCHACHT ASSOCIATES INC. 1175 E. 156th ST. NEW YORK 59, N. Y.

VERTICAL
MEMBER
CLOSED BACK

2" x 4¼"

VERTICAL
MEMBER
OPEN OR CLOSED

This member is suggested for use as a corner post for vestibules, etc., etc. It is also used to present a wider face for fastening of materials by others. Surfaces can be splayed any angle.

4¼" x 4¼"

STANDARD SECTIONS

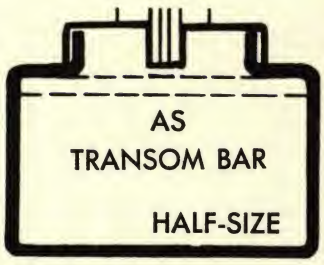
EXCEL-FRAMING®

AVERAGE DELIVERY — 2 WEEKS • THE IMPOSSIBLE — 3 WEEKS

VERTICAL
MEMBER
OPEN BACK

2" x 4¼"

HORIZONTAL
MEMBER
2" x 3¼"



THESE SECTIONAL DIMENSIONS
ARE KEYED TO OUR PRICE-GRAPH

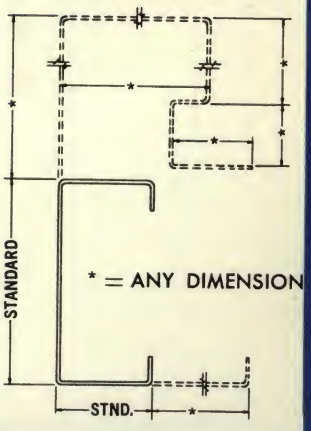
VARIATIONS

ALL DIMENSIONS ARE INCREASED
TO ANY REQUIREMENT AT VERY
NOMINAL ADDITIONAL COSTS.

FULL SIZES

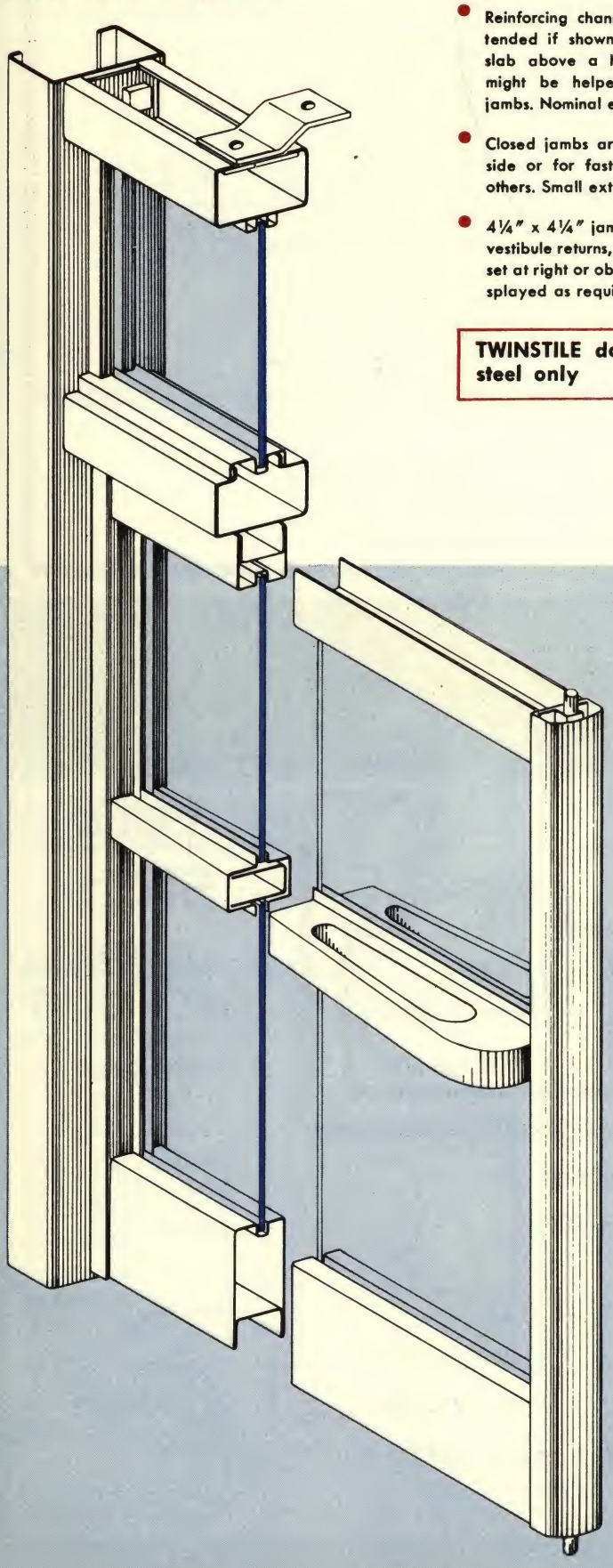
ACTUAL
THICKNESS

DETAILS OF
CONSTRUCTION
PAGES 8 & 9



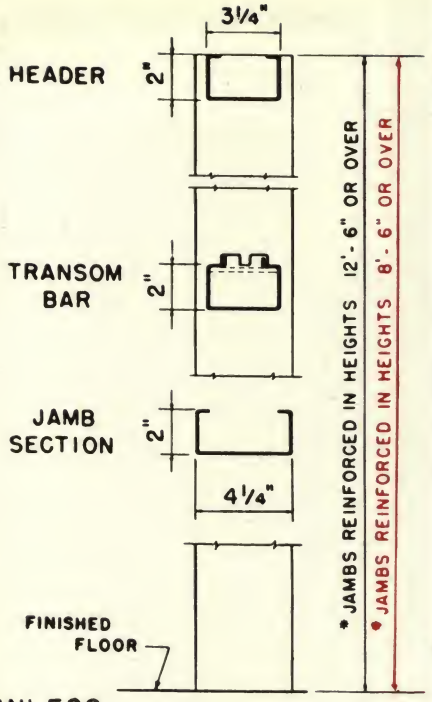
TWINSTILE® AND FULITE®

doors are interchangeable

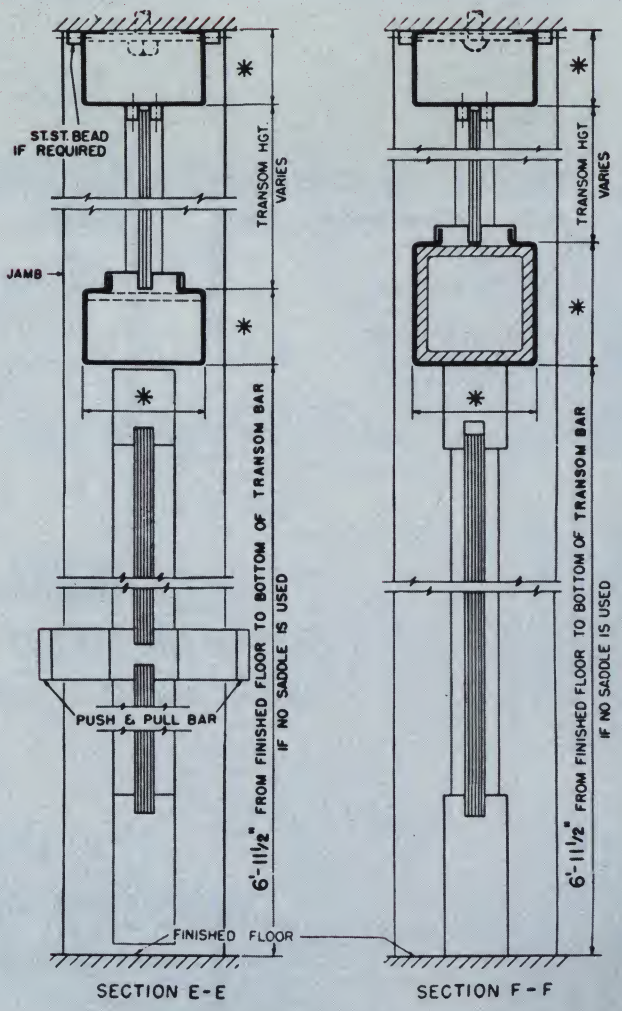


- While frames are made of #14 ga. stainless steel, reinforcing is employed for wide spans and extra heights.
- The accompanying sections show the reinforcing which is standard with our frames for spans and heights.
- Reinforcing channels are inserted (or extended if shown in our sections) to reach slab above a hung ceiling where span might be helped on semi-free-standing jambs. Nominal extra charge.
- Closed jambs are employed for exposed side or for fastening glass moulding by others. Small extra charge.
- 4¼" x 4¼" jambs are recommended for vestibule returns, etc., or for glass moulding set at right or obtuse angles to doors. Sides splayed as required.

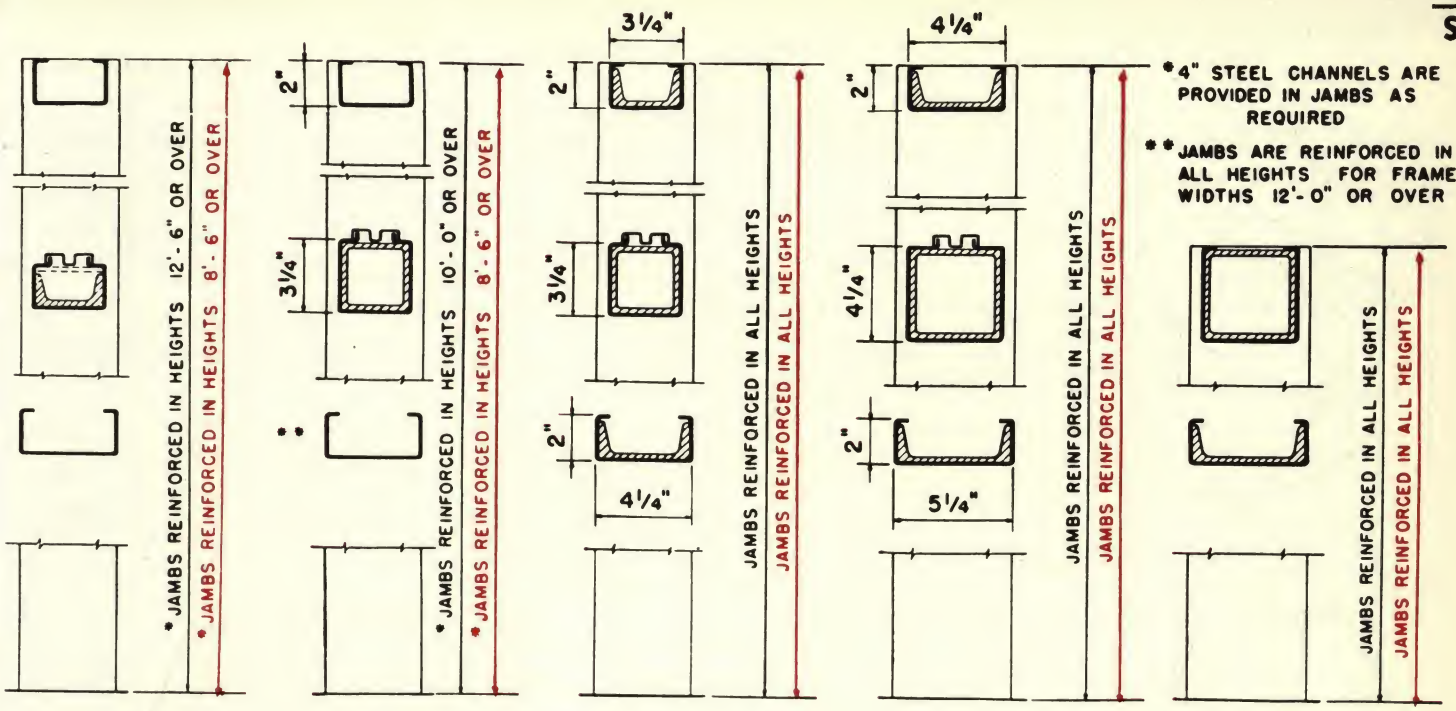
TWINSTILE doors in stainless steel only



FRAME WIDTHS { STAINLESS STEEL — LESS THAN 8'-6" ; BRONZE — LESS THAN 6'-6" }

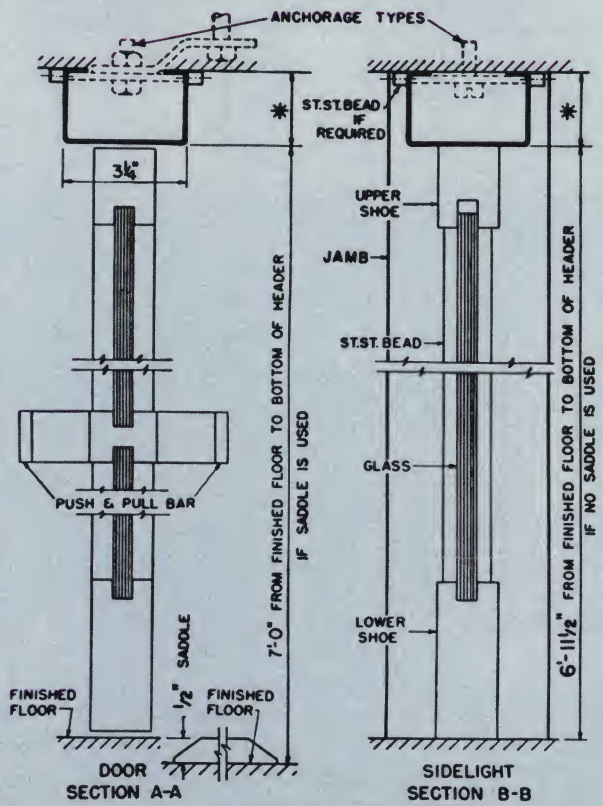

ST.ST. BEAD IF REQUIRED
JAMB
TRANSOM HGT. VARIES
PUSH & PULL BAR
6'-11½" FROM FINISHED FLOOR TO BOTTOM OF TRANSOM BAR IF NO SADDLE IS USED
FINISHED FLOOR
SECTION E-E
SECTION F-F

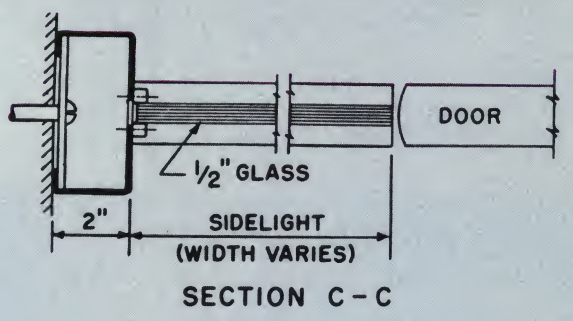
* DIMENSION VARIES WITH SPAN (OR REQUIREMENT) SEE TYPICAL SECTIONS ABOVE


2"
3¼"
4¼"
5¼"
* JAMBS REINFORCED IN HEIGHTS 12'-6" OR OVER
* JAMBS REINFORCED IN HEIGHTS 10'-0" OR OVER
JAMBS REINFORCED IN ALL HEIGHTS
JAMBS REINFORCED IN HEIGHTS 8'-6" OR OVER
* 4" STEEL CHANNELS ARE PROVIDED IN JAMBS AS REQUIRED
** JAMBS ARE REINFORCED IN ALL HEIGHTS FOR FRAME WIDTHS 12'-0" OR OVER

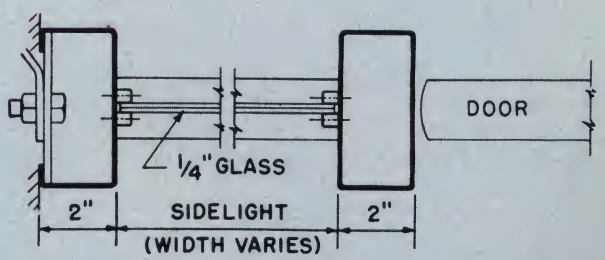
8'-6" TO 9'-5"	9'-5" TO 12'-5"	12'-5" TO 17'-5"	17'-5" TO 21'-0"	21'-0" TO 30'-0"
6'-6" TO 9'-5"	9'-5" TO 12'-5"	12'-5" TO 17'-5"	17'-5" TO 21'-0"	21'-0" TO 30'-0"

details-EXCEL-FRAMING®

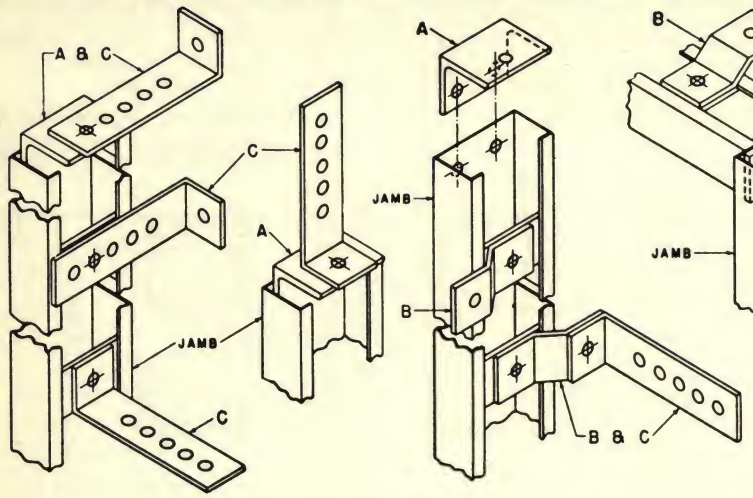




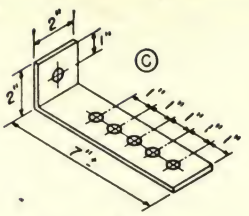
SECTION C-C

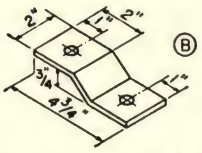


SECTION D-D

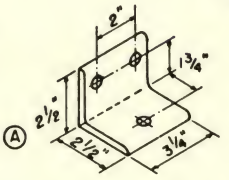


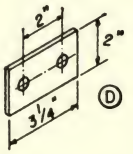
as supplied for Excel-Framing®



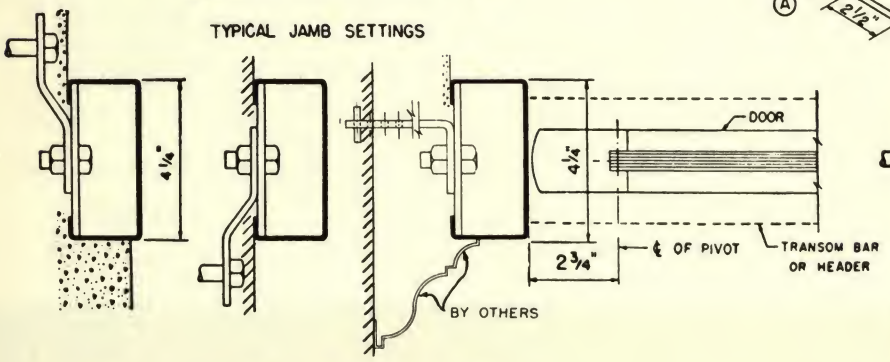


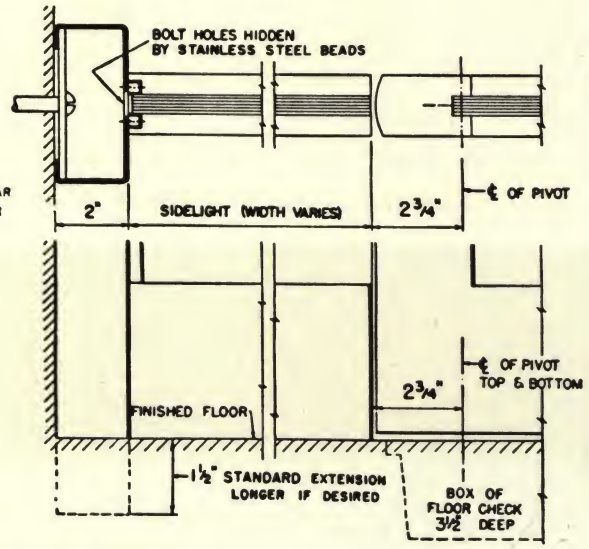
STRAPS FOR VARIOUS ANCHORS

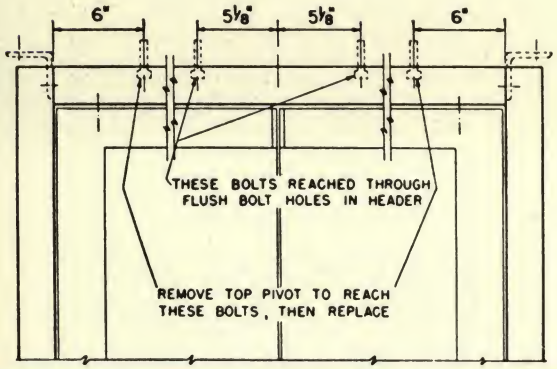




TYPICAL JAMB SETTINGS



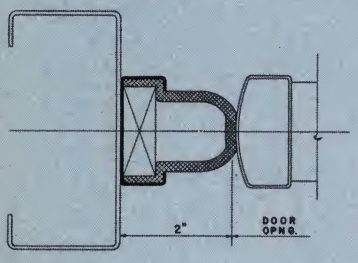




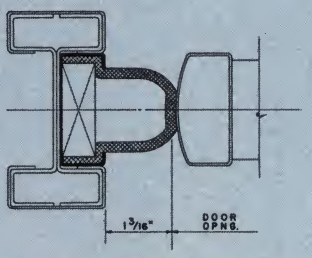
ALTERNATE METHODS OF ANCHORING USING KNEES OR ANY TWO BOLTS AT HEADER

FINGER-GUARDS

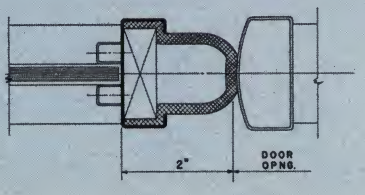
FINGER-GUARD CATALOG OF 16 PAGES AWAITS YOUR REQUEST.



WITH EXCEL-FRAMING®



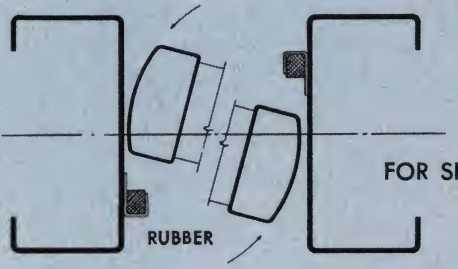
WITH ERECTO-FRAMING®



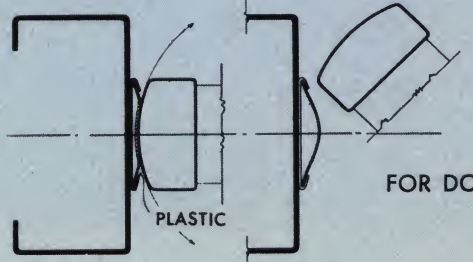
AS AN IMPOST

WEATHER STRIPPING

WHEN SPECIFIED WITH EXCEL-FRAMING®



FOR SINGLE ACTING

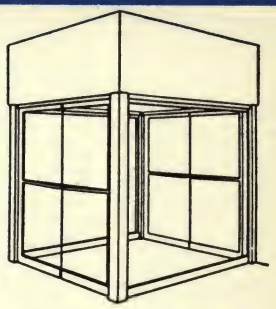


FOR DOUBLE ACTING

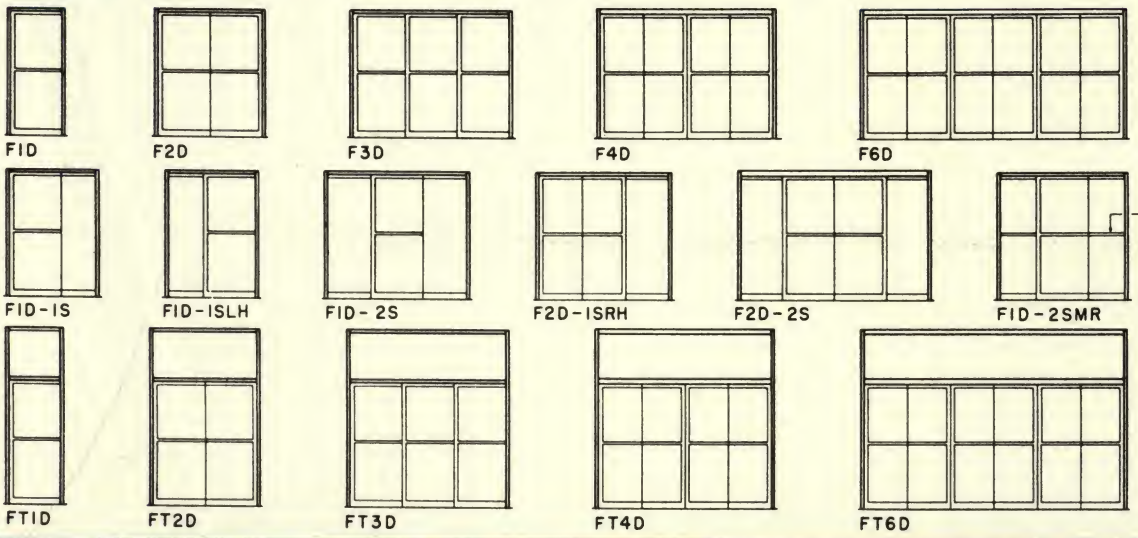
EXCEL-FRAMING is fully fabricated of #14 gauge stainless steel, Type 302-18/8, (or #12 ga. Bronze), satin finish, shop assembled for shop testing. All connecting junctions closely machined (not hand filed). For certain sizes they are reinforced as indicated on pages 8 and 9. Frames are made any height or width, with or without imposts, for any multiple of doors or sidelights.

CODES — TO HELP IDENTIFICATION OR DESCRIPTION

F for frames with FULITE Doors or **FT** with Transoms.
T for frames with TWINSTILE Doors or **TT** with Transoms.



Vestibule built to any form, any height or width.



SERIES FD-S FRAMES WITH SIDELIGHTS

* MIDDLE RAIL CAN BE SUPPLIED

SERIES FT FRAMES WITH TRANSOMS

TYPICAL EXAMPLES & CODE TYPES

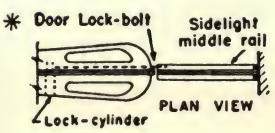
EXCEL-FRAMING®

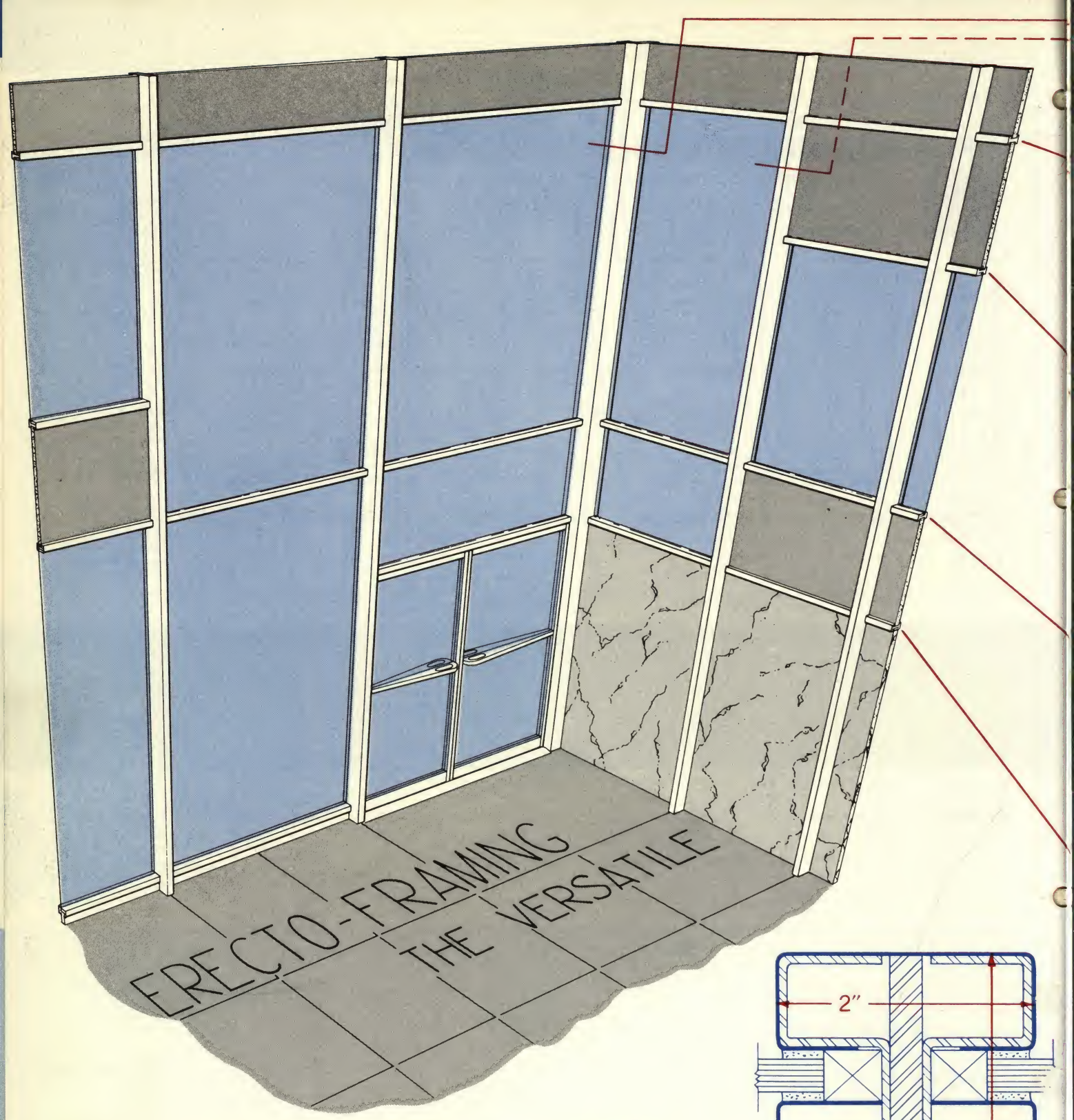
AVERAGE DELIVERY — 2 WEEKS • THE IMPOSSIBLE — 3 WEEKS

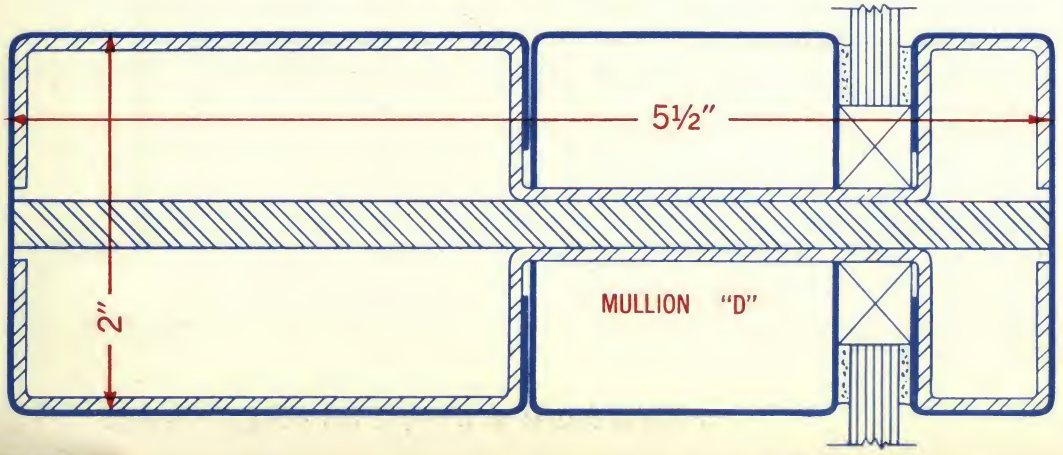
SERIES FT-S FRAMES WITH TRANSOMS AND SIDELIGHTS

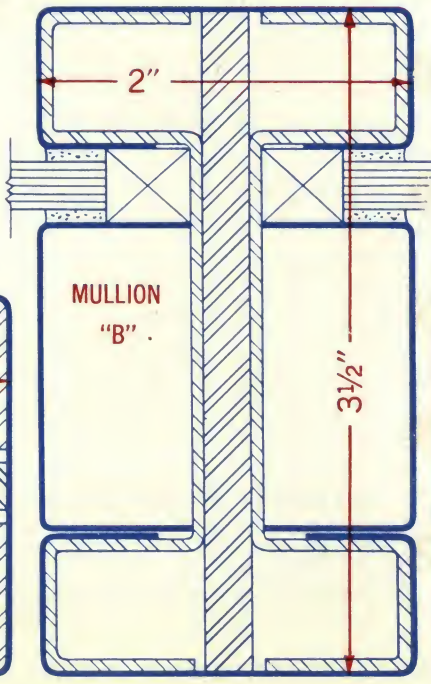
CUSTOM SERIES FT-SW FRAMES TO MEET VARIED CONDITIONS

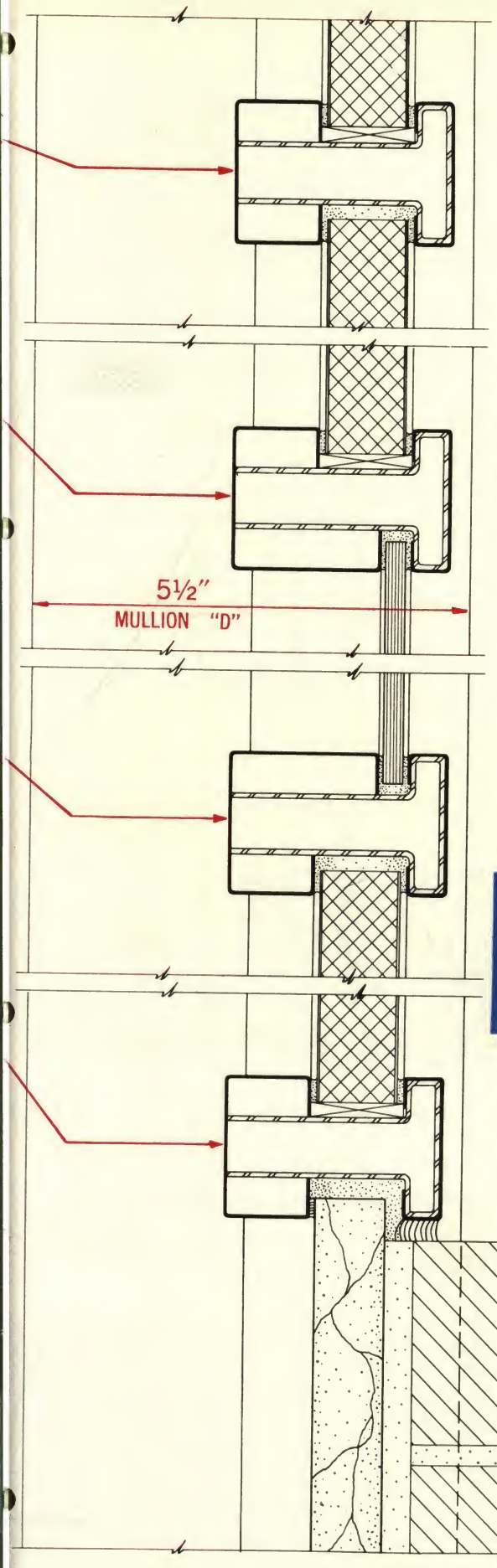
SPECIFICATIONS — Framing shall be formed of #14 gauge stainless steel Type 302-18/8 (or #12 gauge Bronze), satin finish, with details as manufacturing standards (Trade name, EXCEL-FRAMING) by Schacht Associates, Inc., 1175 E. 156th Street, N. Y. C. All junctions shall be **machined** to close tolerances for rigidity and firm setting. Framing shall be shop assembled for testing before shipment. Reinforcement shall be as recommended by the manufacturer.

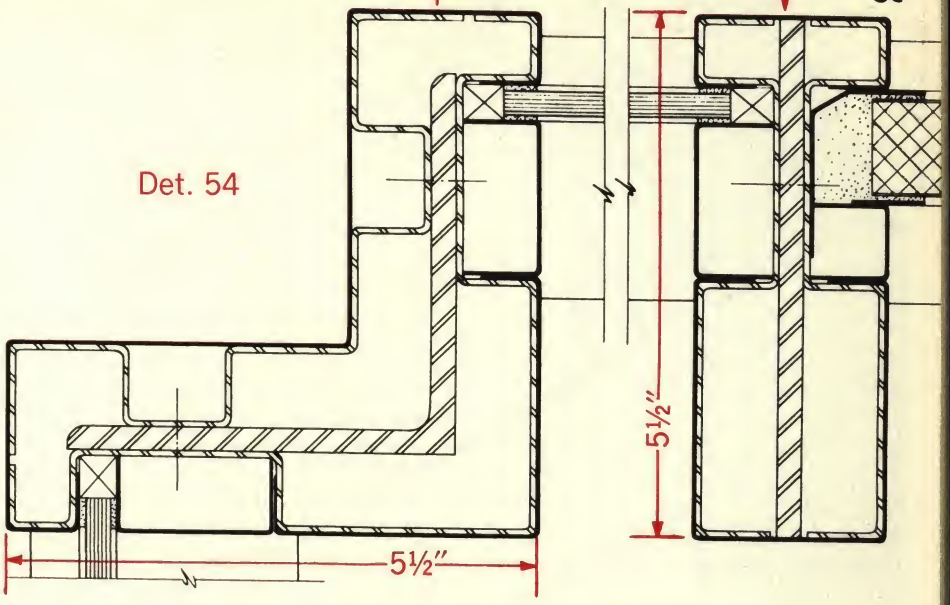



ERECTO-FRAMING
THE VERSATILE


5½"
2"
MULLION "D"


2"
MULLION "B"
3½"





TWO INSTALLATION STEPS:

1. The mullion is erected by fastening it by means of its top and bottom brackets. Intermediate bracing only for special heights.
2. All horizontal members—headers, muntins, etc., are then bolted to the brackets that are fabricated with the mullions.

- The framing is then ready to receive, most efficiently, precut-plate glass, insulating glass, fascias, window sash, etc.
- Detail drawings for approval are submitted to conform to Architectural sketches. Complete assembly drawings assure a simple and easily erected installation.

ERECTO-FRAMING®

PAT. PENDING

SPECIFICATIONS:

Framing shall consist of mullions or upright members formed of 20 gauge stainless steel Type 302-18/8, #4 finish, reinforced with two channel-form members of 16 gauge hot galvanized steel. Sections shall be (*note below). Mullions shall receive horizontal members of headers, muntins, sills, etc., formed of 18 gauge stainless steel. All as per details and as prefabricated by Schacht Associates, Inc., 1175 East 156th Street, New York City, under the trade name of ERECTO-FRAMING.

*NOTE:

"A" MULLIONS UP TO 12'
Sections shall be 3½" deep with 1¾" face.

"B" MULLIONS OVER 12' AND TO 16'
Sections shall be 3½" with 2" face, further reinforced with 3¼" x ¼" steel plate set between the two galvanized channel-forms.

"D" MULLIONS OVER 16'
Sections shall be 5½" with 2" face, further reinforced with 5¼" x ¼" steel plate set between the two galvanized channel-forms.

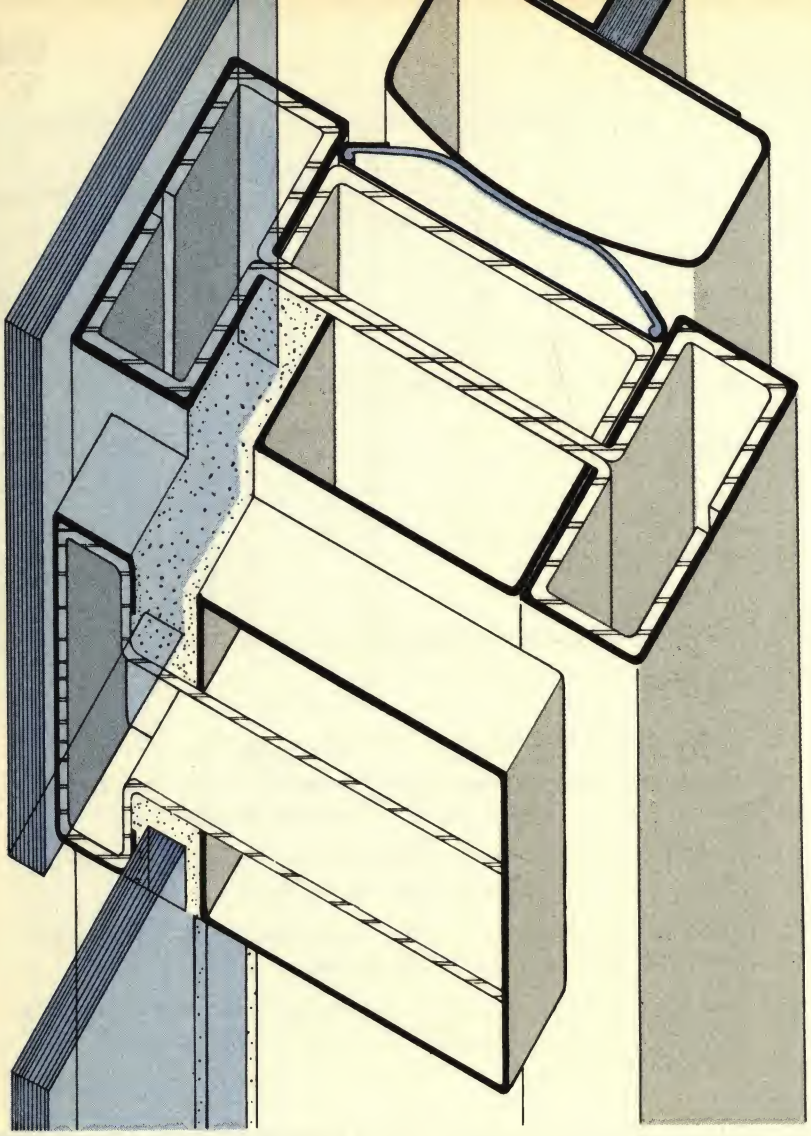
ERECTO-FRAMING

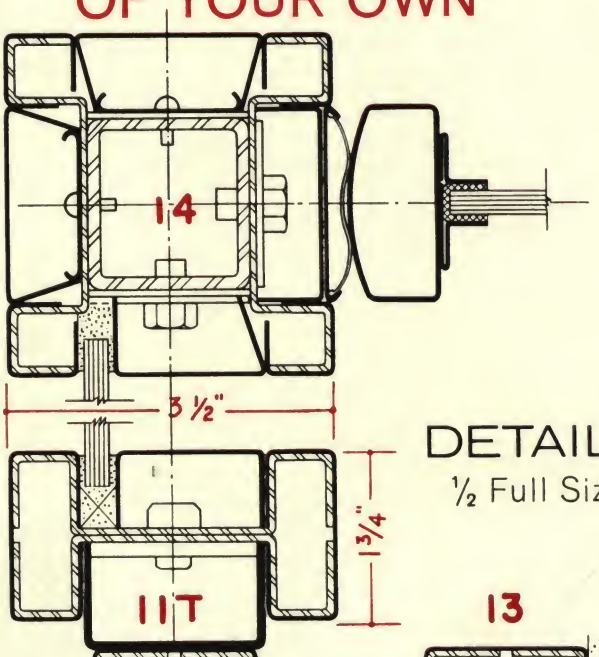
IN

STAINLESS STEEL FULLY PREFABRICATED

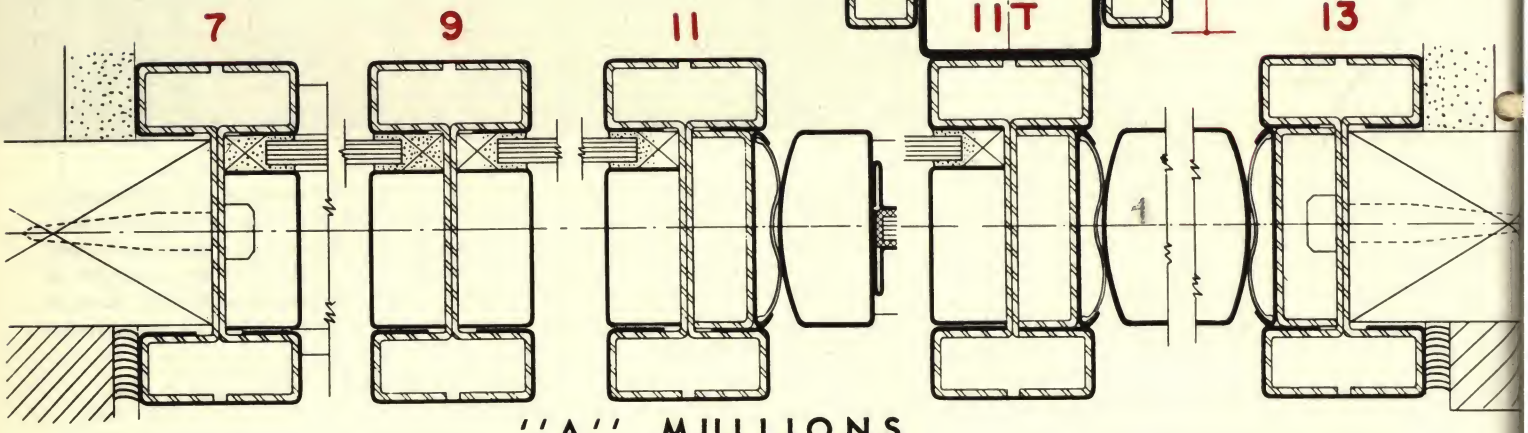
TO

MODULES OF YOUR OWN

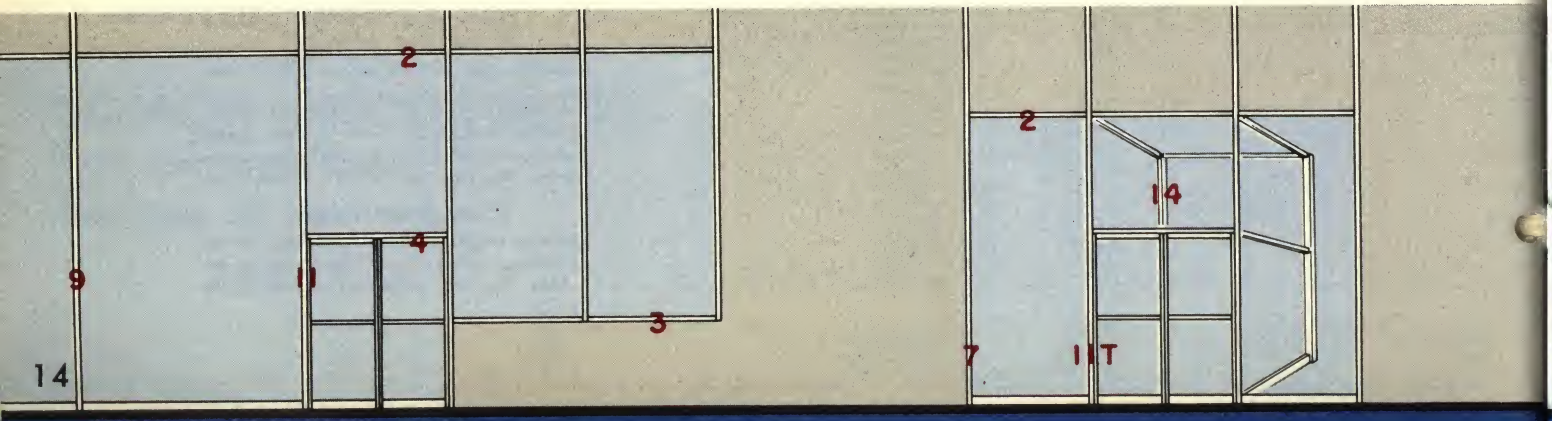




DETAILS
½ Full Size



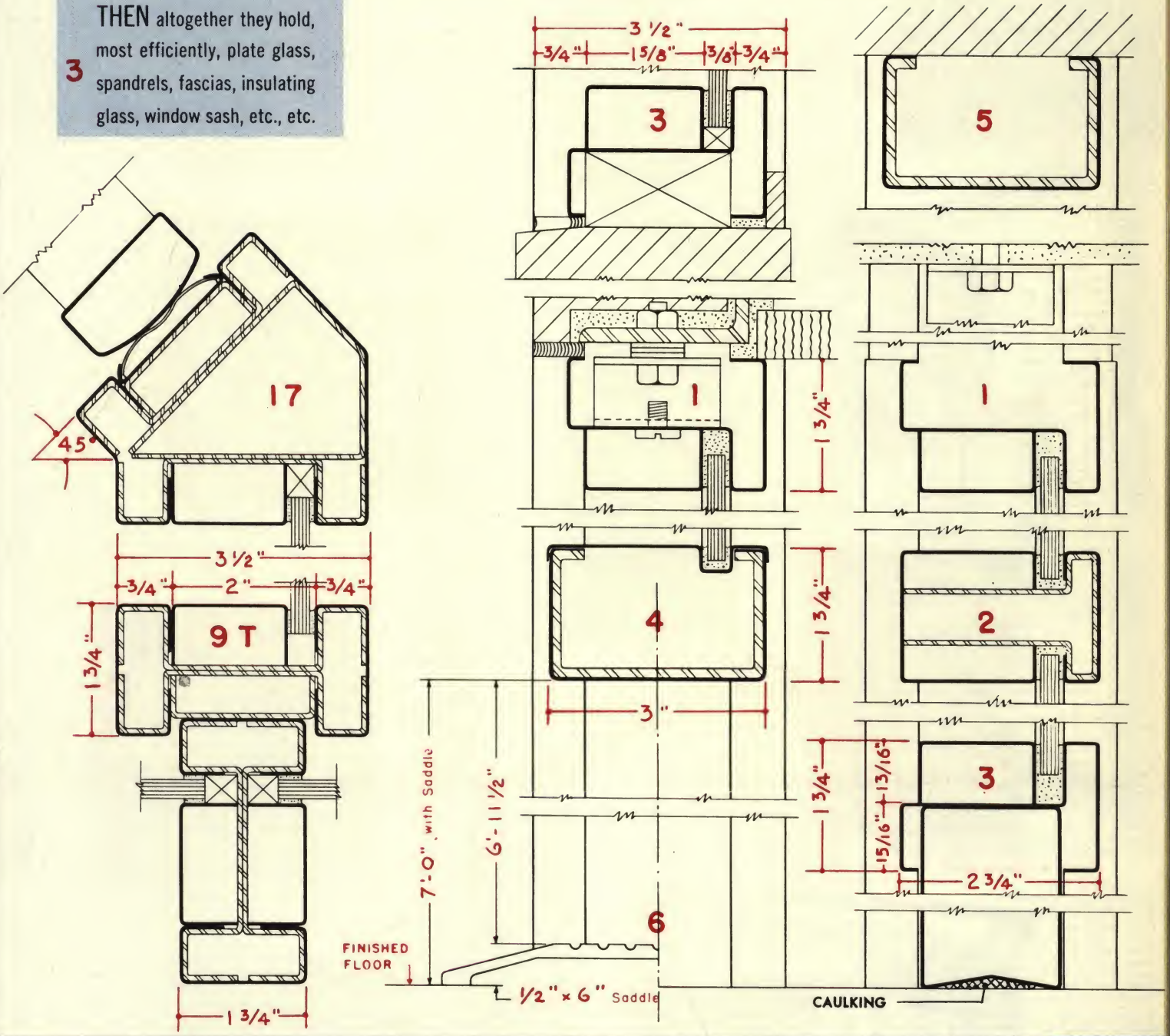
"A" MULLIONS

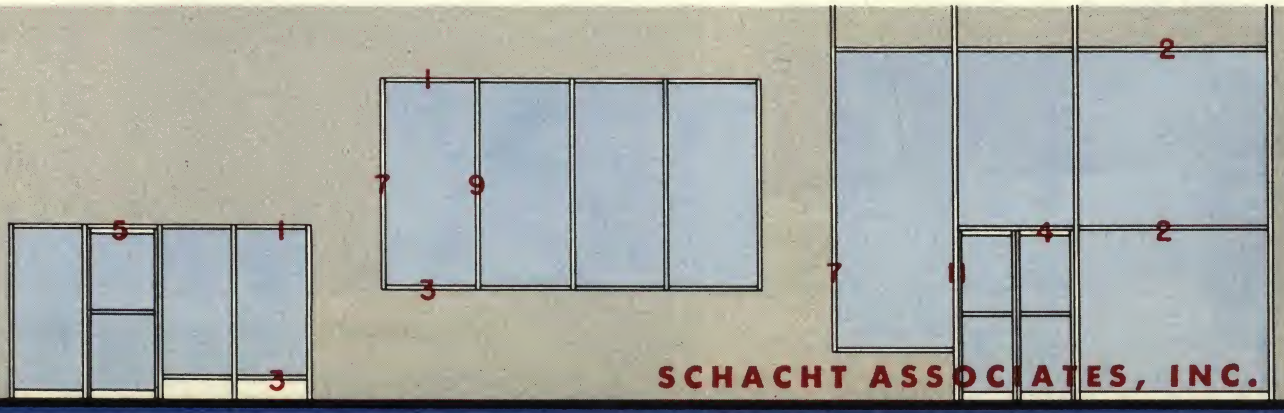


1 ERECTO-FRAMING is an outstanding advance in pre-fabricated framing of stainless steel, which by its great versatility lends itself most practically and sympathetically to the Architect's creativeness.

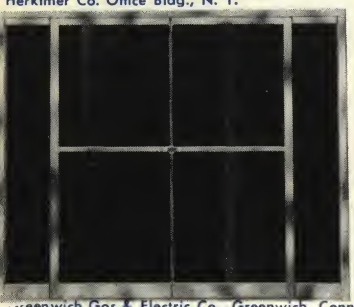
2 CONCEIVED with the idea that its vertical members (mullions), after being erected by fastening at the top and bottom, then carry all horizontal members of the framing.

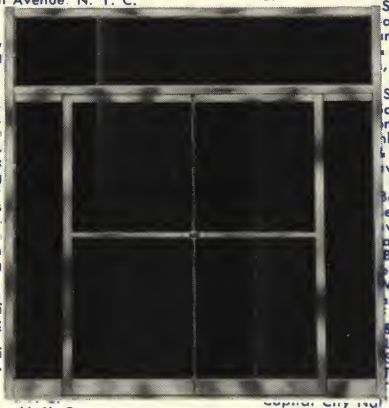
3 THEN altogether they hold, most efficiently, plate glass, spandrels, fascias, insulating glass, window sash, etc., etc.

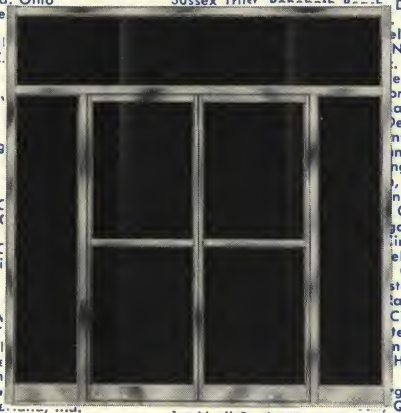


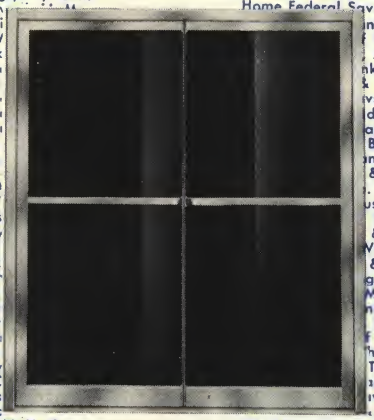


PARTIAL LIST OF INSTALLATIONS









GOV'T & MUNIC. BLDGS.

Pennsylvania R.R. Station, N. Y. C.
Connecticut Turnpike, State of Conn.
New Jersey Turnpike Authority, State of N. J.
U.S. Army Bldg., N. Y. C.
Brookhaven Nat'l Lab., Upton, L. I., N. Y.
Capitol Bldg., Montgomery, Ala.
Electric Bldg., Storkville, Miss.
Herkimer Co. Office Bldg., N. Y.
Greenwich Gas & Electric Co., Greenwich, Conn.
Medical Society, State of N. Y., N. Y. C.
Dept. of Public Works, Hempstead, L. I., N. Y.
City Hall, Chicago, Ill.
United Gas Building, Shreveport, La.
Office Park No. 8, Mt. Broak, Alo.
Suffolk Air Force Base, West Hompton, L
Marylond Nat'l Capitol Park & Plan
Silver Spring, Md.

COMMUNITY

YMCA, Chicago, Ill.
Health Center Bldg., Albony
Nash County Health Ctr., D
Tubman Branch, YWCA, Dur
Vicksburg Munic. Aud., Vick
YM & YWHA, B'klyn., N. Y.
Lafoyette Parish War Mem.,
Y.M.C.A., El Poso, Texas
Princeton YMCA, Princeton,
N. Y. Central YMCA, El Pos

SHOPPING CE

Broinerd Shopping Center,
Giant Food Morket, Lynwoo
Lincoln Plazo Shop. Ctr., N.
Public Market, Springfield,
Ridgewoy Shop. Center, Stamfor
Shopping Center, Gulfport, Miss.
Warren Village Shopping Center
Westgate Village Shop. Center, Toledo, Ohio
Lakeside Shop. Center, Denver, Colo.
Northern Lights Shoppers City, Conway, Pa.
Flamingo Shop. Center, Hioleah, Fla.
Southgate Shopping Center, Maple Hats, Ohio
County Shopping Cent
St. Cloir Shopping Ce
Villo Plozo Shop. Cent
Green Acres Shopping
Great Southern Shopp
Crestwood Plozo Shop
Big Town Shopping Ce
Woodmor Shopping C

THE

Apollo Theatre, N. Y.
Barry Theatre, Pitts., P
Broinerd Theotre, Cha
Floral Pork Theotre, L.
Fresh Meadows Theatr
Morine Theatre, B'klyn
Mory Anderson Theatr
Mayfair Theotre, Trent
Normondie Theo. & O
Olympic Theatre, Wot
Poramount Theatre, Sy
Port Clinton Theatre, F
Tipton Theotre, Huntin
Ploinview Theotre, Hic
Xenio Theotre, Xenio,
Woverly Theotre, New
Strond Theatre, Plainfi
Huntington Theatre, Hu

HOTELS & RESTAURANTS

Al Schacht, N. Y. C.
Auditorium Hotel, Cleveland, O.
Broadview Hotel, St.
Brown Hotel, Louisvi
Copt. Shreve Hotel,
Hotel Ft. Shelby, Det
Hotel Jefferson, St. L
Hotel Hollenden, Cle
Hotel Oympia, Seottl
Martin Hotel, Sioux
Melrose Hotel, Dallo
Rogersan Hotel, Twin
Royal Costle, Clevelc
San Carlas Hotel, Pe
Shelbaurne Hatel, At
Sheraton Cadillac Ho
Stauffers Restaurant,
Texas State Hatel, H
Ft. Harrison Hatel, C
Hotel Roosevelt, Nev
Brown Hotel, Jefferso
Cantinental Hatel, W
Raasevelt Hatel, Nev
Harn & Hardart Co.,
Lobster Restaurant,
Mangor-Seneca Hotel, Rochester, N. Y.
YMCA Hotel, Chicago, Ill.
Ranger Hatel, Lusk, Wyoming
Oscar's Delmanico, New York City

CHURCHES

1st Church of Christ, Westbury, L. I., N. Y.
1st Lutheran Church, Dayton, Ohio
Temple Baptist Church, Det., Mich.
Zion Lutheran Church, Sioux Falls, S. D.
St. Pauls Church, Savannah, Ga.
Parish House, Trinity Episcopal Church, New Rochelle, N. Y.
Temple Beth El, South Orange, N. J.
Our Saviours Luth. Church, Sioux Falls, S. D.
Church of Jesus Christ of Latter Days Saints, Shelby, Mont.

HOSPITALS

St. Jos. Mercy Hosp., Mason City, Iowa
Florido State Hosp., Tampa, Fla.
Armed Forces Ins. of Path., Wash., D. C.
Beth El Hasp., B'klyn., N. Y.
Home for Hebrew Aged, Riverdale, N. Y.
Montefiore Hasp., Bx., N. Y.
North Shore Hosp., Manhasset, L. I., N. Y.
Rehabil. Ctr., Bellevue Hosp., N. Y. C.
Redwood Falls Hosp., Det., Mich.
Renville County Hosp., Olivo, Minn.
St. John's Hosp., Det., Mich.
Tallahassee Mem. Hosp., T
St. Joseph Inst. for Deaf, U
Schumpert Hospital, Shreve
Walter Reade Hospitol, Wo
Mt. Carmel Mercy Hospitol,
Mercy Wood Sonitorium, A
Sutter Hospital, Oakland,
St. Jahns School of Nursing
Day County Hospital, Webs
Allegheny Volley Hosp., Ta

SCHOOLS & UNI

St. Mortin of Taurs, Bx., N.
Bluefield College Lib., Blue
University of Miss., Univers
Worcester Boys Trode Sch.,
Mikkelsen Lib., Augustano
Dillsburg High School, Dills
Leesburg & Orrstown Schs.,
O.C.W. Admin. Bldg., Chic
Plainfield Elem. Sch., Cumb
Elementary Sch., Cumberl
Ellsonville Elem. Sch., Cu
Froncis Xovier Sch., LaGronge, Ill.
Anthony's Porish, Wilmington, Del.
Carroll High Sch., Cumberland Cty., Pa.
Va. Univ., Morgantown, W. Va.
Pauw Univ., Greencastle, Indiono
E. Lee, Jr., Sr. H.S., Baton Rouge, La.
Butler Senior H.S., Butler, Pa.
Southern Illinois Univ., Carbondale, Ill.
College, Det., Mich.

CHAINS

Hyson-Robinsan
Ann Shaps
Ellen Shops
Stores
Dare Stores
T. Grant Compon
Crory's
Woolworths
Woolworths
Woolworths

Specifically better...

Sun Valley

Aluminum
Sliding
Glass
Doors

**"EPOXI-COAT" DOORS IN
10 BEAUTIFUL DECORATOR COLORS**

Imperial **WEATHERWALL®**

Senior **DOOR**

Junior **DOOR**

Impentra **SCREEN**

Specifically better...
Sun Valley

A.I.A. FILE NO. 16-E

"EPOXI-COAT" COLORS BEAUTIFUL—DURABLE

Since their introduction on a commercial scale, epoxy resins have been rapidly gaining stature as a color agent capable of binding to difficult surfaces. Outstanding among their properties are their lack of brittleness. Even on aluminum epoxies refuse to harden to the point where they will chip.

This versatility of color control and resistance to chipping has made possible at last, color coatings of great beauty with almost unlimited resistance to chipping and peeling so common in other coloring agents.

DOVER WHITE
SV 600-01

TAHITI YELLOW
SV 600-02

SEA ISLE GREEN
SV 600-03

BAHAMA BLUE
SV 600-04

MONACO PINK
SV 600-05

SOUTH SEA CORAL
SV 600-06

SAHARA BEIGE
SV 600-07

JAMAICA BROWN
SV 600-08

MANHATTAN BLACK
SV 600-09

BUCKINGHAM GOLD
SV 600-10

Specifically better...

Sun Valley
INDUSTRIES INC.

Specifically better...

Sun Valley

"EPOXI-COAT" COLORS

EPOXI-COAT colors have withstood 500 hours at the grueling Weatherometer test which alternately simulates tropical heat and violent storm conditions proving outdoor durability of the highest order.

EPOXI-COAT colors have been subjected to a 2,000 hour salt spray test with absolutely no harmful effects.

EPOXI-COAT colors are durable. They resist the effects of detergents and cleaning compounds two to five times longer than regular painted surfaces.

EPOXI-COAT colors can take it. Temperature and impact tests, dramatically exceeding normal conditions have virtually no effect on the fine finish.

EPOXI-COAT colors are chip resistant. Far superior to paint, enamel or anodizing.

"EPOXI-COAT" COLORS AVAILABLE ON ALL IMPERIAL WEATHERWALLS AND SENIOR DOORS

This new dimension of color is available in both Sun Valley's IMPERIAL WEATHERWALL and SENIOR door series. Regardless of climatic conditions or economic requirements a Sun Valley door in color, that meets all quality requirements, is available.

"EPOXI-COAT" COLORS ARE ORIGINAL

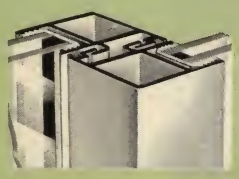
Colors for Sun Valley's IMPERIAL WEATHERWALL and SENIOR doors were created by Virginia Woodbridge, noted interior designer. Miss Woodbridge has chosen a selection of colors that will blend with or accent any color scheme . . . interior or exterior.

AVAILABLE IN
"EPOXI-COAT" COLORS

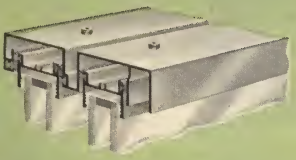
Specifically better...

Sun Valley *Imperial* WEATHERWALL®

EXCLUSIVE TANDEM ROLLERS
Two assemblies of *dual* tandem rollers are built into every sliding panel. Each assembly is able to move 640 pounds.



EXCLUSIVE DOUBLE INTERLOCK
Extrusion design creates a complete baffle effect. Combined with double high pile mohair weatherstripping a virtual weathertight seal is achieved.



5¼" WIDE FRAME MEMBERS
The entire frame of the IMPERIAL WEATHERWALL is comprised of these extra heavy duty members.
They insure a true "walk-in" frame so strong a 5-foot sliding panel of 1" insulated glass can be moved effortlessly with only the barest of side support.

SPECIFICALLY DESIGNED TO CARRY 1" INSULATED GLASS. EFFORTLESSLY*

No climate too severe, no design requirement too demanding, for the IMPERIAL WEATHERWALL. In its creation only one criteria was important . . . quality . . . do the job right. When an Aluminum Sliding Glass Door is needed, that cannot be taxed beyond its capabilities, the Sun Valley IMPERIAL WEATHERWALL is the answer.
(SEE SPECIFICATIONS)

Specifically better...
Sun Valley

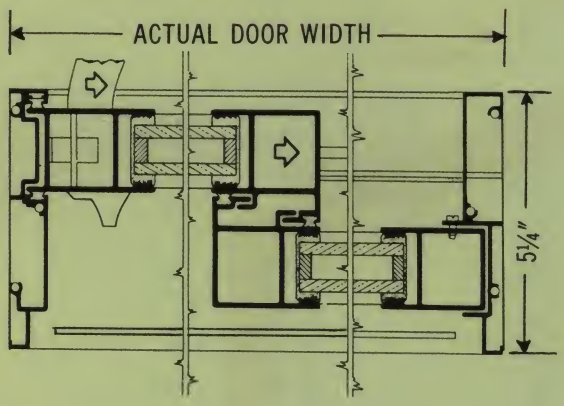
***Single glazing adaptor available*

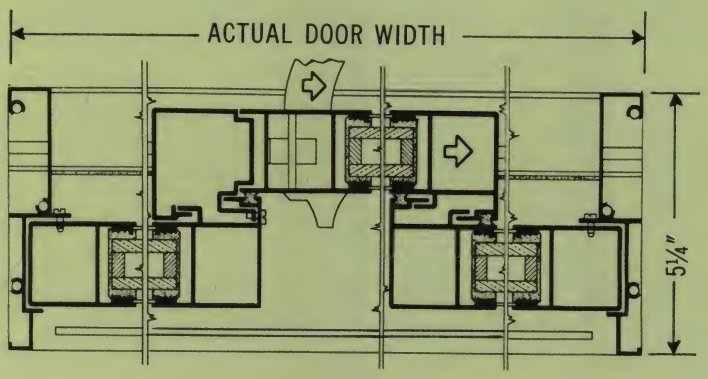
HANDLES: Exclusively styled lucite grip handles

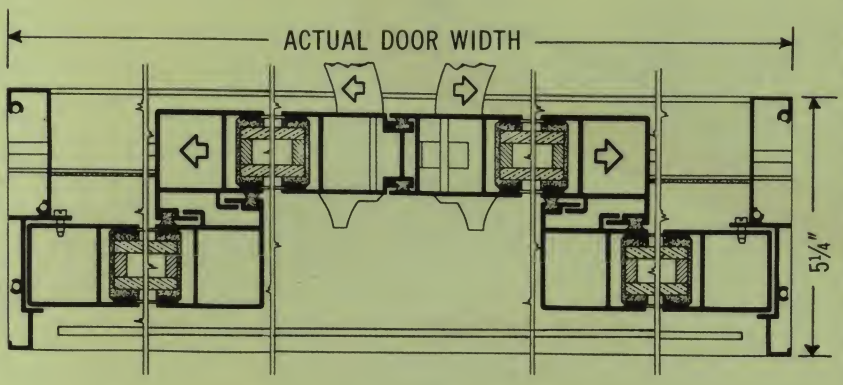
AVAILABLE ACCESSORIES: KEYED CYLINDER LOCK, KICK PLATE

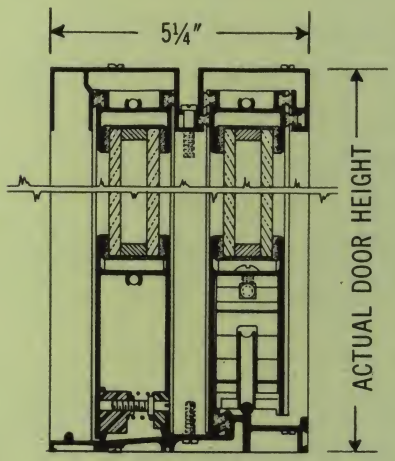
AVAILABLE IN ALL STANDARD AND CUSTOM SIZES

Scale 3″ = 1′









FULL SIZE DETAILS AVAILABLE

GLASS SIZES

Two Panel

6 foot door	2 Pcs. 33 x 76¾
8 foot door	2 Pcs. 45 x 76¾
10 foot door	2 Pcs. 57 x 76¾

Three Panel

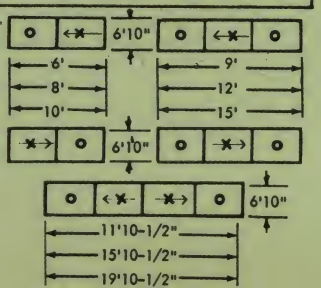
9 foot door	3 Pcs. 33 x 76¾
12 foot door	3 Pcs. 45 x 76¾
15 foot door	3 Pcs. 57 x 76¾

Four Panel

12 foot door	4 Pcs. 33 x 76¾
16 foot door	4 Pcs. 45 x 76¾
20 foot door	4 Pcs. 57 x 76¾

X = Sliding **O = Fixed**

all doors viewed outside looking in



Imperial WEATHERWALL® SPECIFICATIONS

GENERAL—All Aluminum Sliding Glass Doors shall be Sun Valley Imperial Weatherwall as manufactured by Sun Valley Industries, Inc. MATERIAL—ALL EXTRUSIONS TO BE CONSTRUCTED OF ALUMINUM OF 6063-T5 ALLOY. ALL WEATHERSTRIPPING IS TO BE METAL BACKED SILICOATED HIGH PILE MOHAIR.

CONSTRUCTION—The frame shall be as follows: SILL—The sill shall be 5¼″ wide. The sill track is to be solid aluminum capped with a stainless steel wear track. The sill shall have a slot running its entire length into which weatherstripping is inserted. The sill shall have two slots to accommodate the fixed panel. Sill shall have a track for a screen. HEAD—The head shall be 5¼″ wide of a truss design. Head shall have two slots running its entire length into which weatherstripping is inserted. The head shall be pierced to accept adjustable header shims.

JAMBS—The jambs shall be 5¼″ wide. Each to have 3 screwslots so located that when attached to head and sill rigid truss-type joints result.

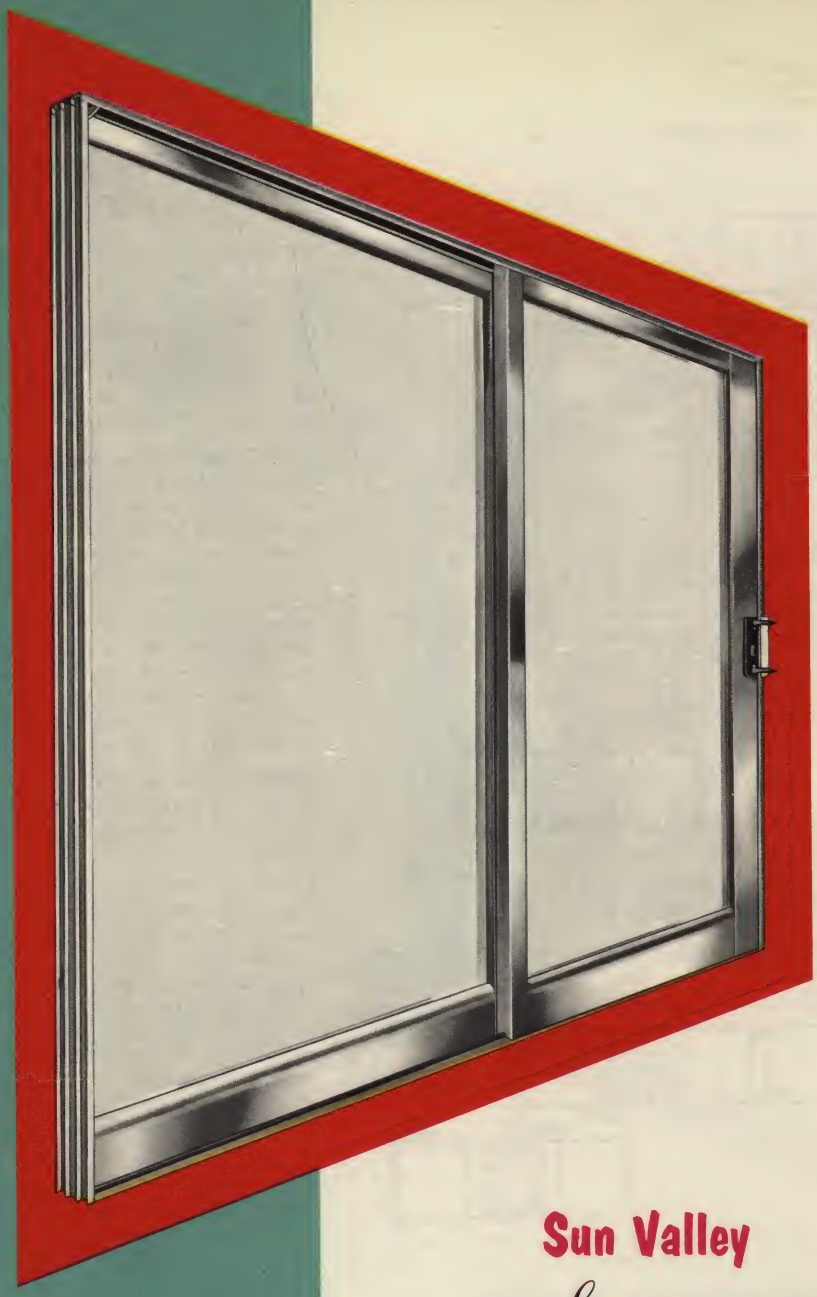
SASH—Lower rail of fixed sash shall have Sun Valley's exclusive fixed rail locking devices. These operate on the principle of a screw which, when turned counter-clockwise, spreads the rail and locks it securely in place in the sill. Top rail shall have double weatherstripping. The interlocking stiles shall have one strip of weatherstripping in each—the fixed interlocking stile and sliding interlocking stile—which form double weatherstripping protection.

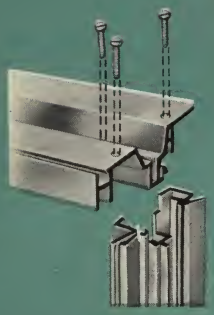
Extrusions forming interlocking stiles are to be so designed as to form a double interlock when door is in closed position. Lower sliding rail is to contain two exclusive adjustable tandem wheel assemblies. Each wheel assembly is to be a self contained unit and utilizes two pre-greased and sealed ball bearing roller races. Each wheel assembly is to be capable of supporting a moving weight of 640 pounds. Lower sliding rail is to have a slot into which weatherstripping is inserted. Top sliding rail shall have two such strips of weatherstripping. Lock stile is to have a maximum torsional deflection of 4 degrees under a movement of 24-foot pounds on a free span of 37½ inches. Lock stile is to be designed in sufficient size to receive a sliding door lock, which can be readily adapted with a cylinder keyed lock. All locks to be equipped with folding bolt. Bolt and strike to be adjustable on the job.

GLAZING HEAD—is to be endless band of vinyl plastic welded at each corner. It is to have styrations on its inner and outer surfaces. These styrations and comparable styration on the stiles and rails act against one another resisting the tendency of the stiles or rails to pull away from the glass. Glazing bead is to be guaranteed for 10 years.

FINISH—all exposed aluminum shall have a satin recodized finish capable of withstanding 250 hours in a salt spray booth.

AVAILABLE IN "EPOXI-COAT" COLORS

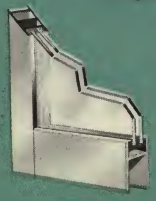




RIGID CONSTRUCTION
Truss principle assures a truly rigid frame. Ease of assembly minimizes labor time and expense.

SINGLE GLAZING
Regular panels for crystal or plate glass.

The SENIOR Door Frame is specifically designed to accept either type panels.



DOUBLE GLAZING
⅝″ Panels for ⅝″ insulated glass.

Sun Valley

Senior DOOR IS CONVERTIBLE

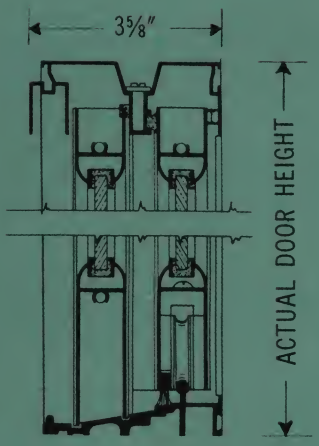
The SENIOR door was designed so the same frame would accommodate either single glazing or ⅝″ insulated glass without adaptor or extra cost. Priced? Competitive to any quality door. Availability? At once in standard sizes . . . shipped in two weeks in any custom size.

Available accessories: Inside trim, keyed cylinder locks, kick plate, integral sill, outside trim fin.

HANDLES:
Exclusively styled lucite grip handles.

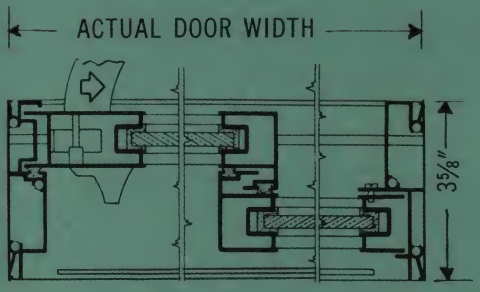
Specifically better...
Sun Valley

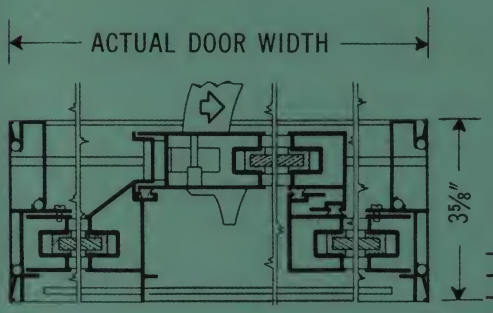
AVAILABLE IN ALL STANDARD AND CUSTOM SIZES



Scale 3" = 1'

ALL SINGLE
GLAZED DETAILS





GLASS SIZES

Two Panel

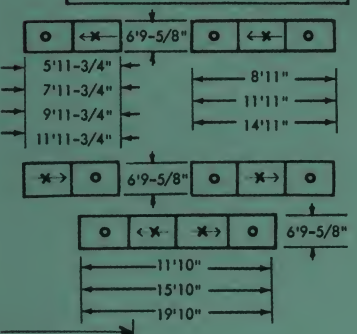
6 foot door	2 Pcs. — 34 x 76
8 foot door	2 Pcs. — 46 x 76
10 foot door	2 Pcs. — 58 x 76
12 foot door	2 Pcs. — 70 x 76

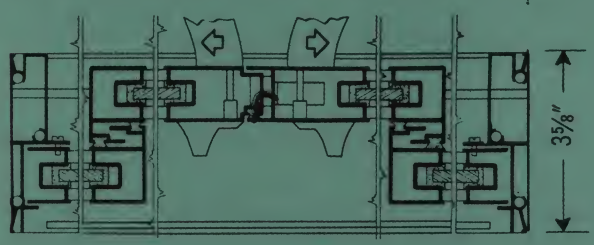
Three Panel

9 foot door	3 Pcs. — 34 x 76
12 foot door	3 Pcs. — 46 x 76
15 foot door	3 Pcs. — 58 x 76

Four Panel

12 foot door	4 Pcs. — 34 x 76
16 foot door	4 Pcs. — 46 x 76
20 foot door	4 Pcs. — 58 x 76





FULL SIZE DETAILS
AVAILABLE

**SEE NEXT PAGE FOR SENIOR DOOR ⅝"
INSULATED GLASS DETAILS AND POCKET DOOR DETAILS**

Senior SPECIFICATIONS

GENERAL—All aluminum Sliding Glass Doors shall be Sun Valley Senior Doors as manufactured by Sun Valley Industries, Inc.

MATERIAL—ALL EXTRUSIONS TO BE FORMED OF ALUMINUM OF 6063-T5 ALLOY. ALL WEATHERSTRIPPING TO BE METAL BACKED SILICOATED HIGH PILE MOHAIR.

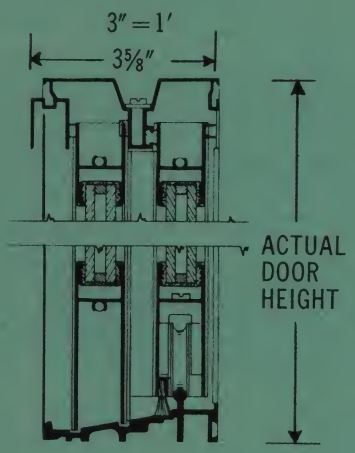
CONSTRUCTION—The frame shall be as follows: SILL—The sill shall be 3⅝" wide with a minimum slope of 8 degrees toward the outside. Sill track is to be solid aluminum capped with a stainless steel wear track. Sill shall have two slots to accommodate the fixed panel. Sill shall have as an integral part a track for a screen. Sill is to have a dovetail slot into which an accessory interior kickplate may be installed. HEAD—The head shall be 3⅝" wide. Head is to have a slot running its entire length into which is inserted weatherstripping. The head is to be pierced and tapped to receive the exclusive header adjusting mechanical shims provided by Sun Valley. Head is to have a screen track. JAMBS—Jambs shall be 3⅝" wide. Each to have 3 screw slots so located that when attached to head and sill rigid truss type joints result. One additional slot is provided in the lock jamb into which is inserted weatherstripping. SASHES—Lower fixed rail is to have a screw slot so that when a screw is inserted through holes in fixed stile a rigid joint results. Lower sliding rail is to contain two adjustable wheel assemblies. Assemblies to be self contained as a unit and utilizes a pre-greased and sealed ball bearing roller race. Each wheel must be capable of supporting a moving weight of 320 pounds. Both top rails to have one screw slot running their entire lengths so when screws are inserted through the holes provided in the stiles strong rigid joints result. STILES—Each interlocking stile is to have a slot into which is inserted weatherstripping. Lock stile is to have a maximum torsional deflection of 6 degrees under a movement of 24 foot pounds on a free span of 37½ inches. Lock stile to be designed in sufficient size to receive a sliding door lock, which can be readily adapted to a keyed cylinder lock. All locks to be equipped with folding bolt, bolt and strike to be adjustable.

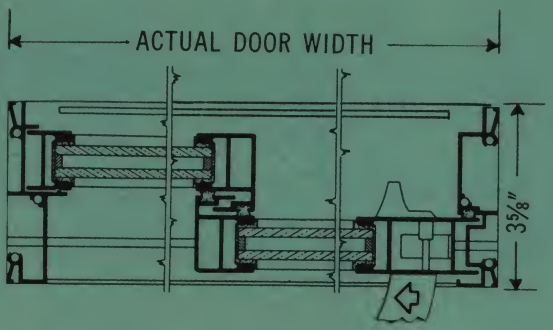
GLAZING BEAD—A—For single glazing a vinyl plastic glazing bead is supplied. B—For ⅝" insulated glass on endless bands of vinyl plastic welded at each corner are supplied. Both glazing beads are to have styrations on inner and outer surfaces. These styrations and comparable styrations on the stiles and rails act against one another resisting the tendency of the stiles or rails to pull away from the glass. Glazing Bead is to be guaranteed for 10 years.

FINISH—all exposed aluminum shall have a satin recodized finish capable of withstanding 250 hours in a salt spray booth.

Senior 5/8" INSULATED GLASS DETAILS

Scale 3" = 1'





Sun Valley's Senior Convertible door with 5/8" insulated glass will assure comfort at either end of the thermometer.

GLASS SIZES

Two Panel

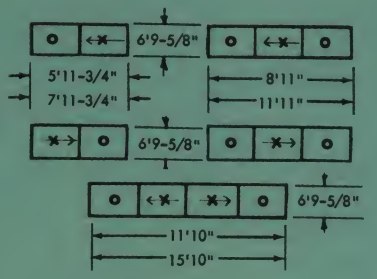
6 foot door	2 Pcs. — 34 x 76
8 foot door	2 Pcs. — 46 x 76

Three Panel

9 foot door	3 Pcs. — 34 x 76
12 foot door	3 Pcs. — 46 x 76

Four Panel

12 foot door	4 Pcs. — 34 x 76
16 foot door	4 Pcs. — 46 x 76

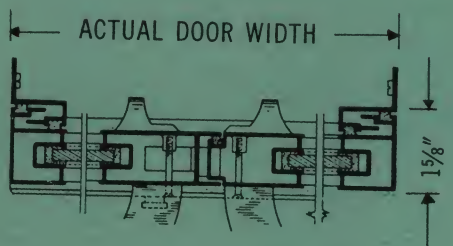


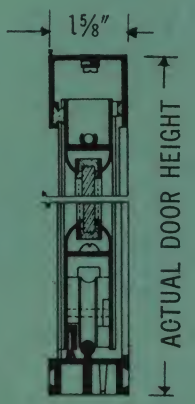
Senior POCKET DETAILS

FULL SIZE DETAILS
AVAILABLE

Scale 3" = 1'

AVAILABLE IN "EPOXI-COAT" COLORS





While particularly adapted to commercial application where space can be opened up or broken into smaller units there are many residential situations where the Sun Valley Senior pocket door can be dramatically used.

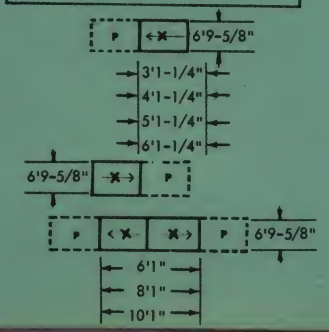
GLASS SIZES

One Panel

3' Door	1 Piece	34 x 76
4' Door	1 Piece	46 x 76
5' Door	1 Piece	58 x 76
6' Door	1 Piece	70 x 76

Two Panel

6' Door	2 Pcs.	34 x 76
8' Door	2 Pcs.	46 x 76
10' Door	2 Pcs.	58 x 76



Sun Valley
Junior Door

An economy door for the modestly priced installation, containing many of Sun Valley's quality features.

- **Choice of handles**
- **Rigid "walk-in" frame**
- **Adjustable wheels**
- **Satin recodized finish**

Complete accessories include: cylinder locks, interior kick plate, adjustable header, inside and outside trims, bull-nose sill.

Junior SPECIFICATIONS

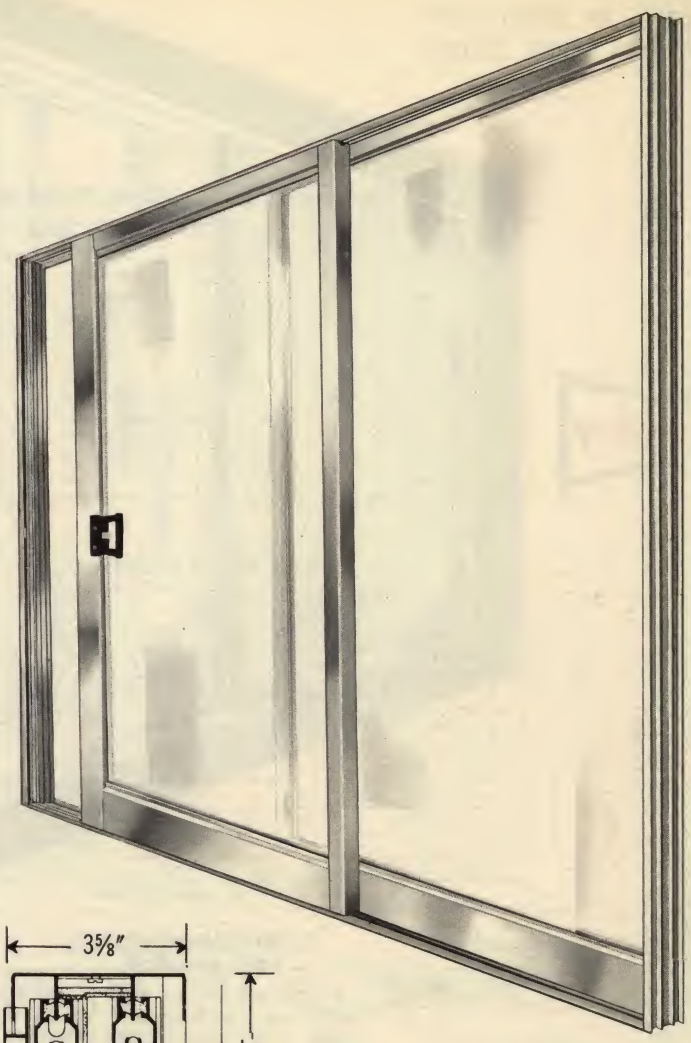
GENERAL—All aluminum sliding glass doors shall be Sun Valley Junior doors as manufactured by Sun Valley Industries, Inc.

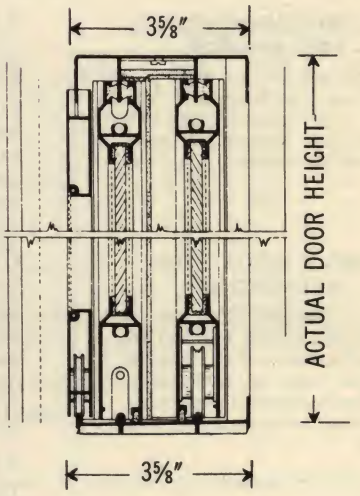
MATERIAL—ALL EXTRUSIONS TO BE FORMED OF ALUMINUM OF 6063-T5 ALLOY.

CONSTRUCTION—The frame shall be as follows: SILL—the sill shall be 3⅝" wide. HEAD shall be 3⅝" wide and shall contain a weather barrier consisting of two pieces of mohair pile running parallel to one another contained in an aluminum extrusion held in place by two sheet metal screws. JAMBS—The jambs shall be 3⅝" wide. Each is to have two screw slots so when screws are inserted through head and sill rigid joints result. The lock jamb shall contain a slot into which metal backed mohair pile is inserted. SASH—Both top and both lower rails are to have screw slots running their full lengths so when screws are inserted through holes in stiles rigid joints result. The lower sliding rail is to contain a slot into which is fitted a vinyl plastic backed mohair pile weatherstrip.

The lower fixed rail is to contain a slot into which vinyl plastic weatherstrip is inserted. Each top rail is to contain two additional slots into which metal backed mohair pile weatherstrip is inserted. STILES—Both interlocking stiles shall be designed so as to interlock securely with the other. Each shall contain a slot into which metal backed mohair weatherstrip is inserted. The fixed stile is to have a groove running its entire length so when placed in the frame it is automatically locked in the fixed jamb. The lock stile is to be an H shaped extrusion for maximum strength. It is to be machined to accept handle and locking mechanism. The entire sliding sash is to roll on two adjustable pre-greased and sealed ball bearing roller assemblies. Each roller is to be capable of supporting a moving load of 320 pounds. Each roller assembly can be removed from sliding sash without disassembling the sliding sash.

GLAZING BEAD—Each door is to be furnished with vinyl plastic glazing beads.





GLASS SIZES

Two Panel

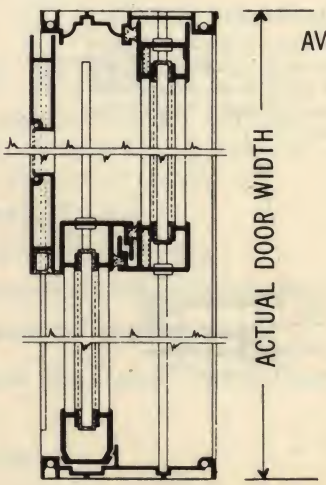
6 foot door	2 Pcs. – 34 x 76
8 foot door	2 Pcs. – 46 x 76
10 foot door	2 Pcs. – 58 x 76
12 foot door	2 Pcs. – 70 x 76

Three Panel

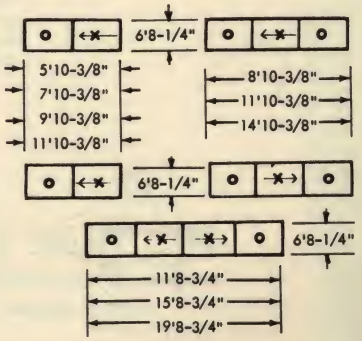
9 foot door	3 Pcs. – 34 x 76
12 foot door	3 Pcs. – 46 x 76
15 foot door	3 Pcs. – 58 x 76

Four Panel

12 foot door	4 Pcs. – 34 x 76
16 foot door	4 Pcs. – 46 x 76
20 foot door	4 Pcs. – 58 x 76



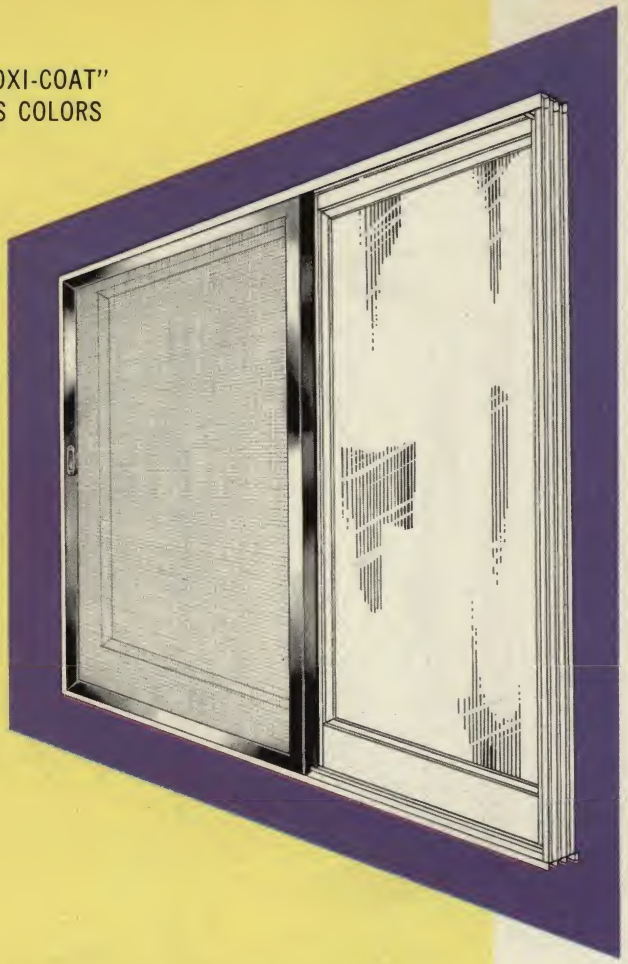
AVAILABLE WITH ALL PANELS SLIDING



FULL SIZE DETAILS AVAILABLE

Scale 3" = 1'

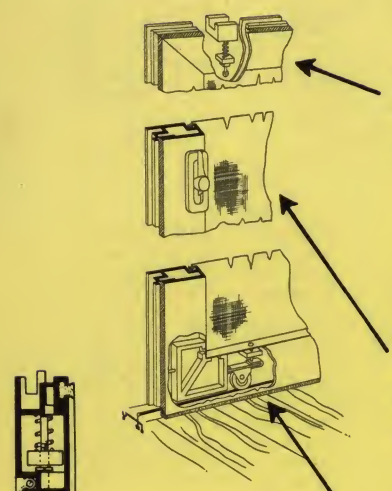
AVAILABLE IN "EPOXI-COAT"
DECORATOR SERIES COLORS



Sun Valley

Impentra SCREEN

With the rising popularity of top quality Aluminum Sliding Glass Doors, it became apparent to Sun Valley's engineering department that a first quality Sliding Screen must be designed to the single criteria of efficiency even if it meant the screen must cost more than was considered competitive. The result has been "IMPENTRA" . . . beautiful . . . durable . . . but above all, efficient.



ALL AROUND PEST BARRIER

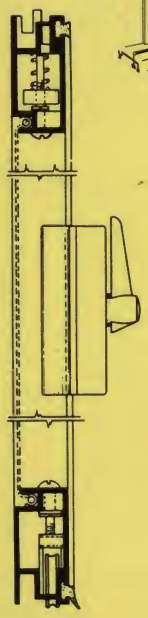
A combination of high pile silicoated mohair and rugged vinyl presents an impenetrable barrier to even the smallest pest.

HEAVY DOOR TYPE EXTRUSIONS

The "IMPENTRA" extrusions are strong enough to permit screens of any height without sag or distortion, and heavy enough to prevent it from jumping off the track.

ADJUSTABLE WHEELS

Two heavy duty wheels can be fully adjusted to overcome any out-of-square condition without removing screen.



Scale 3″ = 1′

SPECIFICATIONS

Aluminum Sliding Screens are to be Sun Valley "IMPENTRA" Screens as manufactured by Sun Valley Industries, Inc.

Frame shall consist of four sections of an identical hollow extrusion of 6063-T5 alloy and shall be mitered and welded at each corner. Each corner is to be further reinforced by an aluminum insert designed to impart maximum strength to the corner joint. Frame extrusions are to weigh a minimum of .600 pounds per foot.

Screen is to roll on two heavy duty wheels located in either end of the lower screen rail. Wheel to be adjustable by means of a wheel adjusting screw in each wheel assembly which protrudes through the bottom rail in a plane parallel to the screen mesh and is accessible for adjustment without removing screen from the opening.

The top spring guide to be a high impact rigid polyvinyl plastic spring loaded to compensate for normal irregularities of door frame. Tension adjustment on top spring guide to be adjustable without removing screen from opening, by means of an adjustment screw.

Top rail and both stiles to be equipped with a pest barrier of silicoated high pile mohair mitered at corners. Pest barrier at bottom rail to be of heavy vinyl plastic coated and mitered at corners to exactly match the vertical pest barrier and achieve one continuous uninterrupted barrier against the smallest of pests.

Screen is to be wired with aluminum wire mesh of .009 inch diameter wire. Each strand of wire to be coated with a tough plastic film to a minimum depth of .0025 inches.

Each screen is to be fitted with a surface mounted lock composed of pressure castings of Zamak No. 5.

Each screen to have a satin recodized finish capable of withstanding 250 hours in a salt spray booth.

FULL SIZE DETAILS AVAILABLE

Specifically better . . .

Sun Valley

Imperial WEATHERWALL®

A premium quality door with a full 5¼" frame especially designed for 1" insulated glass (can be single glazed with an adaptor). We feel the Imperial Weatherwall to be the finest aluminum sliding glass door made.

AVAILABLE IN "EPOXI-COAT" COLORS

SUN VALLEY IMPERIAL WEATHERWALL DOOR

PANELS and SLIDES*	IMPERIAL WEATHERWALL DESIGNATION	ACTUAL WIDTH	ACTUAL HEIGHT	STANDARD 1" GLASS SIZES
→ ← X O | O X 2 PANEL	6' 0" x 6' 10"	6'	6' 10"	2 pcs. – 33 x 76¾
	8' 0" x 6' 10"	8'	6' 10"	2 pcs. – 45 x 76¾
	10' 0" x 6' 10"	10'	6' 10"	2 pcs. – 57 x 76¾
← O X O → O X O 3 PANEL	9' 0" x 6' 10"	9'	6' 10"	3 pcs. – 33 x 76¾
	12' 0" x 6' 10"	12'	6' 10"	3 pcs. – 45 x 76¾
	15' 0" x 6' 10"	15'	6' 10"	3 pcs. – 57 x 76¾
← → O X X O 4 PANEL	12' 0" x 6' 10"	11' 10½"	6' 10"	4 pcs. – 33 x 76¾
	16' 0" x 6' 10"	15' 10½"	6' 10"	4 pcs. – 45 x 76¾
	20' 0" x 6'10"	19' 10½"	6' 10"	4 pcs. – 57 x 76¾

Sun Valley

Senior "CONVERTIBLE" DOOR

A top quality door. Standard frame can accommodate either single glazed or ⅝" insulated glass panels without an adaptor and at no extra cost.

AVAILABLE IN "EPOXI-COAT" COLORS

SUN VALLEY SENIOR DOOR

SENIOR DOOR PANELS and SLIDE*	DOOR DESIGNATION	ACTUAL WIDTH	ACTUAL HEIGHT	GLASS SIZES SINGLE – ⅝"
→ X O ← O X 2 PANEL	6' 0" x 6' 10"	5' 11¾"	6' 9⅝"	2 pcs. – 34 x 76
	8' 0" x 6' 10"	7' 11¾"	6' 9⅝"	2 pcs. – 46 x 76
	• 10' 0" x 6' 10"	9' 11¾"	6' 9⅝"	• 2 pcs. – 58 x 76
	• 12' 0" x 6' 10"	11' 11¾"	6' 9⅝"	• 2 pcs. – 70 x 76
← O X O → O X O 3 PANEL	9' 0" x 6' 10"	8' 11"	6' 9⅝"	3 pcs. – 34 x 76
	12' 0" x 6' 10"	11' 11"	6' 9⅝"	3 pcs. – 46 x 76
	• 15' 0" x 6' 10"	14' 11"	6' 9⅝"	• 3 pcs. – 58 x 76
← → O X X O 4 PANEL	12' 0" x 6' 10"	11' 10"	6' 9⅝"	4 pcs. – 34 x 76
	16' 0" x 6' 10"	15' 10"	6' 9⅝"	4 pcs. – 46 x 76
	• 20' 0" x 6' 10"	19' 10"	6' 9⅝"	• 4 pcs. – 58 x 76
• AVAILABLE IN SINGLE GLAZING ONLY				

Sun Valley

Junior DOOR

An economy door with many of Sun Valley's outstanding quality features. Especially valuable for interior applications. Available in multiple slide arrangements.

SUN VALLEY JUNIOR DOOR

JUNIOR OOOR PANELS and SLIDE*	DOOR DESIGNATION	ACTUAL WIDTH	ACTUAL HEIGHT	GLASS SIZES	JUNIOR MULTIPLE SLIDING PANELS and SLIDE*
→ X O ← O X 2 PANEL	6' 0" x 6' 10"	5' 10⅜"	6' 8¼"	2 pcs. – 34 x 76	X | X 2 PANEL
	8' 0" x 6' 10"	7' 10⅜"	6' 8¼"	2 pcs. – 46 x 76	
	10' 0" x 6' 10"	9' 10⅜"	6' 8¼"	2 pcs. – 58 x 76	
	12' 0" x 6' 10"	11' 10⅜"	6' 8¼"	2 pcs. – 70 x 76	
← O X O → O X O 3 PANEL	9' 0" x 6' 10"	8' 10⅜"	6' 8¼"	3 pcs. – 34 x 76	X | X | X 3 PANEL
	12' 0" x 6' 10"	11' 10⅜"	6' 8¼"	3 pcs. – 46 x 76	
	15' 0" x 6' 10"	14' 10⅜"	6' 8¼"	3 pcs. – 58 x 76	
← → O X X O 4 PANEL	12' 0" x 6' 10"	11' 8¾"	6' 8¼"	4 pcs. – 34 x 76	X | X | X | X 4 PANEL
	16' 0" x 6' 10"	15' 8¾"	6' 8¼"	4 pcs. – 46 x 76	
	20' 0" x 6' 10"	19' 8¾"	6' 8¼"	4 pcs. – 58 x 76	

*O = Fixed X = Sliding ⟶ ⟵ Indicates sliding direction when viewed from outside. For framing add ¼" minimum to actual door dimensions.

Sun Valley

Impentra SCREEN

A premium quality screen constructed of heavy door type extrusions and all around pest barrier. Fits all Imperial Weatherwall and Senior sizes standard or custom.

Available in "Epoxi-Coat" Colors

Regular screen also available for all Sun Valley doors

All Sun Valley Doors available in standard and all custom sizes

On standard sizes immediate delivery. Custom sizes and "Epoxi-Coat" color doors shipped two weeks from receipt of order.

3" = 1' and full size details available on request.

A WORD ABOUT ALUMINUM SLIDING GLASS DOORS

As an industry we are only 10 years old. In this time we have grown to an annual volume of tens of millions of dollars and this is going up dramatically every year.

It is quite obvious that when an industry goes from birth to this magnitude in such a short period mistakes will be made. The facts are that the product being turned out today is of very fine quality. Most of the weatherstripping problems have been solved to the point where aluminum sliding glass doors are practical in any climate. New and modern manufacturing methods have eliminated installation problems. Great progress has been made in finishes that defy the elements.

We are proud to be an important factor in an industry that has accomplished so much in such a short period of time.

Sun Valley *Specifically better . . .*

In the past few years Sun Valley has been responsible for an imposing list of important developments in the Sliding Glass Door industry.

Sun Valley was the first to design interchangeable panels—for either single glazing or insulated glass to fit them into the same frame.

Sun Valley was first to engineer and design as standard a sliding glass door specifically for 1″ insulated glass.

Sun Valley was first to offer a "wrap-around" vinyl glazing bead manufactured in one endless leakproof band to fit any lite of insulated glass.

Sun Valley was first to offer aluminum sliding glass doors in beautiful "epoxi-coat" finishes.

These are just a few of our more dramatic firsts. There will be many more.

Warehouse depots are strategically located in Illinois, Georgia, Texas, New Jersey, California and Washington assuring on time deliveries.

SUN VALLEY INDUSTRIES INC.

FACTORY AND GENERAL OFFICES:
8354 San Fernando Road
Sun Valley, California

NATIONAL SALES OFFICE:
4528 West 51st Street
Chicago 32, Illinois

FOR FURTHER INFORMATION CONTACT EITHER HEADQUARTERS LOCATION

A FINAL WORD ABOUT Sun Valley

- **We make any custom size door.**
- **Regional warehouses make immediate delivery possible on all standard sizes. Custom sizes will be shipped from factory 10 days after receipt of order.**
- **Sun Valley's sales force are all full time salaried employees with full technical knowledge of all Sun Valley products. Their function is to serve you as well as sell you.**
- **A Family of Products. Sun Valley also manufactures complete lines of Rolling Windows and Louvered Windows, both full frame and strip hardware. All are the same high quality as Sun Valley aluminum sliding glass doors.**
- **All Sun Valley products have written guarantees.**

AVAILABLE LITERATURE—INDIVIDUAL SPEC SHEETS on all Sun Valley Products. ARCHITECT'S MANUAL with complete tracing details, outstanding feature pages and much more useful information.

EPOXI-COAT DECORATOR KIT Actual extrusion samples of all 10 beautiful decorator colors.

Sun Valley

SV-598

PRINTED IN U.S.A. 495

16e
Arn

accordion fold doors

CUSTOMFOLD DOORS pages 2-9

STACKDOOR pages 10-11

ACCORDOFOLD ROYALE pages 12-13

WOVYNFOLD DOORS pages 14-15

AMERICAN ACCORDION-FOLD DOORS, INC.

CUSTOMFOLD

accordion doors

AMERICAN ACCORDION-FOLD DOORS, INC. manufacture a complete line of accordion folding doors for all requirements; Room Division, Passageway Doors, Closet Closures. All products have been specifically designed to create space, save space, to assure maximum life, provide ease of installation and simple maintenance.

You can specify American Accordion-Fold Door products; Customfold, Stackdoor, Wovynfold and Accordofold Royale with confidence, because the standards set require the finest materials to be utilized, only the best workmanship to bring about American Accordion-Fold Door's finished product. These standards are observed for every door that is produced by American Accordion-Fold Doors, Inc.

meeting and dining rooms of private club

executive offices, cafeteria and meeting room

quality features

1 CONSTRUCTION

Rust-resistant heavy gauge steel throughout.

2 EXTRA FRAMING

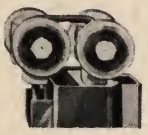
All doors from 7′-6″ to 12′ in height have three sets of hinges to assure rigidity

doors from 12′ to 14′ have 4 sets of hinges

doors from 14′ to 20′ have 5 sets of hinges

3 ROLLERS

Sturdy quiet ball-bearing, nylon covers. 4-wheel Master carriage. Smooth operation specially designed to reduce friction.



4 FABRIC

Frame is enclosed with a General Tire Tolex ® fabric, durable, sunfast, flame resistant. Minimum standard weight—18 oz. per square yard (27 ozs. per linear yard 54″ wide). Fabric will not crack, craze or peel.

5 HARDWARE

Functional, attractive and durable—parts are cast aluminum chrome plated.

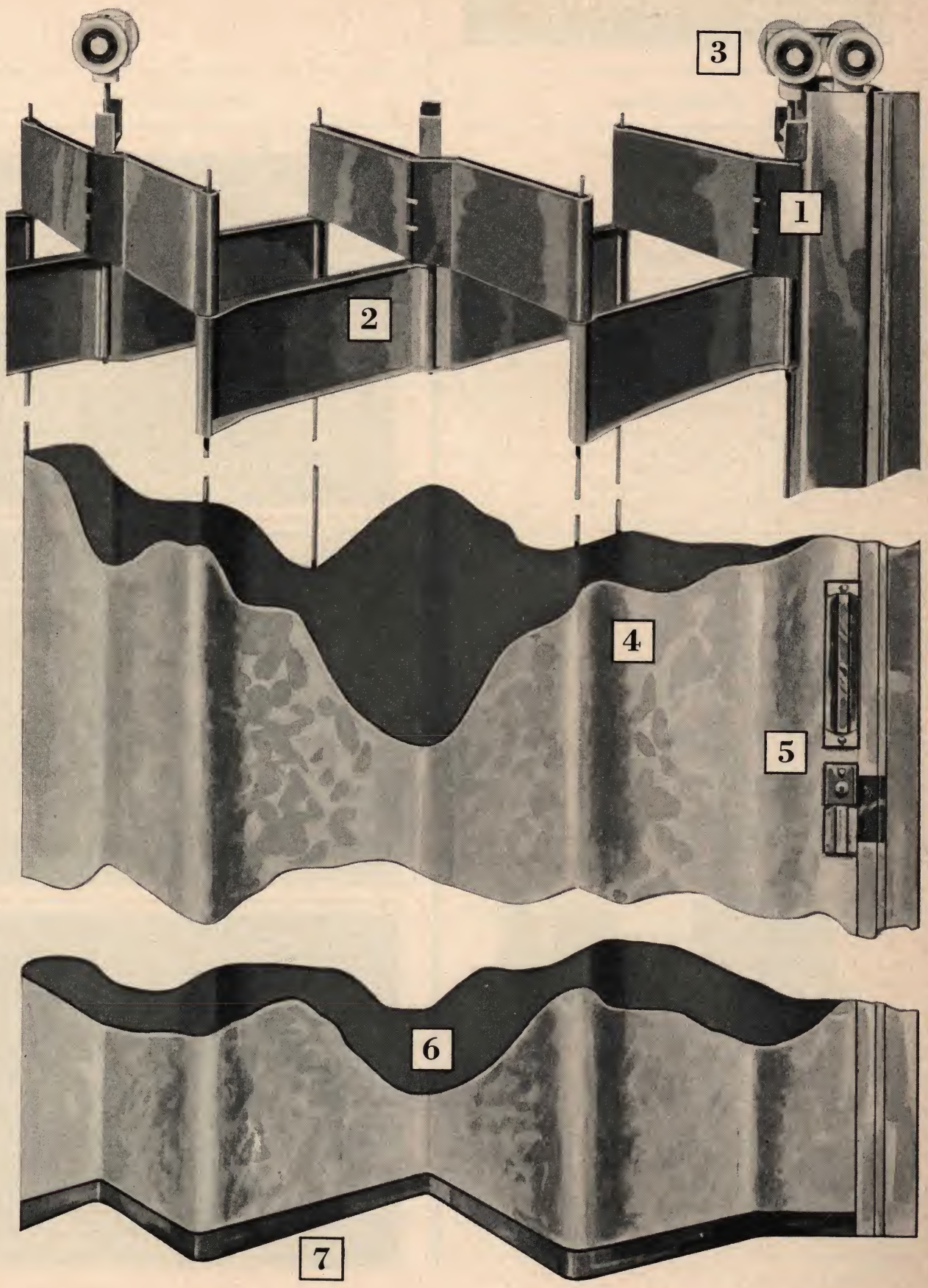
Locks and latches are available keyed or master keyed.

6 SOUND REDUCTION LINER

Separate layer of flame retardant material between frame and covering to provide effective sound retardancy.

7 SWEEP STRIPS

Seals opening against light or sound transmission from one room to another.


3
1
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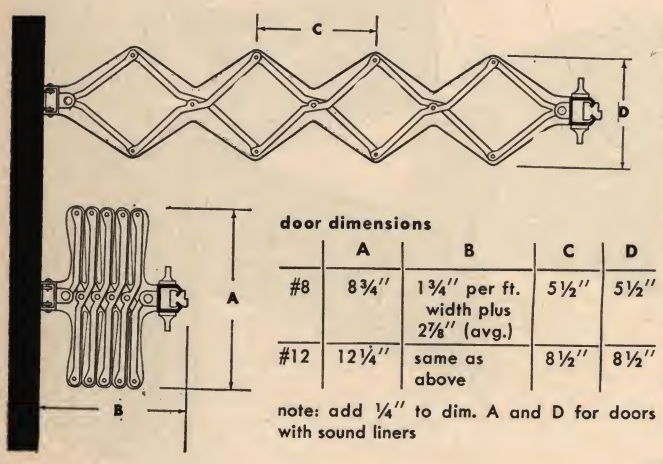
CUSTOMFOLD

design data



door dimensions

	A	B	C	D
#8	8¾″	1¾″ per ft. width plus 2⅞″ (avg.)	5½″	5½″
#12	12¼″	same as above	8½″	8½″

note: add ¼″ to dim. A and D for doors with sound liners

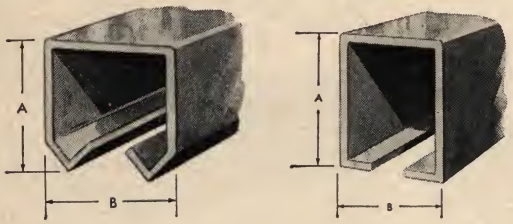
DOORS

	widths	heights
standard #8	2′–6″ to 26′–0″	6′–6″, 6′–8″ or 8′–0″
special #8	2′–0″ to 26′–0″	up to 14′–0″
heavy duty #12	to 30′–0″	up to 20′–0″

TRACK

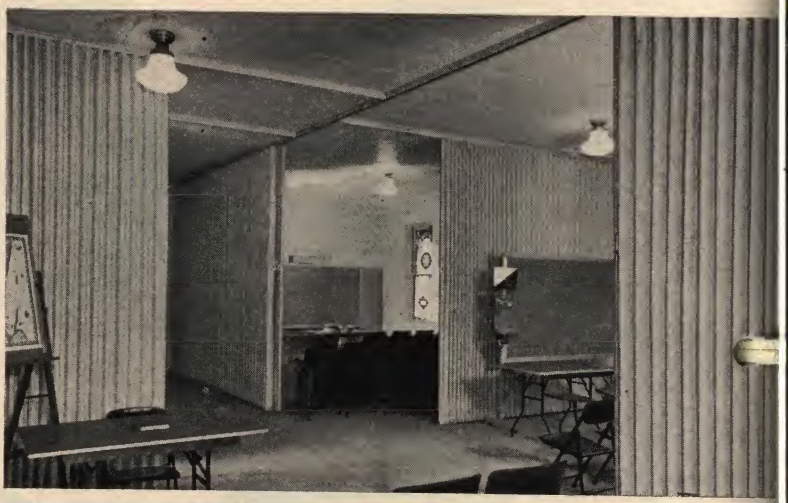
Customfold tracks are electro-plated, rust-resistant steel. Surfaces are prepared for painting if desired.

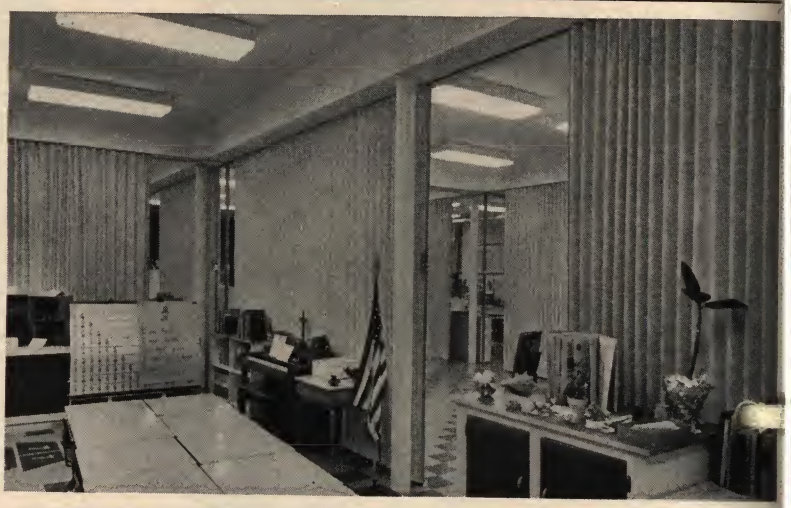
8 # 12

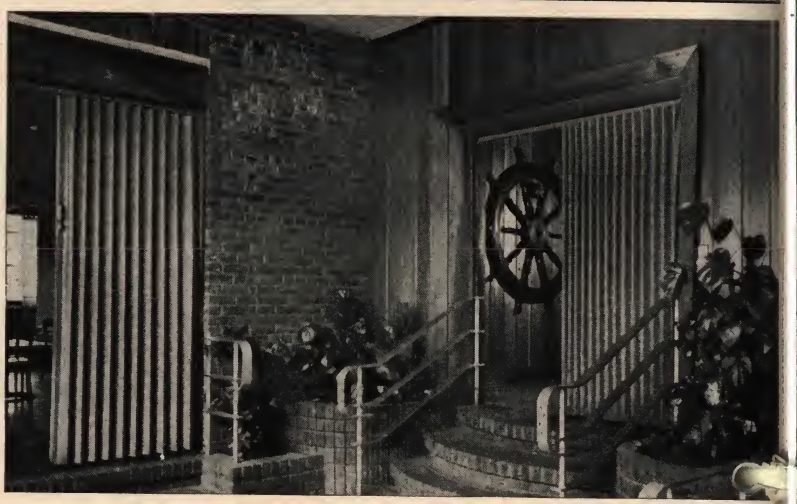


	track dimensions gauge	A	B
standard #8	18	1 11/32″	1 11/32″
special #8	16	1⅜″	1⅜″
heavy duty #12	14	2″	1½″

installations

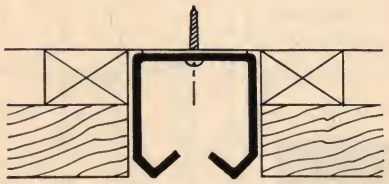




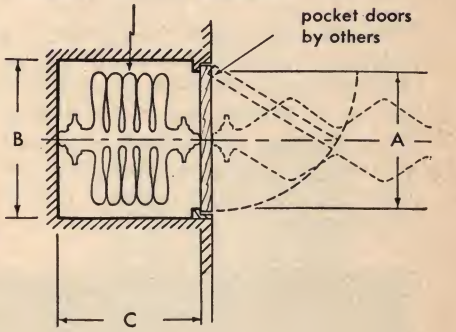


HUNG CEILING

Method one is to make a pocket of wood and fasten track into recess resulting from pocket.



POCKET DOOR RECESS



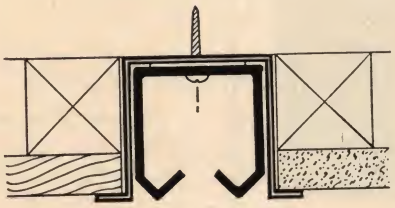
case Y—with pocket door

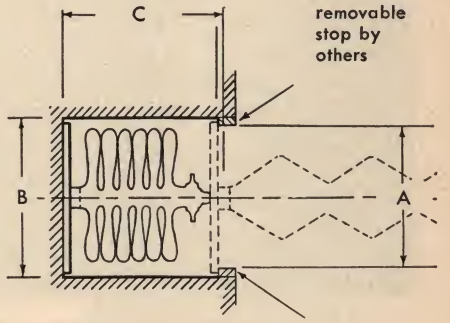
	A	B	C
standard #8	10″	12″	1¾″ per ft. width
special #8	10″	12″	plus 2⅞″ (avg.)
heavy duty #12	15″	17″	same as above

RECESSED

A sub-channel (which we supply) may be permanently fastened to become part of the ceiling either by plastering around it or using it as a shelf to fasten acoustic ceiling squares. After this is permanently installed our track may be fastened into the sub-channel.

In both cases the fabric rides approximately 3/16″ down from ceiling.

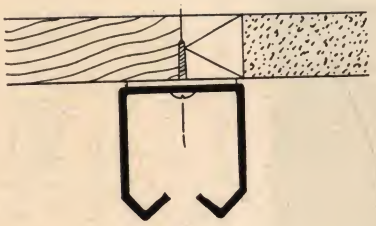




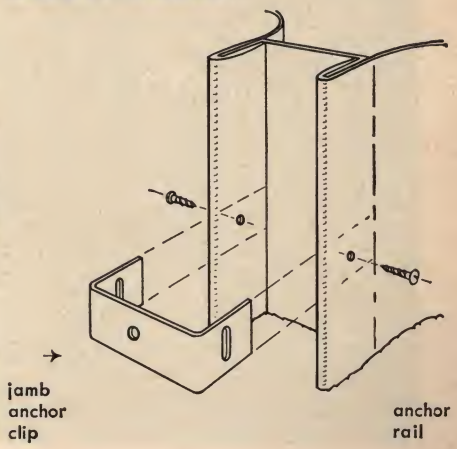
case Z—without pocket door
same dimensions as
for case Y

EXPOSED TRACK

Track is fastened to the ceiling in a predetermined location. In this case the cloth covers the track and hides the track when door is fully extended. The fabric will ride approximately 3/16″ from the ceiling.



JAMB ATTACHMENT

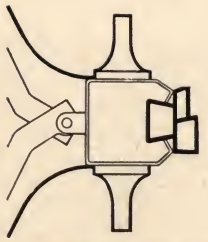


accessories

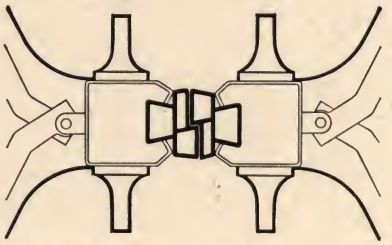
Versatile, adaptable CUSTOMFOLD offers complete planning freedom for room division requirements. The accessories available provide for simplified multiple space partitioning. You will find glide switches, pivot switches, cross-over switches, door meeting posts for 1, 2, 3 and 4 doors, rolling posts, all of which allow you to divide space to meet your specific requirements.

Glide switch installation showing how doors can be quickly stacked against a wall, out of the way, without loss of floor space.

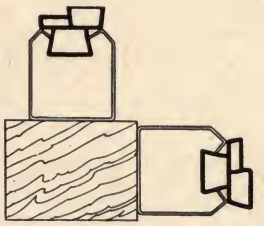
posts



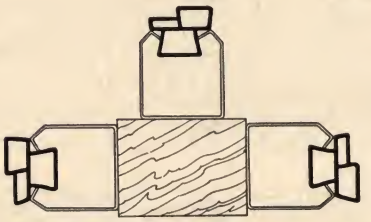
one-way single meeting post meeting wall or jamb



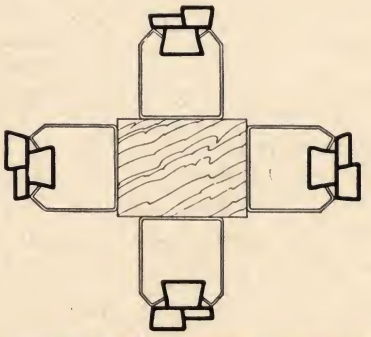
lead posts for pair of doors



two-way "L" meeting post where two doors meet at right angles to form a room



three-way "T" meeting post enables three doors to meet and form two separate rooms



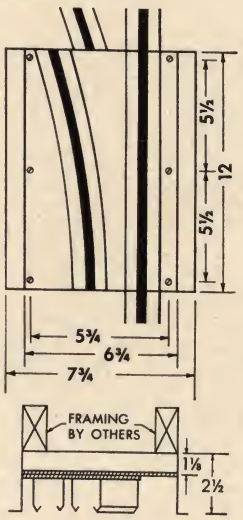
four-way "X" meeting post enables four doors to meet and form four separate rooms

switches

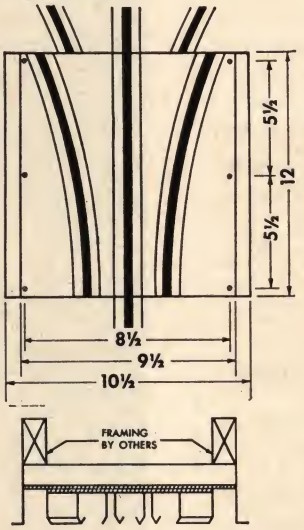
glide

The glide switch, either one-way or two-way, helps doors to move from one track to another and enables the doors to serve a multitude of functions.

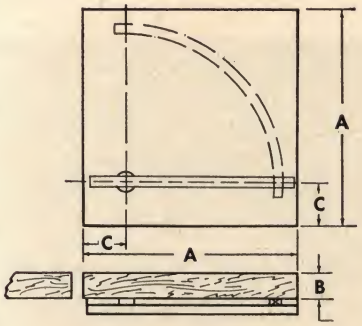
single glide



double glide

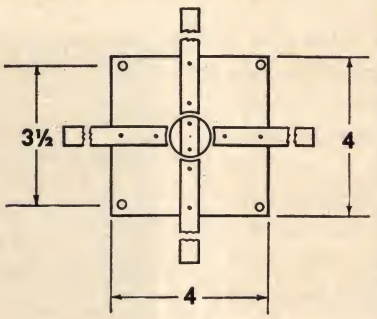


pivot switch



Allows stacked doors to rotate through a 90° arc to change directions.

four-way crossover switch



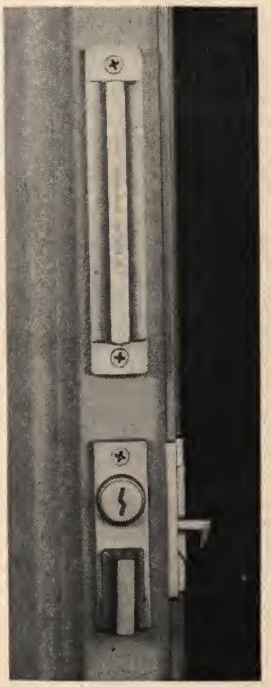
Four-way switch crossover enables door to cross over the track of another door installed at right angles.

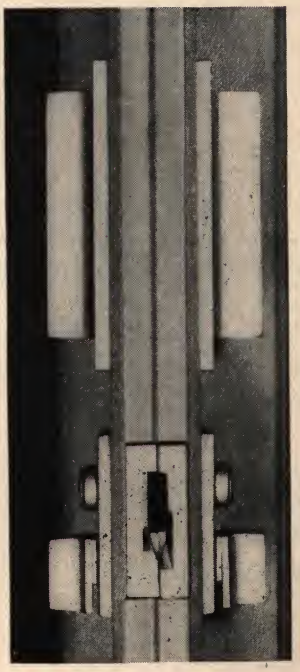
pivot switch dimensions

A	B	C	pivot switch no.	max. width of door 8″ hinge	max. width of door 12″ hinge	max. width with sound liner 8″ hinge	max. width with sound liner 12″ hinge	max. height of door 8″ hinge	max. height of door 12″ hinge
24″	2⅜	5½	24	10′		8′		8′	
30″	2⅜	5½	30	14′	18′	12′	16′	14′	14′
36″	2⅜	5½	36	16′–6″	20′	14′	18′	14′	16′
48″	2⅜	5½	48	23′	30′	21′	28′	15′	16′

hardware

Customfold hardware is of durable, aluminum furnished with latch and key lock or can be supplied master keyed. All Customfold doors can be master keyed to each other.





sound reduction and flame control

Many applications require additional sound insulation in order to reduce noise between rooms.

CUSTOMFOLD meets this problem by supplying the best available sound insulating and fire resistant materials as special liners beneath the outer fabric. They do not alter the appearance of the door and offer maximum sound reduction.

Customfold sound insulated doors are provided with sweep strips to completely close off the entire opening. In addition, sound channels are supplied to receive the lead post.

Sound reduction liners shall be constructed to meet fire requirements:

1—New York City Board of Standards and Appeals.
2—City of Boston Fire Department.
3—City of Los Angeles.

Customfold doors have been sound tested by the United States Testing Co., Inc. Test performance is available upon request.

FABRIC

The superb Customfold supported vinyl fabrics were styled by General Tire and Rubber Corp. exclusively for these doors. The richly textured finish is available in a wide variety of striking patterns in a broad palette of deocrator colors. These Tolex® vinyl fabrics are alltreated to meet local, state and federal flame proofing requirements and are Underwriter Laboratory approved. Rugged and durable, Customfold provides years of trouble-free service—have the flexing strength to take continuing abuse. These Tolex covers withstand folding and abrasion, will not crack or peel, resist fading even in bright sunshine—wipe clean with a damp cloth. These colorful Customfold covers add richness, warmth and distinction to any installation.

Customfold doors are movable walls that create space, save space and divide space. They are versatile, economical and practical solutions to space planning problems.

CUSTOMFOLD INSTALLATIONS

NORTH HALL

EAST HALL

AT THE N. Y. COLISEUM

SOUTH HALL

specifications

general: Customfold Doors as shown on Plans shall be furnished and installed by authorized representatives of the American Accordion-Fold Doors, Inc., Jamaica 33, New York.

detailed: Customfold Doors shall be top supported without floor guides, and shall be completely fabricated at the Factory complete with all hardware ready for installation.

frames: Customfold frames shall consist of a rust resistant 18 gauge or heavier steel frame of interlacing collapsible and extensible hinges, having a true pantograph action. Hinge plates shall be located top and bottom, and necessary intermediate locations. Hinge plates shall be connected by 3/16" rust resistant steel rods to provide uniformity and stability. All mechanism for producing stability and pantographic action shall be contained within the door frame and fabric covering.

track and hardware: All track and sub-channels shall be cadmium plated rust resistant steel. Tracks shall be 18 gauge or heavier.

trolley wheels: Doors less than 10 ft. high shall have solid nylon wheels. Doors over 10 ft. high shall have ball bearing steel wheels with nylon tread. Wheel carriers shall be provided for door support and shall be spaced a maximum of 21" apart. Wheel carriers supporting rolling posts shall be swivel and noiseless.

handles locks and latches: Shall be of satin aluminum baked on finish, or chromium plated or satin finished.

fabric construction: Vinyl coated fabric, finished fabric weight 18 oz. per square yard (27 oz. per lineal yard 54" wide), shall not peel, craze or crack.

characteristics: Fabric coating shall be compounded and applied to backing, so as to give fabric long life, flexibility, and exceptional resistance to cold, fading and discoloration.

flame resistant: Fabric shall meet with the specifications and tests of the following Agencies:

a—New York Board of Standards and Appeal.

b—Fire Department City of Boston.

C—City of Los Angeles.

d—Federal Specification CCC-C-418.

Underwriter Laboratory Approv.

sound insulation: Sound insulating liners shall be flame resistant, mildew and vermin proof, and not support combustion. Lining shall not alter appearance or interfere with the door operation. Sweep strips at head and floor, shall be of elastometric material and shall not crack of craze under severe usage. Sound reduction channels are required. There shall be an equal number of folds on both sides of doors.

Sound reduction liners shall be constructed to meet fire requirements:

1—New York City Board of Standards and Appeals.

2—City of Boston Fire Department.

3—City of Los Angeles.

warranty: Customfold shall be fully guaranteed for 1 year against defects in workmanship or faulty materials.

All Customfold Doors shall be fabricated to receive complete interchangeable lock or latch units, all of which shall be an integral part of the door pull design.

STACKDOOR

for residential applications as closet doors, passageway doors and room dividers

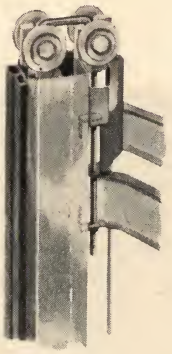
Stackdoor is versatile and beautiful and can be used throughout the home. It's the perfect answer to closet door problems, for Stackdoor takes up no room, allows former wasted space to be used. Stackdoor is ideal as a room divider too. It adds color, charm and utility to rooms.

Stackdoor is the unique folding door that provides custom quality features at stock door prices.

Stackdoor used as room divider

Stackdoor as passageway doors. Note savings in floor and wall space

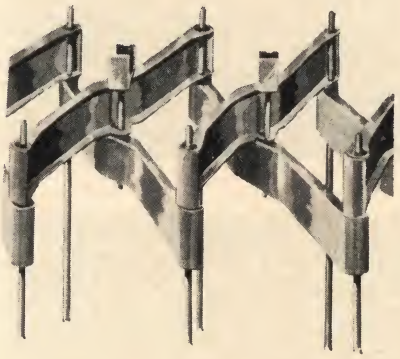
LEAD POST AND ROLLER HARDWARE



Master carrier roller hardware on lead post comprize four 1'' diameter nylon wheels. Lead post of 20 gauge durable electroplated rust-resistant steel.

lead rail and master carrier

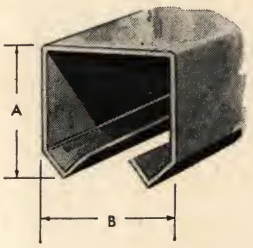
HINGE CONSTRUCTION



Massive heavy gauge electroplated rust-resistant steel plate, 8'' x 2½''. True pantograph action.

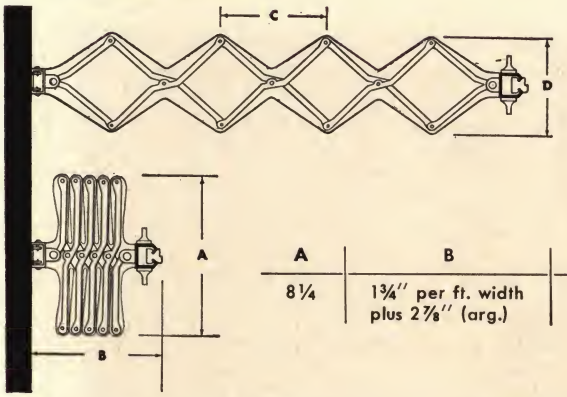
TRACK

Stackdoor tracks are made of rust resistant steel with baked finish to match color of door.



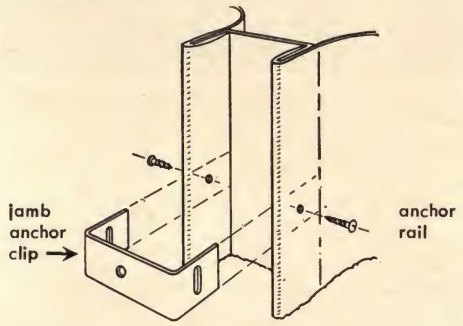
gauge	A	B
20	1 5/16''	1 5/16''

STACK DIMENSIONS

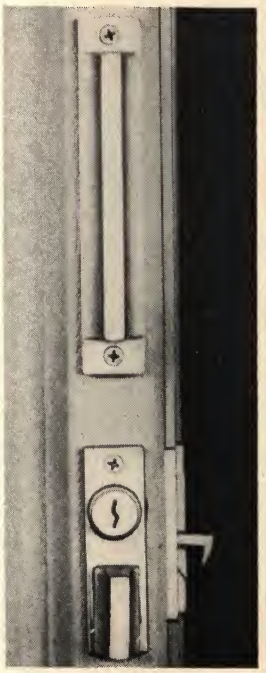


A	B	C
8¼	1¾″ per ft. width plus 2⅞″ (arg.)	5½

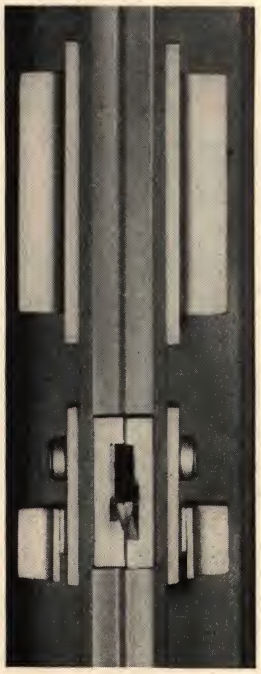
JAMB ATTACHMENT



HARDWARE locks and latches are of satin finished aluminum



Heavy duty bumper guard provides flush fit to jamb or wall.



Lead rail to house hardware — 20 gauge rust resistant steel. Latch and key lock assembly optional equipment

sizes

width	height
2′ 8″ x 7′ 0″	6′ 2″ 6′ 6″ or 6′ 8″ 7′ 6″ 8′ 0″
3′ 0″ x 7′ 0″	6′ 2″ 6′ 6″ or 6′ 8″ 7′ 6″ 8′ 0″
4′ 0″ x 7′ 0″	6′ 2″ 6′ 6″ 7′ 6″ 8′ 0″
4′ 6″ x 7′ 0″	6′ 6″ or 6′ 8″ 8′ 0″
5′ 0″ x 7′ 0″	6′ 6″ or 6′ 8″ 8′ 0″
5′ 6″ x 7′ 0″	6′ 6″ or 6′ 8″ 8′ 0″
6′ 0″ x 7′ 0″	6′ 6″ or 6′ 8″ 8′ 0″
6′ 6″ x 7′ 0″	6′ 6″ 8′ 0″
7′ 0″ x 7′ 0″	6′ 6″ or 6′ 8″ 8′ 0″
7′ 6″ x 7′ 0″	6′ 6″ or 6′ 8″ 8′ 0″
8′ 0″ x 7′ 0″	6′ 6″ or 6′ 8″ 8′ 0″

doors may be paired to fit openings through 16′–0″ wide

Special fully-covered headers are available so that Stackdoor can be used in intermediate heights. Example: for opening 2′ 6″ x 6′ 9″

specifications

Stackdoor as shown on plans shall be furnished by authorized representative of the American Accordion-Fold Doors, Inc., Jamaica 33, New York.

detailed: Stackdoor shall be top supported without floor guides, and shall be completely fabricated at Factory to include all track and necessary hardware ready for installation. Stackdoor frame shall consist of rust resistant steel of interlacing, extensible hinge plates, connected by rust resistant 3/16″ vertical rods, to provide smooth operation, true pantograph action with equal folds on both sides of the door.

The frame shall be completely enclosed with a flame retardant supported vinyl covering.

Fabric shall be attached to clips that are spring loaded to assure even tension to all parts of the frame.

All track shall have a baked enamel finish to match color of door.

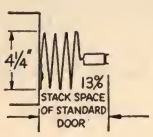
Stackdoor shall be equipped with all hardware, ready for installation and shall be guaranteed for 1 year against faulty materials or workmanship.

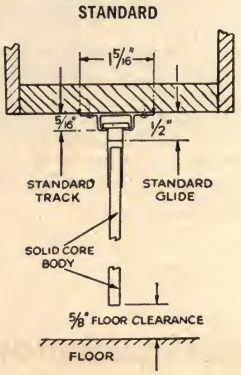
ACCORDOFOLD ROYALE

for residential applications as closet doors, passageway doors and room dividers

Accordofold Royale's solid 5/16" thick composition board body with washable, wrinkleproof laminated supported vinyl cover, gives this door the look and feel of a wall. Accordofold Royale provides trim, slim beauty, compact 4" folds with a 4½" front-to-bac stack to provide graceful and flush fit for openings. Exclusive aluminum handles andlatch assembly is provided as stock equipment. Accordofold Royale makes use of massive top quality hardware that will take indefinite infinite abuse—provides solid certain closures. Accordofold makes use of an exclusive nylon linkage that assures absolute uniformity of folds. Distinctive decorator colors in rich supported vinyl fabrics are keyed to traditional or contemporary interiors.

Accordofold Royale closet doors provide more room in the master bedroom. Two 4' pairs of doors cover a 16' opening in a complete ceiling to floor installation and eliminates trimming down.

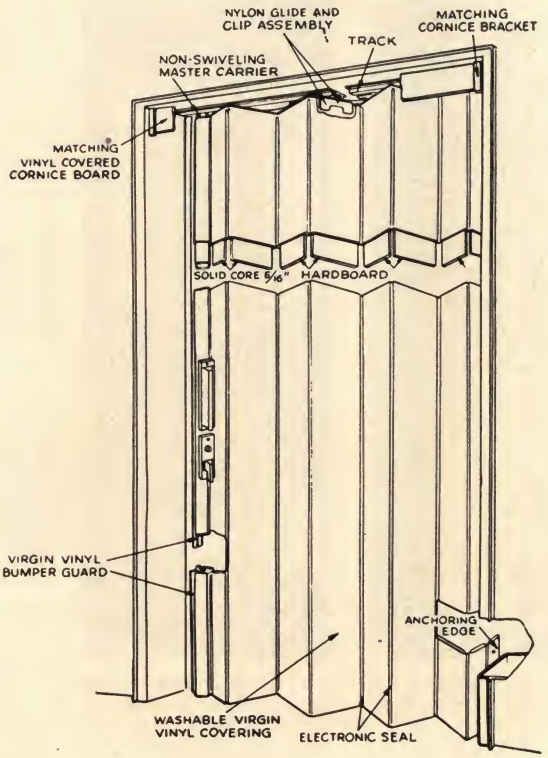




Accordofold Royale used as a passageway door provides compact space saving of floor and wall.

DOOR DETAILS

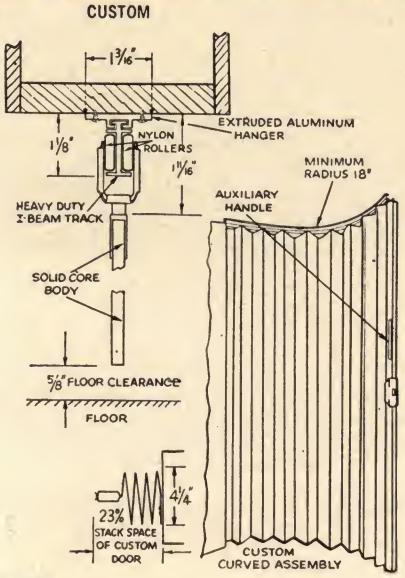
standard



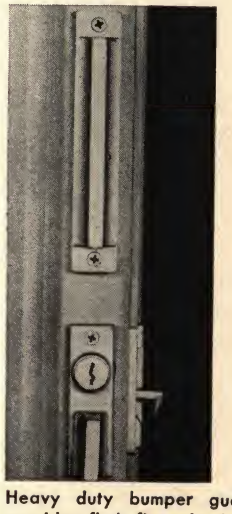
custom

Accordofold Royale Door specifically designed for coverage of large areas contain all features of the standard installation of Accordofold Door but is made with special roller hardware and heavy duty I-beam track. For use in openings over 8′–3″ wide where one door is desired, and for all openings over 8′ high. Maximum single door width: 25′. Maximum height: 12′. When used in pairs, custom Accordofold will fit openings up to 50′ wide, 12′ high. Curved installations for any opening require the custom Accordofold Door. No cornices are supplied with curved doors.

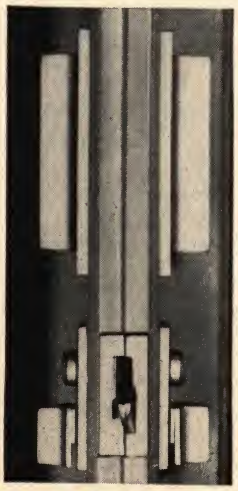
CUSTOM DOOR & INSTALLATION DETAILS



HARDWARE



Heavy duty bumper guard provides flush fit to jamb or wall.



Lead rail to house hardware — 20 gauge rust-resistant steel.

Deluxe aluminum baked on satin finish handles and latch assembles supplied as standard equipment with Accordofold Royale. Keyed lock may be added to latch assembly housing.

sizes

width	height	width	height
2′–0″ x	6′–6″ 6′–8″ 8′–0″	5′–0″ x	6′–6″ 6′–8″ 8′–0″
2′–6″ x	6′–6″ 6′–8″ 8′–0″	6′–0″ x	6′–6″ 6′–8″ 8′–0″
3′–0″ x	6′–6″ 6′–8″ 8′–0″	8′–0″ x	6′–6″ 6′–8″ 8′–0″
4′–0″ x	6′–6″ 6′–8″ 8′–0″		

By using standard size doors in pairs, all openings through 16′ feet wide x 8′ feet can be accommodated. All doors easily shortened to any height.

All Accordofold Royale Doors can be easily shortened and can be supplied for intermediate heights.

specifications

General: Accordofold Royale as shown on Plans shall be furnished and installed by authorized representatives of American Accordion-Fold Doors, Inc., Jamaica 33, New York.

Accordofold Royale doors shall be top supported without floor guides, and shall be completely fabricated at the Factory to include all necessary hardware ready for installation.

Accordofold Royale shall have a 5/16″ composition board body, to which a backed vinyl covering is laminated. Hinge construction shall be created by electronic sealing of pockets every 4″.

Operational hardware shall consist of self-lubricating nylon glides to be connected with nylon linkage to assure true uniformity of folds at all times.

Front to back stack of door to be 4¼″.

Tracks to be galvanized bonderized steel.

Vinyl covering shall be washable, skuff free, shall not peel, crack or craze, and to be flame retardant.

Accordofold Royale to be supplied with a fabric covered, matching cornice and brackets to conceal operational hardware.

As standard equipment, Deluxe satin finished aluminum alloy handles and latching assemblies to be supplied.

All Accordofold Royale shall be constructed to receive keyed locks, and can be master keyed to each other.

Accordofold Royale doors are guaranteed for 1 year against defects in material and workmanship.

WOVYNFOLD

for residential applications as closet doors, passageway doors and room dividers

Wovynfold offers a blending of warm Philippine mahogany body with a durable nylon fortified vinyl—woven together into a completely unique and practical door. Wovynfold has a striking textural beauty that makes it ideal in any interior setting. It is simple to install, easy to maintain and has been flex tested over a million times in laboratory proof of its strength.

Wovynfold room divider creates separate cooking and dining area, provides complete visual privacy

Wovynfold closet closure combines beauty and utility

Philippine mahogany body Beautifully grained Philippine mahogany provides the luxury and distinction typical of this quality wood.

Durable nylon fortified cover Sturdy nylon-filled vinyl covering won't rip, tear or wear through years of use.

Flush-fitting and dust-free Used as a closet door, Wovynfold gives you a flush-fitting, dust-free closure. Remote closet corners are easily accessible.

Complete privacy Used as a passageway door or room divider, Wovynfold provides complete visual privacy.

Savings in new construction Wovynfold eliminates furring, trim, additional hardware and painting.

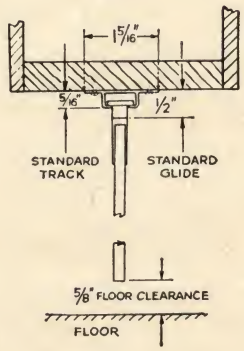
Simple to install and maintain Wovynfold is shipped completely packaged with all necessary hardware. Can be installed in minutes. Surface is easily cleaned.

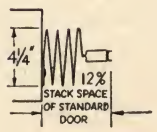
Virtually like a wall When closed, Wovynfold has the appearance and feel of a real wall. It operates without creaking or banging.

Four attractive finishes Natural, beige, grey and white. Wood body matches nylon cover. Decorative accessories, handles, clip assembly, lead rail provided to match color of door.

Wovynfold passageway door provides additional usable wall and floor space

HEAD DETAIL AND STACK DIMENSIONS





sizes

width	height	width	height
2′–2″ x	6′–8″	5′–2″ x	6′–8″
2′–8″ x	6′–8″	6′–2″ x	6′–8″
3′–2″ x	6′–8″	7′–3″ x	6′–8″
4′–2″ x	6′–8″	8′–3″ x	6′–8″

All sizes: 6′–6″ and 8′–0″

stock sizes can be used as single units or 2 units can be paired.

All doors are easily shortened to any height. Intermediate heights other than 6–6″, 6′–8″ and 8′–0″ available. Maximum sizes: single door, 25′ wide, 8′ high; pair: 50′ wide by 8′ high.

specifications

general: Wovynfold Doors as shown on plans shall be furnished and installed by authorized representatives of the American Accordion-Fold Doors, Inc., Jamaica 33, New York.

detailed: Wovynfold Doors shall be top supported without floor guide, and shall be completely furnished to include all necessary hardware ready for installation. Philippine mahogany body 1″ x 1/10″. Woven covering shall be nylon fortified vinyl, 20 strands per inch, embossed texture, washable, fire retardant, and shall contain a minus 20 degree cold crack. Lead rails shall be 32 gauge half-hard steel, bonderized and galvanized, and shall have a baked enamel finish to match color of door. Track shall be electro-galvanized steel U shaped 1 5/16″ x 5/16″. Operational hardware, nylon. Each Wovynfold Door shall contain 12% additional fullness, and shall have a 4 1/4″ front to back stack. Stacking space to be 12% of extended width. Packaging: Each door shall be shipped in individual containers complete with all hardware. Handles and glide assembly shall match color of door.

Wovynfold Doors are guaranteed for 1 year against defects in material or workmanship.

▼CUSTOMFOLD DOORS

▲ACCORDOFOLD ROYALE

▼WOVYNFOLD DOORS

STACKDOOR ▶

AMERICAN ACCORDION-FOLD DOORS, INC.

GENERAL OFFICES Jamaica 33, N. Y.

PLANTS: Richmond Hill, N. Y. • Tulleytown, Pa. • Jamaica, N. Y.

16e
CL

CLOPAY

FOLDING DOORS AND ROOM DIVIDERS

America's complete line of folding closures

AIA No. 16-M

CLOPAY
folding doors

. . . America's complete line of folding closures — *Custom* Magic-Fold, engineered for commercial and institutional installations, Magic-Fold *Regal* and Magic-Fold *Princess* for commercial and residential applications, *Wal-Dor* for office and residential installations. Budget priced Clopay *Steelite* folding doors are also available, but not described in this catalog. Write to Clopay Corporation or contact your distributor for *Steelite* catalog.

100 years of service

Clopay folding doors are produced by a company which is celebrating its 100th anniversary—100 years of service to the building and merchandising fields.

Clopay has established its reputation by providing outstanding value. The 1960 line of Clopay folding doors —from de luxe Clopay Custom Magic-Fold to budget priced Clopay Steelite is the finest and most diversified in the firm's history. All Clopay folding doors are guaranteed for one year against defects in material and/or workmanship. When you specify Clopay doors, you can specify with confidence.

100th CLOPAY ANNIVERSARY

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deluxe heavy duty door for commercial, institutional and residential installations.

CLOPAY Custom MAGIC-FOLD FOLDING DOORS

HEAVY GAUGE VINYL COVERS—Fabricated of embossed virgin vinyl, produced by the General Tire and Rubber Company, is fade proof, moisture and mildew resistant and flame resistant, meeting ASTM Specification D-1593-58. Volutes of the folds are pre-pleated to assure permanence and uniformity of appearance. Laboratory flex-tests of over 400,000 cycles (at room temperature) have proved this material able to withstand years of constant use.

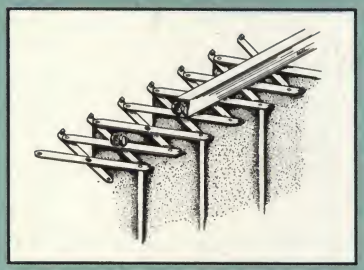
PATENTED SOLID CORE PANELS—Durable Masonite acoustical panels are warp resistant, maintain rigidity, provide a luxurious appearance . . . solid core construction reduces sound transmission, aids greatly in temperature control between rooms.

SIZES—Available from 2′/0″ wide to 25′/0″ wide and up to 16′/0″ in height in single door applications. Openings wider than 25′ can be accommodated with bi-parting, center opening pairs of doors. Panel width for all size openings is just 4¼″. **Stack back equals width of door in inches divided by eight, plus 2½″.**

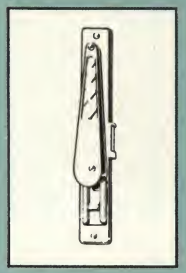
MINIMUM STACK BACK—The Clopay patented construction provides minimum stack back for more walk through area, simplifies design of installation. Recessed applications afforded easily and economically. Panel width is only 4¼″ wide . . . eliminating unattractive "sticking out" beyond standard door jambs.

COLOR SELECTION—Choice of 12 decorator colors: Antique White, Goldenrod, Warm Coral, Sierra Brown, Champagne Beige, Pepper Red, Pine Forest Green, Mist Grey, Blushing Pink, Parchment Ivory, Smoke Grey, Clay Beige. See page 5 for reproduction of colors.

PANTOGRAPHIC ACTION — Silent, trouble-free top mounted panel spacing and limiting device guarantees even folding, fingertip control . . . prevents overextension in extra wide openings. Fabricated of 12 gauge rust-proof steel.



HANDLES—Standard handle includes MF-2 thumb latch assembly with high impact polystyrene tear-drop handle and backing plate, magnetic catch, fingerlocking from either side of door. Key lock MF-3, optional accessory, provides maximum security. MF-3 factory installed or can be installed in field.



conference rooms

offices

restaurants

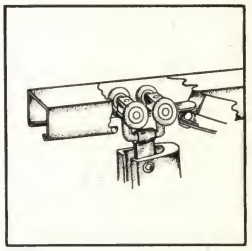
churches

TRACK—Rust-resistant, roll formed heavy weight "U" beam, fabricated of 18 gauge steel, finished in silver grey hammertone baked enamel. Lubricant furnished with doors. Track can be mounted either exposed or concealed (optional) in recessed channel. Recessed channel designed to accommodate acoustical tile or plaster finished ceiling.

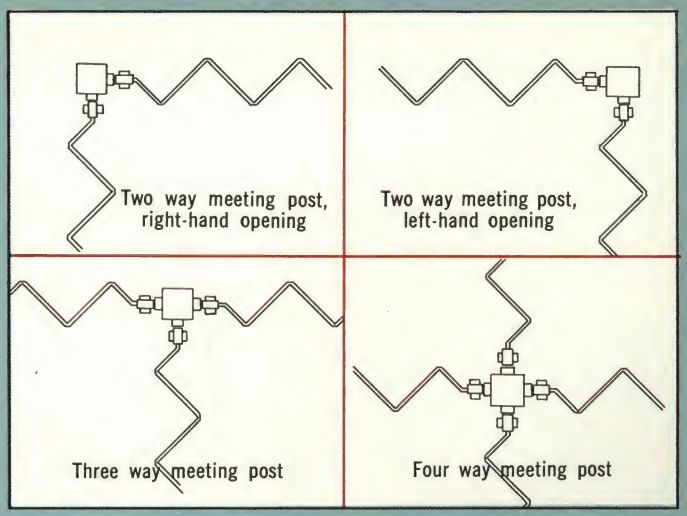
CORNICES—Pair of matching vinyl covered, decorative and acoustical Masonite cornices furnished as standard equipment to conceal track, reduce sound transmission over top of door.

LEADING EDGE—Rigid leading edge formed of extruded aluminum, inherently rust proof, insures maximum strength and long life. Extruded soft vinyl bumper strip is offset to intermesh for snug fit when doors are paired. Leading edge bumper provides maximum privacy, protects woodwork and plaster and cushions door slam.

GLIDE WHEELS — Fabricated of Du-Pont nylon with steel bushed swivel mount to eliminate track bind. Designed to roll smoothly on precision engineered track. Leading edge is supported by a double set of roller wheels free to pivot unilaterally preventing track bind and providing maximum ease of operation.



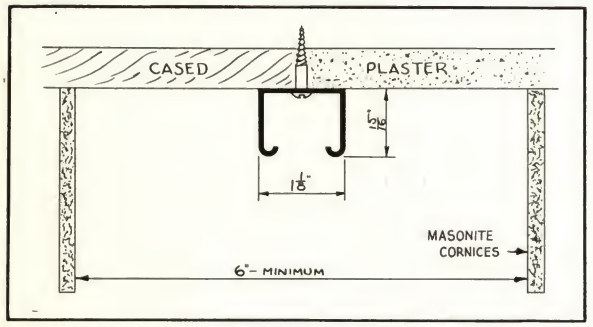
SIZE FOR ANY OPENING—Clopay Custom Magic-Fold folding doors can be furnished to fit any opening width, as single door up to 25′ wide, center opening pairs or series of openings up to 50′ wide and opening height up to 16′. Doors can be equipped with two, three or four-way meeting posts for doors intersecting at right angles, dividing large areas into multiple small rooms.


Two way meeting post, right-hand opening
Two way meeting post, left-hand opening
Three way meeting post
Four way meeting post

CLOPAY Custom MAGIC-FOLD

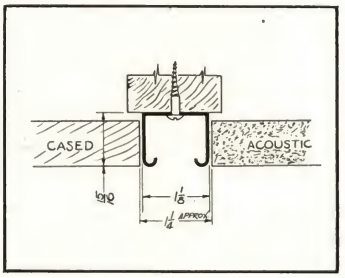
optional accessories

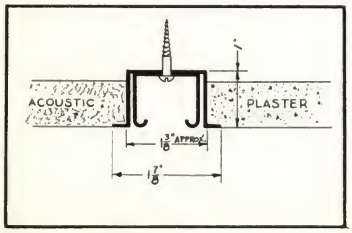
typical track installations



Surface mounted track with cornice installed

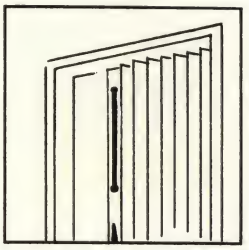
Recessed track without channel



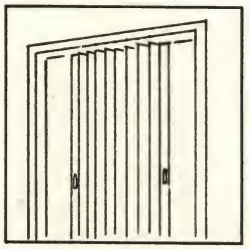


Recessed track with channel (optional)

PUSH-PULL BAR—Optional equipment. Satin finish aluminum, pendulum handle to ease opening and closing of extra high and/or large doors. Single bar required equipment on all doors over 8′ high and/or 90 square feet of total door area. Double push-pull bars optional.



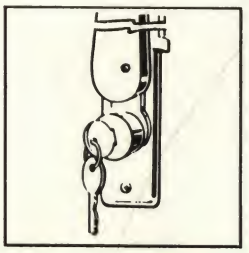
DOUBLE LEADING EDGE — Consists of lead edge assembly on both ends of doors for right and left hand opening or where series of doors are required. No jamb anchor flap. Optional equipment.



FOOT BOLT—Optional equipment. Installed on meeting post or lead edge of door. Prevents movement or lateral sway of meeting post or leading edge. Surface mounted at factory or field installable. (Not illustrated)

SWEEP STRIP—Optional bottom mounted skirt to meet floor surface where maximum sound reduction required. Factory installed only and can be field trimmed for irregular floors.

MF-3 LOCKING DEVICE — Key lock assembly with interchangeable bolt for right or left hand openings. Spare key furnished. Optional equipment.



specifications

GENERAL—Clopay Custom Magic-Fold doors as shown on the plans shall be furnished and installed by an authorized representative of Clopay Corporation, Cincinnati 14, Ohio.

DETAILED—Clopay Custom Magic-Fold doors shall be accordion type, top supported without floor guide. Doors shall be factory assembled and equipped with all necessary hardware and track for installation.

Outer covering shall be non-peeling, color fast virgin vinyl, meeting ASTM Specification D-1593-58 for permanent flame resistance, and shall be electronically heat sealed, forming panel pockets. Panel inserts shall be fabricated of warp-resistant Masonite to provide an acoustical and thermal baffle.

Panels shall be hinged with a quiet panel spacing and aligning pantographic device to provide smooth, positive action and to cause all panels to extend and stack equally and simultaneously. Pantographic device shall be rust-resistant steel, not less than 12 gauge. Glide wheels shall be all nylon construction designed for free, quiet operation. Leading edge material shall be heavy weight extruded aluminum, inherently rust-proof, top supported and operating in track by a four-wheel glide trolley.

Cornices shall be furnished for both sides of the door opening and shall be covered with matching vinyl. All necessary cornice hardware shall be included.

CLOPAY MAGIC-FOLD

Regal and Princess FOLDING DOORS

for commercial and residential installations. Door features include heavy weight vinyl cover, Masonite solid core panel construction and nylon glides. Magic-Fold Regal, with pantographic action and matching cornice, recommended for openings over 4′/0″ wide.

HEAVY GAUGE VINYL COVERS—Fabricated of embossed virgin vinyl, produced by the General Tire and Rubber Company, is fade proof, moisture and mildew resistant and flame resistant, meeting ASTM Specification D-1593-58. Volutes of the folds are pre-pleated to assure permanence and uniformity of appearance. Laboratory flex-tests of over 400,000 cycles (at room temperature) have proved this material able to withstand years of constant use.

COLOR SELECTION—Available in nine attractive shades: Antique White, Goldenrod, Warm Coral, Sierra Brown, Champagne Beige, Pepper Red, Pine Forest Green, Mist Grey, Blushing Pink. See panel at left for reproduction of colors.

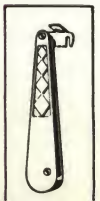
PATENTED SOLID CORE PANELS—Durable Masonite acoustical panels are warp resistant, maintain rigidity, provide a luxurious appearance . . . solid core construction reduces sound transmission, aids greatly in temperature control between rooms.

size selector table

Opening Width	Number of Folds	Panel Width	Stack Back
24″	5	4¼″	4¼″
32	6	4¼	4¾
36	8	4¼	5 11/16
48	11	4¼	7 3/16
60	14	4¼	8 5/8
72	18	4¼	10 1/16
84	21	4¼	11½
96	24	4¼	13

Always specify if dry wall or plaster finish opening, so proper length screws may be supplied.

SIZES—Selector table applies to Magic-Fold Regal and Princess doors, available in widths and heights up to 96 inches in single door application. Wide openings, up to 16′/0″ in width, can be accommodated by center opening pair of doors. For openings requiring a door over 96″ in height, or door units wider than 96″ in width, Custom Magic-Fold door is required.



HANDLES—Standard handles are fabricated of molded high impact polystyrene, tear-drop shaped (No. MF-1).

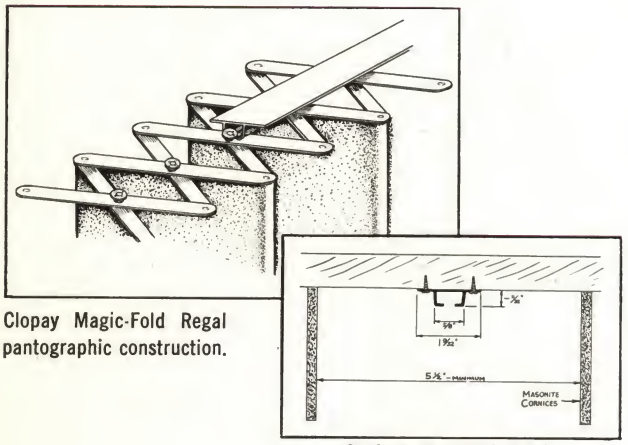
LATCHES — Right hand latch packed with handle assembly MF-1 for standard left hand doors. Right hand door furnished with left hand latch. Latch for back of door and extended "double door" latches for center opening installations provided if specified. Latch is made of 16 gauge rust proof steel and chrome plated. Striker plate, necessary screws and set of instructions packed with unit.

Optional is MF-2 thumb latch handle with high impact polystyrene backing plate and magnetic catch, factory or field installable on Magic-Fold Regal doors. On Magic-Fold Princess or center opening pairs of Magic-Fold Regal or Princess doors, the MF-2 latch must be factory installed. For center opening pair of doors, the latch assembly for the meeting door includes the latch receptacle—factory installed. MF-3 Key lock assembly with interchangeable bolt for right or left hand openings, with spare key, is optional and can be added to MF-2 at factory or is field installable.

Clopay Magic-Fold Princess saves space, lends beauty to this home installation.

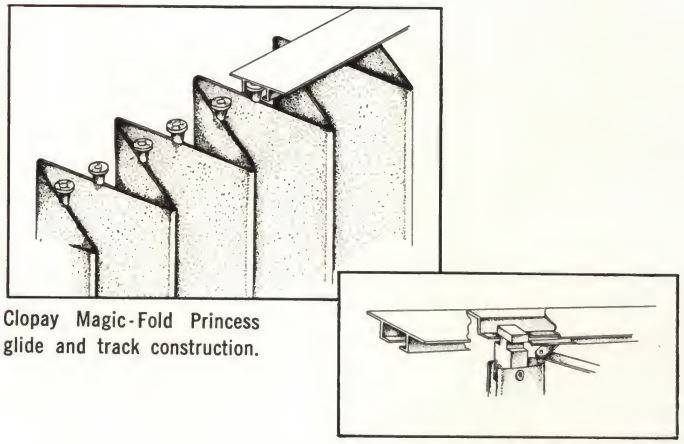
CLOPAY decorator colors

CLOPAY MAGIC-FOLD Regal and Princess



Clopay Magic-Fold Regal pantographic construction.

Surface mounted track with cornice installed.



Clopay Magic-Fold Princess glide and track construction.

Leading edge glide.

TRACK—External flange mount, "U" beam, roll-formed 22 gauge steel with rust proof grey vinylized finish. Factory pre-lubricated to insure long life and silent operation.

CORNICES—Acoustical and decorative cornices are fabricated of Masonite core, covered with matching vinyl material. Conceals track and retards transmission of sound across top of door. Cornice for one side furnished with Magic-Fold Regal doors less than 4′/0″ wide. Double cornice furnished for both sides of Regal doors over 4′/0″ wide. Cornices are optional for Magic-Fold Princess and for second side of Regal doors less than 4′/0″ wide.

GLIDES—(For Magic-Fold Regal)—Injection molded nylon, horizontally rotated to assure ease of operation and prevent track bind. (For Magic-Fold Princess)—Fixed type injection molded nylon glides are designed to operate silently and effortlessly. Leading edge glide for Magic-Fold Regal and Princess door is pivoting type to assure bind free alignment with track during door operation.

PANTOGRAPHIC MECHANISM—(Magic-Fold Regal only)—Made of 18-gauge, zinc-plated, rust-resistant steel. Designed for lifetime of quiet operation. Pre-assembled at factory.

LEADING EDGE—20 gauge galvannealed rust-resistant roll-formed steel, providing maximum rigidity and strength. Extruded soft vinyl bumper strip is offset to intermesh for snug fit when doors are paired. Leading edge bumper provides maximum privacy, protects woodwork and plaster and cushions door slam.

DOUBLE LEADING EDGE—Consists of lead edge assembly on both ends of doors for right and left hand opening or where series of doors are required. No jamb anchor flap. Optional equipment.

specifications

GENERAL—Clopay Magic-Fold Regal (or Clopay Magic-Fold Princess) doors as shown on the plans shall be furnished by an authorized representative of the Clopay Corporation, Cincinnati 14, Ohio.

DETAILED—Clopay Magic-Fold Regal (or Clopay Magic-Fold Princess) doors shall be accordion type, top supported without floor guide. Doors shall be factory assembled and equipped with all necessary hardware and track for installation. Outer covering shall be heavy weight non-peeling, color fast virgin vinyl, meeting ATM Specification D-1593-58 for permanent flame resistance, and shall be electronically heat sealed, forming panel pockets. Panel inserts shall be fabricated of Masonite to provide an acoustical and thermal baffle.

Rust-resistant galvannealed steel leading edge shall operate silently on a glide fabricated of injection molded nylon pivoting type to insure bind free alignment with track.

Track shall be rust-resistant steel, not less than 22 gauge.

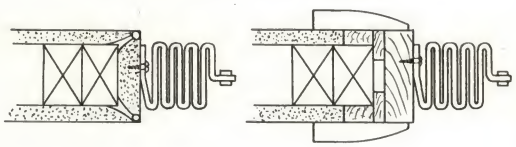
(For Magic-Fold Regal only) Panels shall be hinged with quiet panel spacing and aligning pantographic device to provide smooth positive action and to cause all panels to extend and stack equally and simultaneously. Injection molded nylon panel glides shall be of the horizontal rotating type.

(For Magic-Fold Princess only) The acoustical panel inserts shall be concealed and hinged by the vinyl cover, supported by injection molded nylon glides. Accordion action, extension and spacing of the door will be controlled by inter-action of the glide mounted panels.

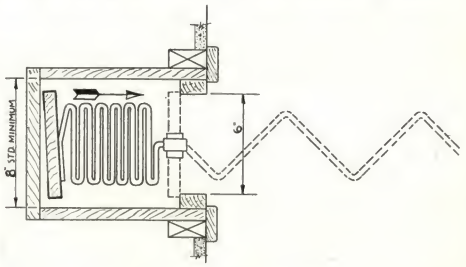
fashon®
VINYL MATERIAL
THE GENERAL TIRE & RUBBER CO.
JEANNETTE, PENNA.

Clopay Magic-Fold bi-parting pair installation for a large opening—available for openings up to 16′/0″ wide.

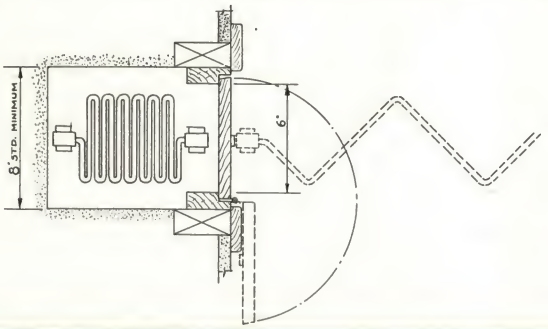
Typical jamb installations. Plaster finish or case finish opening.



Single door, in recessed pocket, with sliding jamb. (Pocket, sliding jamb and stops, furnished by others.)

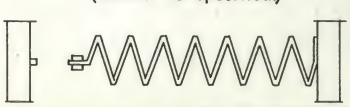


Double leading edge door, recessed in pocket, concealed with small hinged door. (Pocket and pocket door, furnished by others.)



Single door, left-hand installation (standard).

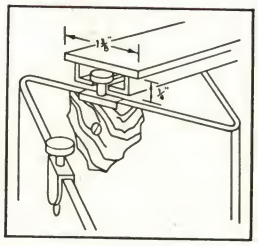
Single door, right-hand installation (should be specified.)



CLOPAY WAL-DOR

economical folding door for office and residential installations. Features: Standard weight vinyl cover, Insulcore® panel solid core construction, nylon glides, positive security latch.

CONSTRUCTION—Double-ply commercial gauge virgin vinyl electronically heat sealed to form panel pockets. Panel inserts of moisture resistant Insulcore® provide acoustical baffling and thermal insulation between rooms . . . assure lifetime rigidity and appearance. Shantung embossed cover is pre-pleated to assure permanent trim fold lines.



HARDWARE—Each door equipped with a pair of high impact polystyrene handles ready to be attached to lead edge plus a manually operated positive security latch of 16 gauge chrome plated steel. Right hand latch packed with handle assembly for standard left hand doors. Right hand door furnished with left hand latch. Latch for back of door and extended "double door" latches for center opening installations provided if specified. Striker plate, necessary screws and set of instructions packed with each carton. Components such as double door latch must be specified if other than standard.

size selector table

Opening Width	Number of Folds	Panel Width	Stack Back
24"	5	4¼"	4¼"
32	6	4¼	4¾
36	8	4¼	5 11/16
48	10	4¼	6 11/16
60	14	4¼	8⅝
72	17	4¼	10 1/16

Always specify if dry wall or plaster finish opening, so proper length screws may be supplied.

TRACK AND GLIDES—Molded nylon glides operate silently and effortlessly along "U" track of 22 gauge rust-resistant galvannealed steel, grey vinylized finish. No complicated mechanism, no parts to squeak or rust.

COLOR SELECTION—Available in three attractive neutral colors: Parchment Ivory, Smoke Grey, Clay Beige. See page 5 for reproduction of colors.

optional accessories

CORNICE—Matching vinyl covered, decorative and acoustical cornice to conceal track, reduce sound transmission over top of door.

DOUBLE LEADING EDGE—Consists of lead edge assembly on both ends of doors for right and left hand opening or where series of doors are required. No jamb anchor flap.

Clopay Wal-dor installations provide economical folding door convenience.

specifications

GENERAL—Clopay Wal-Dor folding doors as shown on plans shall be furnished by an authorized representative of Clopay Corporation, Cincinnati 14, Ohio.

DETAILED—Wal-Dor folding doors shall be accordion type, suspending from a track at the head, without floor guides. Doors shall be factory assembled and equipped with all necessary latch and installation hardware.

Covering material shall be fabricated from virgin vinyl, formed into heat sealed pockets, which serve as hinging device. Inserts shall be fabricated of moisture resistant Insulcore® panels.

Track shall be 22-gauge galvannealed steel. Hanger assemblies and bearings shall be all nylon construction designed for free quiet operation.

Clopay offers a complete selection of folding doors to fit every architectural space-saving requirement.

Clopay representatives are located in all principal cities in the United States and Canada. Inquiries are invited on folding closures of any size, shape, color, pattern. Bid opportunities welcomed. For information, consult your local Clopay distributor or contact

CLOPAY corporation

FOLDING DOOR DIVISION, Clopay Square, Cincinnati 14, Ohio

Plants in Cincinnati, Detroit and Augusta, Kentucky

LOUVER-FOLD
WOOD PANEL FOLDING DOORS

16e
Co

the warmth of natural woods . . .
with folding door convenience

NEW LOUVER-FOLD
WOOD PANEL FOLDING DOORS

The sleek solidity of select wood veneer louvers engineered to operate flawlessly in a mechanism of unique design gives Louver-Fold Doors a touch of elegance found in no other door. Functional features gained with Louver-Fold's non-connected louvers make possible striking new applications in residential or commercial use.

SSS
SUPER SATIN-SURFACE

NEW MIRACLE IN WOOD FINISHING

"Super Satin Surface" and "Triple S" or "SSS" are trademarks owned by GPC (General Plywood Corporation) and used by GPC and licensees on products having a Super sealed or Super Micro sealed surface that satisfies the quality standards established by GPC.

AIA 16M

the NEW door with a view... to more useful charm!

Louver-Fold Doors offer all of the well-known advantages of folding doors plus many exclusive features to be found in no other door. The imaginative architect and designer will find that Louver-Fold gives them many opportunities to create new and truly different interior designs.

The unique construction of Louver-Fold Doors is achieved through the use of select veneers of rich wood, bonded into structurally rigid "Air Foil" louvers. These louvers present a striking contemporary texture that softens and enhances every Louver-Fold Door installation.

The exclusive hollow-core construction of each 8⅜" louver permits lighter weight and easier operation than any other wood folding door. Even the largest sizes operate smoothly and easily; require less ceiling reinforcement than other types.

MOBILE DOOR BEAUTY

Louver-Fold Doors, unlike ordinary folding doors, present a different appearance in each position: as the louvers rotate when the door is opened or closed, Louver-Fold changes from a "paneled wall" to a louvered screen to an unobtrusive, out-of-the-way stack against the jamb! No floor track to obstruct passage area! And Louver-Fold Doors will not "spring back" when partially closed or stacked.

EXCLUSIVE LOUVERED VIEW!

Individual Louver-Fold Louvers are not connected at the edges. As the door is partially opened, each louver angles to allow see-through visibility in one direction, blocking it in the other. Either right or left views are available, permitting the enhancement of an attractive view or concealment of an unwanted scene. Partially opened, Louver-Fold has the appearance of a louvered divider and allows unrestricted air flow — a benefit of prime importance where the efficiency of heating or air conditioning systems must be considered.

MORE EASILY INSTALLED AND MAINTAINED

The lightweight construction of Louver-Fold Doors permits installation with less equipment and labor. Individual louvers can be replaced if ever damaged. Overhead track is all-steel; exposed hardware is of rich, golden anodized aluminum with self-lubricating nylon bushings. Four nylon wheels on each overhead carrier assure perfectly balanced track, glide and door positioning.

Versatile "louvered view" makes LOUVER-FOLD adaptable to use as an attractive paneled screen.

LOUVER-FOLD

WOOD PANEL FOLDING DOORS

16e/Co

New Usefulness

A wide range of new uses are available to the architect due to Louver-Fold Door's exclusive design. In residential or commercial applications, Louver-Fold Doors perform extra duty as louvered, see-through room dividers, or as vision-baffles allowing full ventilation while obscuring unwanted views. Duplex wood veneers can be obtained for special effects. No other folding door does so many jobs . . . and does them so well!

Warm paneled appearance makes LOUVER-FOLD ideal for distinctive closet closures.

STOCK OR CUSTOM DOORS

Stock Louver-Fold doors are available in 6′ 8″ heights in six widths: 2′ 4″, 2′ 6″, 2′ 8″, 3′ 0″, 3′ 6″ and 4′ 0″. All stock doors are furnished in Philippine Mahogany either unfinished or clear satin-finished.

Custom Louver-Fold doors are furnished in widths from 2′ 4″ to 24′ 0″ (write for information on wider sizes) and in any height up to 10′. Philippine Mahogany, Birch, Oak and Walnut are available on custom order. Louver-Fold Custom doors may be ordered unfinished, enameled, stained — or in clear satin — finish.

Both Custom and Stock doors are furnished in either right or left louver view.

STANDARD COLORS

100W	Clear	340	Sky Blue
310	White	341	Turquoise
314	Antique White	359	Mocha Tan
303	Ivory	360	Citron Yellow
329	Mist Green	362	Carnation Pink
328	Gray Green	374	Gray

Unique louvered construction adds graciously to "open area" plans — allows complete closure when desired.

LOUVER-FOLD SPECIFICATIONS

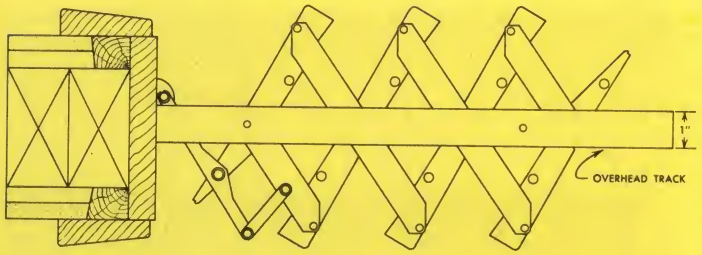
GENERAL: Folding Doors and Room Dividers shall be of wood veneer hollow-core "Air Foil" shaped louvers as manufactured by Consolidated General Products, Inc. and complying with following specifications. Each louver shall be independently attached to pantographic extension arms. Louvers move in unison. Doors shall be suspended from overhead track and no guides or track at the floor when used, shall extend beyond door stack.

TRACK AND HANGERS: Track shall be 1″ x 1″ rolled from not less than .025″ rust and corrosion resistant coated steel. All track shall be pre-lubricated at the factory. Hanger assemblies shall be of the double trolley type, constructed of 16-gauge steel for maximum strength and supplied with four-flanged self-lubricating nylon rollers for smooth, silent operation.

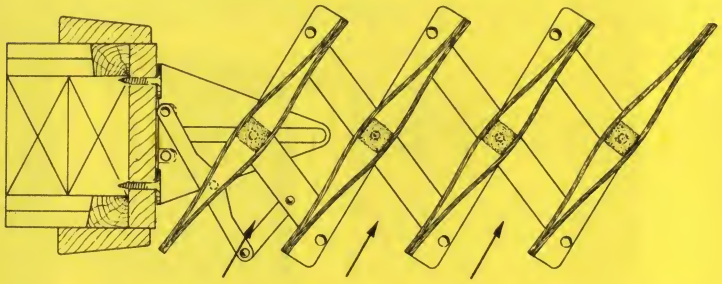
Mechanism-Installation Detail: Doors With Bottom Control Bracket

Furnished on doors up to approximately 8′ wide.

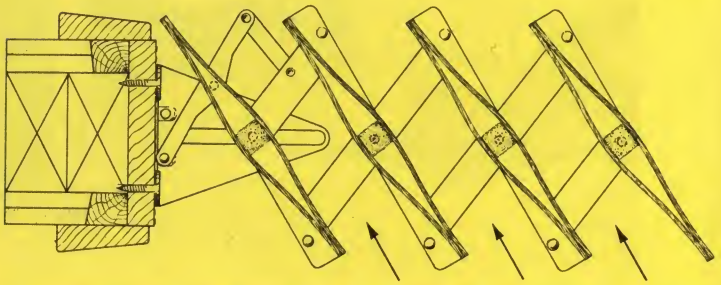
Scale all Drawings: 3/16″=1″



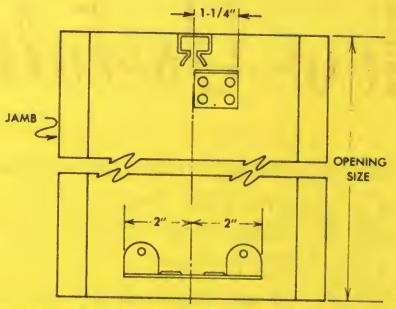
UPPER MECHANISM — TOP VIEW



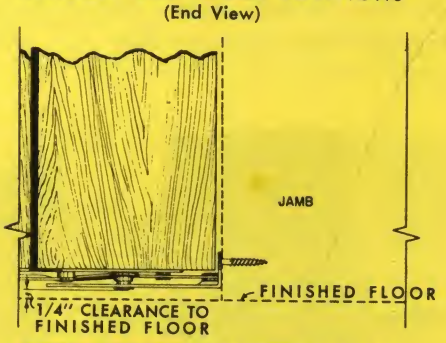
INSTALLATION ON WOOD FRAME — BOTTOM MECHANISM — TOP VIEW
(Right Louver View)



INSTALLATION ON WOOD FRAME — BOTTOM MECHANISM — TOP VIEW
(Left Louver View)



TOP AND BOTTOM INSTALLATION BRACKET AND TRACK POSITIONS
(End View)



BOTTOM CONTROL BRACKET — End View showing bottom hardware clearance above sub floor on standard ¾″ allowance door.

How to Specify Louver View

Louver-Fold doors are made with either a *left louver view* or a *right louver view*. (Louver view is direction eye can see through door with door in louver position.) Select left or right louver view to give most advantageous view or privacy desired. *Note: Louver view remains the same whether door is installed with stack at left or right of opening.* Pairs of doors that louver all left or all right are made to overlap at center and are made without "U" type molding on leading panels. Pairs ordered with opposite louver-view, *one right and one left,* cannot be made to overlap and will be furnished with "U" type molding on lead panels to butt together at the center.

Stack Space

Louver-Fold doors require only 1 1/16″ stack space for each panel in closure plus ¾″ at installation point. *No spring back!* Overall thickness is only 8⅜″ when folded.

PANELS: All louvers shall be made of select ⅛″ plywood bonded into hollow-core "Air Foil" shape with Urac 185 water resistant glue. Louvers shall be ¼″ thick at the edges, 1″ thick at the center and 8⅜″ wide. Louvers shall not be connected at the edges and shall rotate in unison through approximately 90° of arc when the door is opened or closed. With door in closed position, louvers shall contact each other and overlap at the edges for maximum privacy and sound deadening. In partially open position, louvers shall angle with air space between to allow ventilation and view. (Specify louver view desired — either left or right.)

HARDWARE: All hardware shall be of anodized aluminum construction with the exception of steel track, hangers and screws. All hinge links shall be fastened with anodized aluminum rivets with self-lubricating nylon bushings and washers to assure trouble-free, and quiet operation. Two 6″ anodized aluminum handles, matching the hardware, shall be provided.

MOLDINGS: One half-round 1″ molding shall be supplied with each door for use in sealing stack side of door. The lead panel of door shall be supplied with a ⅞″ x 1⅛″ "U" type molding providing for adjustment up to ⅝″ to compensate for variations in the door frame. (On pairs of doors with the same louver view no "U" molding is needed as lead panels overlap for complete closure.)

Each LOUVER-FOLD door shall be furnished completely fabricated ready for installation, with track, installation screws and instructions included in the carton.

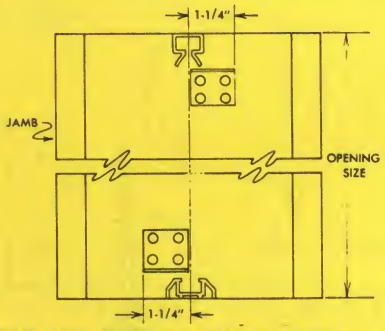
Specifications subject to change without notice.

Sound Transmission: Louver-Fold Doors have satisfactorily passed test by Armour Research Foundation in accordance with ASTM E-90-55 testing procedure. Full report of decibel ratings available on request.

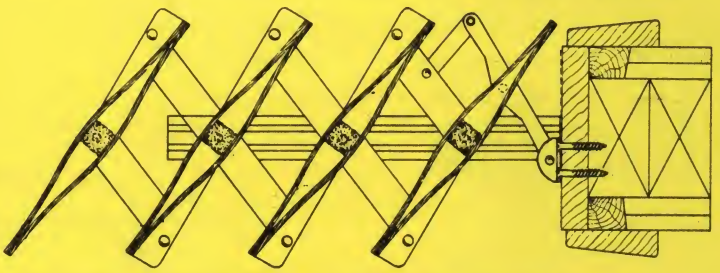
Mechanism-Installation Detail: Doors With Partial Control Track

Scale all Drawings: 3/16″=1″

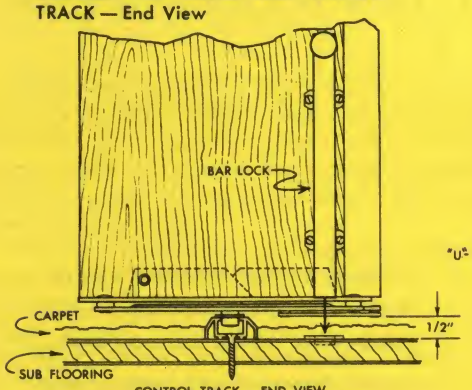
Furnished on doors wider than 8′.



TOP AND BOTTOM INSTALLATION BRACKET TOP TRACK AND PARTIAL TRACK — End View



INSTALLATION ON WOOD FRAME—BOTTOM MECHANISM
Top View Showing Control Track

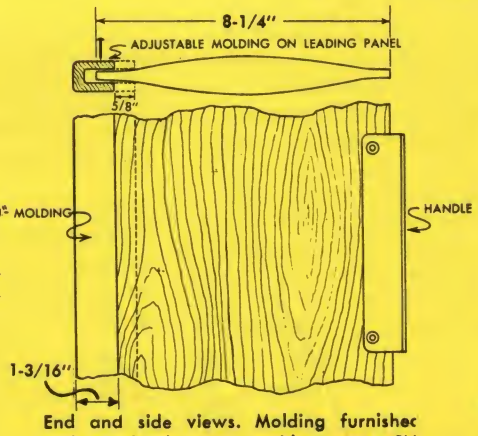


CONTROL TRACK – END VIEW

BOTTOM CONTROL TRACK—End View showing maximum clearance of bottom hardware above sub-floor on standard ¾″ allowance door. (Bar Lock optional)

TOP OF TRACK MUST EXTEND NO LESS THAN 5/16″ ABOVE FINISHED FLOOR

BOTTOM CONTROL TRACK—End View showing method of blocking up control track when extra thick floor covering is to be installed. Door height measurement should be made from top of block — not from sub-floor.

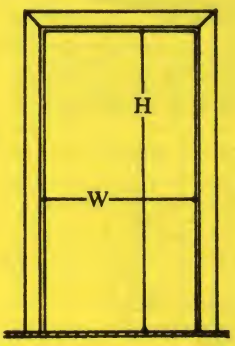


End and side views. Molding furnished with single doors — provides up to ⅜′ adjustment to fit door to irregular openings ¼″ less than opening size or ⅜″ greater than opening size. For Pairs, See "How To Specify Louver View," Page 4.

ALLOWANCES

All doors are furnished approximately ⅛″ less in width and ¾″ less in height than opening size ordered to provide for clearance. (See drawings "Bottom Control Brackets & Track")

... more detail on next page



HOW TO MEASURE FOR LOUVER-FOLD DOORS
Note: Measurements must be accurate for proper installation and operation.

HEIGHT MEASUREMENT. The height measurement "H" is the distance from finished opening at top to finished floor. Louver-Fold Doors are made with an approximate ¾″ bottom clearance.

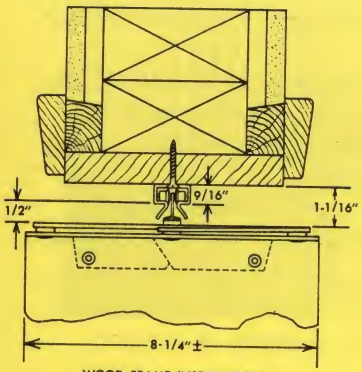
WIDTH MEASUREMENT. The width measurement "W" is the distance from jamb to jamb. We recommend that width measurements be taken at top, center and bottom of opening to insure against irregularities.

LOUVER-FOLD
WOOD PANEL FOLDING DOORS

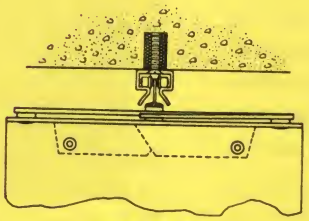
SPECIFICATIONS continued

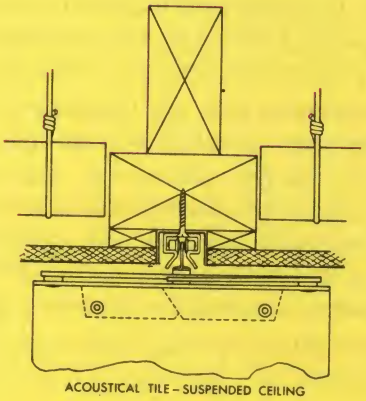
OVERHEAD TRACK DETAIL

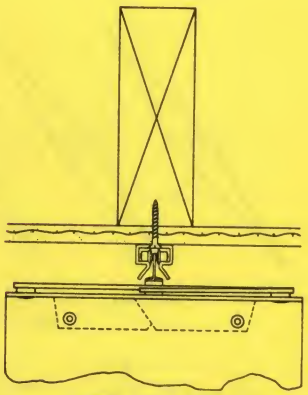
Scale: $\frac{3}{16}" = 1"$

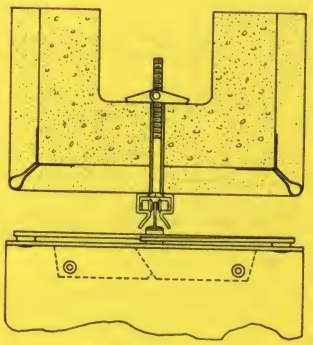


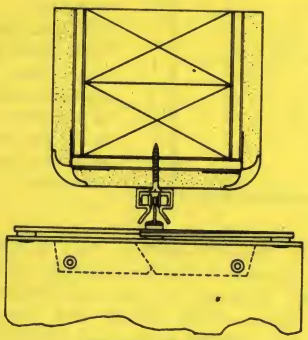
WOOD FRAME INSTALLATION

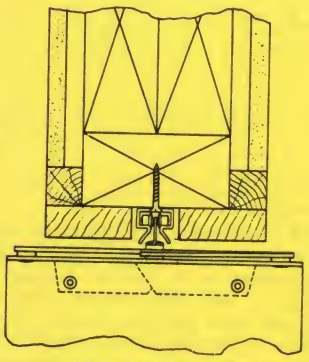

SOLID MASONRY


ACOUSTICAL TILE – SUSPENDED CEILING


METAL LATH & PLASTER


HOLLOW MASONRY


DRY WALL OR PLASTER


WOOD FRAME – RECESSED TRACK

Detail drawings presented here represent most installation requirements. Write for information on installations not covered here.

Louver-Fold Doors are manufactured only by:

Consolidated General Products Inc.
Executive Offices and Main Factory:
Houston 8, Texas

For Low-Cost Installations

SPECIFY

Veni-flex

woven wood folding doors

ADD BEAUTY

CONVENIENCE – ECONOMY

Now, with Veni-Flex Folding Doors, you can achieve greater decorative appeal combined with *engineered* convenience. And Veni-Flex allows full use of all available room – space-consuming door swing is completely eliminated, saving as much as eight square feet of valuable floor space per opening.

For "open-area planning," Veni-Flex offers many advantages: family areas or activity areas can be screened off without sacrificing needed ventilation; small Veni-Flex "stack space" doesn't steal floor space when doors are opened; Rol-Trak may be mounted directly to the ceiling to eliminate expensive over-door construction.

Specify Veni-Flex Folding Doors – you'll get the most in quality materials, fine workmanship by American craftsmen, and precision engineering.

VENTILATION:

The ventilation allowed by the slight space between the slats of a Veni-Flex door is a real boon to modern homemakers, particularly in areas where mildew is a problem. For closets, Veni-Flex allows sufficient ventilation to stop damaging mildew. And for air-conditioned houses, Veni-Flex doors and room dividers are ideal: the free passage of cool air is not materially impeded by the fine Veni-Flex woven wood fabric.

Veni-flex **16e / Co**

GENERAL DESCRIPTION:

VENI-FLEX Folding Doors are made from select Northern Basswood slats expertly woven with heavy seine twine into a decorative and functional wood fabric. Standard models use ⅞" x 1/10" slats; Deluxe models feature the new ⅜" x 1/10" slat for a softer, more attractive appearance. VENI-FLEX doors operate smoothly and quietly on nylon rollers in the exclusive "Rol-Trak" which features an integral valance to eliminate light space between fabric and track. The casual textured background offered by VENI-FLEX harmonizes gracefully with the most distinctive interior decoration.

COLORS:

VENI-FLEX Doors are available in Clear Natural lacquer finish or in these standard enamel colors:

Red	**Cocoa**	**Gray**	**Light Green**	**Off-White**
Blue	**Cream**	**Alice Blue**	**Apple Green**	**White**

In addition, stain lacquer finish is available in:

Dark Walnut	**Mahogany**	**Maple**

Also, three oil stain colors are offered:

Cairo Cream	**Tan Natural**	**Redwood**

Special Colors are available at slight extra cost. Doors with *prime coat only* can be obtained at slightly lower cost.

SPECIFICATIONS:

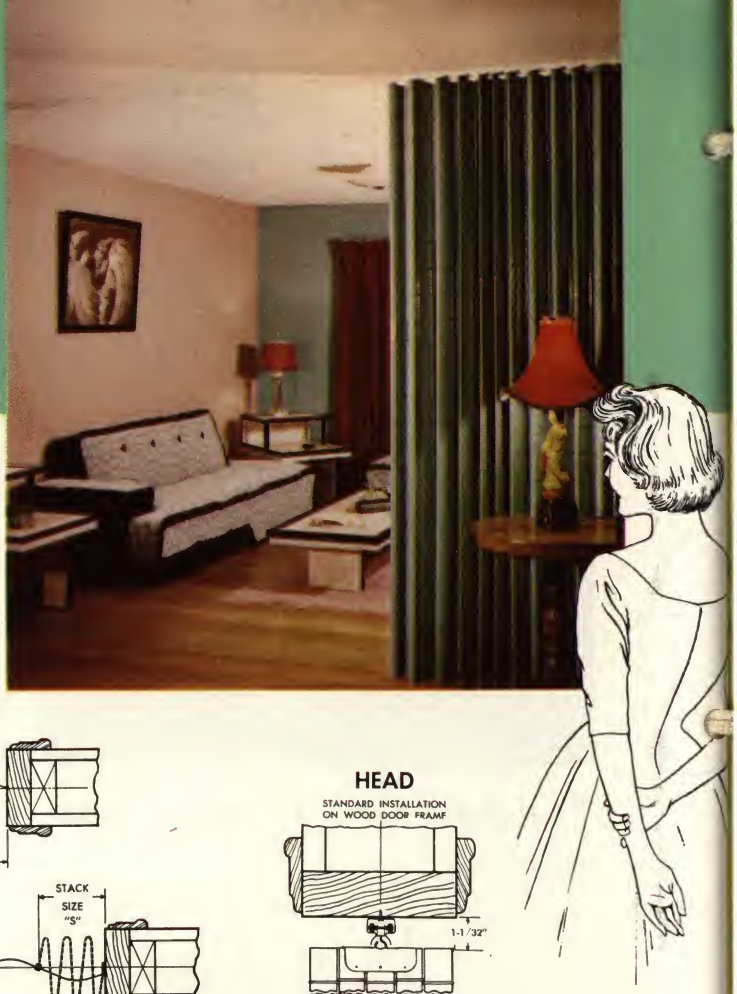
Veni-Flex Folding Doors and Room Dividers as indicated shall be of ⅞" (or ⅜") x 1/10" kiln dried Northern basswood slats woven with #15 cable laid heavy duty seine twine to provide flexibility and ventilation, as manufactured by Consolidated General Products, Inc. Doors shall be suspended from swivel type nylon rollers attached to bronze finish aluminum hangers, securely riveted (not stapled) to fabric, operating in corrosion-resistant coated steel track with integral valance mounted overhead. All tracks shall be pre-lubricated at factory. Doors shall be equipped with magnetic catch inset in lead molding and shall be finished, stained, or lacquered as individually specified. (Optional: Doors for curved areas shall be furnished with heavy aluminum "I" beam tracks and swivel-type nickel-plated steel rollers.)

STANDARD EQUIPMENT:

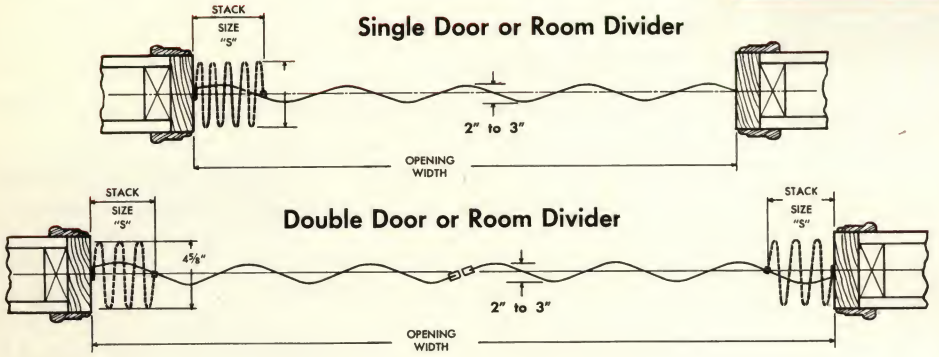
All Veni-Flex single doors and room dividers are individually cartoned, complete with all operating hardware, track, screws and anchor molding for securing one side of door to jamb, casing or wall. Two plastic handles, magnetic catch, and all necessary screws are also furnished. Complete installation instructions are included in each carton. Veni-Flex doors are also available as follows: (1) Prime Coat only, (2) With double stile moldings for "free" door, (3) Anchor moldings omitted.

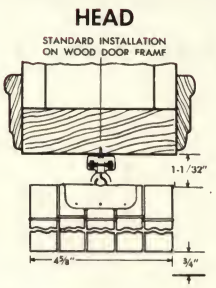
Veni-flex

woven wood folding doors



DIMENSIONS AND INSTALLATION DATA





IMPORTANT: Veni-Flex doors and room dividers should be ordered for the full opening in which they are to be installed and the full opening measurements both in width and height should be given. They are supplied to fit such space with 12 to 15 per cent fullness and with ¾" operating clearance at floor level.

SINGLE DOOR OR ROOM DIVIDER – Veni-Flex doors are supplied so that they can be used for either left hand or right hand opening. The left hand door anchors at the left and stacks at the left. The right hand door is just the opposite.

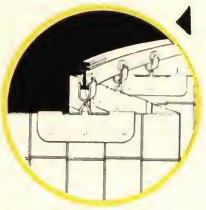
STOCK DOORS OR STOCK ROOM DIVIDERS – Stock doors or stock room dividers are supplied in 6′ 8″ and 8′ 0″ opening heights only. They are supplied in opening widths of 2′ 0″, 2′ 4″, 2′ 6″, 2′ 8″, 3′ 0″, 3′ 6″, 4′ 0″ and 5′ 0″, 6′ 0″, 7′ 0″, 8′ 0″, 9′ 0″ and 10′ 0″.

SPECIAL DOORS OR ROOM DIVIDERS – Veni-Flex special doors or room dividers are supplied in opening heights of 2′ 0″ to 10′ 0″ and in any opening width desired. The size of the stack when the door is fully opened is approximately 1½" per foot of opening width on both stock and special doors.

DOUBLE DOORS OR ROOM DIVIDERS – These units are supplied in stock and custom sizes. The stack size "S" is approximately 1½" per foot of opening width when the door is completely open.

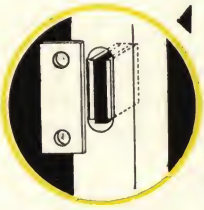
NEW NYLON ROLLERS

Rugged, self-lubricating nylon rollers, operating in the sturdy steel "Rol-Trak," give longer roller life, smoother operation, eliminate need for frequent lubrication.



"I" BEAM TRACK

To install your Veni-Flex doors on a curve, specify "I" Beam Track. All necessary hardware, brackets and components are furnished.



NEW MAGNETIC CATCH

All Veni-Flex Folding Doors are equipped with permanent hard-holding INDOX I magnet with 10-lb. pull to insure complete closure. Releases with an easy twist.

FORM No. 9426

PRINTED IN U.S.A.

LOUVER-FOLD AND VENI-FLEX Folding Doors are manufactured exclusively by:

CONSOLIDATED GENERAL PRODUCTS, INC.

Executive Offices and Main Factory: 2401 Nicholson, P. O. Box 7425: Houston 8, Texas

Branches in: Dallas, New Orleans, Atlanta, Tampa, Melrose Park, Ill. Saddle Brook, N. J. and Waukesha, Wis.

A·I·A—16M

16e
Cu

Accordion Partitions and Doors

4 DISTINCTIVE DOORS

EACH ONE ENGINEERED FOR YOUR SPECIFIC REQUIREMENT

CURTITION®

Mark XX	Commercial Heavy-Duty
Mark X	Commercial
Mark V	Residential
Mark I	Residential

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A·I·A—16M

CURTITION CORPORATION • HAWTHORNE, CALIFORNIA

CURTITION®

Mark XX

the king of accordion partitions and doors

For industrial, commercial and residential installations where large areas are to be divided and subject to heavy use.

POST CARRIER—of durable steel with 4 nylon wheels—built to withstand the roughest handling, yet provides easy, smooth operation at all times.

HEAVY-DUTY I BEAM TRACK—of aluminum extrusion . . . special taper keeps nylon wheels from "chattering." Provides smooth, quiet performance.

DOUBLE-ACTION LATCH—optional, available with or without deadlock. May be installed at a later date without dismantling door. Amazingly simple installation.

HANDLE—an all metal die casting finished in satin chrome, smart styling, contoured to fit the hand. One piece handle operates latch control.

FINISH MOLDINGS—of extruded aluminum accommodate vinyl-bumper, provides positive seal in closed position.

HINGE PLATES—of 18 gauge channel type, reinforced to form extra heavy-duty frame; more rigid performance. True pantograph action completely concealed within the fabric covering. Interlacing hinge plates—**top and bottom** and necessary intermediate rows—prevents side sway.

ANCHOR POST—all metal roll-formed C-Channel incorporates center line positioning.

ANCHOR CLIPS—of tempered spring steel install on jamb. Anchor post "snap locks" into secured position. No visible screws.

POSITIONING CLIPS—Holds door in positive closed position. No latch required. Eliminates "springback."

HEAT SEAL ATTACHMENT—nylon reinforced tape for positive wrinkle-free attachment of cover to frame.

NEW TEXTURES, NEW COLORS—vinyl coated fabrics in modern Decorator colors (see page 12 for textures). Plain, mottled and fabric prints . . . especially tailored for folding doors . . . supplied by leading plastic manufacturers in the industry.

EXTRUDED ALUMINUM SUB-CHANNEL FOR PLASTER—available for concealed type track. May be used as plaster stop or acoustical tile moulding.

MOLDED NYLON WHEELS—with precision bearings give friction-free quiet operation, much longer life.

Specify CURTITION MARK XX and be confident in the knowledge of having installed the finest accordion partition doors available. CURTITION CORPORATION has been manufacturing accordion folding partition doors since 1949. CURTITION MARK XX provides today's buyers with unusually attractive flexible living space, and with unique quality construction details not found in any other door. Will help you to sell faster—more profitably. When you want the best, specify CURTITION MARK XX—the king of accordion partitions and doors. For additional details see specification pages.

CURTITION®

Mark X

the king of "narrow-profile" accordion partitions and doors

For industrial, commercial and residential installations where large areas are to be divided and where space is extremely critical.

NARROW PROFILE—fits into door casing without overhang. Allows narrow pocket for concealment.

SWIVEL JOINT—extra heavy, intermediate carriers at every fold maintain balanced suspension . . . guarantees trouble-free, smooth operation.

ANCHOR POST—all metal roll-formed C-Channel incorporates center line positioning.

RECESSED HINGE BRACKETS—at anchor end and lead post result in minimum "compressed" stacking position—creates a smooth contour flow of covering to frame. Eliminates wrinkles and bulges.

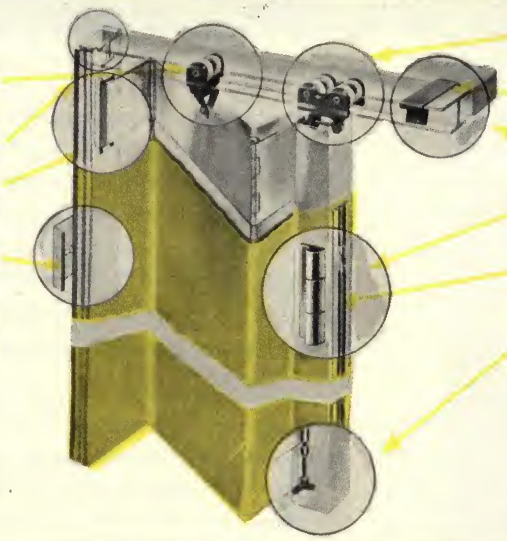
ANCHOR CLIPS—of tempered spring steel install on jamb. Anchor post "snap locks" into secured position. No visible screws.

HEAT SEAL ATTACHMENT—nylon reinforced tape for positive wrinkle-free attachment of cover to frame.

NEW TEXTURES, NEW COLORS—vinyl coated fabrics in modern Decorator colors (see page 12 for textures). Plain, mottled and fabric prints . . . especially tailored for folding doors . . . supplied by leading plastic manufacturers in the industry.

EXTRUDED ALUMINUM SUB-CHANNEL FOR PLASTER—available for concealed type track. May be used as plaster stop or acoustical tile moulding.

MOLDED NYLON WHEELS—with precision bearings give friction-free quiet operation, much longer life. Four wheels at lead post and a truck of 2 wheels at every fold for the entire width of door.



POST CARRIER—of durable steel with 4 nylon wheels—built to withstand the roughest handling, yet provides easy, smooth operation at all times.

POSITIONING CLIPS—hold door in positive closed position. No latch required. Eliminates "springback."

HEAVY-DUTY I BEAM TRACK—of aluminum extrusion . . . special taper keeps nylon wheels from "chattering." Provides smooth, quiet performance.

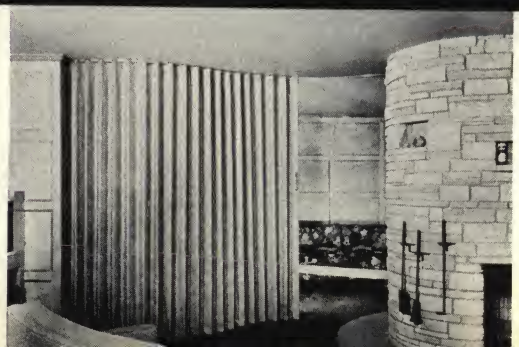
DOUBLE-ACTION LATCH—optional, available with or without deadlock. May be installed at a later date without dismantling door. Amazingly simple installation.

HANDLE—an all metal die casting finished in satin chrome, smart styling, contoured to fit the hand. One piece handle operates latch control.

WING-NUT—(concealed, but accessible). Provides fast, easy, accurate positioning of lead post to jamb. Eliminates any gap at top or bottom.

FINISH MOLDINGS—of extruded aluminum accommodate vinyl-bumper, provides positive seal in closed position.

HINGE PLATES—of heavy non-breakable warp-free 14-gauge steel, 2½" deep by 5" wide on the Mark X. Special equalizer-stop provides proper fullness and equal spacing when door is fully extended. Interconnecting vertical rods are welded to hinge plates for positive parallel action of folds.



Specify CURTITION MARK X and be confident in the knowledge of having installed the finest accordion partition doors available. CURTITION MARK X provides today's buyers with unusually attractive, flexible living space, and with unique quality construction details not found in any other doors, will help you to sell faster—more profitably. When you want the best, specify CURTITION MARK X—the king of accordion partitions and doors. For additional details see specification pages.

CURTITION®

Mark V

a deluxe folding door
for residential use
at an appealing low price

Designed for those who want a deluxe residential accordion door at a moderate price. With CURTITION MARK V you have the perfect solution to quality construction on a moderate budget—and to space problems so often arising with wardrobes, family rooms, "jack and jill" rooms, dining-living areas, and wherever an accordion door is indicated. All of the same basic deluxe features of CURTITION doors have been built into this new line. For details on CURTITION MARK V, as well as other Curtition models, refer to specification pages.

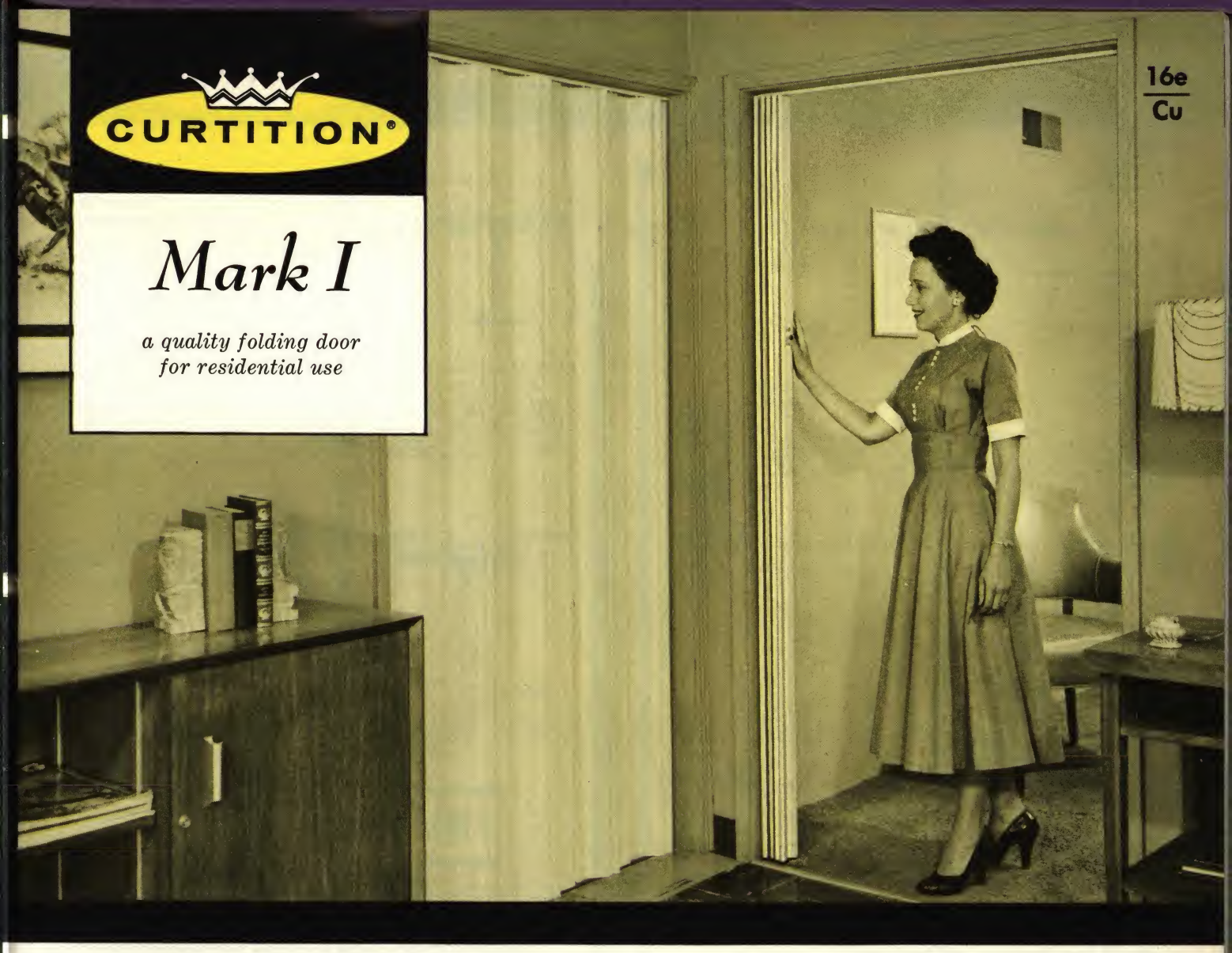
CURTITION MARK V accordion doors quickly solve residential space problems by providing a more attractive and flexible means of subdividing problem areas. As with all Curtition models, CURTITION MARK V doors add functional utility and charm to any residential room.

DESIGN FEATURES—CURTITION MARK V doors are distinguished by a heavy gauge vinyl, reinforced fabric backing especially created for CURTITION. Frames are of all-steel "narrow-profile" construction and were designed for maximum usage and stability.

CURTITION®

Mark I

a quality folding door for residential use



ECONOMY—CONVENIENCE—BEAUTY—AND SERVICE . . . are the key features of CURTITION MARK I accordion doors. Low in price, yet quality engineered, they offer the budget home designer and builder a golden opportunity to enhance the beauty of even the lowest-priced dwelling. CURTITION MARK I doors are especially indicated for wardrobes and closets, service areas, as well as any other residential door opening.

Soft beige color creates pleasing eye appeal in **any** price home. Rich plastic surfaces are easily cleaned—virtually damage-proof. Installation is fast, simple, requires no special skill. Specify CURTITION MARK I with the full confidence they are backed by the reputation of the CURTITION CORPORATION—manufacturers of accordion folding doors since 1949. For other details see specification pages.

ANCHOR—screw attached.

ALUMINUM EXTRUDED TRACK—center-line suspension.

PANELS—joined together by matching vinyl hinge strips. Nothing to jamb or come loose—no warping. Finger touch opens or closes. Rich plastic surface.

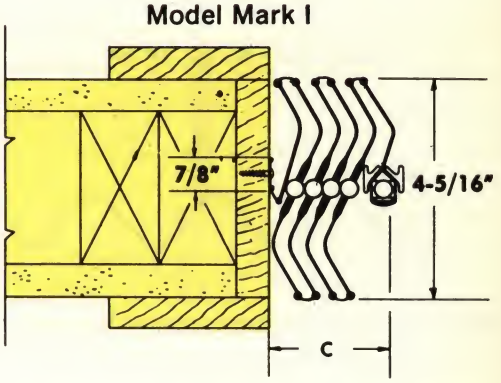
CLIP GLIDES—of one-piece nylon. No wobble or chatter.

HINGE CARRIERS—nylon glide.

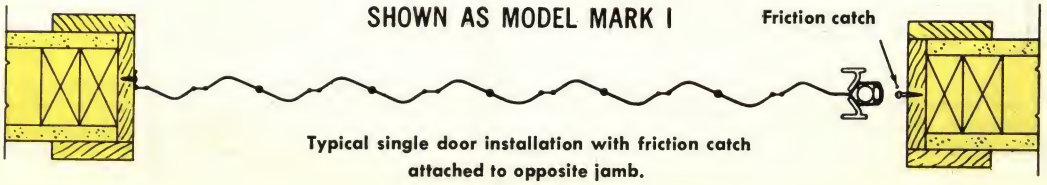
FRICTION LATCH—included on all doors.

PLASTIC HANDLE—attractive, soil-proof.

Model Mark I



COMPRESSED STACK DETAIL Mark I model compressed ratio of 12″ to 1″. Anchor panel attached by wood drive screws. Friction catch attached to opposite jamb. For other details see specification pages.



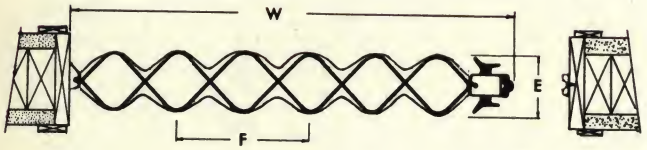
Typical single door installation with friction catch attached to opposite jamb.

CURTITION

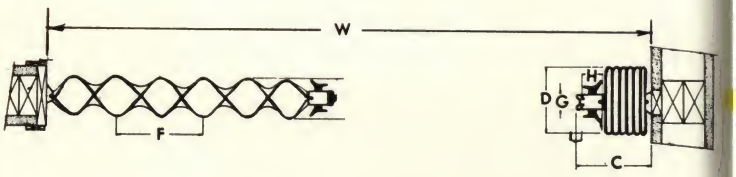
Plan Details

MARK XX PLAN

See Page 10 for Standard Door Schedule

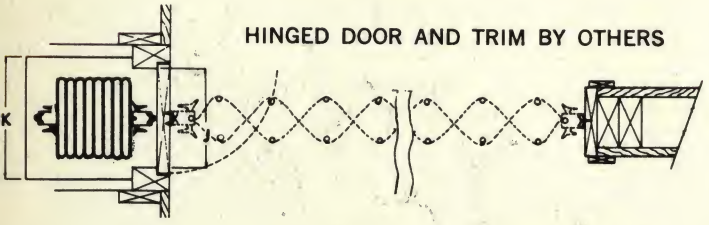


Single Curtition Doors using standard lead post and fixed jamb.



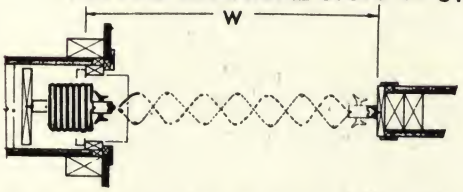
Two Curtition Doors form a pair, using standard lead posts and fixed jambs.

HINGED DOOR AND TRIM BY OTHERS



Popular where wall panelling is used . . . provides greater flexibility of operation. May be housed as shown . . . or without being recessed. No fixed jambs.

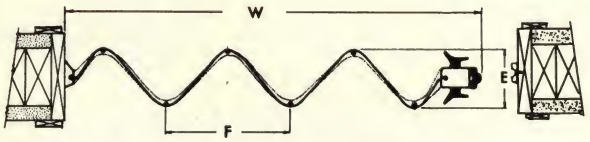
TRIM AND REMOVABLE STOPS BY OTHERS



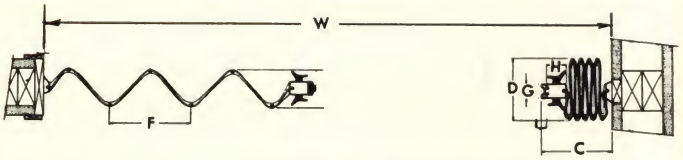
Curtition Door with sliding jamb covered with matching fabric. Operates in a pocket or recess to conceal stacked Curtitions. In use, panel slides out with door and comes to rest against stops as shown in diagram.

MARK X & V PLAN

See Page 10 for Standard Door Schedule

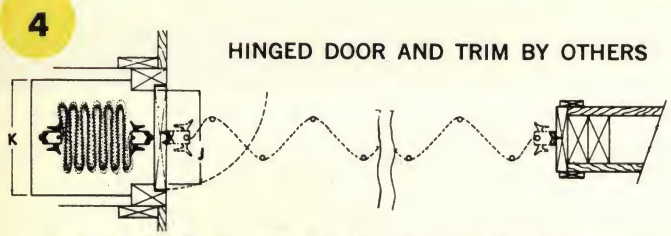


Single Curtition Doors using standard lead post and fixed jamb.



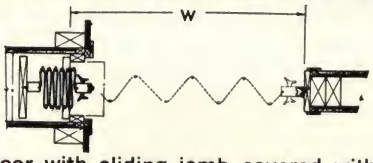
Two Curtition Doors form a pair, using standard lead posts and fixed jambs.

4 HINGED DOOR AND TRIM BY OTHERS



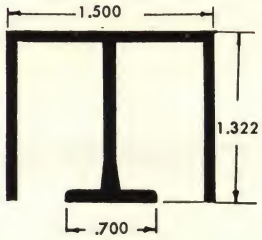
Popular where wall panelling is used . . . provides greater flexibility of operation. May be housed as shown . . . or without being recessed. No fixed jambs.

7 TRIM AND REMOVABLE STOPS BY OTHERS



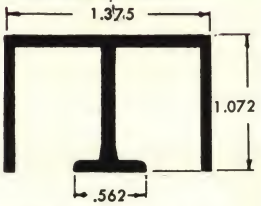
Curtition Door with sliding jamb covered with matching fabric. Operates in a pocket or recess to conceal stacked Curtitions. In use, panel slides out with door and comes to rest against stops as shown in diagram.

Heavy Duty I Beam



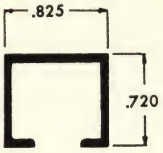
Available Mark XX - Mark X

Standard I Beam



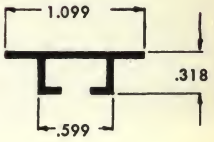
Standard for Mark XX and Mark X
Available Mark V

Box Track



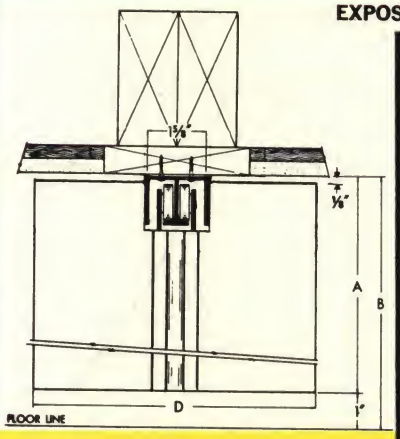
Standard
Mark V

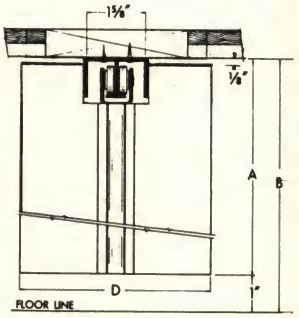
Box Flange

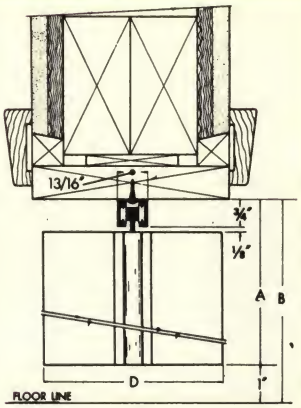


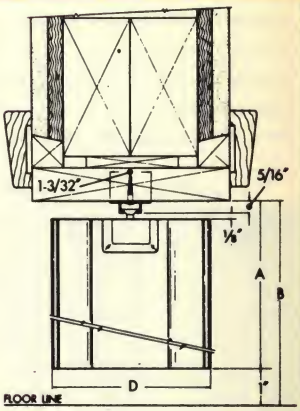
Standard
Mark I

EXPOSED TRACK

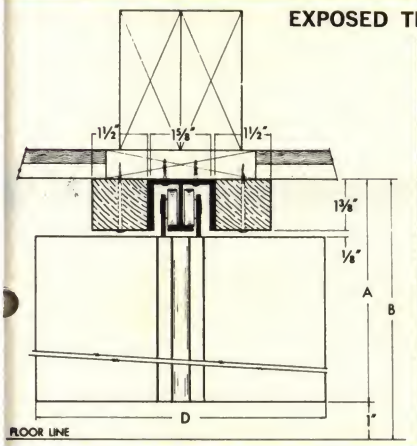


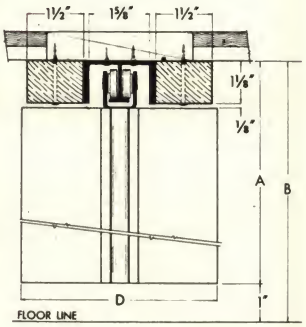


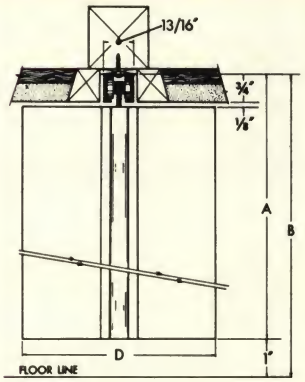


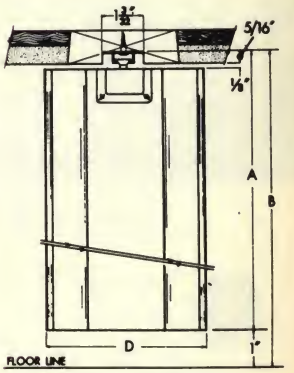


EXPOSED TRACK MARK X

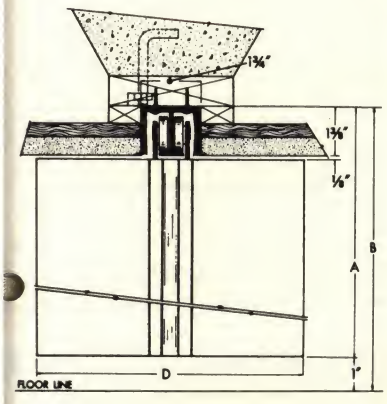


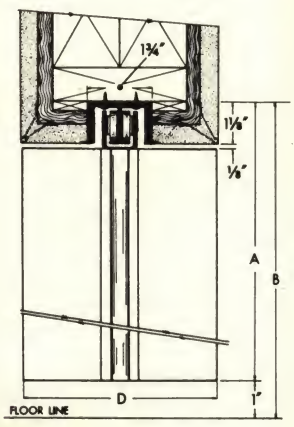






CONCEALED TRACK MARK XX AND X





INTERMEDIATE HINGE ROWS

An additional row of intermediate hinges on doors 7'6" in height and spaced not more than 3'6" apart thereafter.

Limit chains are added to MARK XX doors 7' 6" and wider to assure evenness of folds for the full width of the door.

Refer to Dimension Code Schedule Page 10
For "D" Dimension Mark XX or Mark X

CURTITION®

OPTIONAL EQUIPMENT

1. **LATCH** (double action with or without deadlock, striker plate and female jamb strip)
2. **FEMALE JAMB MOULDING**
3. **LATCH WITH CYLINDER KEY LOCK** (One side only)
   LATCH WITH CYLINDER KEY LOCK (Both sides)
   SCHLAGE NO. A2374 with lazy cam action
4. **MOVABLE POST** (attached to door—replaces anchor) (see page 6)
5. **FLOATING POST** (not available when friction latch is used)
6. **PUSH PULL RODS** (furnished on custom—over 9'0" in height)
7. **SLIDING JAMB** (See page 6)

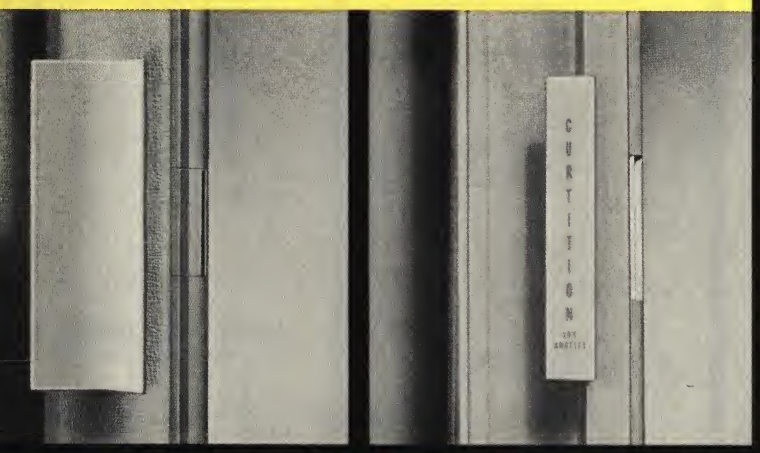
AVAILABLE ON

LOCKING MECHANISMS

Locking devices are smartly designed to accentuate the beauty of all Curtition Doors. They provide positive locking action when closed, yet require minimum effort to open. Locks are placed at a convenient height. All hardware is of top grade quality. Available in aluminum or brass finish.

Positive holding with ease of operation when opening or closing. Two single doors may be combined to make a pair by a converter installed into the latch of one door. **For availability in models see schedule page 10.**

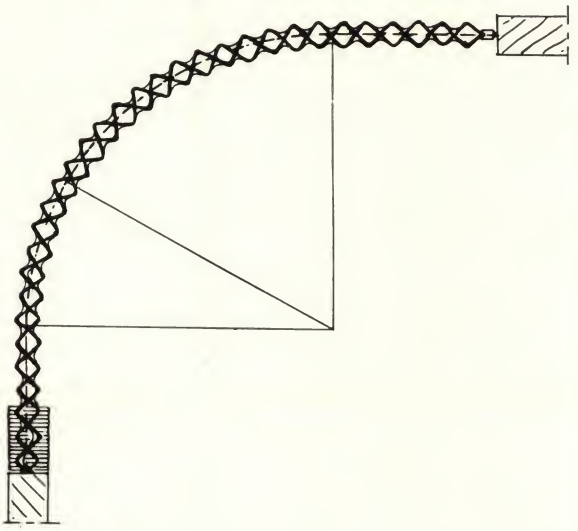
FRICTION LATCH



CURVED TRACK DETAILS

Standard CURTITION doors may be used on radius track, providing the heights are according to Standard Door Schedule Dimension A.

Track can be curved to required radius on the job . . . an exclusive feature with CURTITION.



MECHANICAL LATCHES

1

DEAD-LOCK

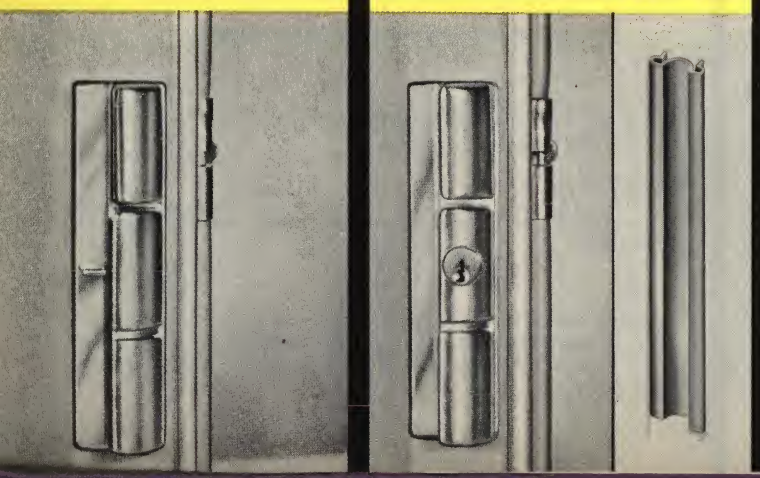
Available with or without deadlock. With deadlock, operates from either side for privacy. Provision for emergency release from opposite side.

3

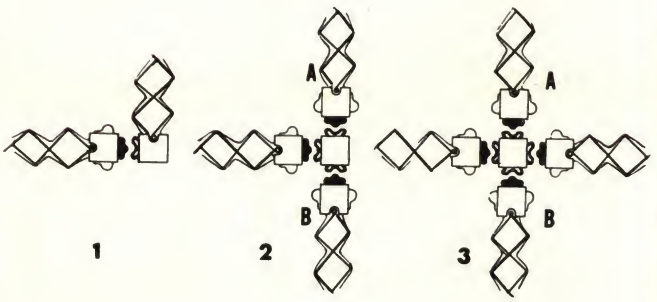
CYLINDER LOCK

Cylinder key lock may be used on one side or both. May be keyed alike on multiple door installation or masterkeyed.

2 **FEMALE JAMB MOULDING**



MULTIPLE DOOR ARRANGEMENTS 5



1. Special post detail where two CURTITION doors meet at right angles. Used to create private rooms in corner areas.

2. Detail shows three CURTITION Doors meeting. Floating post may be attached to either A or B. This eliminates need of permanent post structure.

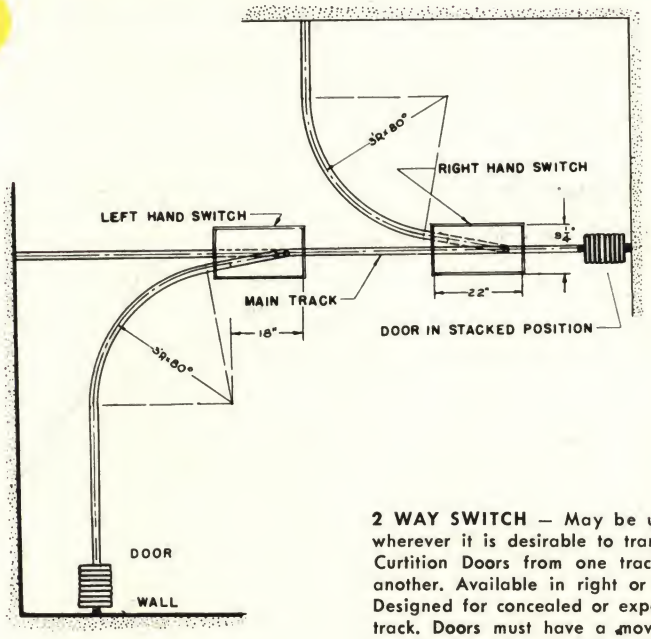
3. Popular arrangement of four CURTITIONS meeting at floating post. When stacking, floating post may be attached to either A or B.

AND ACCESSORIES

8 **TRACK SHIM** - 1⅝" x 5⅝" maximum
9 **SURFACE FOOT BOLTS**
10 **SOUND LINER** (includes sweepstrips)
11 **SWEEPSTRIPS** (without liner) Top and Bottom
12 **TWO-WAY SWITCH** (includes pan and plate)
13 **THREE-WAY SWITCH** (includes pan and plate)
14 **PIVOT SWITCH 30"**
PIVOT SWITCH 48"
15 **CROSS-OVER SWITCH**

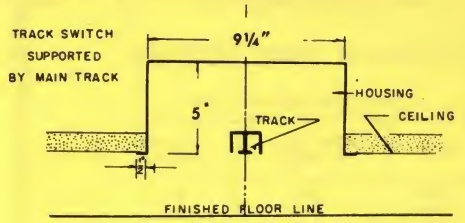
MARK XX AND MARK X

12



2 WAY SWITCH — May be used wherever it is desirable to transfer Curtition Doors from one track to another. Available in right or left. Designed for concealed or exposed track. Doors must have a movable post in place of anchor.

SWITCH TRACK HOUSING INSTALLATION



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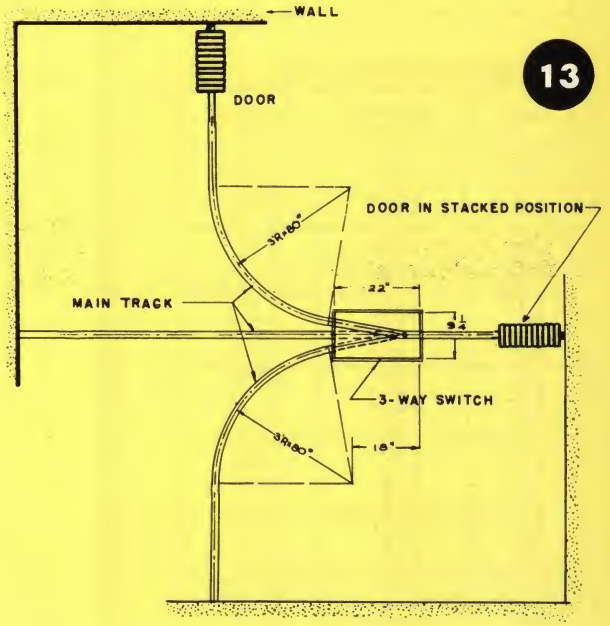
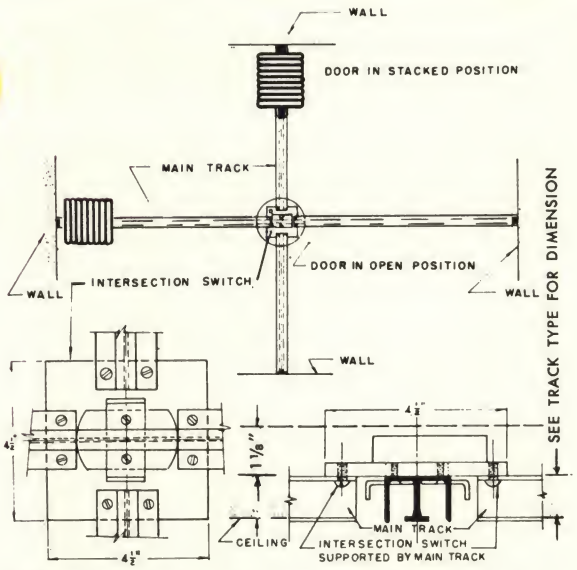


3 WAY SWITCH — Used where multiple doors operate on a common track. This allows switching from the main track to any of two side tracks. Doors must have a movable post in place of anchor.

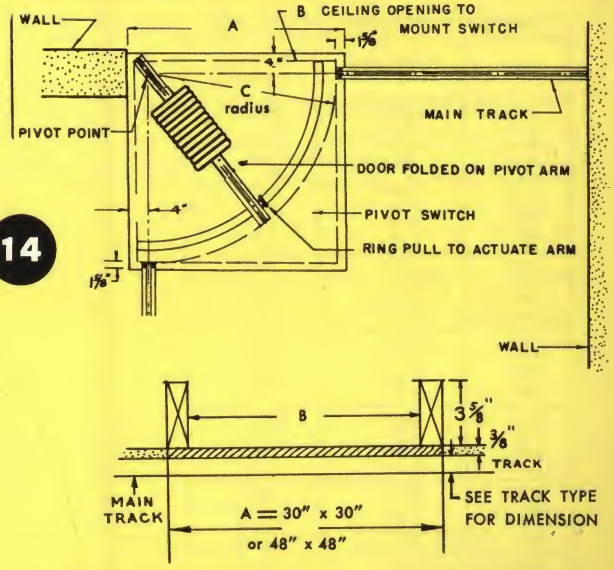
15



CROSS OVER SWITCH — Allows great flexibility in arranging for private rooms within one large area. Permits one Curtition Door to pass through the track of a second door installed at a right angle.

SAFETY FEATURES have been incorporated into all switch tracks. This eliminates the possibility of a Curtition Door accidentally rolling off the track in any position.

14



SWITCH SIZE	30"	48"
A	30"	48"
B	26¾x26¾x3⅝"	44¾x44¾x3⅝"
C	24"	42"

PIVOT SWITCH — 30" switches accommodate doors up to 14 ft. in width; 48" switches accommodate doors up to 25 ft. in width — without sound liner. When sound liner is used, stacking is increased by 35%. Doors must have a movable post in place of anchor.

CURTITION

STANDARD DOOR SCHEDULE

OPENING HEIGHT 6'6"

Width	Header Height Dimension B	Door Height Dimension A
2'4"	6'6"	6'5"
2'8"	6'6"	6'5"
3'0"	6'6"	6'5"
3'4"	6'6"	6'5"
3'8"	6'6"	6'5"
4'0"	6'6"	6'5"

STANDARD OPENING HEIGHT 6'8½"

Width	Header Height Dimension B	Door Height Dimension A
2'4"	6'8½"	6'7½"
2'8"	6'8½"	6'7½"
3'0"	6'8½"	6'7½"
3'4"	6'8½"	6'7½"
3'8"	6'8½"	6'7½"
4'0"	6'8½"	6'7½"
4'4"	6'8½"	6'7½"
4'8"	6'8½"	6'7½"
5'0"	6'8½"	6'7½"
5'4"	6'8½"	6'7½"
5'8"	6'8½"	6'7½"
6'0"	6'8½"	6'7½"
6'4"	6'8½"	6'7½"
6'8"	6'8½"	6'7½"
7'0"	6'8½"	6'7½"
7'4"	6'8½"	6'7½"
7'8"	6'8½"	6'7½"
8'0"	6'8½"	6'7½"
8'4"	6'8½"	6'7½"
8'8"	6'8½"	6'7½"
9'0"	6'8½"	6'7½"
9'4"	6'8½"	6'7½"
9'8"	6'8½"	6'7½"
10'0"	6'8½"	6'7½"
10'4"	6'8½"	6'7½"
10'8"	6'8½"	6'7½"
11'0"	6'8½"	6'7½"
11'4"	6'8½"	6'7½"
11'8"	6'8½"	6'7½"
12'0"	6'8½"	6'7½"
12'4"	6'8½"	6'7½"
12'8"	6'8½"	6'7½"
13'0"	6'8½"	6'7½"
13'4"	6'8½"	6'7½"
13'8"	6'8½"	6'7½"
14'0"	6'8½"	6'7½"

STANDARD OPENING HEIGHT 8'0"

Width	Header Height Dimension B	Door Height Dimension A
3'0"	8'0"	7'11"
3'4"	8'0"	7'11"
3'8"	8'0"	7'11"
4'0"	8'0"	7'11"
4'4"	8'0"	7'11"
4'8"	8'0"	7'11"
5'0"	8'0"	7'11"
5'4"	8'0"	7'11"
5'8"	8'0"	7'11"
6'0"	8'0"	7'11"
6'4"	8'0"	7'11"
6'8"	8'0"	7'11"
7'0"	8'0"	7'11"
7'4"	8'0"	7'11"
7'8"	8'0"	7'11"
8'0"	8'0"	7'11"
8'4"	8'0"	7'11"
8'8"	8'0"	7'11"
9'0"	8'0"	7'11"
9'4"	8'0"	7'11"
9'8"	8'0"	7'11"
10'0"	8'0"	7'11"
10'4"	8'0"	7'11"
10'8"	8'0"	7'11"
11'0"	8'0"	7'11"
11'4"	8'0"	7'11"
11'8"	8'0"	7'11"
12'0"	8'0"	7'11"
12'4"	8'0"	7'11"
12'8"	8'0"	7'11"
13'0"	8'0"	7'11"
13'4"	8'0"	7'11"
13'8"	8'0"	7'11"
14'0"	8'0"	7'11"

MARK XX AND MARK X
up to 25'0" in width

Dimension Code Schedule and Comparison Chart

Description	Dimension Code	Mark XX	Mark X	Mark V	Mark I
Stack	C	1'=1.4"+3"	1'=1.3"+3"	1'=1.2"+2½"	1'=1.1"+1"
Panel width	D	9"	5½"	5½"	4 5/16"
Extended width	E	* 6¼"	3¼"	3¼"	¾"
Distance between folds	F	† 6¾"	8"	8"	8¼"
Lead post width	G	1¼"	1¼"	1"	—
Lead post depth	H	1¾"	1¾"	1¼"	—
Clear opening	J MAX.	10"	7½"	7½"	6 5/16"
Pocket width	K MIN.	12"	9½"	9½"	8 5/16"
Pounds per square foot		1.6	1.5	1.0	.6
§Wheels		¾" nylon	¾" nylon	Nylon glides	Nylon glides
Track		I Beam	I Beam	Box	Box
Cornice		None	Wood covered matched plastic Type 10	None	None
Anchor		Steel 1¾" x ¾"	Steel 1¾" x ¾"	Steel 1½" x ¾"	Styrene
Anchor Clip		Clip Attached	Clip Attached	Screw Attached	Screw Attached
Hinge Rods		No. 6	No. 6	No. 10	None
Handle		Metal	Metal	Plastic	Plastic
Friction Latch		None	None	Furnished	Furnished
Mechanical Latch/Lock		Optional	Optional	None	None

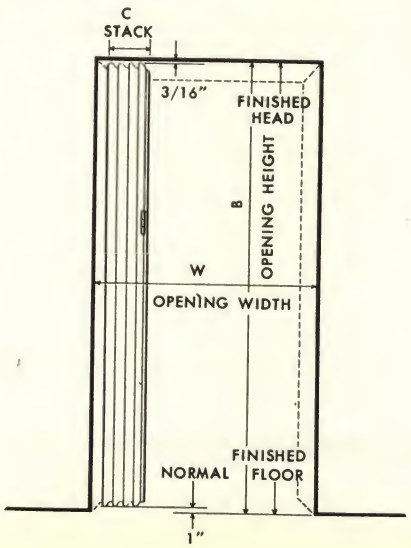
* Standard Doors: 5½" † Standard Doors: 7¼" § Ball Bearing Wheels Optional

STANDARD DOOR HEIGHTS—The actual height of Standard Curtition Doors for use in 6'-8½" or 8'-0" openings is 6'-7½" or 7'-11" (including track). If floor covering is not to be used the header or ceiling must be raised or lowered to achieve the proper amount of clearance at floor line.

STANDARD DOOR WIDTHS—In determining the width of the Standard Door to use when the width of the opening does not fit the Standard Door schedule then go to the next largest size shown. As an example: A door shown on our Standard Door schedule of 4'-8" in width can be used in an opening of 4'-5" to 4'-8" bearing in mind that the schedule shows Maximum Widths of Standard Doors.

HEIGHT MEASUREMENT (B) is the distance between the finished opening at the top of door to the finished floor. Curtition doors are made with an approximate 1" clearance at bottom to allow for future carpet installation on all standard doors.

WIDTH MEASUREMENT (W) is the distance between the finished jambs. Door widths are in approximate 4" increments. Referring to the Curtition Standard Door Schedule, an opening 7'-1" wide requires one door 7'-4" wide, or a pair of doors, each door 3'-8" wide.



MARK XX EXTENDED SPECIFICATIONS

CURTITION ACCORDION PARTITION DOORS shall be top supported without floor guide and shall be fabricated at the factory, including all necessary hardware and track for installation. CURTITION DOORS shall have a steel frame of interlacing collapsible and extensible hinge plates to provide true pantograph action at top, bottom, and necessary intermediate locations. Hinge plates shall be connected to vertical 3/16" rods by WELDING to provide resistance to sidesway, and to insure BALANCED ACTION, VERTICAL STABILITY, PREVENTION OF WARPING; AND SHALL MAINTAIN UNIFORM SPACING OF ALL FOLDS WHILE OPENING OR CLOSING.

All mechanism for producing stability action shall be contained within door frame and covering WITHOUT AUXILIARY SHIELDS OR COVERS. FURTHER, ALL STABILITY SHALL BE DEPENDENT UPON DOOR FRAME without employing stiffness of the covering. The lead post shall remain at a right angle to track at all times.

Tracks shall conform to minimum gauge of HEAVY DUTY or STANDARD and shall be of I beam construction incorporating a special taper to give smooth operation and prevent chattering; as shown in A.I.A. Catalog 16 M.

All doors shall be fabricated to receive COMPLETE INTERCHANGEABLE KEY LOCK OR LATCH UNITS, WHICH ARE ADAPTABLE TO STANDARD BUILDING MASTER-KEYING SYSTEMS, all of which shall be an INTEGRAL PART OF THE DOOR.

Door side jambs shall be secured with steel clips: These clips shall be attached without necessitating removal of covering. The frame shall be completely enclosed within a covering of durable, sun-fast flame-resistant fabric consisting of a vinyl coating on 1.85 drill, and this covering shall not contain any PAPER OR PAPER PRODUCTS in its composition. The MINIMUM standard weight shall be 18.2 oz. per square yard plus 10% minus 5%, and shall not peel, craze or crack.

ALL COVERING MATERIALS, SEPARATELY AND IN COMBINATION, MUST PASS THE FOLLOWING FIRE CODES:

1. New York Board of Standards and Appeals
2. Fire Department, City of Boston
3. American Society for Testing Specification D626-55T
4. Federal Specification CCC-T-191b, Method 5902

LABORATORY CERTIFICATION ON ALL PROPOSED MATERIALS WITH RESPECT TO ABOVE TESTS SHALL BE MADE AVAILABLE ON REQUEST.

COVERING SPECIFICATIONS

Flexibility: Coating shall not crack through to the fabric base after exposure to 124 hours at 110° F in a standard Atlas Fadeometer, and there shall be no stiffening or appreciable discoloration.

Resistance to Cold: Material shall not crack through the fabric base when tested at zero degrees F in accordance with method described in the "Standard Test Methods" of the Vinyl Fabric Institute.

Abrasive Resistance: Fabric shall not be abraded to the cloth surface after 10,000 cycles on a Taber Abrader using CS-10 wheels and 1,000 grams load on each arm.

Flex Resistance: Coating shall not crack or peel when subjected to 100,000 single flexes on the Chrysler-Type Flex Machine giving alternate bias pulls under load.

GUARANTEED FOR ONE YEAR AGAINST DEFECTS IN MATERIAL AND/OR WORKMANSHIP.

MARK XX SHORT FORM SPECIFICATIONS

Accordion Partition Doors shall be CURTITION MARK XX as manufactured by CURTITION CORPORATION, 12616 Chadron Ave., Hawthorne, California. All steel pantograph frame. Aluminum I beam track. Electronically heat sealed panel attachment without stitching. They shall be installed by an authorized factory representative and carry a factory guarantee for a period of one year against defects in material or workmanship. Complete as described in extended specifications of A.I.A. Catalog 16M.

MARK X SHORT FORM SPECIFICATIONS

Accordion Partition Doors shall be CURTITION MARK X as manufactured by CURTITION CORPORATION, 12616 Chadron Ave., Hawthorne, California. These doors shall have an Aluminum Extruded I Beam Track with a taper . . . Equalizer Stops within the hinges . . . No stitching shown on face of fabric covering . . . Positive Action One Screw Adjustment on the lead post. Complete as described in A.I.A. Catalog 16 M. Guaranteed for one year against defects in material and/or workmanship.

MARK V SHORT FORM SPECIFICATIONS

Accordion Doors shall be CURTITION MARK V as manufactured by CURTITION CORPORATION, 12616 Chadron Ave., Hawthorne, California. They shall consist of an all steel frame with fabric covering of reinforced vinyl. No stitching shown, aluminum extruded box type track and shall be installed by an authorized factory representative. They shall carry factory guarantee for a period on one year against defects in material and workmanship. Complete as described in extended specifications of A.I.A. Catalog 16M.

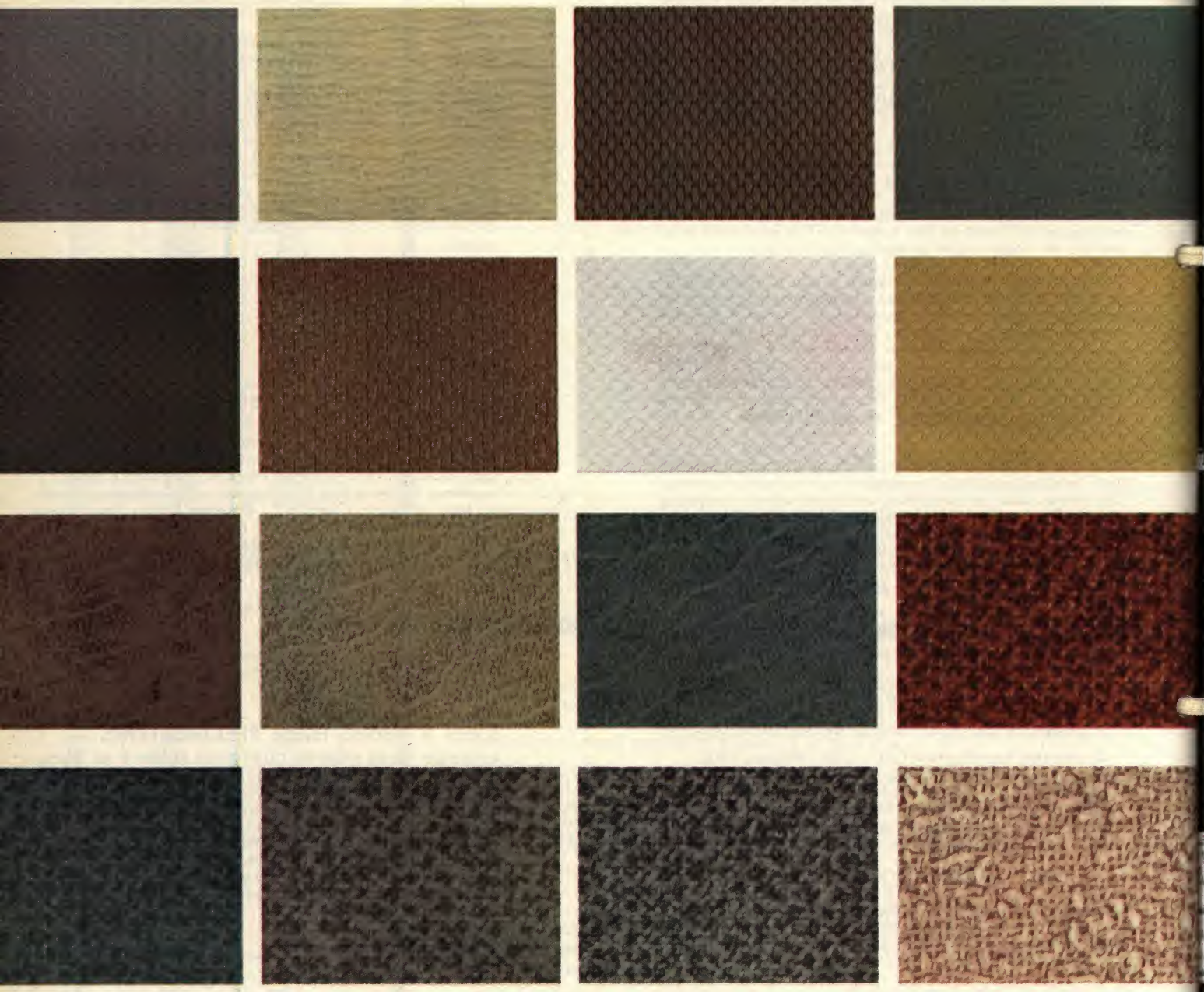
MARK I SHORT FORM SPECIFICATIONS

Doors shall be CURTITION MARK I as manufactured by CURTITION CORPORATION, 12616 Chadron Ave., Hawthorne, California. Doors shall be of high-impact plastic panels connected with full length vinyl hinges. They shall be top track supported, incorporating a one piece Nylon clip-guide, positively attached to plastic panels without the use of cements. Track shall be extruded aluminum, box type. Doors shall be properly installed and shall carry a one year guarantee against defects in material and workmanship.

CURTITION®

ACCORDION
PARTITIONS AND DOORS

CURTITION Mark XX, Mark X and Mark V Partitions and Doors are available in a wide and tasteful selection of 32 decorator colors and smart fabrics. Fabrics are easily cleaned in seconds with a damp cloth. They withstand abuse like magic—will not fray, peel, or crack. **Consult your Curtition distributor for color swatches or write directly to manufacturer.**



CURTITION CORPORATION
12616 Chadron Avenue
Hawthorne, California
ORegon 8-7281

Also manufactured in Canada under licensing arrangement by
CURTITION DOORS CANADA, LTD.,
WINNIPEG, MANITOBA.

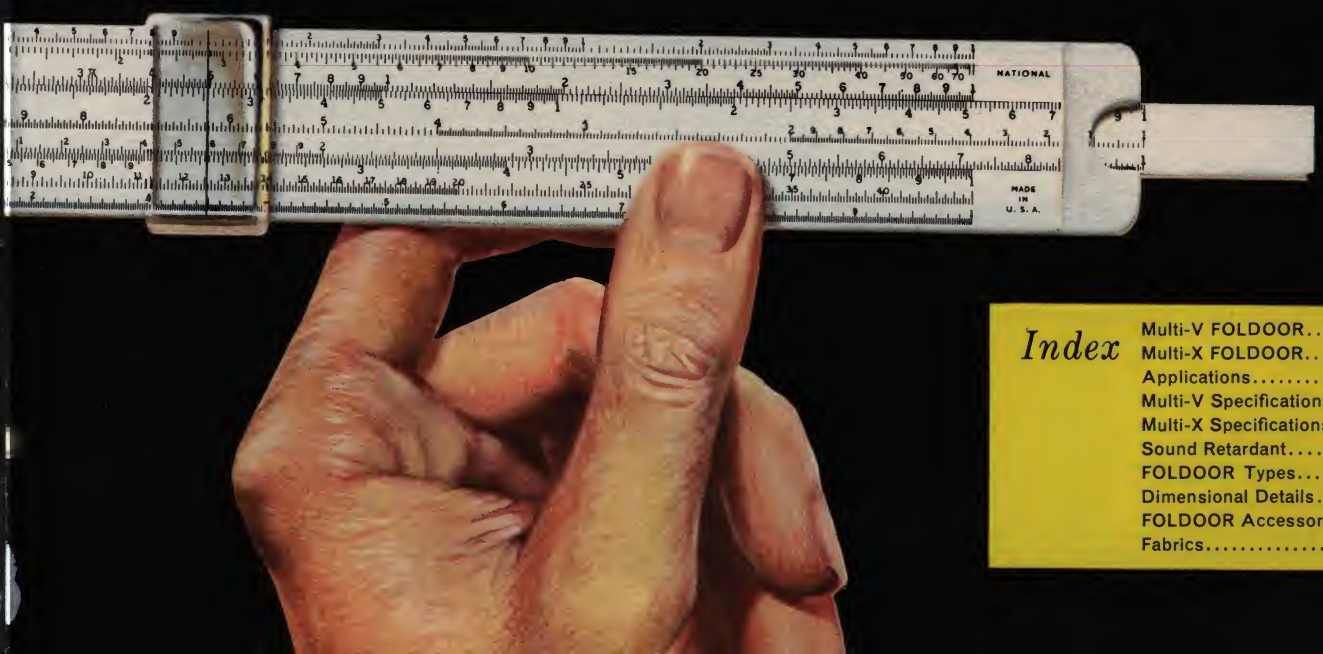
Curtition Accordion Partitions and Doors are manufactured and sold under the following U.S.A. and Canadian patents: 2,712,513—2,717,033—411,529—549,869—635,041—630,727—101,801.

61—102—10C PRINTED IN U.S.A. 10-59

Pompeii Cafe, Hotel Eden Roc, Miami Beach—Morris Lapidus, Architect

First for Unbiased Design
First for Unexcelled Performance

FOLDOOR



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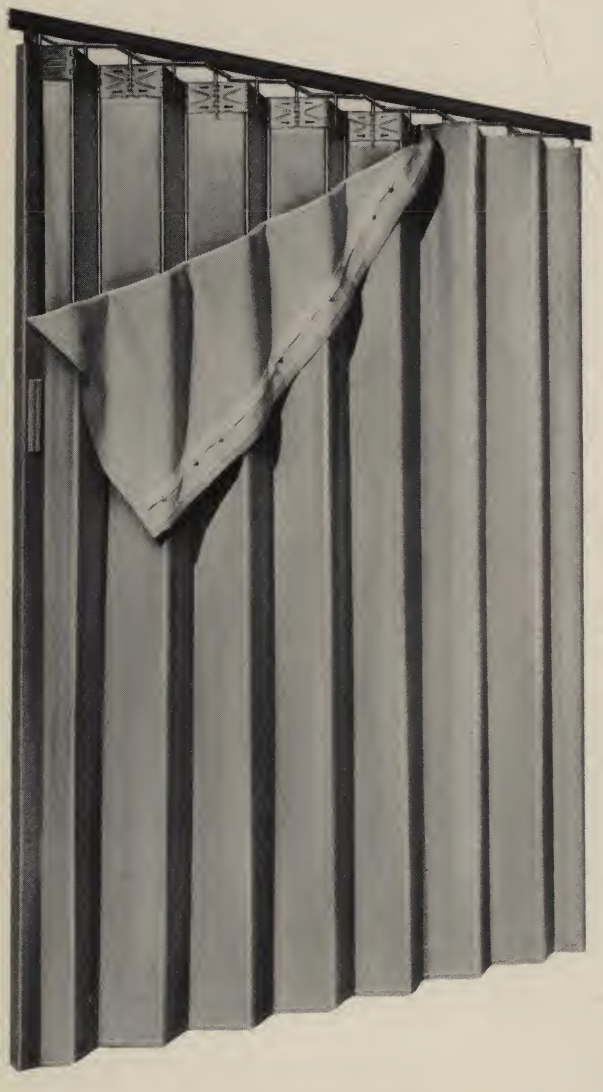
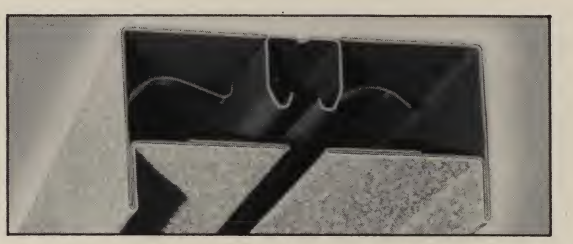
HOLCOMB & HOKE
FOLDOOR
FOLDING PARTITIONS AND DOORS

Multi-V FOLDOOR

Narrow Profile
Minimum Stack Space



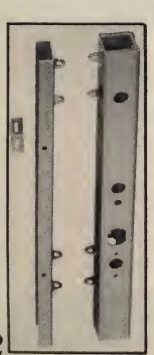


TRULY CONCEALED TRACK
Decorator-favored cornice, covered in matching fabric, is supplied at no extra cost. It completely shrouds the track and pantograph mechanism wherever a recessed-track installation has not been constructed. Cornice is easily attached, stays firmly in place to give a finished look. Sturdy metal construction. Saves substantially on framing, trimming and finishing costs.

NARROW PROFILE
Due to patented back-to-back fabric construction which provides deep volutes in minimum space, Multi-V Type FOLDOOR is only 5½" wide in profile—an important consideration in thin-wall doorways and in pocket installations, where door is stored within a wall. This narrower profile is not achieved at any sacrifice in stack space. Actually, stack space is smaller than Multi-X Type, making the Multi-V Type especially desirable for narrow doors, such as closets.

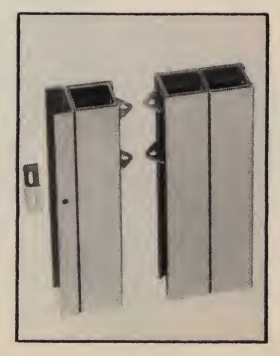
The Holcomb & Hoke Multi-V Type FOLDOOR is adaptable to a wide variety of applications—wherever flexibility of room arrangement and economy of space is important. Inherent and exclusive design features of the Multi-V construction make it particularly desirable for smaller openings, where narrow profile is an objective—and concealing the track will enhance appearance. Its matching decorator-styled cornice is supplied at no extra cost. Similarly, the smaller stack space required by the Multi-V Type FOLDOOR makes its use especially advantageous on unusually wide openings. But you need have no fear of making an improper selection, based on these design considerations; only Holcomb & Hoke makes both principle styles, the Multi-V and Multi-X—only Holcomb & Hoke, through their installing distributors, are qualified and capable of giving unbiased assistance in your selection.

For complete specifications on the Multi-V Type FOLDOOR *see page 6. Dimensions and details are illustrated on pages 10-15.*

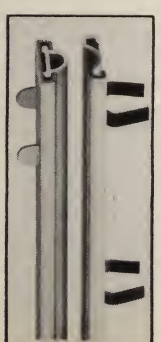


Fixed Jamb and Single Lead Post
This construction is supplied as standard equipment on both Multi-V Type and Multi-X Type FOLDOORS, permitting opening of door from one side only. If door is covered with the same fabric on both sides, it may be installed for either right- or left-hand opening; otherwise opening should be specified. Fabric-covered jamb and lead post are of rust-resistant steel, pre-punched to receive handle (standard) and (as options) latch, privacy latch or lock, whether installed as original equipment or at a later date.

Reinforced Jamb and Double Lead Post
Heavy reinforced jamb is supplied as standard equipment on all Multi-V Type and Multi-X Type FOLDOORS 14'0" in height and larger. Double lead post is supplied on all FOLDOORS 11'0" in height and larger. Rust-resistant steel, pre-punched.



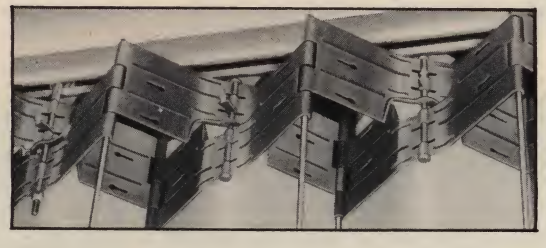
Male & Female Mouldings
All lead posts on Multi-V Type or Multi-X Type single-door installations come equipped with long-life, resilient, sound-deadening plastic extruded male moulding, keyed into aluminum channel on lead post. Matching female aluminum extrusion is supplied on lead post of second door of two-door installation, to receive plastic male extrusion. Similar female aluminum extrusion is available as an extra for opposing doorway jamb on single-door installations. This may be cut to accommodate necessary hardware when latch or lock is desired.



Rigid Construction
Easy to Conceal Track

Multi-X FOLDOOR

HOLCOMB & HOKE
FOLDOOR
FOLDING PARTITIONS AND DOORS ®



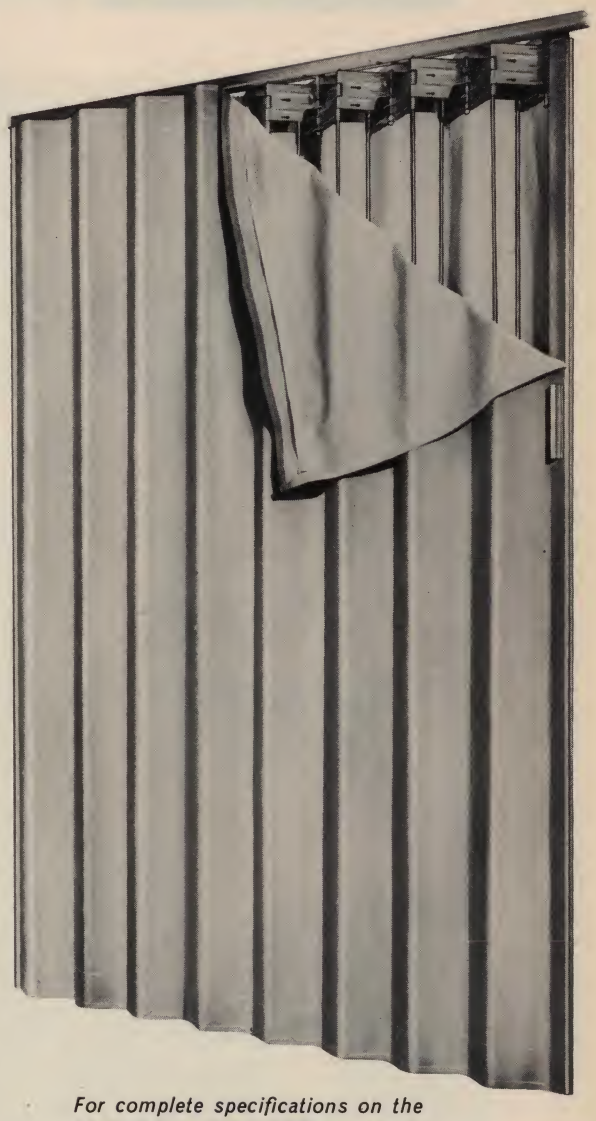
CONCEALED PANTOGRAPH CONSTRUCTION

Because the positive-acting pantograph of the Multi-X Type FOLDOOR is incorporated in the hinge construction of the door itself, no shrouding cornice is required. Bare track can be mounted unobtrusively directly to header or ceiling and painted to match—or can be recessed in minimum space at low cost. This is particularly desirable on broad expanses of ceilings.

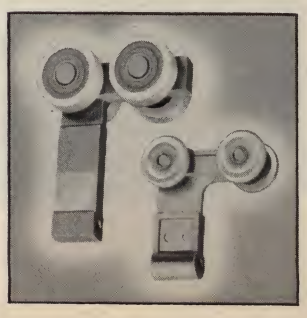
BROAD PROFILE

Inherent in the design of the Multi-X Type FOLDOOR is the broader profile, characteristic of the X-frame construction. This more massive appearance is particularly suited for especially high doors in large rooms. By the same token, the rigid construction of the Multi-X design results in a desirable degree of rigidity in the lower portions of extremely high doors.

The Holcomb & Hoke Multi-X Type FOLDOOR was introduced to round out the first truly complete, truly unbiased choice of folding doors. The Multi-X Type is not intended as a substitute for or a competitor of the Multi-V Type. Although both types are made in the same comprehensive and complete range of sizes, and at substantially the same price, each has inherent design advantages which will dictate the desirability of its use on a specific application. Only Holcomb & Hoke can offer you this impartial selection. For example, the Multi-X Type FOLDOOR sometimes is preferred on the higher, larger openings. Recessed track installations are more compact, also—because of the smaller space required to recess the track. But even where these considerations do not apply, there are individual variations in application or preference. Our installing distributor in your locality will be glad to give you the benefit of his exclusive, impartial recommendation.



For complete specifications on the Multi-X Type FOLDOOR *see page 7. Dimensions and details are illustrated on pages 10-15.*



Silent Trolley Wheels

All Multi-V Type and Multi-X FOLDOORS less than 14'0" high are equipped with solid Nylon wheels. Long wearing, formed to fit track. Doors 14'0" and over are equipped with Nylon tired, oversize ball-bearing wheels for easy operation.

All-Metal Handles

Located at convenient height to assure smooth operation. Baked-on satin aluminum finish will not discolor. BRASS PLATED handles, locks, latches, moulding, etc., are available as extras. BRONZE PLATED hardware on special order.

HOLCOMB & HOKE
FOLDOOR
FOLDING PARTITIONS AND DOORS
®

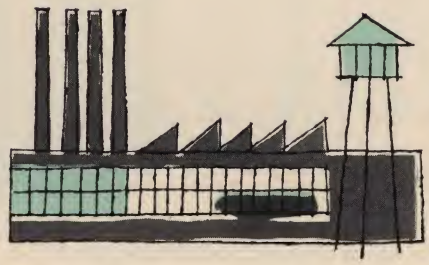
for every building

religious and educational

FOLDOOR converts "do nothing" floor space to active use in schools, hospitals, public buildings, etc. Large areas are divided into smaller units—for private study, group discussion, parties, meetings, conferences. Unused portions can be closed off to save heat and maintenance. FOLDOORS also conserve valuable space between rooms, and for doorways, closets and storerooms.

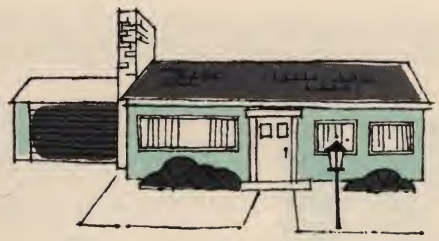
commercial

In restaurants, offices, stores, hotels, mortuaries, FOLDOOR puts every foot of floor space to profitable use in a decorative manner. It divides wide-open areas to fit any size group; partitions large rooms for private occasions or displays; closes off unused space to save heat and light; creates extra rooms, booths and offices on a moment's notice.



industrial

With FOLDOOR, all floor and wall area is functional. Files and furniture may be placed up to either side of door openings. Departments can be separated, additional offices added without disrupting normal schedules or incurring high remodeling costs. Private conference rooms, meeting rooms of flexible size, showrooms, storerooms and temporary partitions are instantly obtainable.



residential

When you use FOLDOOR in new or old homes, you gain about 7 sq. ft. of usable space (worth $80-90) around each opening; avoid conflicting door arrangements; obtain maximum flexibility. Besides serving as a space-saving door, FOLDOOR functions effectively as a moveable wall. It divides one room in two, forms cozy dens, spacious closets, extra bedrooms, playrooms, storerooms.

you design

HOLCOMB & HOKE
FOLDOOR
FOLDING PARTITIONS AND DOORS ®

HOLCOMB & HOKE FOLDOOR FOLDING PARTITIONS AND DOORS ®

SPECIFICATIONS *Multi-V* FOLDOOR

Simple, rugged construction assures lifetime trouble-free operation

GENERAL

FOLDOOR Multi-V, as shown on plans, shall be manufactured by Holcomb & Hoke Mfg. Co., Inc., Indianapolis, Indiana, and shall be installed by an authorized representative of that company. The door shall be of a Multi-V centerline design with corrosion-resistant steel frame covered with a flame-resistant, plastic-coated cotton (or fiberglass) fabric as described herein. All hinges shall be of 16-gauge zinc corrosion-resistant steel, and shall be of the same size throughout the door with a minimum net dimension at pivot point of 1¾″.

Door shall be center-hung from a steel overhead track having a dual channel cross-section providing high strength, free tracking of trolley wheels and minimum rolling friction. Floor guides shall not be required. When fully extended, all volutes of the door shall be equally spaced.

TRACK

The track shall be of steel no less than 18-gauge in thickness and shall have two U-shaped sections in which the wheels roll. All track shall be concealed by a cornice or steel plate.

DOOR COVERINGS

Construction— Fiberglass fabric with virgin vinyl coating, finished fabric weighing 30 ounces per lineal yard, 54″ wide. Underwriters Laboratories approved.

—or—

Cotton fabric with virgin vinyl coating, finished fabric weighing 27 ounces per lineal yard, 54″ wide.

Characteristics— Coating shall be compounded and applied to backing so as to give finished fabric long life, flexibility and resistance to cold, fading and discoloration.

Flame Resistance— Fabrics shall comply with the specifications and tests of the following agencies:

a. New York Board of Standards and Appeals
b. Fire Department, City of Boston
c. City of Los Angeles

HINGES

Metal hinges shall be used in the door frame, and they must not be less than 16-gauge #4 tempered, zinc-coated, corrosion-resistant steel. They shall not be less than 2⅜″ in height throughout the length of the hinge. The net height at center of hinge where trolley pins support door frame shall not be less than 75% of the maximum hinge height.

DOOR FRAMES

Up to 7′0″ in height, door frames shall have a row of hinges at top and bottom of the door frame. Door frames 7′0″ and higher shall have a horizontal row of hinge plates approximately every 48 inches. Hinges shall be held in a horizontal position by being welded to 3/16″ steel rods which extend full height of door frame. This assures true pantograph action throughout.

TROLLEY WHEELS

Doors less than 14 feet high shall have solid Nylon wheels. Doors 14 feet high and over shall have ball-bearing steel wheels with Nylon tread.

STACKING SPACE

When the door is stacked, it shall not measure more than 1⅜″ per foot of opening with nylon wheels, or 1½″ per foot of opening with ball bearing wheels—plus width of end posts. The door when stacked shall not measure more than 5½″ in thickness. On sound-insulated doors, stack space shall measure no more than 1¾″ per foot of opening, plus end post.

SOUND INSULATION (Optional)

Sound insulating lining shall be flame-retardant and not support combustion. Lining shall not alter appearance nor interfere with door operation. Sweep strips at head and floor, and moulding seals at posts are required.

HARDWARE

Door handles, latches and locks shall be of satin aluminum baked-on finish, or brass plated.

WARRANTY

FOLDOOR shall be fully guaranteed for one year against defects of faulty material and workmanship.

Multi-V FOLDOOR *Sizes*

Multi-V FOLDOOR regular and special sizes fit any opening you design

REGULAR

Height	Minimum Width	Maximum Width
6′6″	2′7½″	3′4″
6′8½″	2′7½″	25′5½″
8′0″	3′0″	25′5½″

SPECIAL SIZE

Minimum Height: 2′6″ Minimum Width: 2′7½″

Maximum Height	Maximum Width
11′11⅞″	35′4″
13′11⅞″	30′9″
20′0″	25′5½″

SPECIFICATIONS
Multi-X FOLDOOR

HOLCOMB & HOKE FOLDOOR FOLDING PARTITIONS AND DOORS ®

Beauty and performance are built into every FOLDOOR

GENERAL

FOLDOOR Multi-X, as shown on plans, shall be manufactured by Holcomb & Hoke Mfg. Co., Inc., Indianapolis, Indiana, and shall be installed by an authorized representative of that company. The door shall be of a Multi-X centerline design with corrosion-resistant steel frame covered with a flame-resistant, plastic-coated cotton (or fiberglass) fabric as described herein. All hinges shall be of 16-gauge zinc corrosion-resistant steel, and shall be of the same size throughout the door with a minimum net dimension at pivot point of 1¾″.

Door shall be center-hung from a steel overhead track having a dual channel cross-section providing high strength, free tracking of trolley wheels and minimum rolling friction. Floor guides shall not be required. When fully extended, all volutes of the door shall be equally spaced.

TRACK

The track shall be of steel no less than 18-gauge in thickness and shall have two U-shaped sections in which the wheels roll.

DOOR COVERINGS

Construction— Fiberglass fabric with virgin vinyl coating, finished fabric weighing 30 ounces per lineal yard, 54″ wide. Underwriters Laboratories approved.

—or—

Cotton fabric with virgin vinyl coating, finished fabric weighing 27 ounces per lineal yard, 54″ wide.

Characteristics— Coating shall be compounded and applied to backing so as to give finished fabric long life, flexibility and resistance to cold, fading and discoloration.

Flame Resistance— Fabrics shall comply with the specifications and tests of the following agencies:

a. New York Board of Standards and Appeals
b. Fire Department, City of Boston
c. City of Los Angeles

HINGES

Metal hinges shall be used in the door frame, and they must not be less than 16-gauge #4 tempered, zinc-coated, corrosion-resistant steel. The minimum dimension of each hinge at pivot points and trolley supports must be 1¾″ net on Top and Bottom Rows.

DOOR FRAMES

Up to 7′0″ in height, door frames shall have an interlaced row of hinges at top and at bottom of the door frame. Door frames 7′0″ and higher shall have a horizontal interlaced row of hinge plates approximately every 48 inches. Hinges shall be held in a horizontal position by being welded to 3/16″ zinc-coated steel rods which extend full height of door frame.

TROLLEY WHEELS

Doors less than 14 feet high shall have solid Nylon wheels. Doors 14 feet high and over shall have ball-bearing steel wheels with Nylon tread.

STACKING SPACE

When the door is stacked, it shall not measure more than 1¾″ per foot of opening with nylon or ball bearing wheels —plus width of end posts. The door when stacked shall not measure more than 8½″ in thickness. On sound-insulated doors, stack space shall measure no more than 2¼″ per foot of opening, plus end post.

SOUND INSULATION (Optional)

Sound insulating lining shall be flame-retardant and not support combustion. Lining shall not alter appearance nor interfere with door operation. Sweep strips at head and floor, and moulding seals at posts are required.

HARDWARE

Door handles, latches and locks shall be of satin aluminum baked-on finish, or brass plated.

WARRANTY

FOLDOOR shall be fully guaranteed for one year against defects of faulty material and workmanship.

Multi-X FOLDOOR *Sizes*

Multi-X FOLDOOR regular and special sizes fit any opening you design

REGULAR

Height	Minimum Width	Maximum Width
6′6″	2′6″	3′4″
6′8½″	2′6″	25′5½″
8′0″	3′0″	25′5½″

SPECIAL SIZE

Minimum Height: 2′6″ Minimum Width: 2′6″

Maximum Height	Maximum Width
11′11⅞″	35′4″
13′11⅞″	30′9″
20′0″	25′5½″

HOLCOMB & HOKE
FOLDOOR
FOLDING PARTITIONS AND DOORS

types

Foldoor features a complete line of folding doors to fit every situation... meet every need

Single Foldoor

This type is generally suited for any type opening, including doors and closets, and for partitions when used with rolling post. The Single FOLDOOR is especially popular for closets with rolling post provided for unhampered, easy access from either jamb.

Foldoor as a Pair

Generally used on wider openings and to provide symmetry and balance for the installation. Doors latch together at the center and can be divided by turning knob on either side. Two FOLDOORS can also be joined at right angles. See architectural details, page 10, 12.

Three-Way Foldoor

Primarily used to break room into ½, ¼ and ¼, and installed in "T" shape. This application allows many different divisions of a large room. Particularly useful in churches, funeral homes, schools and restaurants where groups fluctuate in size. See diagram. Three-Way Post, page 11.

Four-Way Foldoor

This installation divides a large room into four smaller ones. Use of floating post permits any combination of the four doors. Use of crossover switch enables space to be divided into two or three rooms, rather than all four, for still more flexibility and utility. Architectural details on page 11, 15.

Curved Foldoor

Often used to follow the architectural contours to certain rooms such as bars, beauty salons, clubs, etc. Meets many unusual architectural requirements. A particularly smart installation as FOLDOOR folds neatly into a graceful curve and operates just as smoothly on the curved track as on straight ones.

Sound-Retardant

Sound insulation is available for both Multi-V and Multi-X FOLDOORS to fit the widest range of requirements. Sweep strips and sound channel are added to complete insulation at floor, ceiling and point of closure. THE DUAL SOUND-RETARDANT FOLDOOR PARTITION is available for situations that require maximum sound reduction.*

Mechanically Operated Foldoor

For large openings, where hand operation is impractical or inconvenient, FOLDOOR offers either manually operated crank or electric motor units. Smooth, positive opening and closing is assured with aircraft-quality 4-cable mechanism. Crank or motor may be mounted in any convenient position, is readily accessible for service.

Foldoor Pivot Switch

At selected points on the main track, a Pivot Switch allows FOLDOOR to be switched to either side. This provides unusual flexibility of room arrangement and convenient storage along wall when FOLDOOR is not in use. Safety features prevent door from leaving track. Pivot Switch available with cornice, exposed and recessed track. Architectural details on page 14.

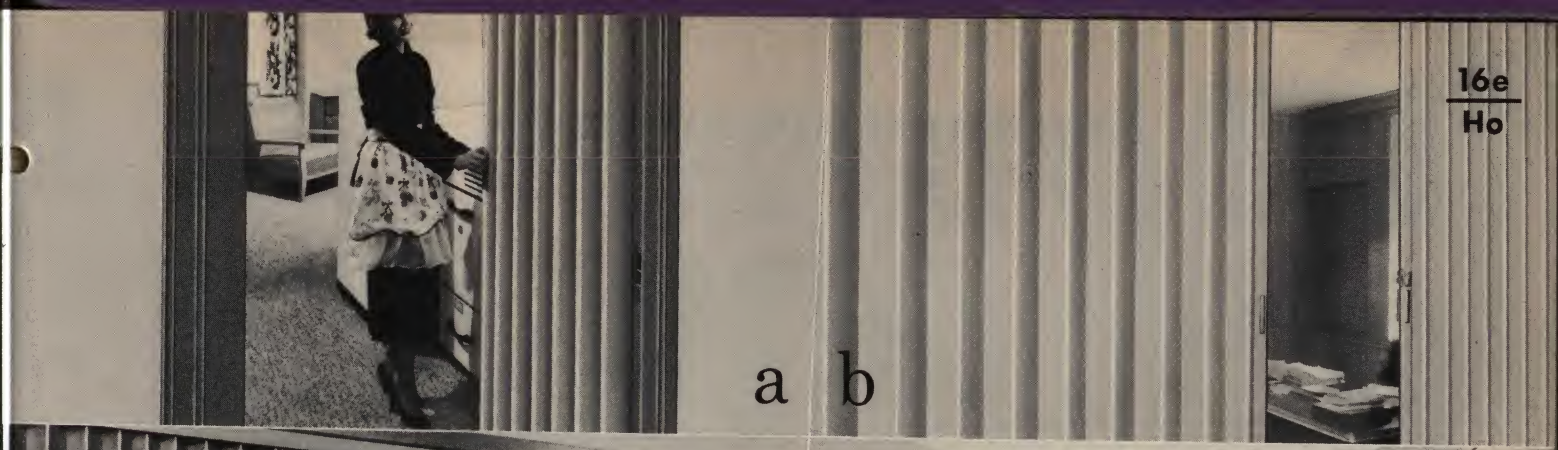
Foldoor Glide Switch

An alternative arrangement to the Pivot Switch. The Glide Switch also has many applications which give graceful and versatile use of FOLDOOR as well as out-of-the-way storage. The Glide Switch is designed exclusively for curved track and for recessed-type construction. Each track has safety bar to prevent door from slipping off. See diagram page 14 for typical details.

Foldoor Crossover Switch

In 4-way installations, the Crossover Switch gives complete efficiency in "stacking" of doors. A rod key easily flips switch to whichever direction the movement of doors is desired. Switch locks into position for safety. This is ideal for Sunday schools, large offices, other businesses or institutions that require semi-permanent room arrangements. Details on page 15.

*See FOLDOOR Dual Sound-Retardant Partition catalog (A.I.A. File 16-M; Sweet's Architectural File 22d/Ho).



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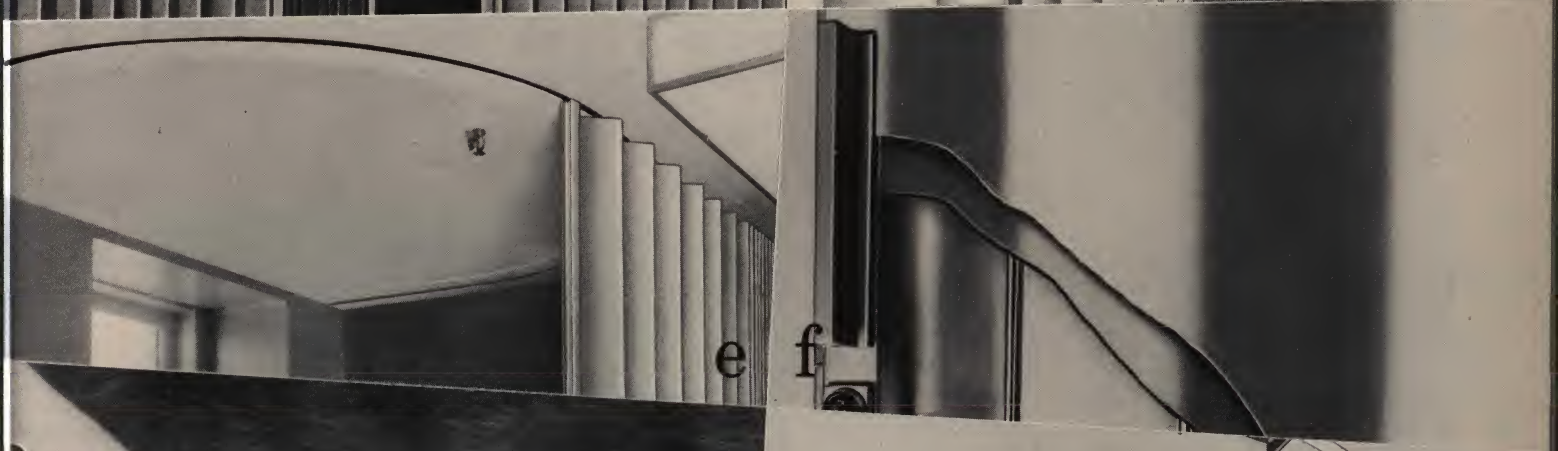

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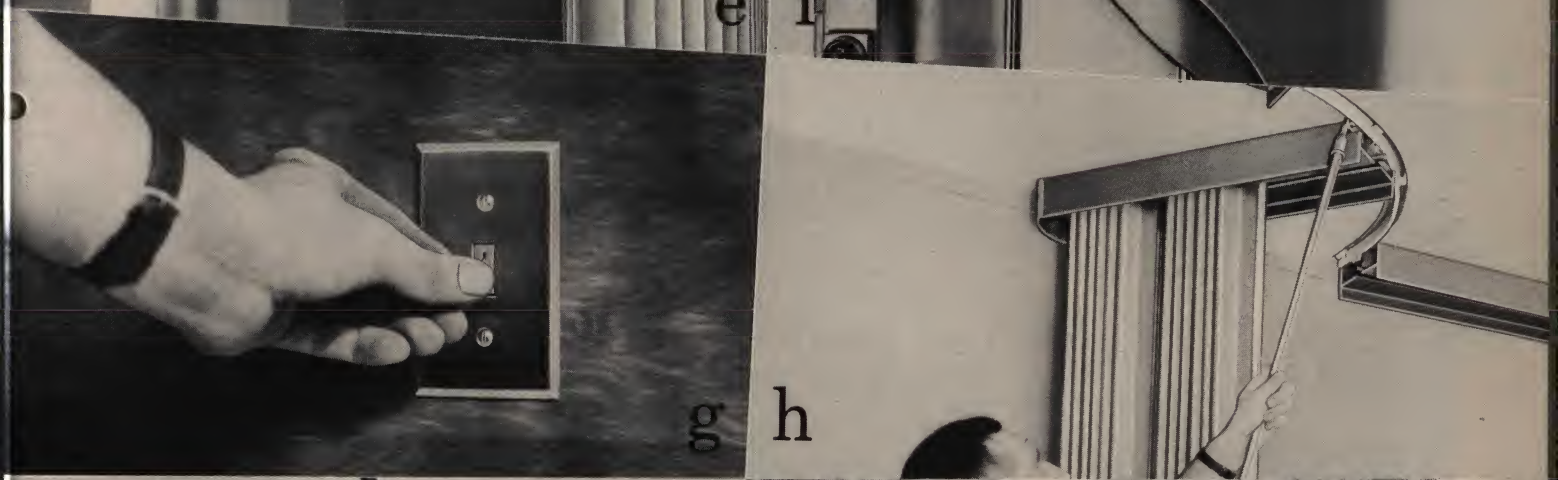

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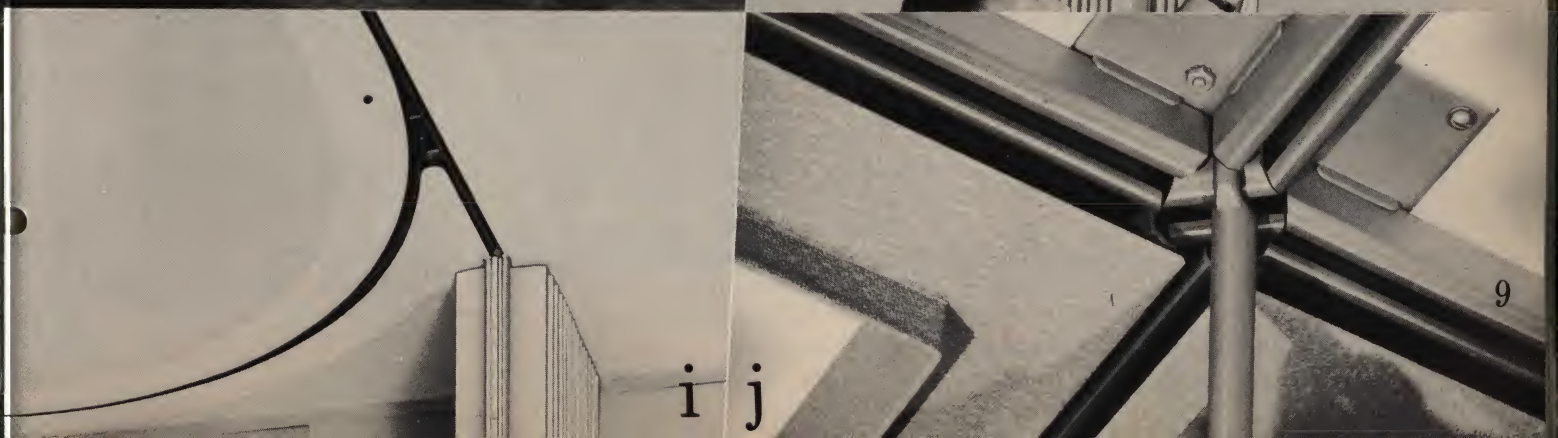

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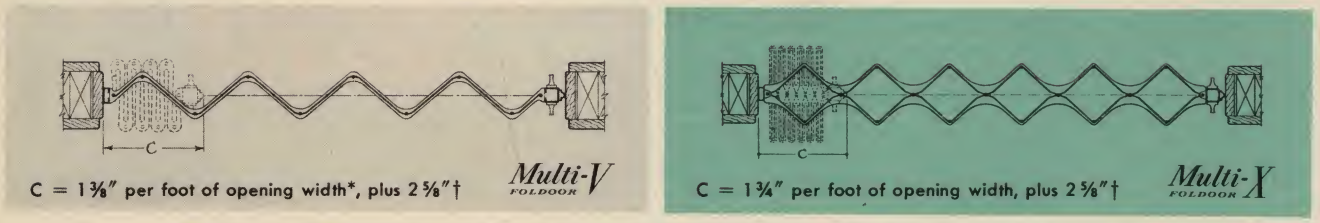
HOLCOMB & HOKE FOLDOOR FOLDING PARTITIONS AND DOORS

GENERAL DIMENSIONS

SINGLE FOLDOOR

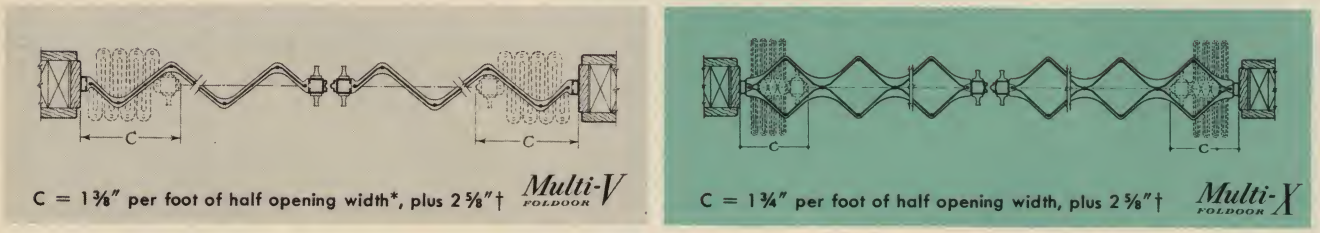


C = 1 3/8" per foot of opening width*, plus 2 5/8"† Multi-V FOLDOOR

C = 1 3/4" per foot of opening width, plus 2 5/8"† Multi-X FOLDOOR

Shows single FOLDOOR installation using standard lead post and fixed jamb. This is the most popular, or normal, application. Latches or locks are available. Single FOLDOOR also is available with rolling posts (lead posts at both ends, for opening from right and left.)

PAIR OF FOLDOORS

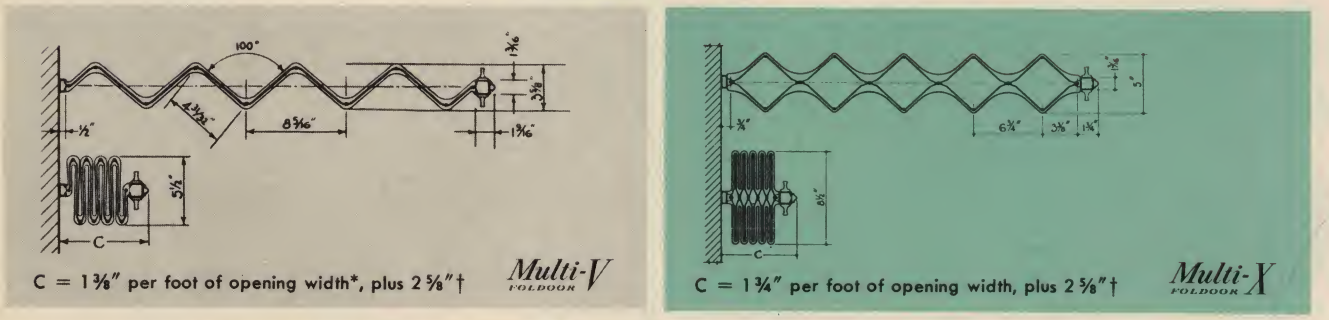


C = 1 3/8" per foot of half opening width*, plus 2 5/8"† Multi-V FOLDOOR

C = 1 3/4" per foot of half opening width, plus 2 5/8"† Multi-X FOLDOOR

Showing arrangement of two FOLDOORS to form a pair, using standard lead posts and fixed jambs. Other jamb arrangements illustrated also may be employed in pair applications. Latches or locks are available.

FIXED JAMB

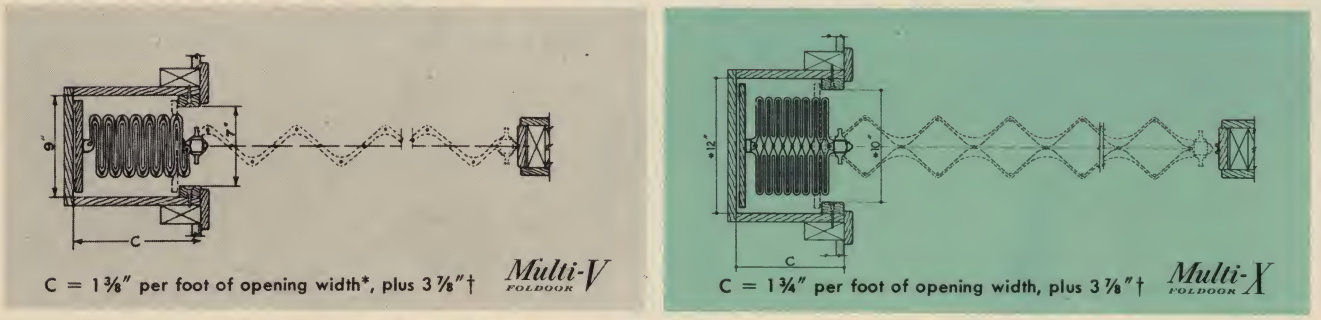


C = 1 3/8" per foot of opening width*, plus 2 5/8"† Multi-V FOLDOOR

C = 1 3/4" per foot of opening width, plus 2 5/8"† Multi-X FOLDOOR

Details show typical dimensions of Multi-V and Multi-X Type FOLDOOR elements—any of which apply to other dimensional and detail illustrations in this section. Details show typical plastered and wood-cased fixed jamb constructions. Plastered openings can effect substantial savings on new construction; wood-cased are more common on remodeling.

SLIDING JAMB IN POCKET



C = 1 3/8" per foot of opening width*, plus 3 7/8"† Multi-V FOLDOOR

C = 1 3/4" per foot of opening width, plus 3 7/8"† Multi-X FOLDOOR

Details show both Multi-V and Multi-X Type FOLDOORS equipped with sliding jamb (board), covered with matching fabric which operates in a pocket or recess which can be closed to conceal the stacked FOLDOOR when not in use. When FOLDOOR is extended, sliding jamb comes out flush with stops at opening of pocket.

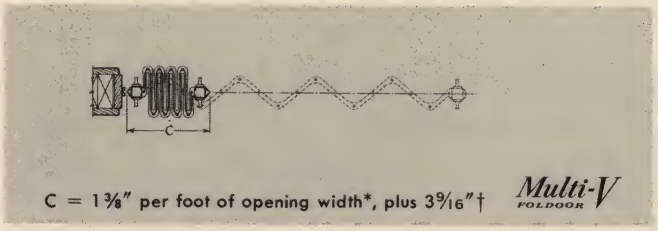
*With nylon trolley wheels. With ball bearing wheels, 1 1/2" per foot of opening.

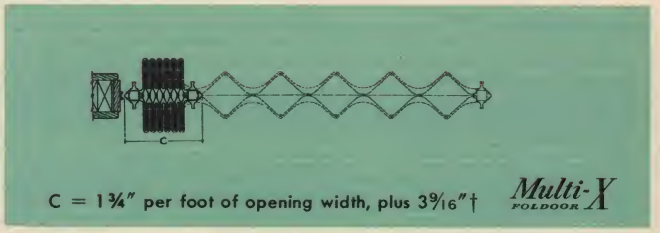
†Also add 1 1/8" for double lead post on doors 11' and higher; and add 1 1/8" for reinforced jamb on doors 14' and higher.

HOLCOMB & HOKE
FOLDOOR
FOLDING PARTITIONS AND DOORS

POST DETAILS

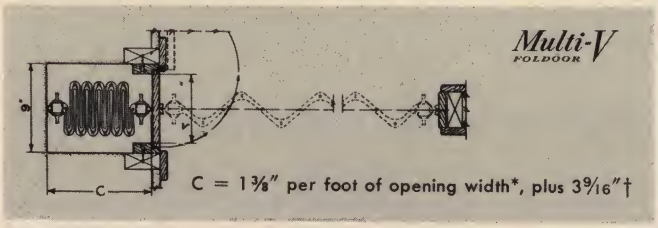
ROLLING POST

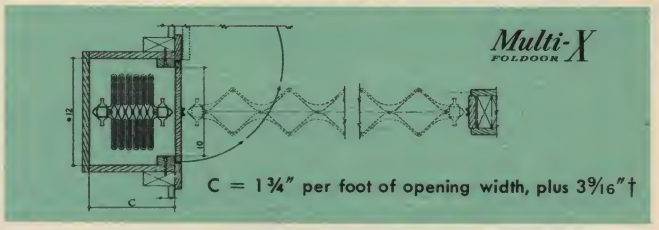




Details show rolling post applications for Multi-V and Multi-X Type FOLDOORS. These are used primarily to obtain greater flexibility of operation. This arrangement, in effect using lead posts at both ends of a door, is popular for wide closets, giving access from either end.

ROLLING POST AGAINST HINGED POCKET DOOR



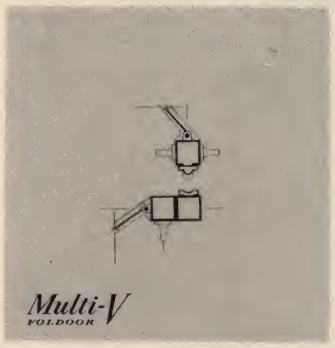


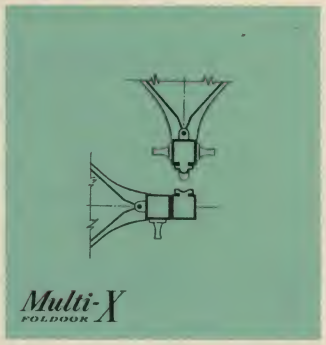
Details show applications of rolling post construction combined with hinged pocket door. This enables stacked FOLDOOR to be completely concealed in a pocket when not in use, and gives convenient operation from either end of door.

*With nylon trolley wheels. With ball bearing wheels, 1½" per foot of opening

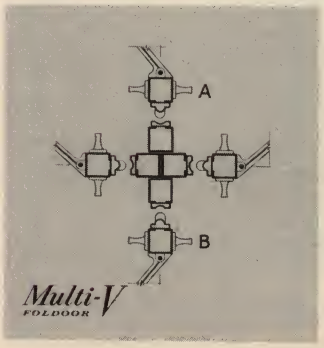
†Also add 1⅛" for double lead post on doors 11' and higher; and add 1⅛" for reinforced jamb on doors 14' and higher.

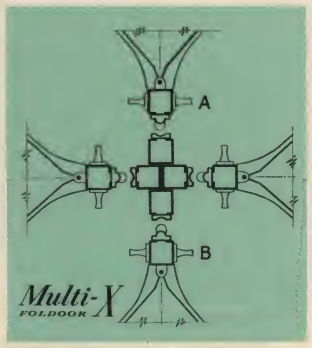
2-WAY POST





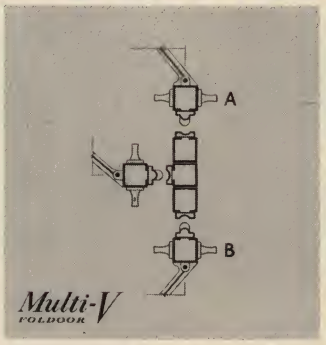
Special post detail used where two FOLDOORS meet to form a corner at right angles. This arrangement often is used for creating corner offices in large areas.

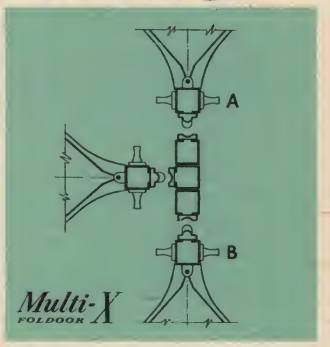




Note: Each post section of 2, 3 or 4 way posts measures 1¾₁₆" x 1¾₁₆".

3-WAY POST (Floating)





Details show most popular method of combining three FOLDOORS to form a "T" partition of an area. This arrangement provides maximum accessibility between the rooms thus formed. For both Multi-V and Multi-X Type FOLDOORS, floating post is left attached to either A or B when stacked.

When Multi-X FOLDOORS are installed to form a corner where one door will travel past the intersecting track, recessed tracks must be used to avoid fabric damage.

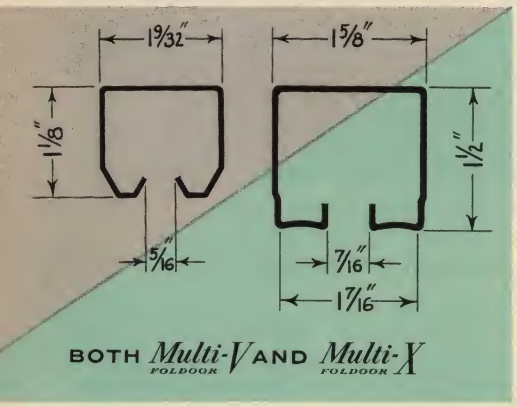
4-WAY POST (Floating)

Details show most popular method of combining FOLDOORS to form a four-way "X" partitioning of an area. This arrangement provides great flexibility of use in the rooms thus formed. Floating post is left attached to A or B when FOLDOORS are stacked.

HOLCOMB & HOKE
FOLDOOR
FOLDING PARTITIONS AND DOORS

HEAD, TRACK AND SWITCH DETAILS

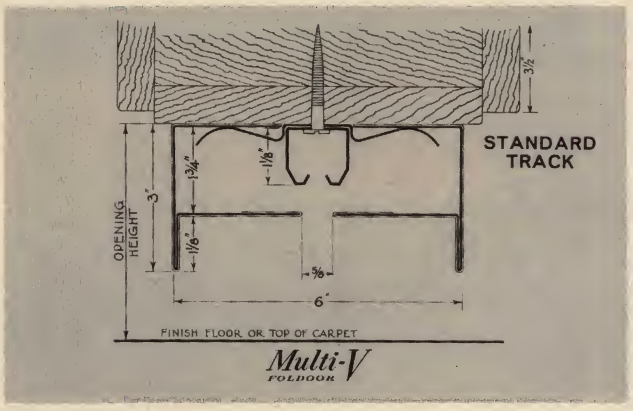
STANDARD TRACK HEAVY DUTY TRACK

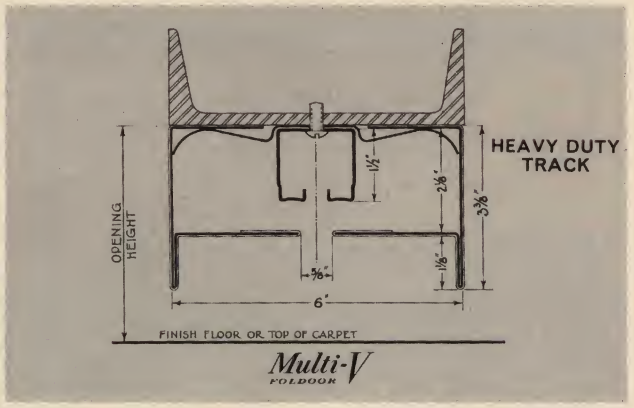


STANDARD AND HEAVY DUTY TRACK COMPARISON

Details show dimensional differences between standard and heavy duty track as used for both Multi-V and Multi-X Type FOLDOORS. Standard track is used for FOLDOORS up to, but not including, 14 feet high. Nylon rollers are used with this track. Heavy duty track is used for FOLDOORS 14 feet and higher and with all mechanically operated FOLDOORS. Ball-bearing steel wheels with Nylon tread are used. Heavy duty track and wheels can be furnished on FOLDOORS less than 14 feet high as an extra.

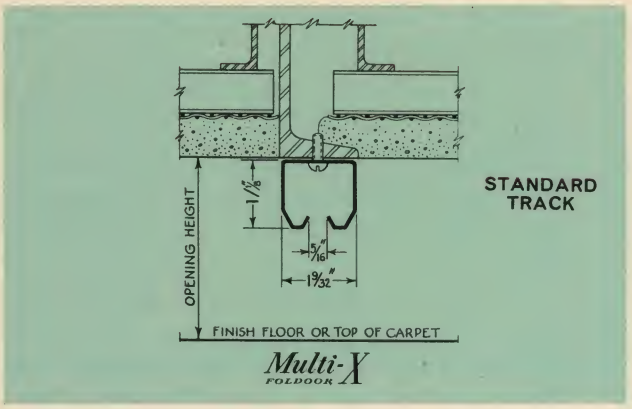
CORNICE TRACK AND HEAD DETAILS

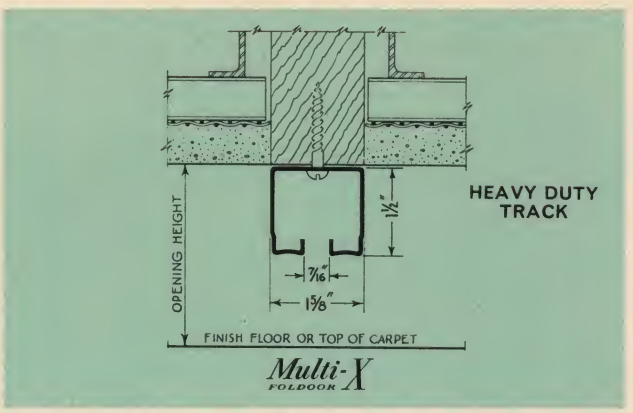




MULTI-V TYPE FOLDOOR installation in which the track is mounted directly to the surface of the header or ceiling employs a metal cornice covered in fabric matching that used on the door. Cornice is easily installed and held in place by a series of spring clips. Its finished appearance, completely concealing the track, is especially desirable for small openings.

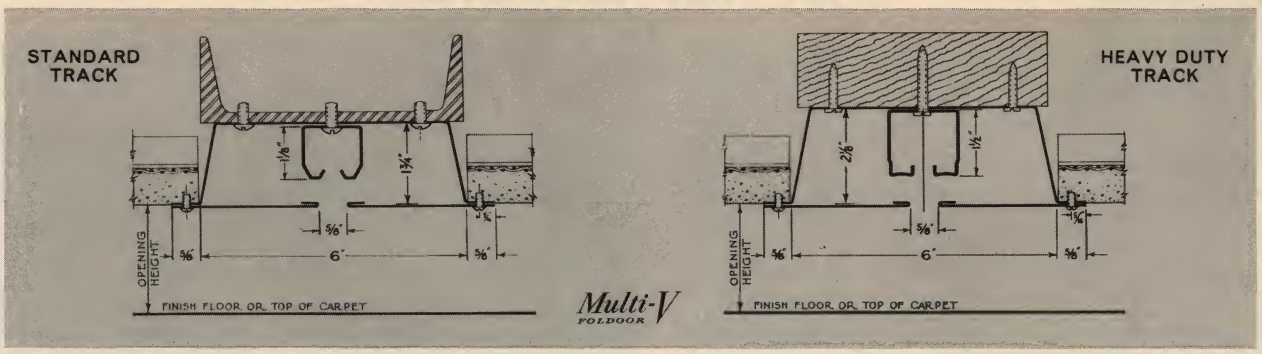
EXPOSED TRACK AND HEAD DETAILS

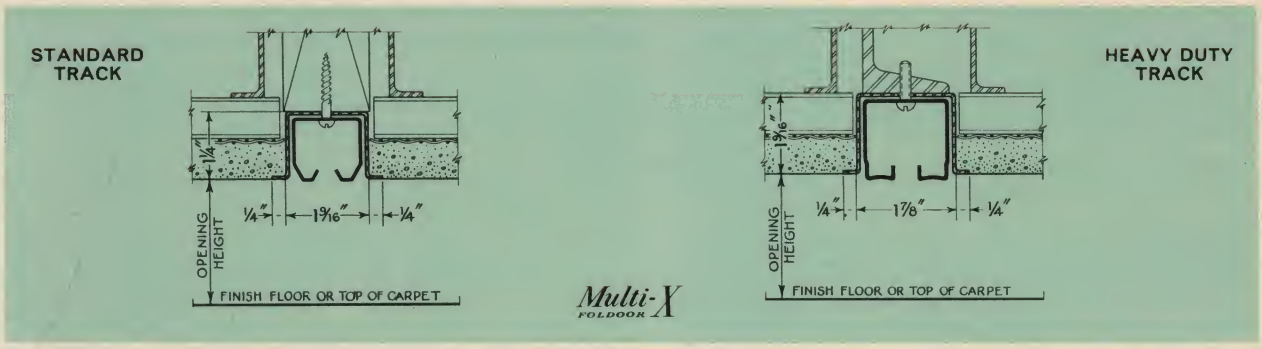




MULTI-X TYPE FOLDOOR installation in which the track is mounted directly to the surface of the header or ceiling requires no cornice, since this type of FOLDOOR has no exposed pantograph mechanism. Accordingly, such an installation is especially suited for low ceilings, where headroom is a problem—and for large room dividers.

RECESSED TRACKS

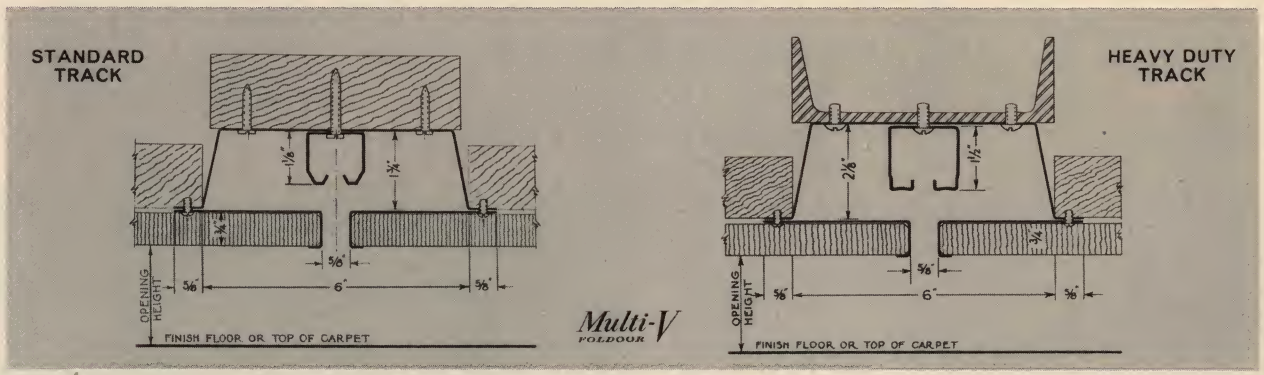


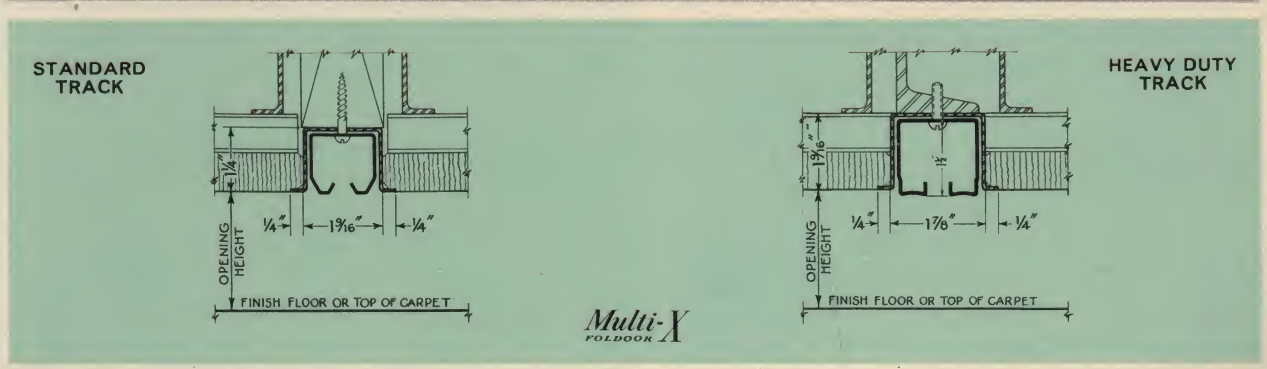


Both standard and heavy duty track installations of the Multi-V Type FOLDOOR require extra recessing space and the use of a metal cover plate to prevent scoring of soft ceilings. Metal pan for recess is furnished if requested—or similar detail can be framed in wood.

While standard and heavy duty track installations of the Multi-X Type FOLDOOR require different depths for recessing (because of their different dimensions), neither requires as great a depth or breadth as recessed Multi-V Type installations—and no cover plate is needed. The surface of the track is mounted flush with the surface of the ceiling, as indicated in the above detail drawings.

ACOUSTICAL RECESSED TRACKS





As with the recessed track installations illustrated at top of page, acoustical recessed installations of both standard and heavy duty tracks for the Multi-V Type FOLDOOR require extra recessing space and the use of a cover plate because of the pantograph mechanism. The acoustical recessed track installation requires a special metal cover plate formed to accommodate the acoustical tile, as indicated in the detail drawings above. Metal pan for recess is furnished, if requested, or it can be framed in wood.

Acoustical recessed installations for Multi-X Type FOLDOORS are quite similar to ordinary recessed track installations for this type of door. Since the edges of the tile may be butted up against the sides of the track, and the surface of the track mounted flush with the surface of the tile, the only consideration is the depth to which the track is recessed, as indicated in the dimension drawings above. Metal pan for recess furnished on request.

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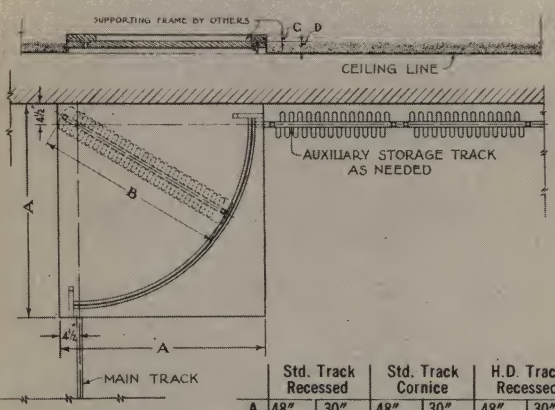
FOLDING PARTITIONS AND DOORS

SWITCH DETAILS

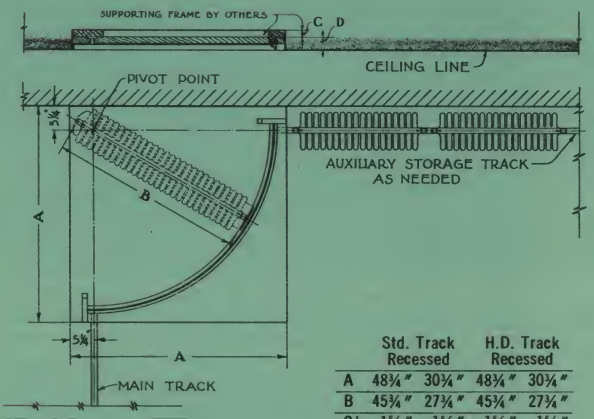
PIVOT SWITCH



	Std. Track Recessed		Std. Track Cornice		H.D. Track Recessed		H.D. Track Cornice	
A	48″	30″	48″	30″	48″	30″	48″	30″
B	45″	27″	45″	27″	45″	27″	45″	27″
C†	1⅝″	1⅝″	1⅝″	1⅝″	1⅝″	1⅝″	1⅝″	1⅝″
D*	3¼″	3¼″	1½″	1½″	3⅝″	3⅝″	1½″	1½″

Multi-V FOLDOOR

†Framing (By Others)
*Recess Depth (Above Ceiling Line)



	Std. Track Recessed		H.D. Track Recessed	
A	48¾″	30¾″	48¾″	30¾″
B	45¾″	27¾″	45¾″	27¾″
C†	1⅝″	1⅝″	1⅝″	1⅝″
D*	2⅝″	2⅝″	3″	3″

Multi-X FOLDOOR

†Framing (By Others)
*Recess Depth (Above Ceiling Line)

Details show most common use for pivot switches, which provide means to stack FOLDOORS along wall when desired. Also can be used for other right-angle switching applications.

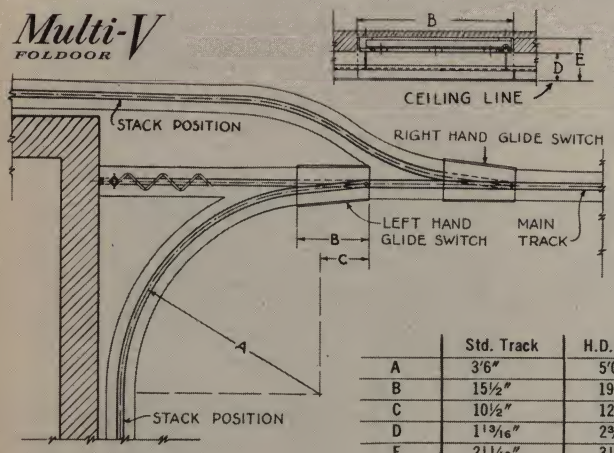
The Multi-V Type FOLDOOR pivot switch is available for standard or heavy duty track installations in either cornice or recessed type.

The Multi-X Type FOLDOOR pivot switch is available for either standard or heavy duty recessed track installations only.

None of these require the use of curved-type FOLDOORS. Operating pull rod is furnished to shift switch track to desired location.

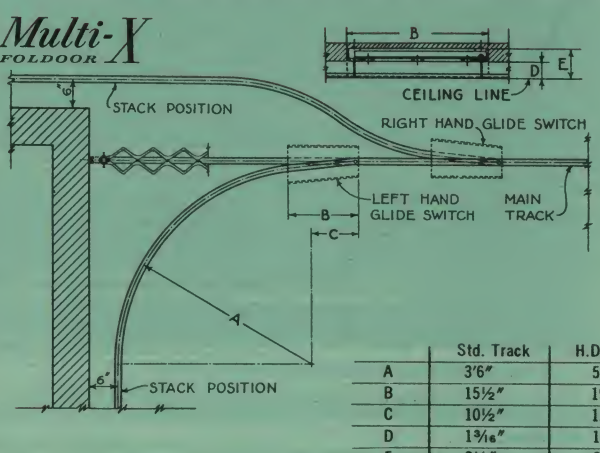
GLIDE SWITCH

Multi-V FOLDOOR



	Std. Track	H.D. Track
A	3′6″	5′0″
B	15½″	19″
C	10½″	12⅜″
D	1 3/16″	2 3/16″
E	2 1/16″	3 1/16″

Multi-X FOLDOOR

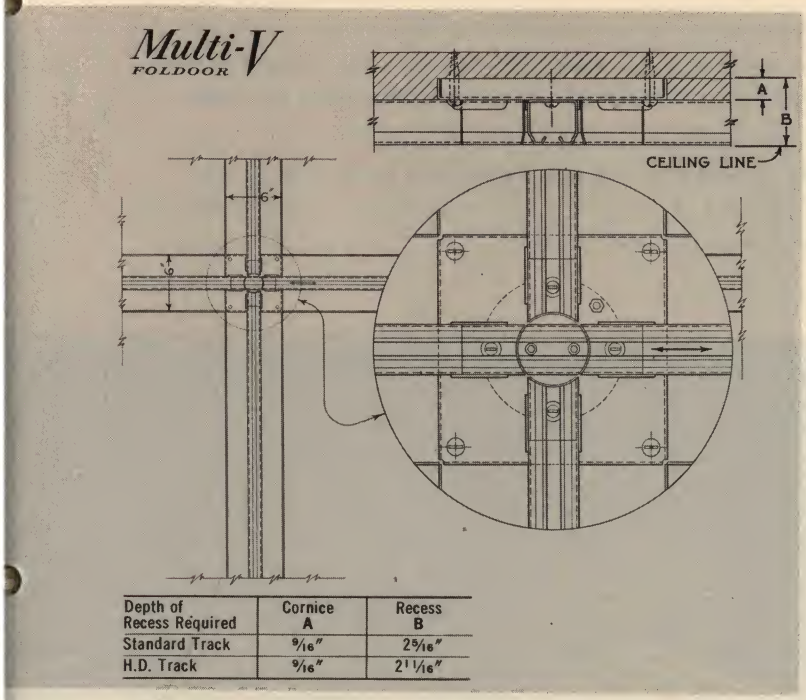


	Std. Track	H.D. Track
A	3′6″	5′0″
B	15½″	19″
C	10½″	12⅜″
D	1 3/16″	1½″
E	2⅛″	2 7/16″

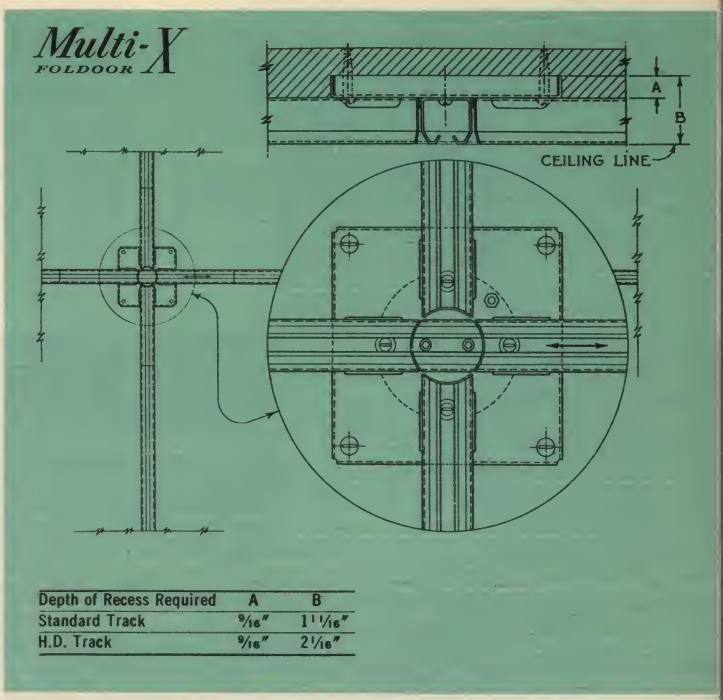
Details show typical track diagrams with glide switch used to switch FOLDOORS from one track to another. Purpose may be to stack FOLDOORS along wall or to provide multiple use of FOLDOORS to meet varying space requirements. Details will suggest many other applications where glide switch will be useful.

The glide switch is available for recessed-type installations only, whether Multi-V or Multi-X. In all cases curved-type FOLDOORS must be used if they pass through a glide switch. Minimum radius of track is 3′6″ for standard track or 5′0″ for heavy duty track. Operating key rod furnished to throw switch to desired position.

CROSSOVER SWITCH



Depth of Recess Required	Cornice A	Recess B
Standard Track	9/16"	2 5/16"
H.D. Track	9/16"	2 1 1/16"



Depth of Recess Required	A	B
Standard Track	9/16"	1 1 1/16"
H.D. Track	9/16"	2 1/16"

This switch is designed for use with four-way FOLDOOR combinations to permit more versatile stacking arrangements when desired. Full utility of this feature requires use with rolling posts to enable FOLDOORS to be stored on either end of both tracks as conditions warrant. Useful for clearing any two walls of stacked room-divider doors. (Normally, side tracks butt against main track, which prevents side FOLDOORS from crossing main track.)

Available for either standard or heavy duty recessed track installations, for both Multi-V and Multi-X Type FOLDOORS. Also available for Multi-V cornice type installations. Will handle both standard and curved FOLDOORS. Operating key rod furnished to throw switch in desired position.

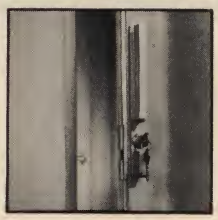
HOLCOMB & HOKE
FOLDOOR
FOLDING PARTITIONS AND DOORS

ACCESSORIES

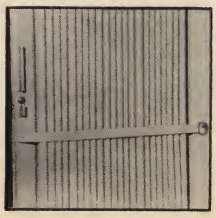
FOR MULTI-V and MULTI-X FOLDOORS

DOUBLE LATCH. A positive spring-type latch with "keeper" assembly is available for FOLDOORS. Rugged metal construction with a baked satin aluminum finish. Latch is operated by knobs, on both sides of door, located below handles.

PRIVACY LOCK and latch provides a locking knob on one side only. In an emergency, lock can be opened from the outside by inserting the edge of a coin in a slotted, flush disc to operate lock. Satin aluminum finish matches other hardware.



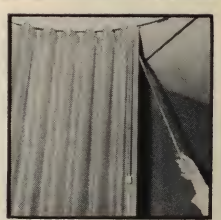
KEY LOCK and latch sets are available for FOLDOORS. A key operates the lock from either side of the door. FOLDOOR locks are provided for pass key and master key systems. Lock and latch sets have a satin aluminum finish to match other hardware.



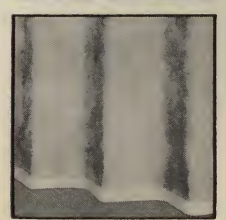
TIE BACKS are used to keep large FOLDOORS, particularly sound-insulated doors, tightly stacked when not in use. They are made from matching FOLDOOR fabric and are equipped with adjustable plated steel buckles and "D" rings, with matching latch hooks which fasten to the wall.

SURFACE FOOT BOLTS. Satin chrome plated foot bolts, with floor plates, are available to stabilize multi-way posts and wide FOLDOORS. They are applied singly or in pairs as required, and may be installed at the factory or in the field.

FRICTION GRIP FOOT BOLT. To anchor floating posts, intersecting doors or wide doors. For use where floor plate is objectionable. Satin chrome plated finish. Simple press-down operation to set and release. Field installation.



PENDANT PULLS are furnished with FOLDOORS over 9'6" high, to facilitate moving the doors. Pull rods are mounted on each side of the lead post, near top of door, and extend to a point above the handle. Rubber hand holds provide a secure grip.



SWEEP STRIPS of flexible, rubber-coated fabric are available for the top and, or, bottom, on one or two sides, to retard the passage of sound and light, as well as to confine air conditioning. Sewed to the fabric at the factory; may be installed in the field with special hooks.

Your nearby FOLDOOR installing distributor will be happy to show you samples of the newly enlarged range of fabrics and colors available for your selection. There is a FOLDOOR covering to meet every decorator need. Look under "Doors" in the yellow pages, or write:

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Dear Mr. Architect,

The pages that follow are more than a catalog.

It has long been recognized that folding partitions are called upon to do *many* space division jobs.

Here for the first time is a *complete line* of folding partitions which will interpret your creative talent without compromise . . . folding partitions you can specify with utmost confidence because each has been specifically engineered for the job, rather than being an adaptation of a basic unit.

MODERNFOLD is extremely proud to present these commercial lines:

. . . The *Standard* Line for the most economical division of space.

. . . The *Custom* Line for maximum flexibility.

. . . The *Spanmaster* Line for those giant jobs (see below).

. . . The *Soundmaster* Line when sound control is of the essence.

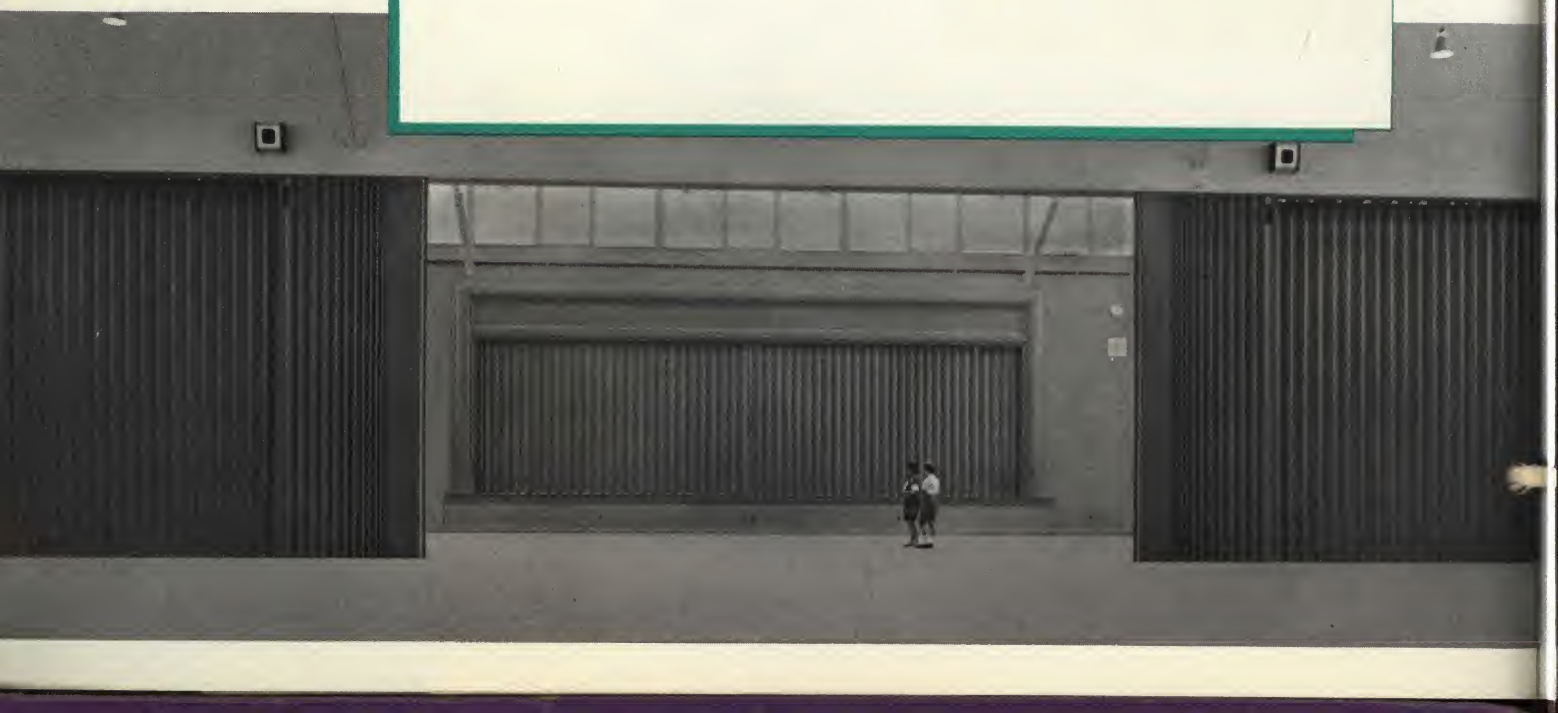
. . . The *Woodmaster* Line when only the richness of genuine hardwood will suffice.

. . . The *Neowood* Line for the look of wood with maximum economy.

In addition, for residential applications, this job-engineering has been carried through the *Crownmaster* and *Spacemaster* Lines.

This is the reason why leading architects know MODERNFOLD as the *complete line* of folding partitions.

A Typical "Spanmaster" Installation



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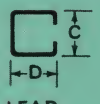
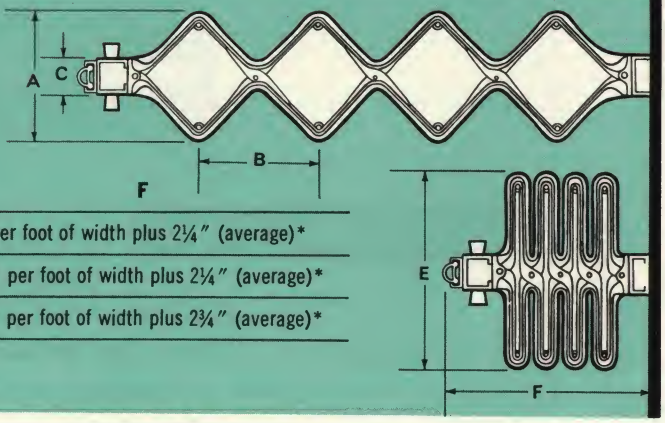
modernfold DOORS®

commercial line

door dimensions





	A	B	C	D	E	F
Standard	5⅝"	7"	1¼"	1¼"	8⅝"	2" per foot of width plus 2¼" (average)*
Custom	6¼"	6½"	1¼"	1¼"	8⅞"	2⅛" per foot of width plus 2¼" (average)*
Spanmaster	7⅝"	9½"	1½"	1¾"	12⅝"	1½" per foot of width plus 2¾" (average)*

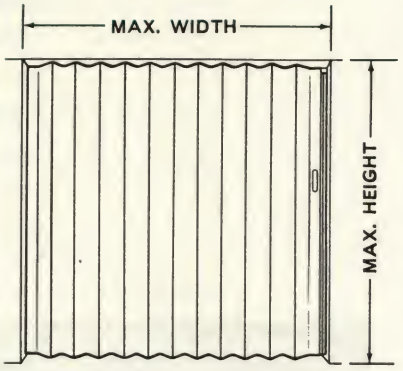
*Add ¼" extra per foot of opening for sound insulated doors.

rated capacities–doors and tracks

	Max. Widths (Single Doors)			Max. Heights		
	With No. 8 Track	With No. 12 Track	With No. 7 Track	With No. 8 Track	With No. 12 Track	With No. 7 Track
Standard	(Limited to available sizes—see below)					
Custom	26'3"	60'0"*	60'0"	12'0"	15'0"	22'0"
Spanmaster	—	60'0"*	60'0"	—	15'0"	22'0"

*Recommended maximum width with curved track is 26'3".

Note: For installation of No. 8 Door on No. 12 track, and No. 8 or No. 12 Doors on No. 7 track, fabric at top of doors must be made for recessed track even though track may be surface mounted.

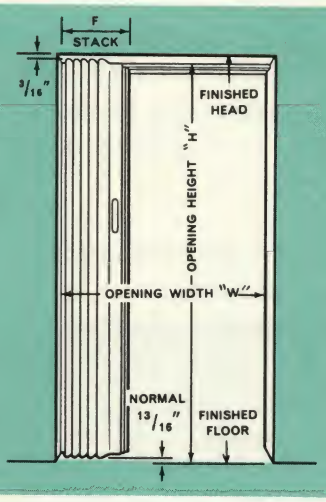


door sizes

Height Measurement—The height measurement "H" is the distance from finished opening at top to finished floor. All doors are made with an approximate $^{13}/_{16}$" clearance at the bottom of the door.

Width Measurement—The width measurement "W" is the distance between finished jambs. Door extensions are in 6" to 7" increments, so openings ("W") falling between door widths require the next larger size door.

Stack Space—Normal stack space "F" is shown above in the "Door Dimension" chart.



standard sizes

Although Modernfold doors can be made any size, definite economies can be effected by designing opening dimensions to conform to standard heights and widths.

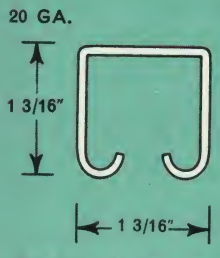
Two standard heights are available—6'8½" and 8'0"—and standard widths range from 2'6" to 26'3", in approximate 7" increments.

door weights in opening

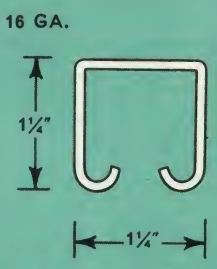
Type Door		Type Door	
Standard	1.75 lbs. per sq. ft. of opening		
Custom	2.50 lbs. per sq. ft. of opening	Soundmaster "80"	4.10 lbs. per sq. ft. of opening
Spanmaster	3.00 lbs. per sq. ft. of opening	Soundmaster "120"	4.25 lbs. per sq. ft. of opening

Note: Weights given include adequate margin of safety.

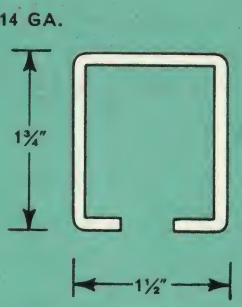
track dimensions



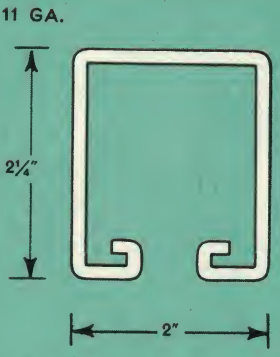
Standard—For use with Standard doors only.



No. 8 Heavy Duty—Same inside dimensions as standard track, but made with heavier gauge metal.

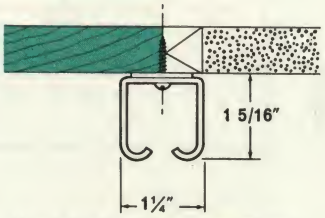


No. 12 Heavy Duty—Both a larger and heavier gauge track (used with ball bearing trolleys) for large commercial jobs. Must be used on all single doors from 12'0" to 15'0" high, and/or all doors over 26'3" wide.

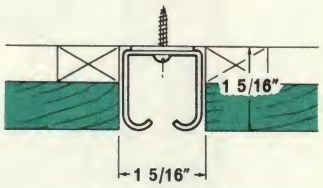


No. 7 Mechanical—This track (used with ball bearing trolleys) must be used on all mechanically operated installations (see page 13), and all doors over 15'0" high.

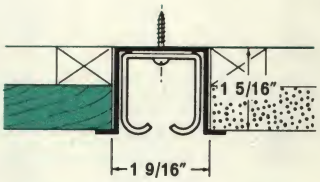
typical track applications



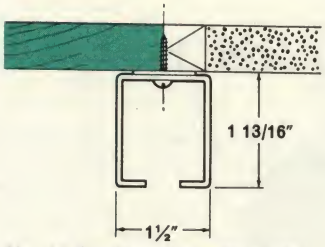
No. 8 Surface Mounted Track



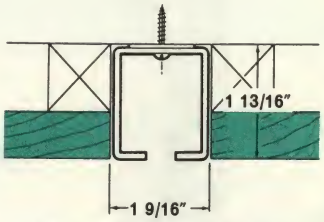
No. 8 Concealed Track



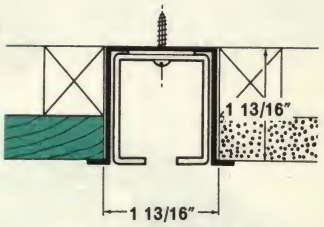
No. 8 Concealed Track —with sub channel



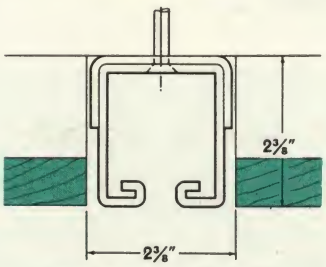
No. 12 Surface Mounted Track



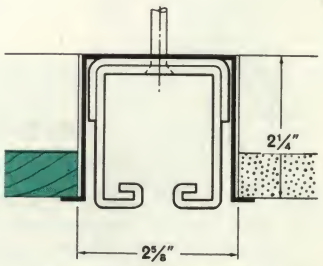
No. 12 Concealed Track



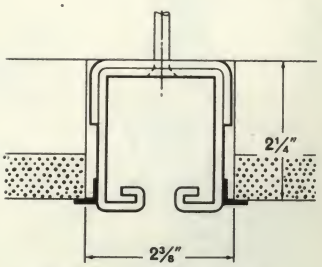
No. 12 Concealed Track —with sub channel



No. 7 Concealed Track



No. 7 Concealed Track —with sub channel



No. 7 Concealed Track —with plaster angles

modernfold DOORS®

locks and latches

The complete line of hardware for Modernfold's Custom line is designed to provide the last word in appearance, function and performance.

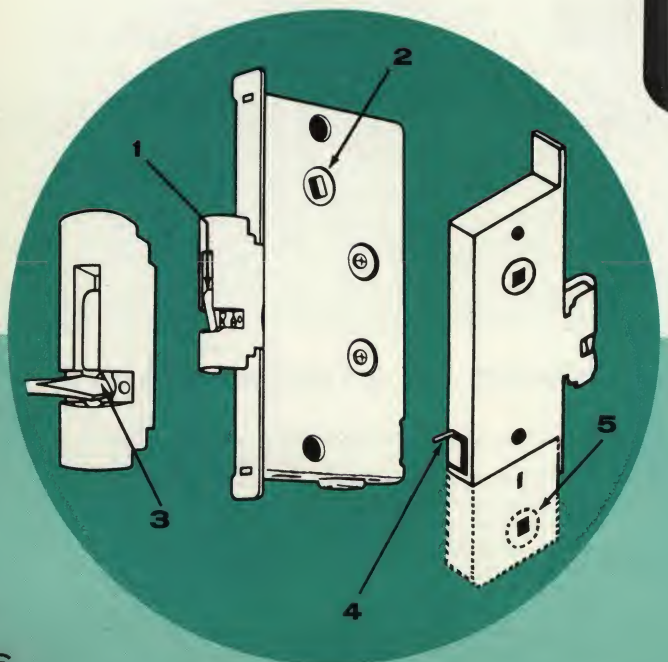
Beginning with the basic pull shown here, the lock and latch system branches out into a highly versatile arrangement that offers an almost unlimited degree of privacy, security and safety. Each of the component parts that make up the system is interchangeable—simplifying alterations in the field.

The latching mechanism is placed in the "on" position by giving the thumb knob a 45° turn. To release the latch, return thumb knob to the vertical position.

A key lock system is available to provide maximum privacy and security. The lock is engaged by giving the key a 45° turn, then bringing it back to its vertical position for removal.

A coin-operated safety button is provided for installations where an emergency release is desirable. A 45° turn by a coin operates the mechanism from the side opposite the thumb knob or key lock.

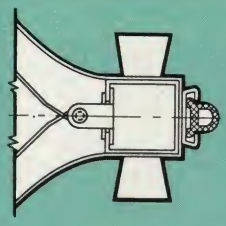
Modernfold doors can be master keyed to the lock system of any building by inserting a standard 1⅛" dia. x 1" rim type cylinder in the special pull.



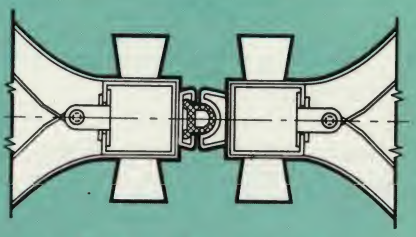
modernfold lock case

1. Bolt is spring loaded, and engages or disengages strike plate with normal opening or closing pressure on door.
2. Bushing activates locking mechanism within case to secure door, and is operated by thumb knob, coin-operated safety button, or key in all units.
3. Adjusting screw regulates bolt tension to increase or decrease pressure required to open door with lock or latch in "off" position.
4. Special locking device may be moved to bottom of slot to keep unit permanently in "on" position, making it necessary to use key or thumb knob each time door is opened.
5. Auxiliary lock attaches to case—when locked, this device immobilizes thumb knobs, making it possible to provide key-lock security even though thumb knobs are used.

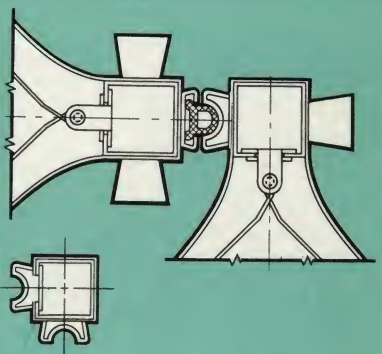
meeting post details



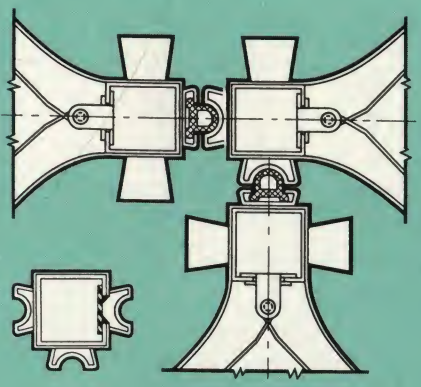
Single Meeting Post Meeting Wall or Jamb



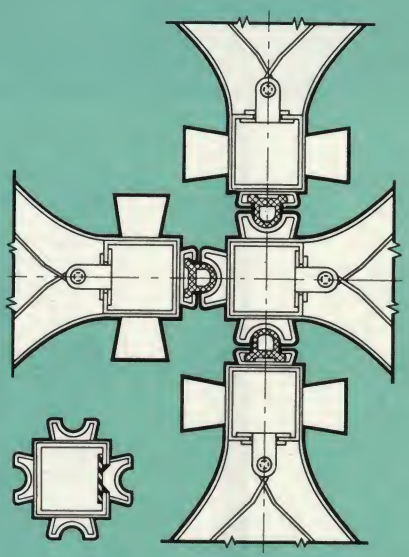
Lead Posts on Pair of Doors



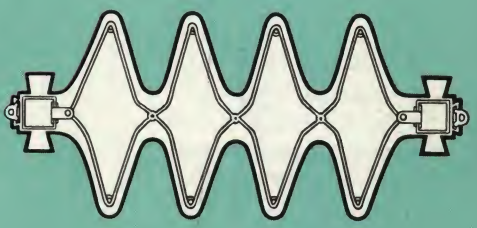
"L" Meeting Lead Posts—The "L" meeting post is often used when two doors meet at right angles to form a separate room in a corner. Available with free rolling "L" post.



"T" Meeting Lead Posts—The "T" meeting post enables three doors to meet at one point and form two separate rooms. Available with free rolling "T" post.



"X" Post Lead Posts—The "X" meeting post acts as the center meeting point for four doors which form four separate rooms. Available with free rolling "X" post.

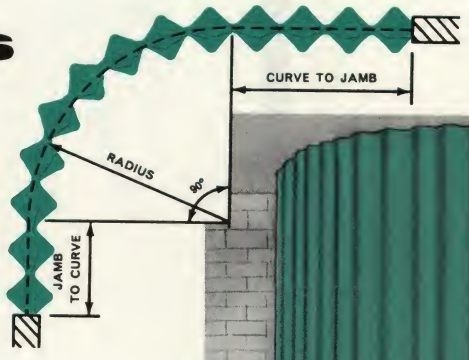


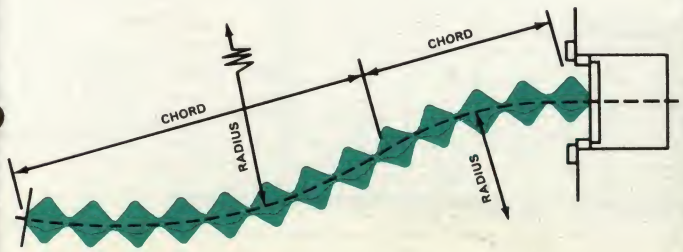
Rolling Post—Rolling post doors—doors not permanently attached to a jamb—fold in either direction. This application is especially suitable for closet openings, and required for passing through switches, pocket installations, etc.

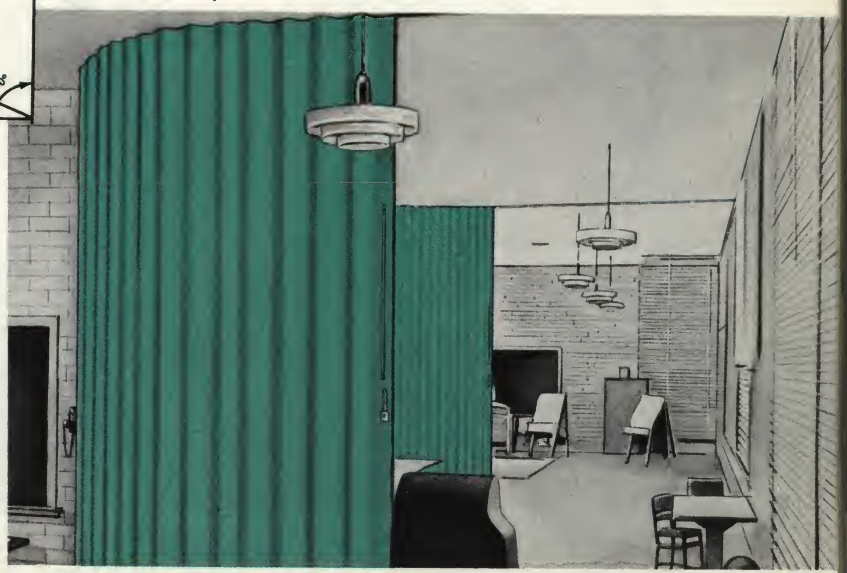
curved doors

Specially constructed Modernfold Doors are made for curved installations to permit a wide range of highly practical and unusually attractive interior applications, that blend in perfectly with the general design and decor of the surroundings.

Minimum radius is 3'6" with No. 8 track, and 5'0" with No. 7 and No. 12 track.





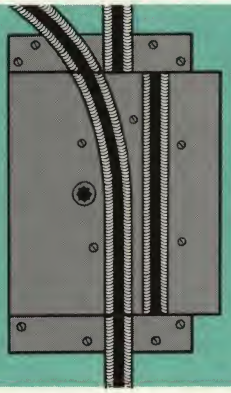


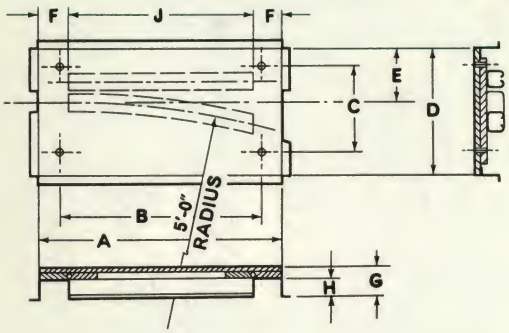
modernfold DOORS®

track switches

One-way Glide Switch

The one-way glide switch transfers doors from one track to another, thus enabling doors to serve multiple functions.



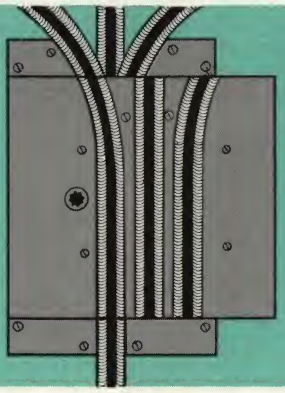


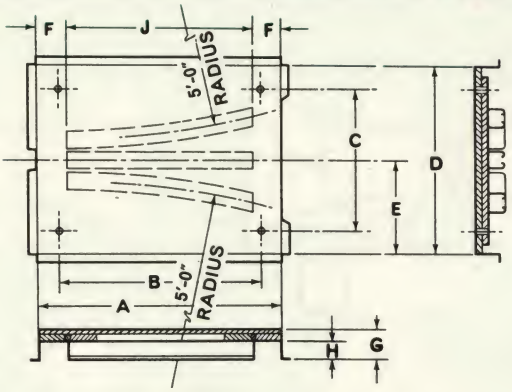
One-Way Glide Switch Dimensions

Switch Dim.	A	B	C	D	E	F	G	H	J
No. 8	1′5 7/16″	1′2 7/16″	6″	9″	3¾″	2 1/32″	1⅞″	1¼″	1′1⅜″
No. 12	1′5 7/16″	1′2 7/16″	6″	9″	3¾″	2 1/32″	2⅜″	1¾″	1′1⅜″
No. 7	1′7¾″	1′4¾″	7¾″	11″	4⅜″	2 1/32″	2 15/16″	2¼″	1′3 11/16″

Two-way Glide Switch

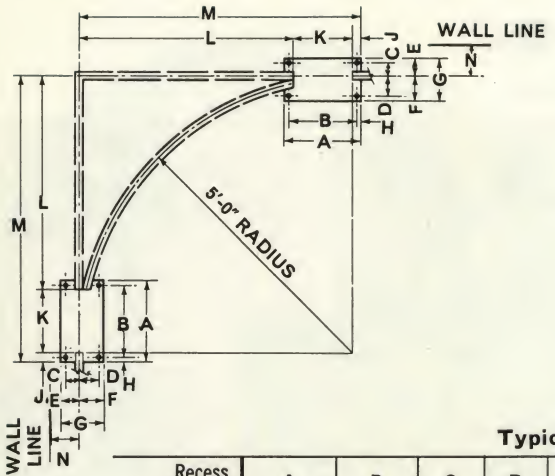
The two-way glide switch operates both to left and to right so that doors can be transferred from one track to two separate tracks.

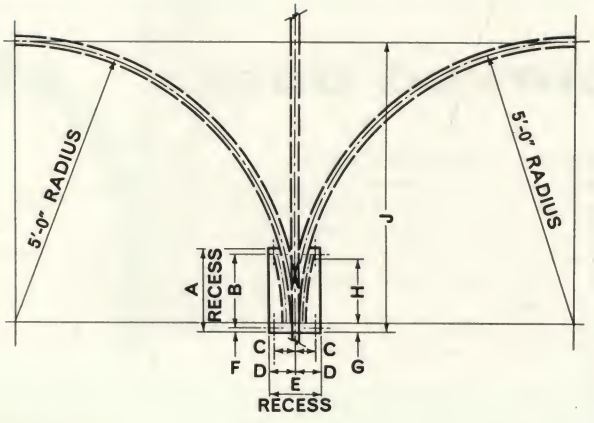




Two-Way Glide Switch Dimensions

Switch Dim.	A	B	C	D	E	F	G	H	J
No. 8	1′5 7/16″	1′2 7/16″	8″	1′0¼″	6⅛″	2 1/32″	1⅞″	1¼″	1′1⅜″
No. 12	1′5 7/16″	1′2 7/16″	8″	1′0¼″	6⅛″	2 1/32″	2⅜″	1¾″	1′1⅜″
No. 7	1′7¾″	1′4¾″	12″	1′4½″	8¼″	2 1/32″	2 15/16″	2¼″	1′3 11/16″





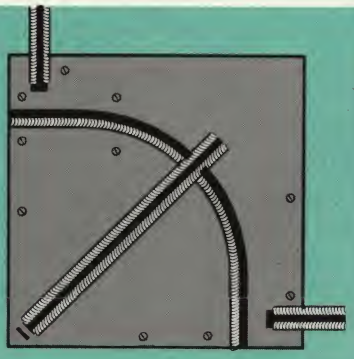
Typical Glide Switch Applications

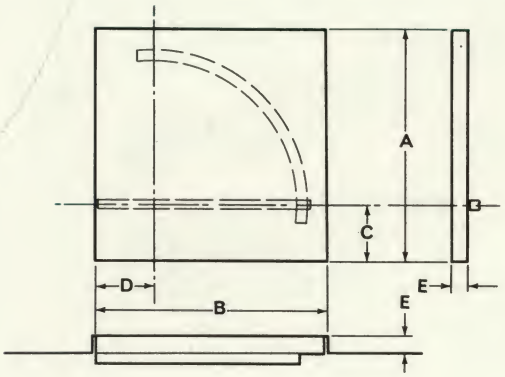
	Recess Size	A	B	C	D	E	F	G	H	J	K	L	M	N
ONE-WAY	No. 8	1′5 11/16″	1′2 7/16″	2½″	3½″	3⅜″	5⅜″	9¼″	1⅝″	2⅛″	1′1 7/16″	3′10 19/32″	5′2 5/32″	5½″
ONE-WAY	No. 12	1′5 11/16″	1′2 7/16″	2½″	3½″	3⅜″	5⅜″	9¼″	1⅝″	2⅛″	1′1 7/16″	3′10 19/32″	5′2 5/32″	7½″
ONE-WAY	No. 7	1′8″	1′4¾″	2¾″	5″	4½″	6¾″	11¼″	1⅝″	2⅛″	1′3¾″	3′8 9/32″	5′2 5/32″	7½″
TWO-WAY	No. 8	1′5 11/16″	1′2 7/16″	4″	6¼″	1′0½″	1⅝″	2⅛″	1′1 7/16″	5′2 5/32″				
TWO-WAY	No. 12	1′5 11/16″	1′2 7/16″	4″	6¼″	1′0½″	1⅝″	2⅛″	1′1 7/16″	5′2 5/32″				
TWO-WAY	No. 7	1′8″	1′4¾″	6″	8⅜″	1′4¾″	1⅝″	2⅛″	1′3¾″	5′2 5/32″				

While Modernfold track switches are used in countless installations, they function basically in these three ways: First, they move stacked doors away from congested areas. Second, they enable a single folding door to act as a closure for two or more openings. And third, they make it possible to partition the space in a room in a variety of different ways to suit the immediate space requirements.

pivot switch

The pivot switch enables the door—when stacked—to pivot in a 90° arc so that door may be extended in more than one direction, or swing out of the way when not in use.



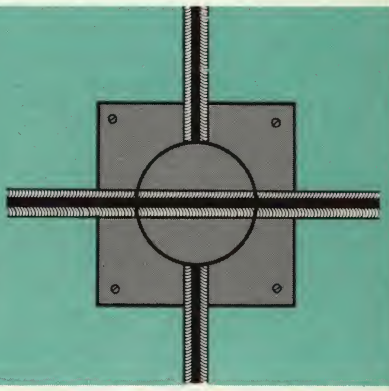


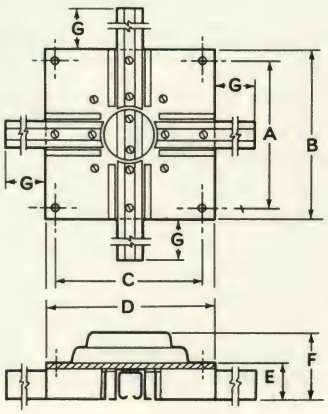
Pivot Switch Dimensions

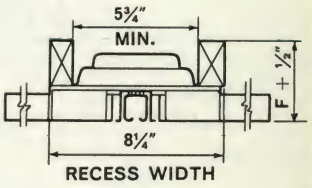
Pivot Switch	Actual Dimension				
	A	B	C	D	E
No. 8 —1'6"	1'8"	1'8"	5"	5"	1¼"
No. 8 —2'6"	2'6"	2'6"	7 5/16"	7 5/16"	2⅝"
No. 8 —3'6"	3'10⅜"	3'10⅜"	7 5/16"	7 5/16"	2⅝"
No. 12—2'6"	2'6"	2'6"	7 5/16"	7 5/16"	2⅝"
No. 12—3'6"	3'10⅜"	3'10⅜"	7 5/16"	7 5/16"	2⅝"
No. 7 —3'6"	3'10⅜"	3'10⅜"	7 5/16"	7 5/16"	2⅝"

cross-track switch

The cross-track switch permits one door to pass through the track of another installed at a right angle. Available in No. 8 Heavy Duty, No. 7 and No. 12 track size.







Cross-Track Switch Dimensions

Actual Dimension	A	B	C	D	E	F	G
No. 8	7"	8"	7"	8"	1 9/16"	2⅞"	1'2"
No. 12	7"	8"	7"	8"	2 1/16"	3⅜"	1'2"
No. 7	7"	8"	7"	8"	2½"	3 13/16"	1'2"

Maximum Door Widths for Pivot Switches

Door Type	1'6" Pivot Switch No. 8 Track	2'6" Pivot Switch No. 8 or No. 12 Track	3'6" Pivot Switch No. 8 or No. 12 Track	3'6" Pivot Switch No. 7 Track
Standard	8'10"	18'1"	26'3"	——
Custom	6'7"	14'0"	19'10½"	19'10½"
Spanmaster	——	16'1½"	24'10"	24'10"
Soundmaster "80"	6'7"	12'11½"	18'9½"	18'9½"
Soundmaster "120"	——	16'1½"	24'10"	24'10"

modernfold DOORS®

"soundmaster" line

When the most important job factor is sound control, the Soundmaster Line—either "80" or "120" is the folding partition to use. Soundmaster has been engineered for sound control, rather than being an adaptation of a basic partition.

Soundmaster panels within the partitions, exclusive sealing devices (the exclusive pull-in latch, jamb sealing channels and sweepstrips); frames with truss-link suspension to carry the heavy Soundmaster panels; and free rolling ball bearing trolleys are a few of the features built into each Soundmaster to provide the ultimate in flexible sound control.

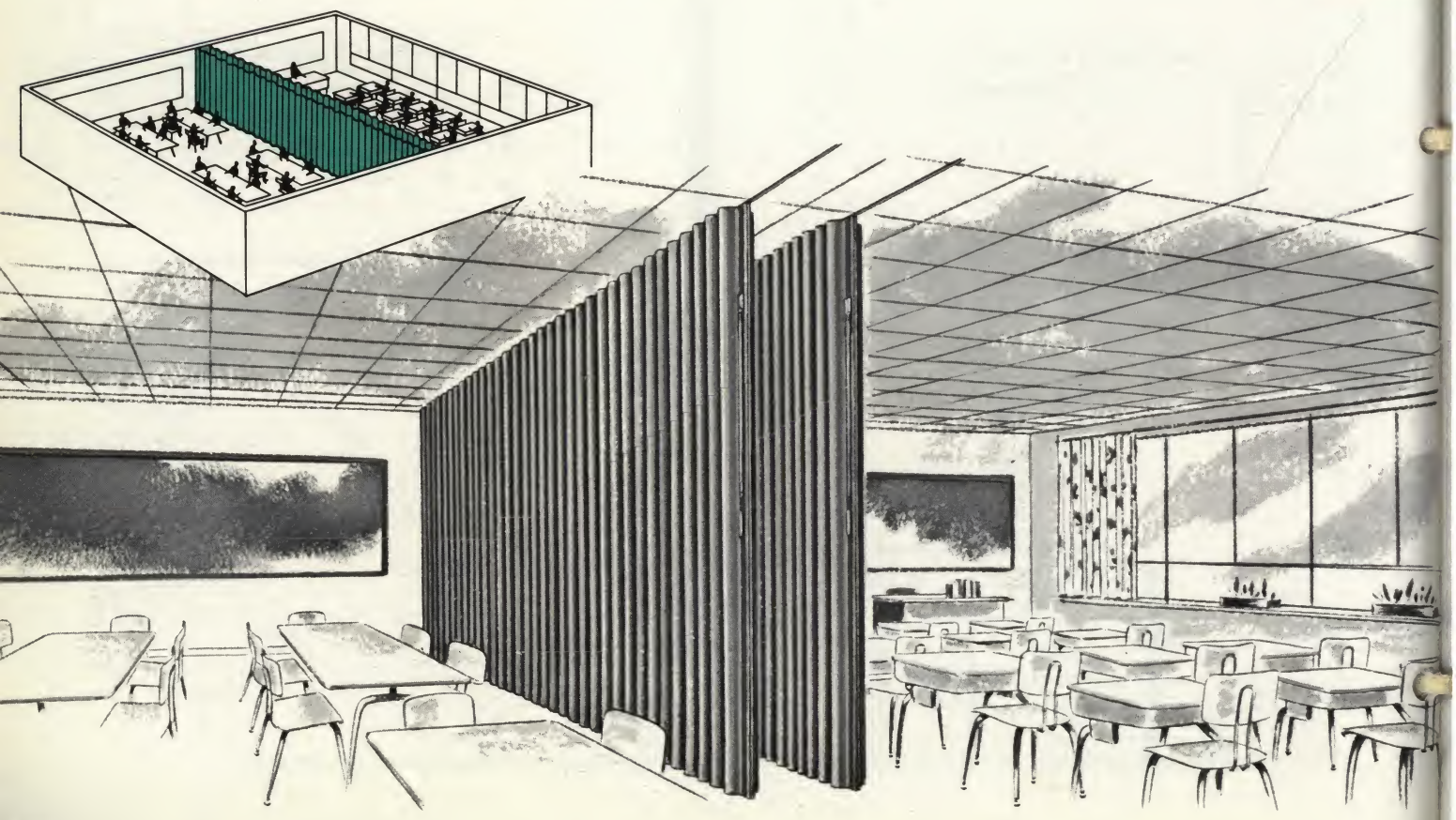
Since constant improvements are being made, ratings can become outdated. The sound ratings below are accurate as of this printing. For the latest information, we suggest that you contact the local MODERNFOLD distributor.

All data in the following tables was obtained by Richard Hamme of Geiger & Hamme Laboratories, Ann Arbor, Michigan. Mr. Hamme is a consultant in acoustics, and served on ASTM Committee E-G on Methods of Testing Building Construction.

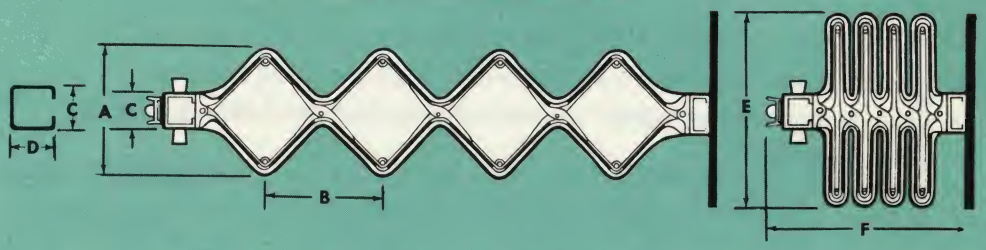
Sound Transmission Loss Tests—Geiger & Hamme Laboratories
Transmission Loss (db.) At Frequency (C.P.S.)

Door Description	125	177	250	354	500	707	1000	2000	4000	Ave. 1	Ave. 2
G & H Test #NC-18T "Soundmaster No. 80"	16	25	22	27	28	32	33	40	47	29.9	34.5
G & H Test #NC-16T "Soundmaster No. 120"	14	23	25	33	33	36	31	43	49	31.9	37.5
G & H Test #NC-17T Two (2) "Soundmaster No. 80"—12" O.C.	24	33	32	39	40	46	46	53	53	40.5	46.2
G & H Test #NC-19T Two (2) "Soundmaster No. 120"—15" O.C.	24	29	33	49	42	49	46	54	54	42.2	49.0

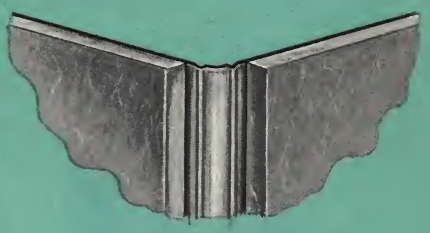
Ave. 1—Average of nine (9) test frequencies (125-4000 cps) per A.S.T.M. E90-55.
Ave. 2—Average of six (6) test frequencies (354-4000 cps) per Folding Door Industry Standards.



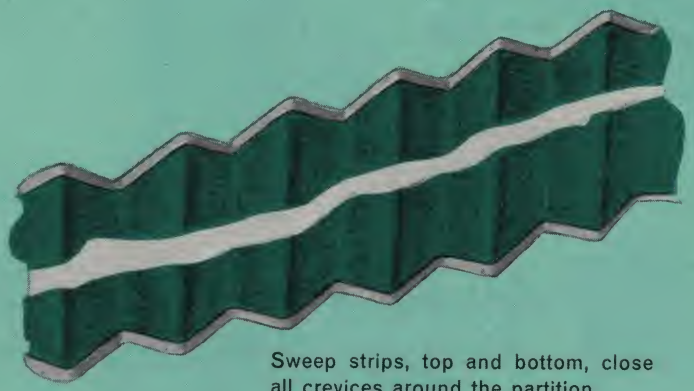
dimensions



	A	B	C	D	E	F
"Soundmaster 80"	6¼"	6½"	1¼"	1¼"	8⅞"	2⅛" per ft. of width plus 2¼" (average)
"Soundmaster 120"	7⅝"	9½"	1½"	1¾"	12⅝"	1½" per ft. of width plus 2¾" (average)

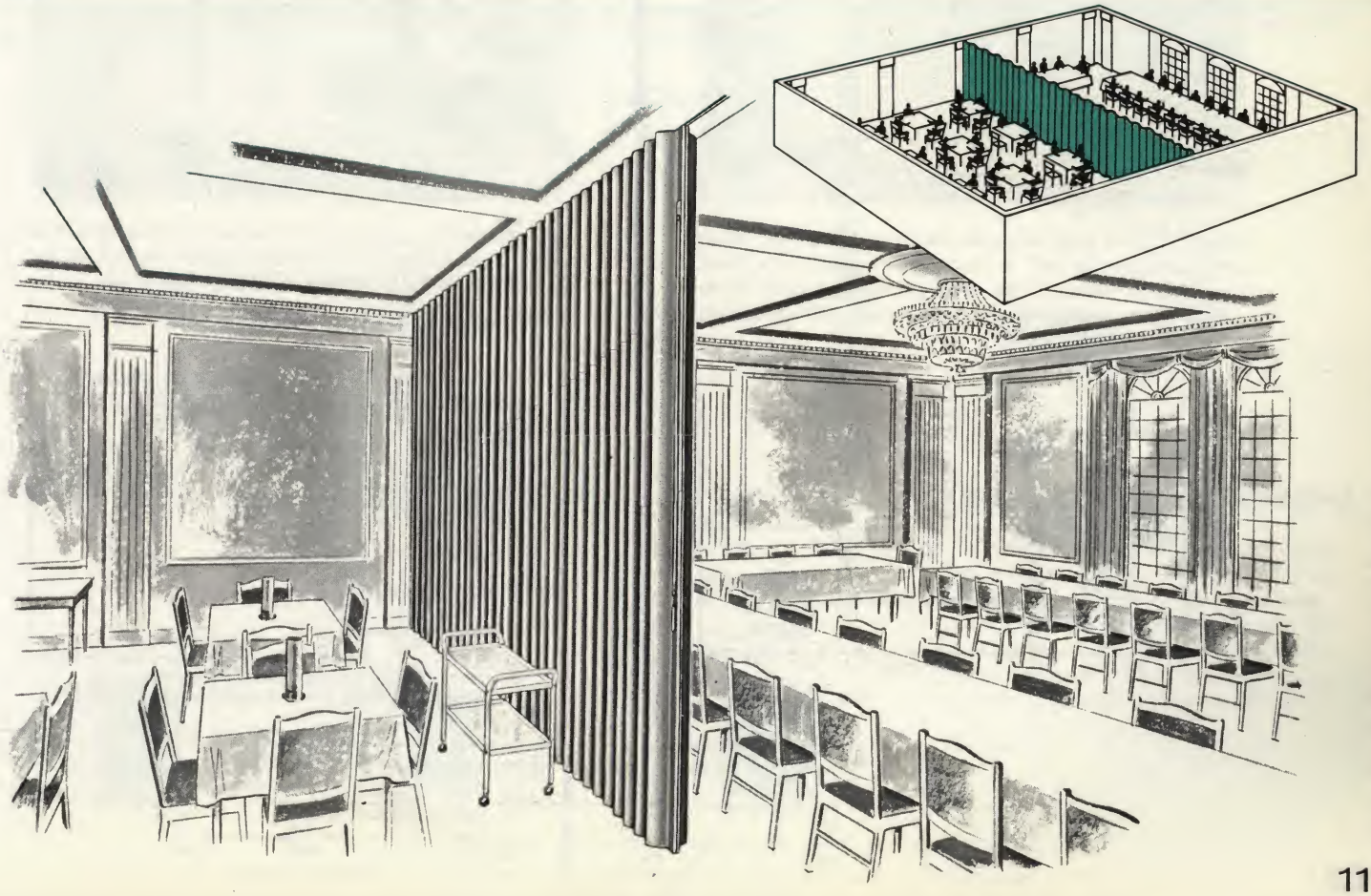


Tough, vinyl-coated chip board liner, on both sides of partition, insulates against sound.



Sweep strips, top and bottom, close all crevices around the partition.

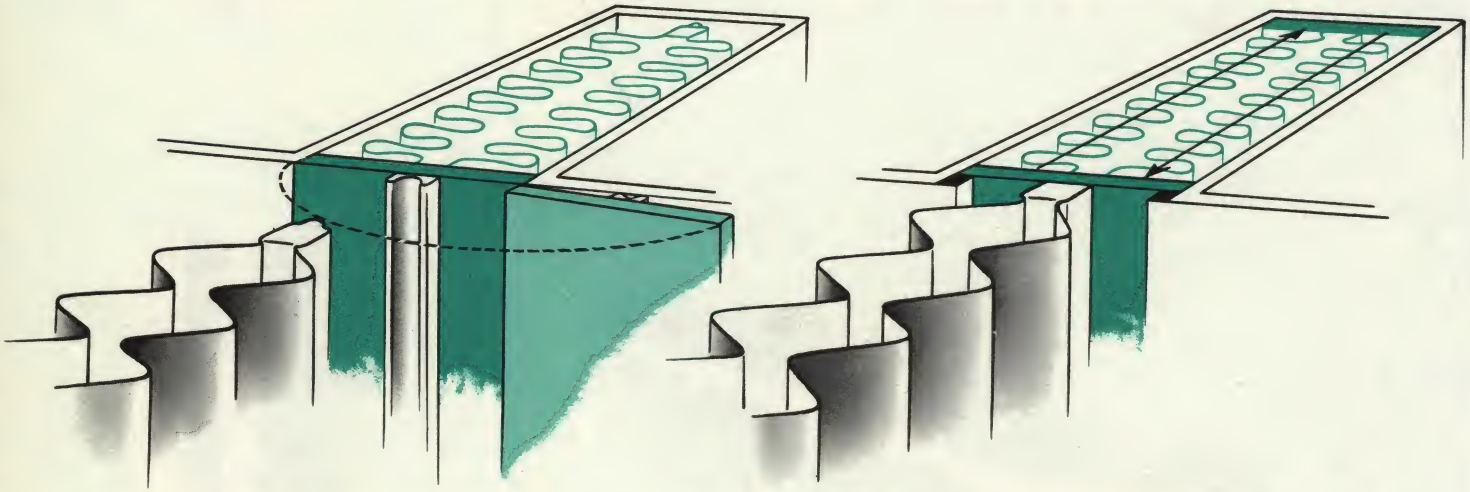
Extruded aluminum channels seal off crevices at lead post with a lining of plastic foam.

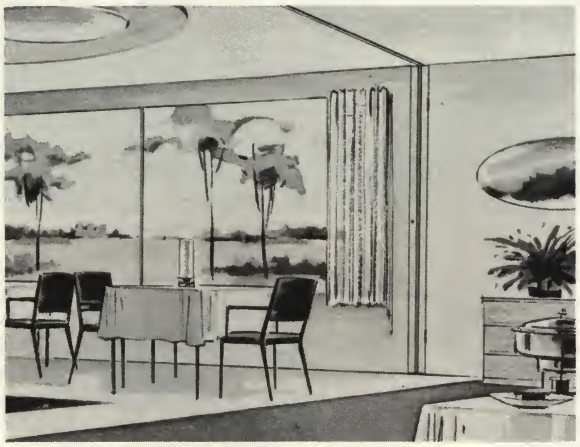


modernfold DOORS ®

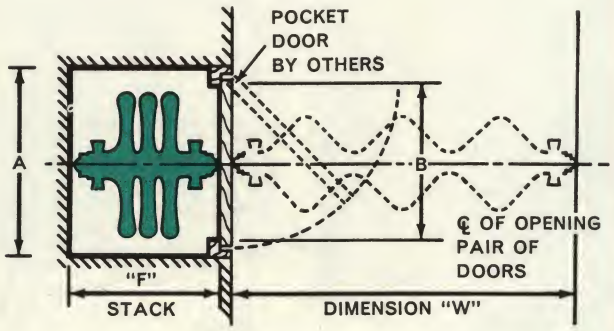
pocket or door recess installations

In many installations, it is desirable to store Modernfold doors in a pocket or recess when not in use. Two basic systems to do this are illustrated and described below—both of which can be modified to suit individual circumstances.

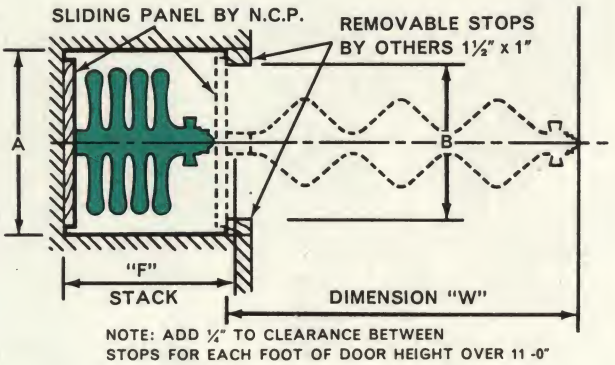




Case Y: This application illustrates a "rolling post" Modernfold stacked in wall recess and concealed by a small hinged door. When in use, the Modernfold is rolled completely out of recess and latched to outside of hinged door.



Case Z: In this application, the Modernfold is attached to a sliding panel within the wall recess (since rear of recess is inaccessible for door attachment). When in use, panel slides out with door and comes to rest against stops.



NOTE: ADD ¼" TO CLEARANCE BETWEEN STOPS FOR EACH FOOT OF DOOR HEIGHT OVER 11'-0"

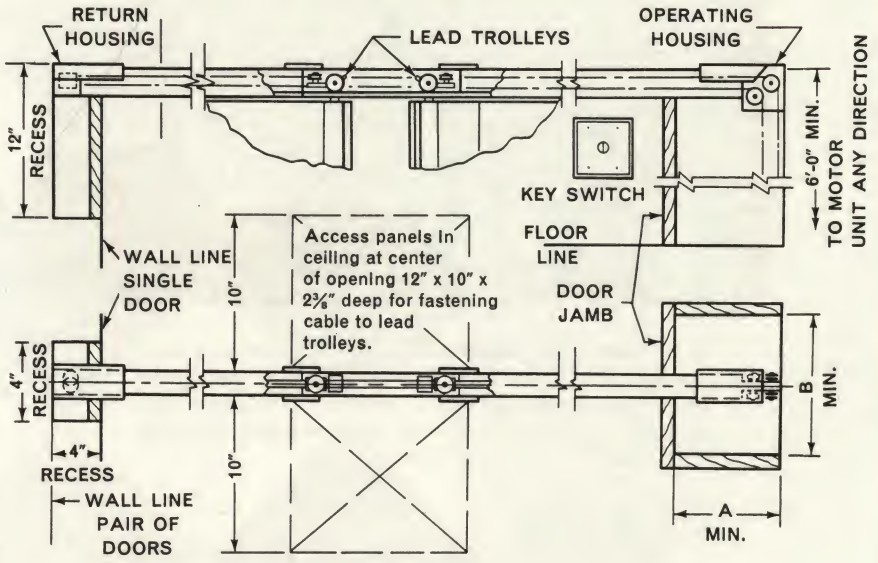
	Custom	Soundmaster "80"	Spanmaster	Soundmaster "120"
A	12"	13"	16"	17"
B	10"	11"	14"	15"

mechanically operated doors

Large Modernfold installations which cannot conveniently be operated manually are equipped with hand cranks or electric motors according to specifications described here.

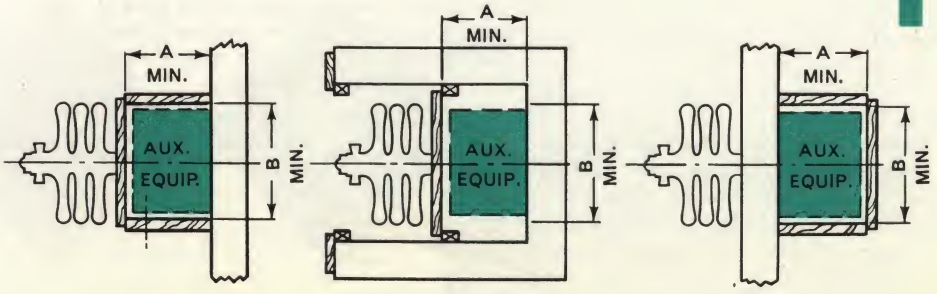
general specifications

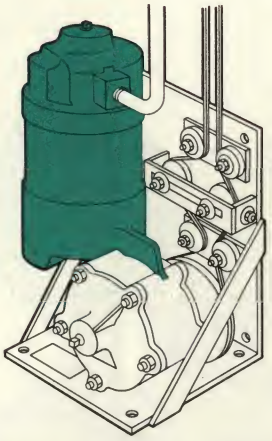
Mechanically operated Modernfold doors, either electrical or hand crank, shall be supported by flanged ball-bearing trolleys operating in 1/8" thick channel track, 2" wide x 2 1/4" high. Principle of operation shall provide smooth positive operation through the concealed use of 3/32" galvanized airplane cables operating over suitable sheaves and all auxiliary equipment shall be complete including adjustable tension slip clutch, speed reducer, and operating mechanism. Mechanical operation shall provide for simultaneous closure of both doors of a pair. Space provisions for auxiliary equipment shall be as indicated on chart below.



space requirements – auxiliary equipment

	electric				hand crank
	1/4 hp	1/3 hp	1/2 hp	3/4 hp	
A	9 1/2"	13"	13"	13"	9"
B	12"	19 1/2"	19 1/2"	19 1/2"	12"



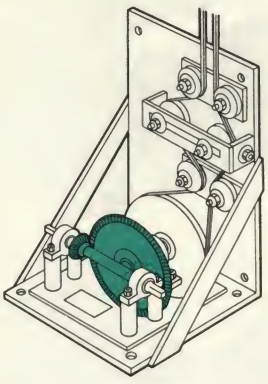


electrically operated

Electrically operated Modernfold doors shall provide closure at the approximate rate of 30 feet per minute and shall be complete, except wiring, with electrically reversible motor and momentary, key-operated contact switch.

Door Weight	Motor
up to 1500 lbs.	1/4 hp
1501 to 2000 lbs.	1/3 hp
2001 to 3200 lbs.	1/2 hp
3201 to 4800 lbs.	3/4 hp

Note: See chart on page 4 giving weights of all Modernfold doors. Consult factory for equipment to handle doors over 4800 lbs.

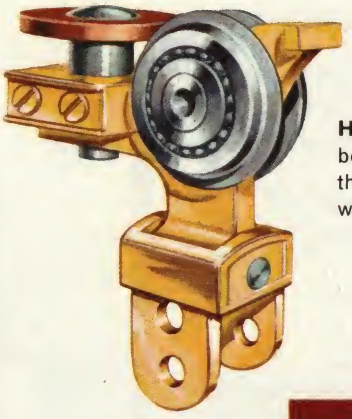


hand crank operated

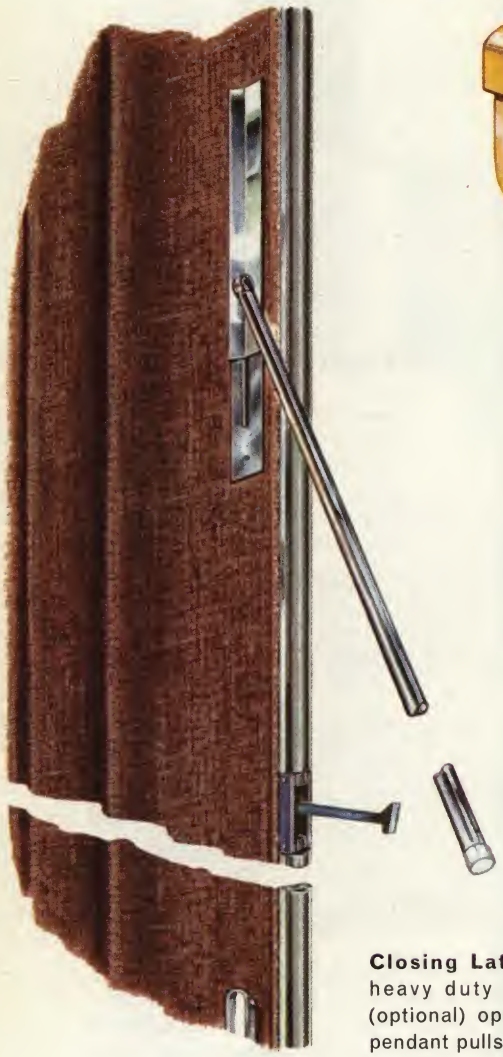
For installations in which remote operation other than electrical is desired, Modernfold Doors shall be equipped with a hand crank, easily accessible on one side only at either jamb, which will provide closure at the rate of 25 feet per minute when crank is turned at 60 revolutions per minute.

modernfold DOORS ®

construction features

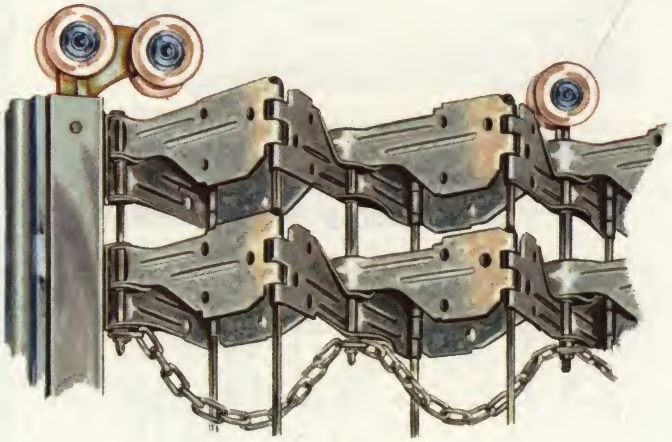


Heavy Duty Trolleys—All-steel, ball bearing trolleys are engineered to guide the largest partitions through the track with ease.

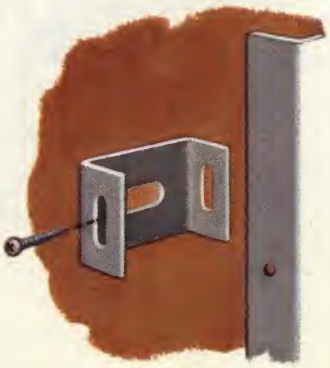


Closing Latch—Exclusive heavy duty closing latch (optional) operates through pendant pulls—assures snug seal between partition and wall moulding. Closing latch operates independently of key-operated security lock.

"X" Type Frame (Spanmaster Line)—Two rows of rugged, rust-resistant hinge plates provide true pantograph action for smooth, balanced operation. The plates are welded, not crimped, to rods for super strength. Supplied on all partitions over 15'0" high.



Truss-Link Suspension (Custom Line)—The system illustrated above consists of two rows of pantograph hinge plates linked together to form a single integrated unit for extra strength and stability on partitions over 8'0" high.



Secure Jamb Attachment—Door is securely attached to jamb by a series of steel clips placed at frequent intervals along jamb casing. Small, Phillips-head screws, on both sides of door, secure jamb post to the clips.

fabrics

exclusive *decorator* colors, textures patterns

MODERNFOLD partitions are available in a rainbow range of colors, and in textures and patterns to please even the most discriminating taste.

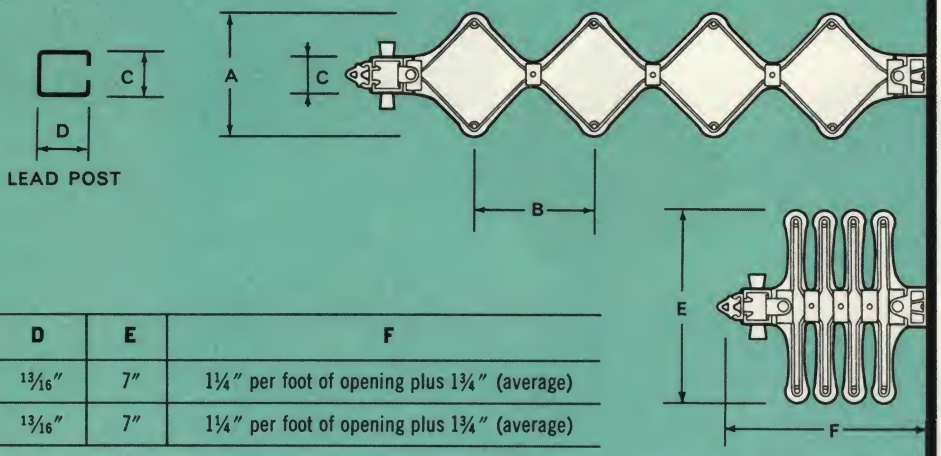
The small swatches illustrated here represent only a cross section of the fabrics available. From the Decorator Colors at left to the Duotone Prints at right, the total assortment consists of more than 50 different selections.

In addition, the Super DeLuxe line of fabrics includes hand printed, silk-screen patterns in virtually any color or combination of colors for truly unique decorator effects.

MODERNFOLD is the only folding partition manufacturer using the exclusive "Nuca Seal" process for quality preservation. Full details of this process appear on Page 18.

modernfold DOORS®

residential line



door dimensions

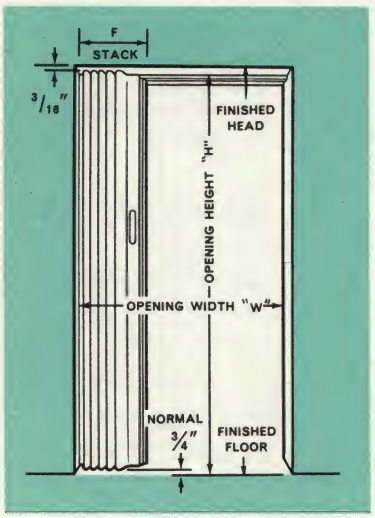
	A	B	C	D	E	F
Crown-master	3¾″	5 13/16″	13/16″	13/16″	7″	1¼″ per foot of opening plus 1¾″ (average)
Spacemaster	3¾″	5 13/16″	13/16″	13/16″	7″	1¼″ per foot of opening plus 1¾″ (average)

door sizes

Height Measurement—The height measurement "H" is the distance from finished opening at top to finished floor. Doors are made with an approximate ¾″ clearance to allow for future carpet installations. A 1″ clearance is provided on 8'0″ high doors.

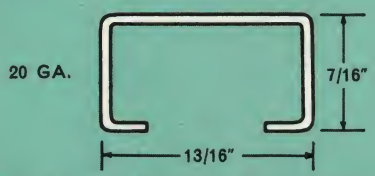
Width Measurement—The width measurement "W" is the distance between finished jambs. Door extensions are in 6″ increments, so openings ("W") falling between door widths shown in chart require next larger size door.

Stack Space—Normal stack space "F" is determined by the formula shown above under "F."



For Opening Width	For Opening Height
2'0″	6'6″
2'0″	6'8½″
2'6″	6'6″
2'6″	6'8½″
3'0″	6'6″
3'0″	6'8½″
4'0″	6'6″
4'0″	6'8½″
4'0″	8'0″

track dimensions

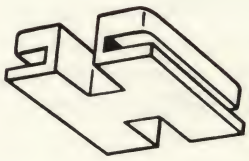


Steel track is finished with baked enamel. Track is completely covered when door is closed, virtually invisible when door is open.

durable fabrics

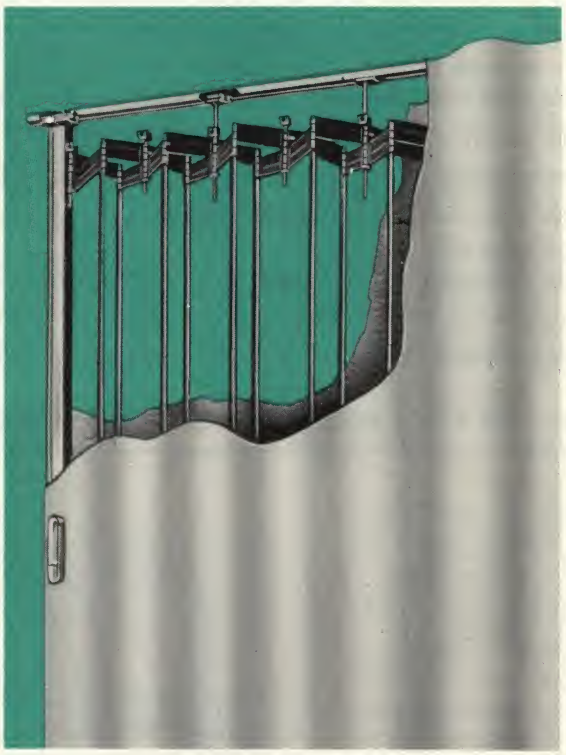
Commercial grade fabrics are back-coated for maximum stability. Thick vinyl coating provides extreme durability. Available in selected custom patterns and textures for unlimited decorative effects.

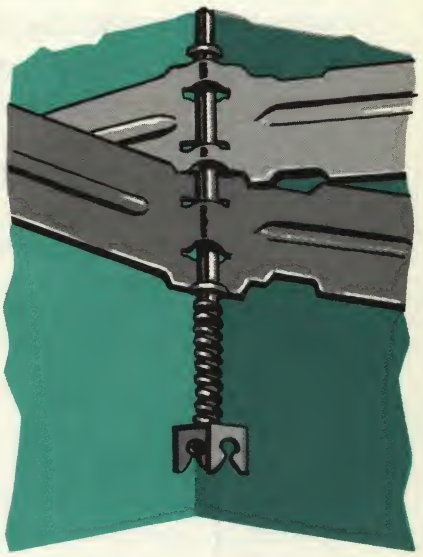
construction features



nylon slide operation

Pre-lubricated, sturdy nylon slides carry the full weight of the door silently and smoothly.



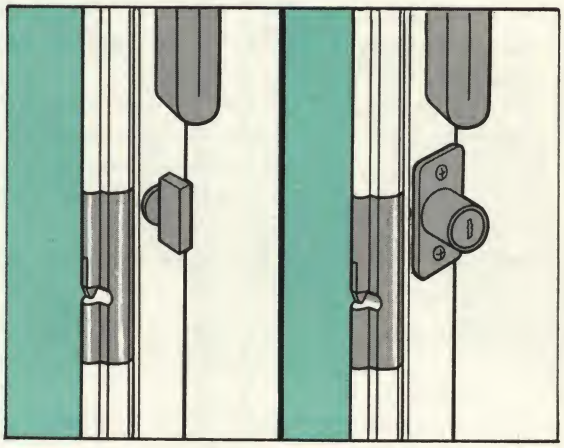


compression springs

Compression springs at bottom hinge plates equalize fabric tension—keep folds neat and even.

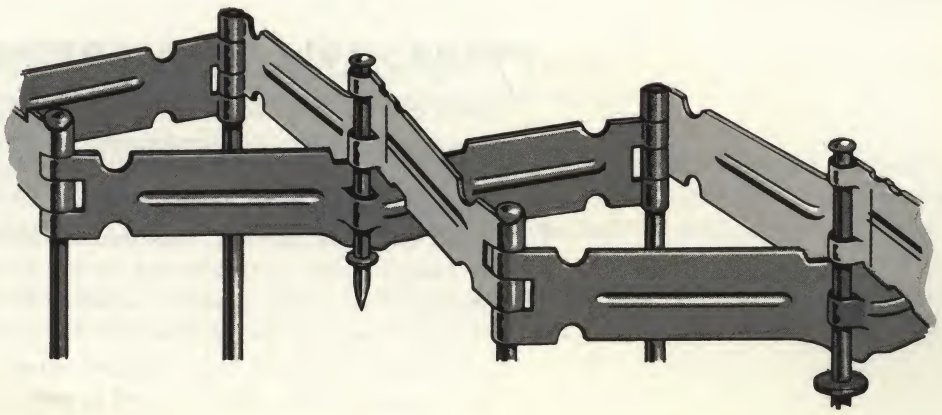
latch

Door automatically engages latch in closing—latch is released with normal pressure in opening operation. Turning knob secures door for privacy—coin operated safety button is on opposite side for emergency release.



lock

Door automatically engages latch in closing—releases with normal opening pressure. Door is securely locked by key—thumb knob on opposite side secures or releases lock from the "inside" without requiring the use of the key.



double strength steel frame

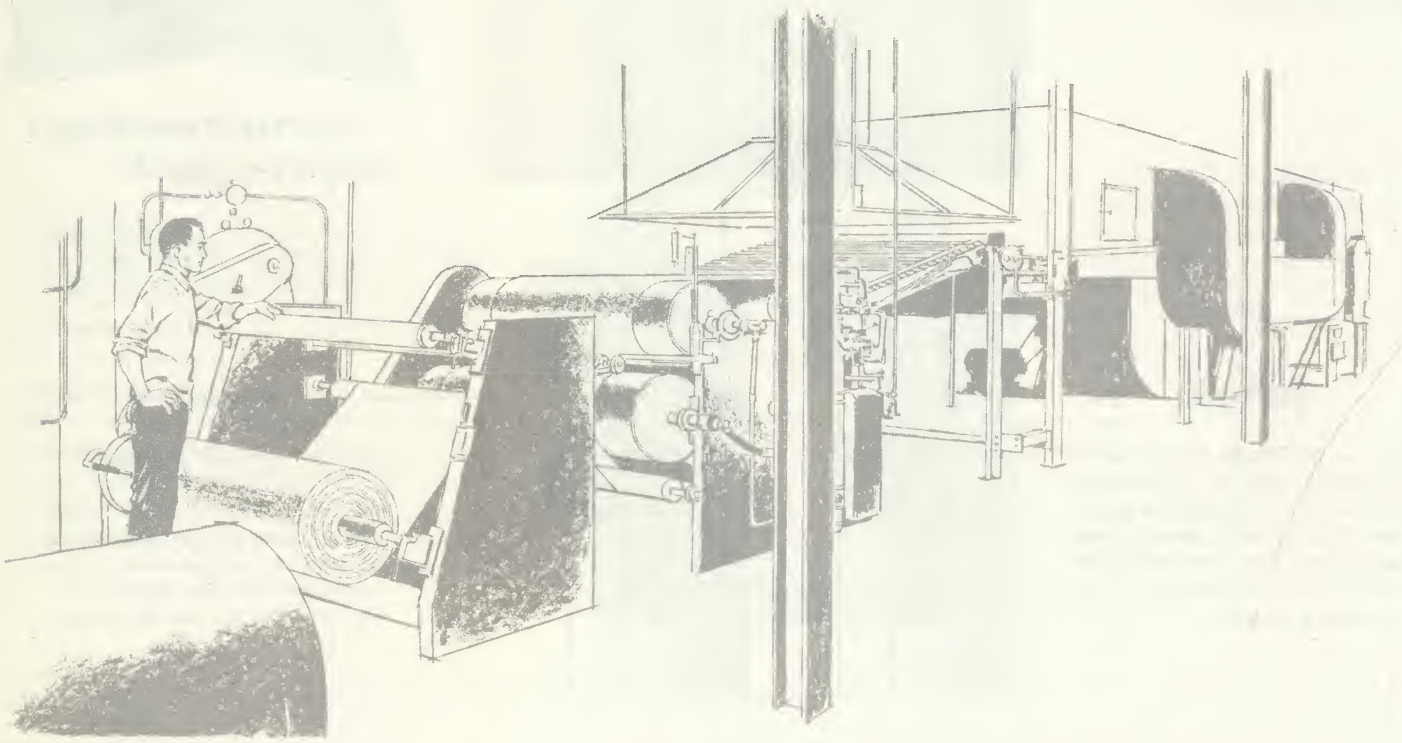
Two rows of steel rods are welded to exclusive "X" type hinges at both top and bottom.

modernfold DOORS ®

specifications

MODERNFOLD has been manufacturing folding doors since 1936 . . . far longer than anyone else in the industry. Those years have provided the experience needed to produce a top quality product, and the time needed to build an adequate nation-wide sales and service organization.

MODERNFOLD, the first and world's largest user of vinyl coated fabrics for flexible door coverings, is the only folding door manufacturer maintaining its own fabric coating plant, established for the express purpose of maintaining absolute quality control.



modernfold back coated fabric

MODERNFOLD'S new back coating process ("Nuca-Seal") has brought about significant improvements in fabric performance. In the process, the fibers on the back of the fabric are sealed with a thick aluminized coating of vinyl.

This technique improves "dimensional stability" by locking out moisture and thus deterring fabric distortions and/or shrinkage due to temperature or humidity fluctuations.

Greater opacity is also provided by this treatment, and this characteristic eliminates frame shadows caused when a strong light is placed behind doors covered in pastel colored fabrics.

specifications - commercial line - short form

MODERNFOLD doors shall be as manufactured by New Castle Products, Inc., installed by authorized factory representative, and guaranteed for one year.

MODERNFOLD doors shall be top supported, completely factory fabricated, with true pantograph action at top and bottom, and with welded steel frame.

Each door shall have an equal number of volutes on each side. All hardware shall be interchangeable.

Fabric coverings shall be 18 oz. per sq. yard (27 oz. per lineal yard) minimum weight, vinyl coated cotton drill, and coating shall not peel, craze or crack. Fabric shall be back coated by "Nuca-Seal" process, and shall meet these fire codes or tests (Laboratory certification may be requested):

a. New York Board of Standards and Appeals
b. Fire Department, City of Boston
c. American Society for Testing Specification D626-55T
d. Federal Specification CC-T-191b, Method 5902

specifications - commercial line - detailed

GENERAL

MODERNFOLD doors as shown on plans shall be furnished and installed by an authorized representative of New Castle Products, Inc., of New Castle, Indiana.

DETAILED

MODERNFOLD doors shall be top supported without floor guide and shall be completely fabricated at the factory, including all necessary hardware and track for installation.

MODERNFOLD doors shall have a rust resistant frame on interlacing collapsible and extensible hinge plates, to provide true pantograph action at top, bottom, and necessary intermediate locations.

Hinge plates shall be connected to vertical $\frac{3}{16}$" rods by welding to provide positive resistance to sidesway, and to insure balanced action, vertical stability, prevention of winding or warping; and shall maintain uniform spacing of all folds during operation.

There shall be an equal number of folds on both sides of all doors.

The frame shall be completely enclosed within a covering of durable, sun-fast, flame retardant fabric consisting of a vinyl coating on 1.85 drill.

The minimum standard weight shall be 18 oz. per square yard (27 oz. per lineal yard 54" wide), plus 10% minus 5%, and shall not peel, craze or crack.

MODERNFOLD coverings shall be back-coated with "Nuca-Seal," for maximum dimensional stability, drape and life.

MODERNFOLD doors shall include track or rust-resistant steel, not less than 16 gauge, be equipped with hardware and mouldings, and shall be guaranteed for one year against defects in material and/or workmanship. Distributors shall furnish steel sub-channel for all tracks that are recessed in plaster headers.

All MODERNFOLD doors shall be fabricated to receive completely interchangeable lock or latch units, which are adaptable to standard building master keying systems, all of which shall be an integral part of the door pull design.

All MODERNFOLD covering materials, separately and in combination, must pass the following fire codes:

a. New York Board of Standards and Appeals
b. Fire Department, City of Boston
c. American Society for Testing Specification D626-55T
d. Federal Specification CCC-T-191b, Method 5902

Laboratory certification on all proposed materials with respect to the above tests shall be made available on request.

specifications - "soundmaster" line

GENERAL—Soundmaster doors as shown on the plans shall be furnished and installed by the authorized representative of New Castle Products, Inc.

DETAILED—Soundmaster doors shall be top supported without floor guide and shall be completely fabricated at the factory, including all hardware and track necessary for installation. They shall be guaranteed for one year against defects in material and/or workmanship.

STEEL FRAMEWORK: The rust-resistant steel framework shall consist of various combinations of hinge plates

specifications – "soundmaster" line (continued)

interlaced to form "X" hinge pairs. These hinge pairs shall be in rows at the top and bottom of all doors, and intermediately every 3′6″ on doors over 5′0″. Vertical 3/16″ steel rods shall extend from the top row of hinge plates through the intermediate plates to the bottom row, and shall be welded to each to form a complete, integrated pantographic frame that will resist winding and sidesway, operate with a smooth centerline pull, and will have uniform spacing of folds during operation, with an equal number of folds on each side. All mechanism for producing stability and pantograph action shall be contained within the steel frame. Stability shall depend upon the steel frame, not the stiffening of the cover.

1. "Soundmaster 80": Individually, each hinge plate shall be no less than 1 7/8″ in width, shall be of channel construction, and shall be ribbed for maximum strength. SOUNDMASTER doors 8′0″ and less in height shall have one row of pantographic hinge plates at the top. Doors over 8′0″ high shall have truss-link suspension consisting of two rows of pantographic hinge plates at the top linked together in such a manner as to form a single integrated unit to give increased strength and stability. These two rows of plates shall be separated by 1 5/32″ lengths of tubing at each intermediate trolley to distribute the door load equally between these two rows of plates. The combined vertical height of the two rows of plates shall be no less than 4 3/4″.

2. "Soundmaster 120": Doors 15′0″ high and less shall have one row of no less than 4 1/8″ wide hinge plates at the top with a load-bearing reinforcement added to the plates at the point through which the supporting pins pass. Doors over 15′0″ high shall have two rows of pantographic hinges no less than 4 1/8″ wide individually and 8 1/4″ wide in combination at the top and shall be reinforced at their lower edge by a reinforcing member through which a supporting pin of no less than 1/4″ diameter must pass.

COVERING

1. Outer Covering—The outer covering fabric shall be attached to the hinge pairs with coated steel leaf fasteners through hidden webbing stitched near the top and bottom of the outer cover. Fabric shall be 1.85 drill coated on both sides to a minimum standard weight of 18 ounces per square yard (27 ounces per lineal yard 54″ wide), plus 10% minus 5%. The exposed surface of the outer covering shall be vinyl of the color and pattern selected and shall be protected by an abrasive-resistant top coat of clear vinyl. The outer covering shall be backcoated with an aluminized vinyl material known as "Nuca-Seal" in order to control the fabric stretch and shrinkage and to prevent passage of light when necessary. Fabric shall be sunfast and flame retardant and shall not peel, craze or crack.

SOUNDMASTER outer covering materials must pass the following fire codes:

a. New York Board of Standards and Appeals, Rules for Flameproof Material.

b. Fire Department, City of Boston, Fire Prevention Division, Document No. 5.

c. American Society for Testing Materials Specification D 626-55T

d. Federal Specification CCC-T-191B, Method 5902.

2. Inner Covering—The inner covering shall be attached independently to the hinge pairs with coated steel leaf fasteners near the top and bottom of the inner covering. The inner covering shall consist of chipboard panels no less than .175″ thick bonded by heat to a vinyl coated flexible material of long life and durability. The inner covering shall be so constructed as to meet the following New York and Boston fire requirements:

a. New York City Board of Standards and Appeals, Rules for Flameproof Material.

b. Fire Department, City of Boston

Terms and conditions promulgated by the head of the fire department covering the use of Decorative Materials in Public Buildings, Places of Assembly and in Stores. Fire Prevention Division—Document No. 5.

Note: Laboratory Certification on all proposed materials with respect to the above tests shall be made available on request.

TRACK AND TROLLEYS: All track for Soundmaster doors shall be rust-resistant and of the minimum gauges indicated below. Appropriate ball-bearing trolleys for track sizes specified shall conform as indicated below. No auxiliary track shields or coverings shall be used.

Track Size	Trolley Composition	Min. Track Gauge	Max. Recess Width Concealed track	Max. Door Height	Max. Door Width
No. 8	Nylon, ball bearing	16 ga.	1 5/16″	12′0″	26′3″
No. 12	Nylon, ball bearing	14 ga.	1 9/16″	15′0″	60′0″
No. 7	Steel, ball bearing	11 ga.	2 3/8″	22′0″	60′0″

SUB CHANNEL: When recessed track is specified, sub channel shall be furnished by the distributor but installed by others.

HARDWARE: All Soundmaster doors shall be fabricated to receive completely interchangeable lock or latch units which are adaptable to standard building master keying systems, all of which shall be an integral part of the door pull design. (*Please specify latch, lock, or master keyed lock.*) All Soundmaster doors, both No. 80 and No. 120, above 8′0″ high, shall be equipped with a "pull-in" latch operated by the pendant pulls supplied with the door. This device shall engage either the wall jamb or the mould of a matching door at a distance of no less than 3½″ and shall exert a force in such a manner as to assure a tight seal. This "pull-in" latch shall be easily released by an upward push on the pendant pulls.

SEALING: All Soundmaster doors shall be equipped with a sound seal consisting of two aluminum channels, one male and one female, into which has been inserted a seal of polyurethane foam. When a single door meets the jamb, or a pair of doors engage, the male channel shall press into the polyurethane foam forming a tight, soundproof seal. All Soundmaster doors shall be equipped with an air release at the lead post which will prevent entrapment of air as the doors are stacked by release of this air through suitable lead post openings. Such openings shall be completely sealed when the two aluminum extrusions meet. Soundmaster doors shall be supplied with sweep strips to completely close all crevices at the top and bottom of the door and shall be applied to both sides of the door.

specifications - residential line

"crown-master"

GENERAL—MODERNFOLD'S Crown-master Line of folding doors as shown on plans shall be furnished by an authorized representative of New Castle Products, Inc., New Castle, Indiana.

DETAILED—These doors shall be top supported without floor guide and shall be completely fabricated at the factory, including track and all necessary hardware for installation. Crown-master doors shall consist of a rust-resistant frame of interlacing extendable hinge plates, connected by welding to provide smooth positive operation, to cause all volutes to extend and collapse equally and simultaneously.

The frame shall be completely enclosed within a covering of durable, sun-fast, flame retardant fabric consisting of a vinyl coating on 1.85 drill.

The minimum standard weight shall be 18 oz. per square yard (27 oz. per lineal yard 54″ wide), plus 10% minus 5%, and shall not peel, craze or crack.

MODERNFOLD coverings shall be back-coated with "Nuca-Seal," for maximum dimensional stability, drape and life.

The fabric shall be attached to clips, which are spring loaded, to assure even tension at all points of attachment.

All track shall be rust-resistant and shall have a baked enamel finish, and shall provide a good surface for painting if desired.

Crown-master doors shall be equipped with satin brass hardware and shall be fully guaranteed for one year against defects in material and/or workmanship.

"spacemaster"

GENERAL—MODERNFOLD'S Spacemaster Line of folding doors as shown on plans shall be furnished by an authorized representative of New Castle Products, Inc., New Castle, Indiana.

DETAILED—Spacemaster doors shall be top supported without floor guide and shall be completely fabricated at the factory including track and all necessary hardware for installation. Spacemaster doors shall consist of a rust-resistant frame of interlacing extendable hinge plates connected by welding to provide smooth positive operation, to cause all volutes to extend and collapse equally and simultaneously.

The frames shall be covered with a durable, sun-fast, especially compounded vinyl resin coating on first quality, exceptionally strong cotton fabric. The coating shall be such that it will not peel or craze, is easily cleaned and shall add dimensional stability to the door cover.

The fabric shall be attached to clips, which are spring loaded, to assure even tension at all points of attachment.

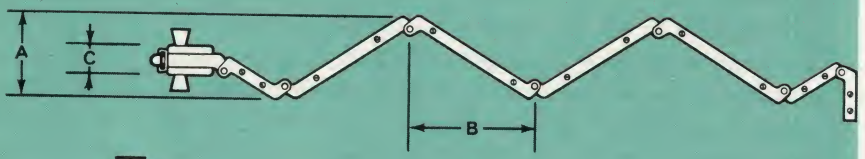
All track shall be rust-resistant and shall have a baked enameled finish, and shall provide a good surface for painting if desired.

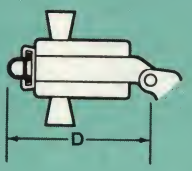
Spacemaster doors shall be equipped with hardware and shall be fully guaranteed for one year against defects in material and/or workmanship.

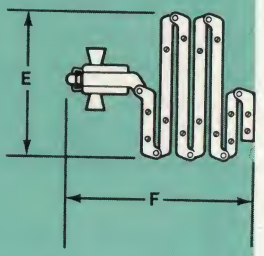
modernfold DOORS

wood line

door dimensions

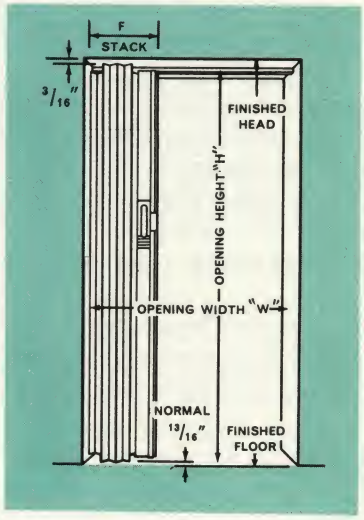






	A	B	C	D	E	F
Woodmaster	2¾"	5 13/16"	1 5/16"	3⅜"	6 7/16"	1 5/16" per foot of width plus 5" (average)
Neowood—Stock	1½"	5 13/16"	⅜"	2 5/16"	6"	¾" per foot of width plus 2¼" (average)
Neowood—Custom	1½"	5 13/16"	½"	3 3/16"	6"	¾" per foot of width plus 3" (average)

door measurements and weights



Height Measurement—The height measurement "H" is the distance from finished opening at top to finished floor. Doors are made with an approximate $^{13}/_{16}$" clearance to allow for future carpet installations.

Width Measurement—The width measurement "W" is the distance between finished jambs. Door extensions are in 5" to 6" increments, so openings ("W") falling between door widths shown in chart require next larger size door.

Stack Space—Normal stack space is determined by the formula shown above under "F."

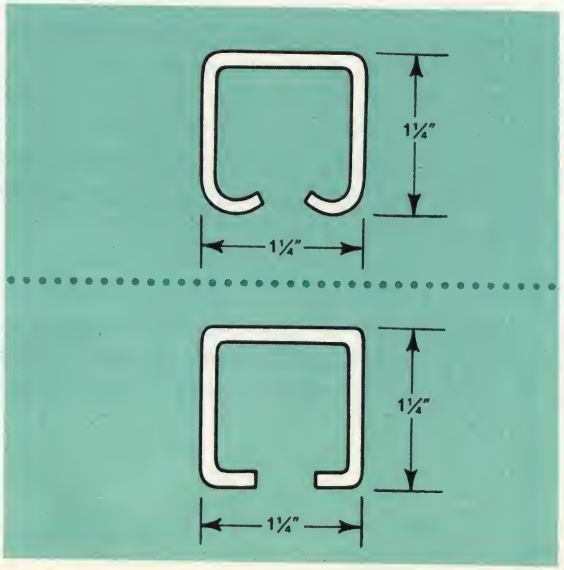
Note: Door weight is approximately 2½ lbs. per square foot of opening.

track dimension – woodmaster

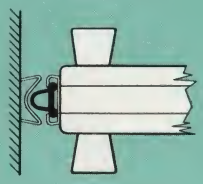
Two tracks are available—both having identical dimensions as shown in the illustration. The "standard" track is used for all residential installations up to and including 8'0" x 8'0". A heavier gauge track is used for *all* commercial installations, regardless of size.

track dimension – neowood

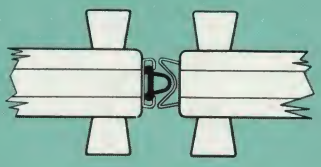
Track for Neowood doors shall be no less than 16 gauge (.060") with baked-on enamel finish to harmonize with the other door components, and the track shall be suitable for further painting if required.



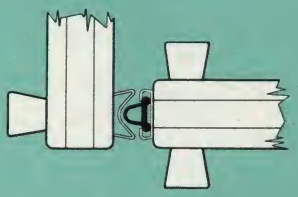
meeting post details



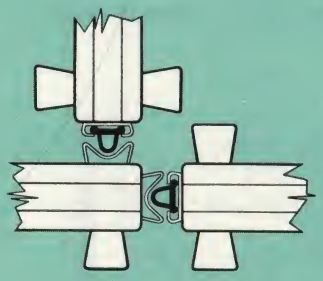
Single meeting post meeting wall or jamb



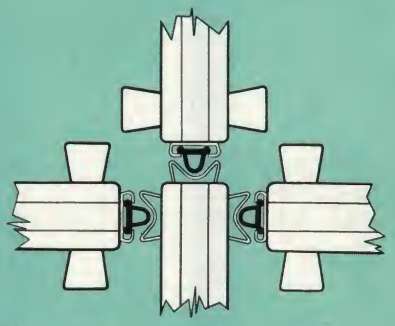
Lead posts on pair of doors

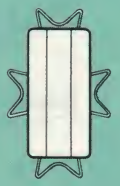


The "L" meeting post is often used when two doors meet at right angles to form a separate room in a corner.



The "T" meeting post enables three doors to meet at one point and form two separate rooms.



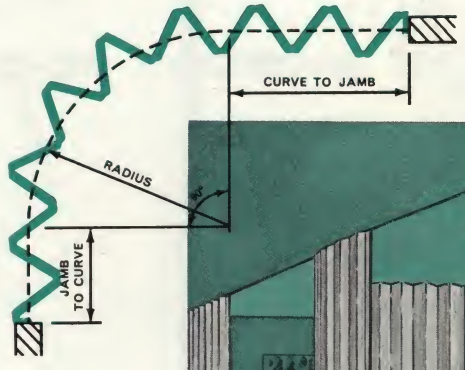


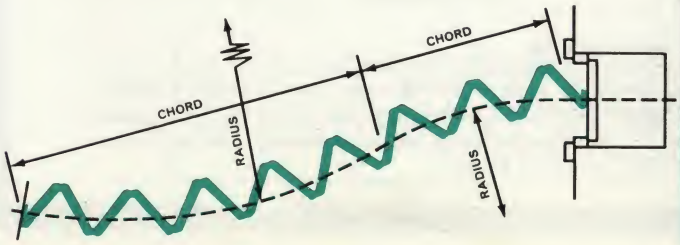
The "X" meeting post acts as the center meeting point for four doors which form four separate rooms. Also available with a free rolling "X" post.

Rolling post doors—doors not permanently attached to a jamb—fold in either direction. This application is ideally suited for closet openings, and is required for passing through switches, pocket installations, etc.

curved doors

Doors made for curved installations permit a wide range of highly practical and unusually attractive interior applications, that blend in perfectly with the general design and decor of the surroundings. Minimum radius for wood doors is 1'6".



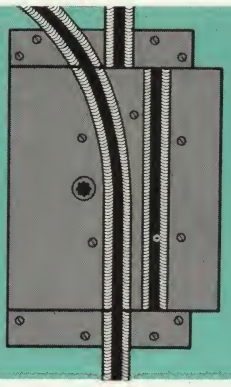


modernfold DOORS

track switches

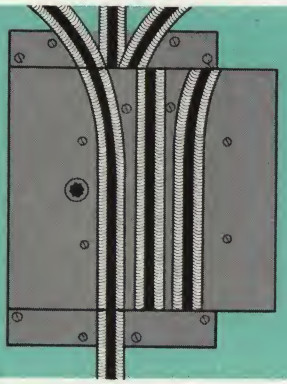
one-way glide switch

The one-way glide switch transfers doors from one track to another, thus enabling doors to serve multiple functions.

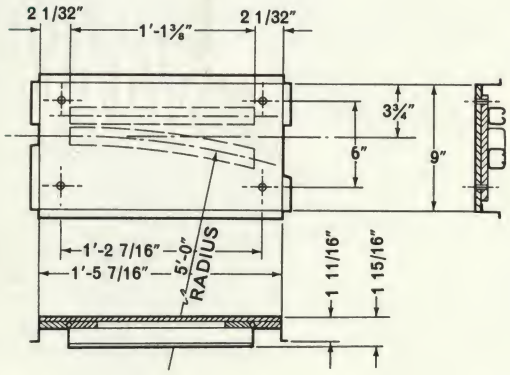


two-way glide switch

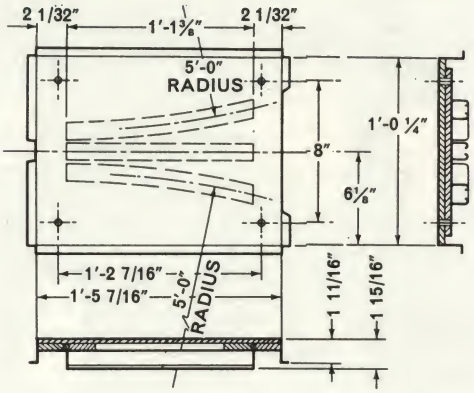
The two-way glide switch operates both to left and to right so that doors can be transferred from one track to two separate tracks.

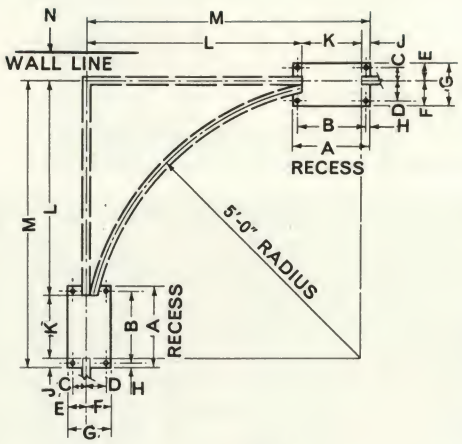


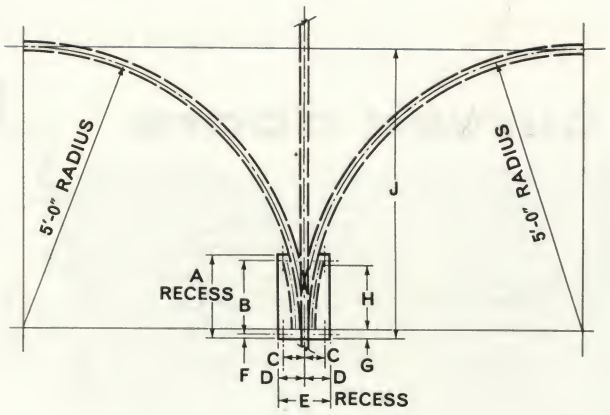
One-Way Glide Switch Dimensions



Two-Way Glide Switch Dimensions







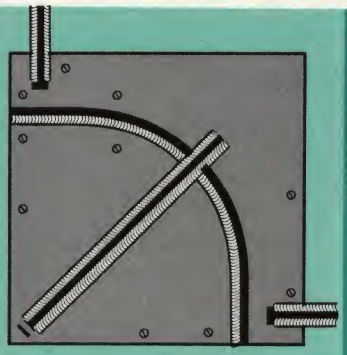
Typical Glide Switch Applications

Recess Size	A	B	C	D	E	F	G	H	J	K	L	M	N
No. 8 one way	1′5 11⁄16″	1′2 7⁄16″	2½″	3½″	3⅜″	5⅜″	9¼″	1⅝″	2⅛″	1′1 7⁄16″	3′10 19⁄32″	5′2 5⁄32″	5½″
No. 8 two way	1′5 11⁄16″	1′2 7⁄16″	4″	6¼″	1′0½″	1⅝″	2⅛″	1′1 7⁄16″	5′2 5⁄32″				

While Modernfold track switches are used in countless installations, they function basically in these three ways: First, they move stacked doors away from congested areas. Second, they enable a single folding door to act as a closure for two or more openings. And third, they make it possible to partition the space in a room in a variety of different ways to suit the immediate space requirements.

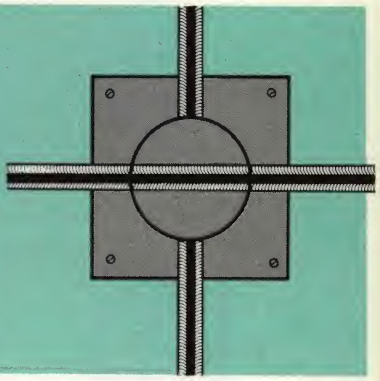
pivot switch

The pivot switch enables the door—when stacked—to pivot in a 90° arc so that door may be extended in more than one direction, or swing out of the way when not in use.

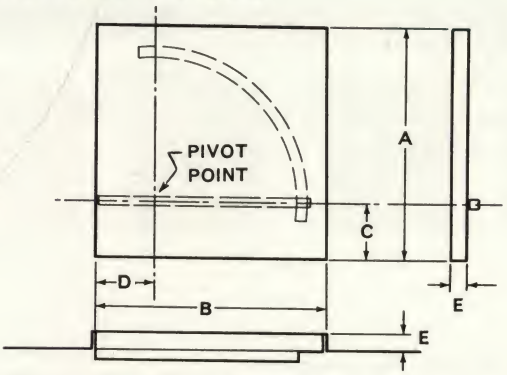


cross-track switch

The cross-track switch permits one door to pass through the track of another installed at a right angle. Available in No. 8 Heavy Duty, No. 7 and No. 12 track size.

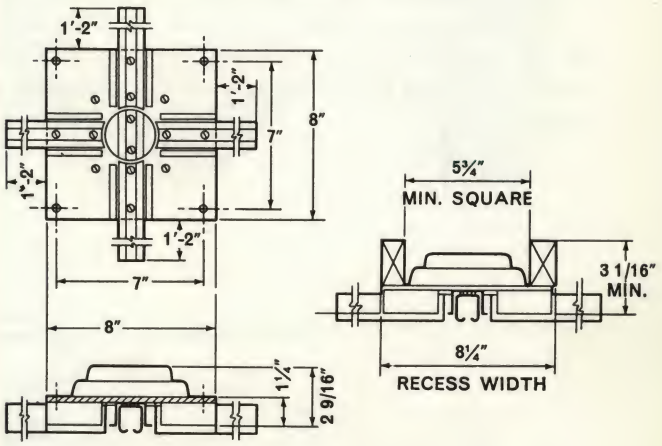


Pivot Switch Dimensions



Pivot Switch	A	B	C	D	E
No. 8 —1'6"	1'8"	1'8"	5"	5"	1¼"
No. 8 —2'6"	2'6"	2'6"	7 5/16"	7 5/16"	2⅝"
No. 8 —3'6"	3'10⅜"	3'10⅜"	7 5/16"	7 5/16"	2⅝"

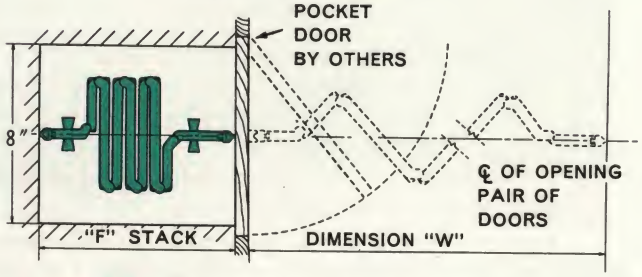
Cross-Track Switch Dimensions



Note: Switches for Neowood doors same as shown—except use flat lipped track.

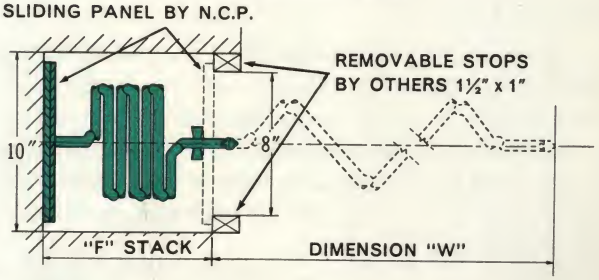
pocket or door recess installations

CASE Y
POCKET WITH DOOR



Case Y: This is a "rolling post" installation in which door is stacked in wall recess and concealed by a small hinged door. When in use, the door is rolled completely out of recess, and latched to the hinged door.

CASE Z
POCKET WITH SLIDING PANEL



Case Z: In this installation, door is attached to a sliding panel within the wall recess (as rear of recess is inaccessible for door attachment). When in use, panel slides out with door and comes to rest against stops.

modernfold DOORS®

specifications

"woodmaster"

GENERAL

Woodmaster doors, as shown on plans, shall be furnished and installed by an authorized representative of New Castle Products, Inc., of New Castle, Indiana.

DETAILED

Woodmaster doors shall be top supported, without floor guide, and shall be completely fabricated at the factory, including all necessary hardware and track for installation.

Woodmaster doors shall consist of 6″ vertical panels, of particle board, veneered with GENUINE HARDWOOD, and the panels shall be connected by extruded vinyl connectors.

Woodmaster panels shall be connected at the top by 12 gauge steel hinges for maximum strength. All steel hinges shall be properly prepared for the prevention of rust.

Woodmaster panels shall be finished with a CONVERSION finish, which is scratch, mar and mark resistant when subjected to standard scratch tests.

All Woodmaster hardware shall be finished in dull satin. Woodmaster doors when required shall be equipped with locks or latches. All locks or latches are to be so equipped as to be interchangeable, and are to be so constructed as to be an integral part of the door pull design.

Woodmaster doors as herein specified shall be guaranteed by the manufacturer for one year against defects in material and/or workmanship.

"neowood"

GENERAL

"Neowood" Doors, as shown on plans, shall be furnished and installed by an authorized representative of New Castle Products, Inc. of New Castle, Indiana.

DETAILED

Neowood doors shall consist of vertical panels, of two-ply laminated tempered hardboard, and the panels shall be connected by extruded vinyl connectors.

Track for Neowood doors shall be no less than 16 gauge (.060″) with baked-on enamel finish to harmonize with the other door components, and the track shall be suitable for further painting if required.

Panels composing Neowood doors shall be of laminated construction to prevent warping, consisting of two-plys of tempered hardboard laminated with thermosetting adhesive.

The finish on "Neowood" doors shall be factory applied in a three-step process. The ground, or base coat, shall be a high opacity lacquer. Actual photographic reproductions of select fine woods shall be printed over the base coat and the resulting surface protected by a clear, baked-on conversion film.

All hardware for Custom doors shall be furnished in beige baked enamel, and harmonizing plastic pulls. Neowood doors when required shall be equipped with locks or latches. All Custom locks or latches are to be so equipped as to be interchangeable, and are to be so constructed as to be an integral part of the door pull design.

Neowood doors as herein specified shall be guaranteed by the manufacturer for one year against defects in material and/or workmanship.

Steel top hinge carries full lateral weight—maintains even folds. Ball bearing trolleys with nylon tires provide smooth, quiet operation.

Heavy duty hardware comprises a complete lock and latch system that provides infinite combinations of privacy, security and safety.

Extruded vinyl connectors between panels assure efficient folding action—minimum stacking space.

BIRCH

MAHOGANY

OAK

WALNUT

Nylon trolleys—four on the lead post, and two on each full panel—give smooth, silent operation. Staggered design permits trolleys to overlap and reduce stack space to an absolute minimum.

Positive-acting latch secures partition to the jamb, or another partition. Easily converted to key-operated lock in the field.

Floating trolley hangers pivot inside panels as door is operated to eliminate all binding and provide easy, finger-tip operation.

BIRCH

MAHOGANY

OAK

WALNUT

Modernfold doors are sold and serviced from coast to coast by a network of strategically located distributors. Consult the yellow pages for the distributor nearest to you.

modernfold®

Manufacturers of "Modernfold" Folding Doors, "Air Doors," "Modern-Cote" Wall Coverings, and "Peabody" School Furniture. • In Canada: New Castle Products Canada, Ltd., St. Lambert, Que.

New Castle Products, Inc., New Castle, Indiana, U. S. A.

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A.I.A. File No. 16M

Panelfold doors

Panelfold...beautiful, permanent wood folding Doors that positively control

SPACE ... COST ... SOUND

The modern trend is toward wood. Today, more than ever before, architects specify wood for its rich, natural, permanent beauty.

Panelfold doors fulfill the desire for beauty and answer the need for space, cost and sound control. All Panelfold doors have warp-resistant, solid wood core panels, faced with oak, walnut, birch, cedar, ash, pine or mahogany, finished with the smooth, lustrous patina of hand-rubbed wood.

Most important, only Panelfold doors have this patented, famous combination:

(1) Rugged and durable wood panels,

(2) connected and sealed with decorative, matching or contrasting extruded vinyl, and

(3) a pantographic action exclusively designed for permanent operating ease.

Waverly Presbyterian Church
Pittsburgh, Pennsylvania
Architect: Richard B. Benn

Cover: Interiors by Brinkmier-Brown Designs I.D.I.
Photograph by Rudi Rada

16e
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Panelfold wood folding doors manipulate space to its most functional degree.

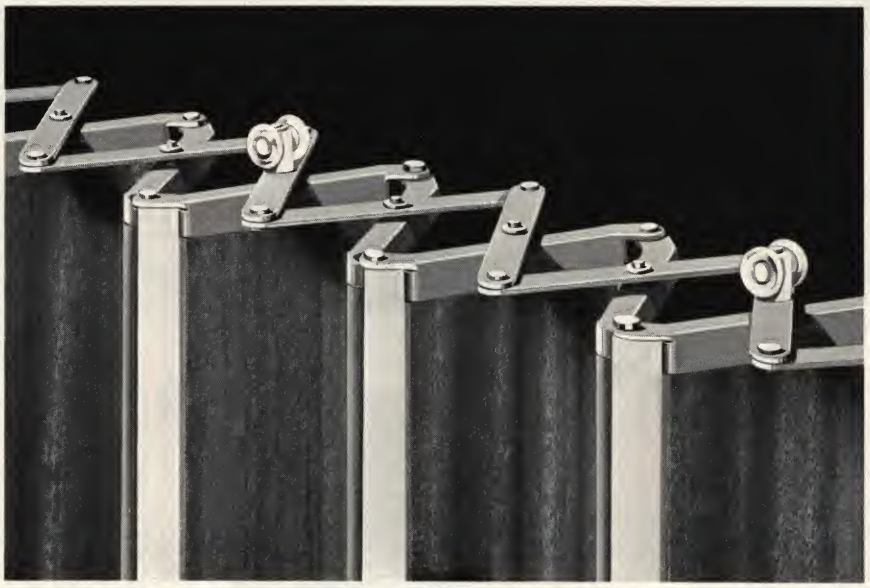
Garden House, Fresno, California
Designer-Builder: Taylor & Wheeler

St. Marks United Lutheran Church of Coral Gables, Fla.
Architect: Houston Ferguson Architects & Associates

Kellogg Center, Michigan State University

Wrigley Building Restaurant,
Chicago, Illinois
Architect: L. R. Solomon & Assoc.

- **RESIDENTIAL**
- **RELIGIOUS**
- **EDUCATIONAL**
- **COMMERCIAL**

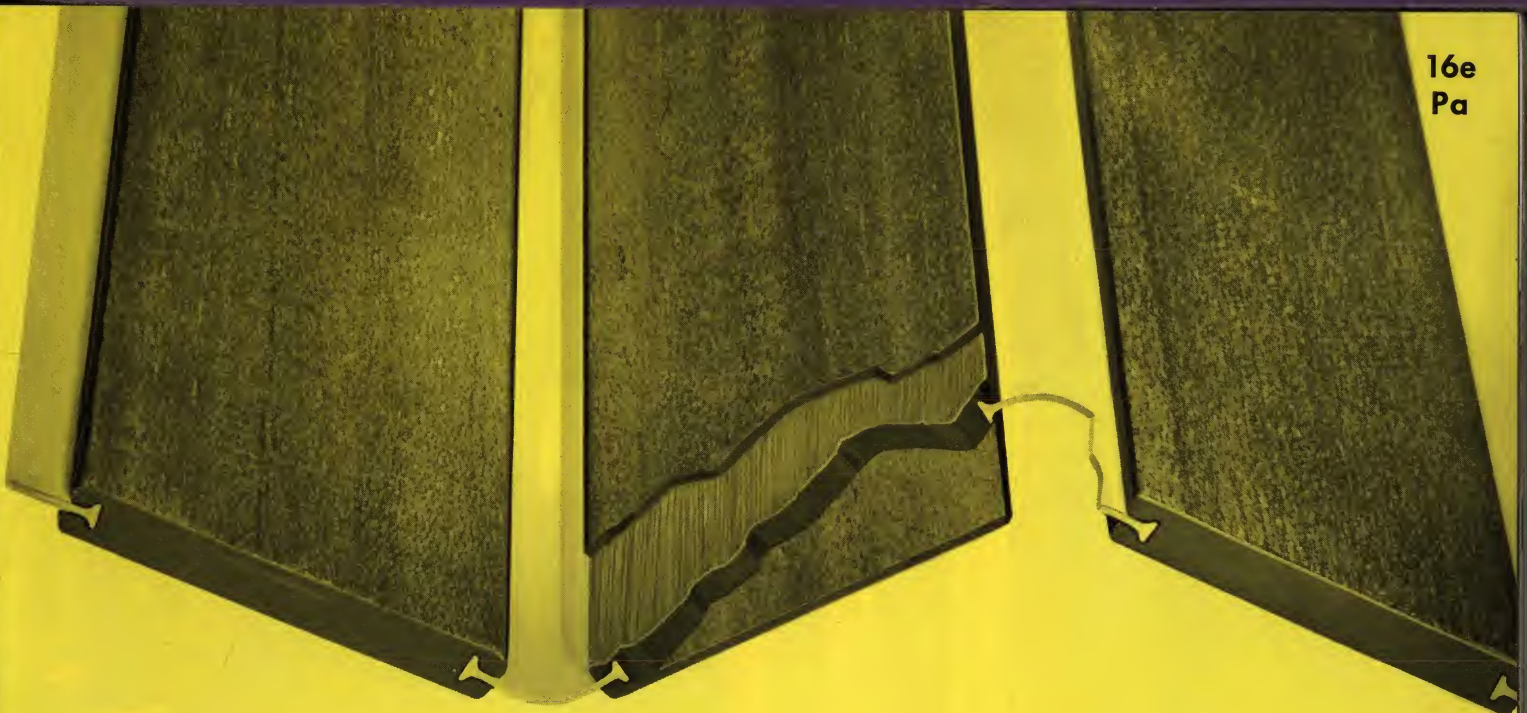


Panelfold's silent pantographic action assures operating ease

Only Panelfold wood folding doors have the patented action which permits simultaneous movement of each panel, dividing stress and effort equally along the overhead track. Only Panelfold's dependable, quiet pantograph gives full assurance that panels will never strike one another and clatter as the doors move to their open or closed positions.

Manufactured of rugged heavy gauge steel and aluminum, the top-supported pantograph travels by nylon wheels and guides on a heavy gauge extruded track. Panelfold's pantograph is entirely rust-proof and eliminates maintenance problems.

Panelfold's pantographic action allows doors to be opened or closed at the slightest touch... at the same time arresting the doors' action. Panelfold wood folding doors never "creep," but remain in any fixed position until moved. Remember: only Panelfold gives you the patented combination of silent pantographic action, vinyl connector seals, and beautiful, permanent solid wood core panels.



Panelfold seals out...Sound...Light...Air

Panelfold Doors, with their rugged, sound-sealing construction of solid wood core panels and vinyl connector seals, form a continuous wall of solid wood and vinyl, reducing sound transmission up to 32.0 decibels, and eliminating need for special sound liners. This built-in sound-sealing construction establishes Panelfold as sound control leader in the field.

SOLID WOOD CORES provide thickness and density for better seal of sound.

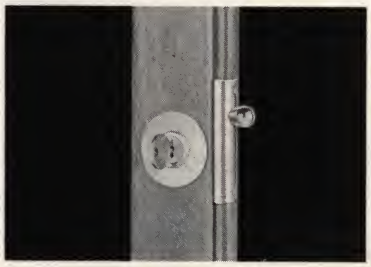
HARDWOOD FACES permanently bonded to solid wood cores form rugged, warp-resistant panels.

EXTRUDED VINYL CONNECTOR SEALS have been flex-tested through 950,000 cycles by M.I.T. Snug within recessed grooves in wood panels, there are no cracks or spaces for leakage of sound, light, air.

SECURITY . . . Panelfold's snug-fitting extruded vinyl bumper seals are furnished when doors are specified with the stainless steel security units.

BASIC NYLON UNIT...Smooth snubbing action holds door(s) positively in place. Cannot be locked. No vinyl bumper seals provided.

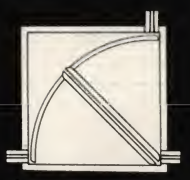
PRIVACY LATCH UNIT . . . A thumb turn permits locking of door on one side; emergency release on other side.



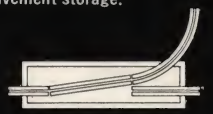
LOCK AND PRIVACY LATCH UNIT . . . A cylinder lock on one side of the door and thumb turn on reverse side.

MASTER KEY UNIT...Any standard, recognized master key cylinder lock is added to the lock and privacy latch unit.

SWITCH DETAILS . . . Track switches, when placed in corners, along walls, or at any point in ceiling, permit closures to cross tracks at right angles; change direction 90°, or pass from main track onto any number of parallel storage tracks. Infinite variety can be achieved.



PIVOT SWITCH can be used for any right angle switching. A single door may be used as divider for more than one location within a room, and may be transferred to a central location for more convenient storage.



CURVED SWITCH permits easy transfer of doors from main to auxiliary tracks. Parallel stacking allows compact storage.

CROSSOVER SWITCH permits one door to pass through the track of a second door installed at right angles.

RADIAL TRACK for curved installations.

color guide

WOOD *	VINYL
Mahogany	Silver Gray
Cedar	Russet
Birch	Walnut Brown
Walnut	Star White
Oak	Golden Tan

Unless otherwise specified, Gold Tan vinyl is furnished with Cedar, Birch and Oak Panelfold Doors; Walnut Brown is furnished with Walnut doors and Russet is furnished with Mahogany doors. In addition to the above most popular colors, now you may specify any color in the entire spectrum, on both Panelfold wood panels and vinyl connector-seals. Details upon request.

*Ash and pine also available.

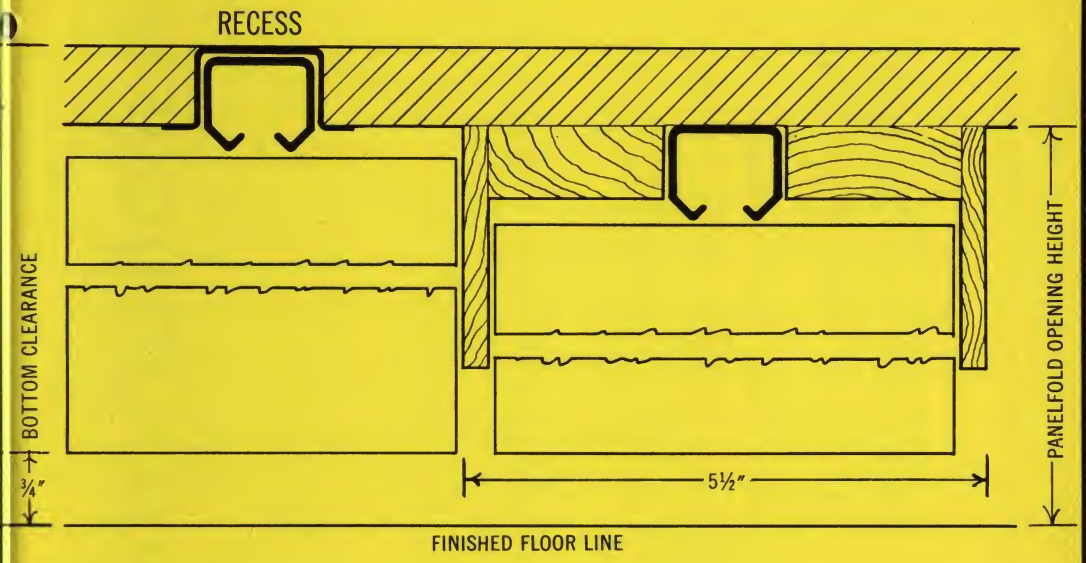
WOOD...for natural beauty that never fades

From the deep, warm glow of mahogany, through the lovely grains and colors of oak, cedar, and walnut, on to the blonde sheen of birch, there is a Panelfold door to heighten the beauty of any interior—residential, commercial, or institutional applications such as churches, schools, and hospitals. Vinyl connector-seals, an integral part of each Panelfold door, can blend in smooth harmony or contrast with a striking change of hue. Only Panelfold has the decor on the door!

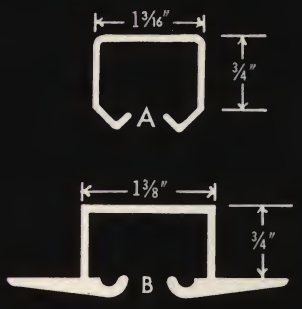
Black Dog School: Savage, Minnesota
Architect: Haarstick Lundgren and Associates, St. Paul, Minnesota

typical track applications

scale: ½



track dimensions

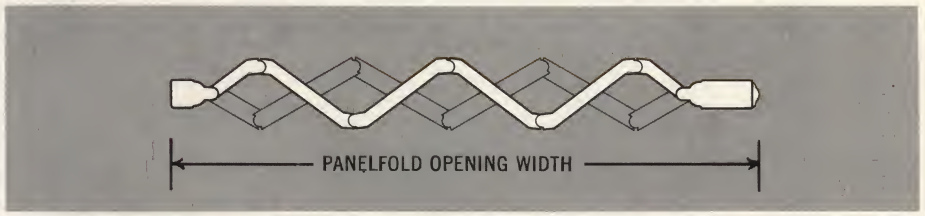


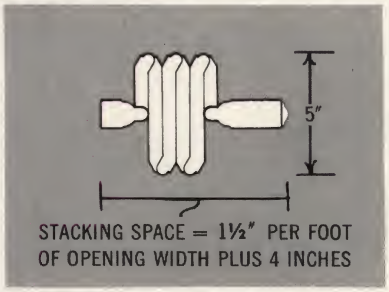
a Heavy Duty #8, for use with doors up to 12'1" high.

b Extra Heavy Duty #12, for use with doors higher than 12'1"

door dimensions

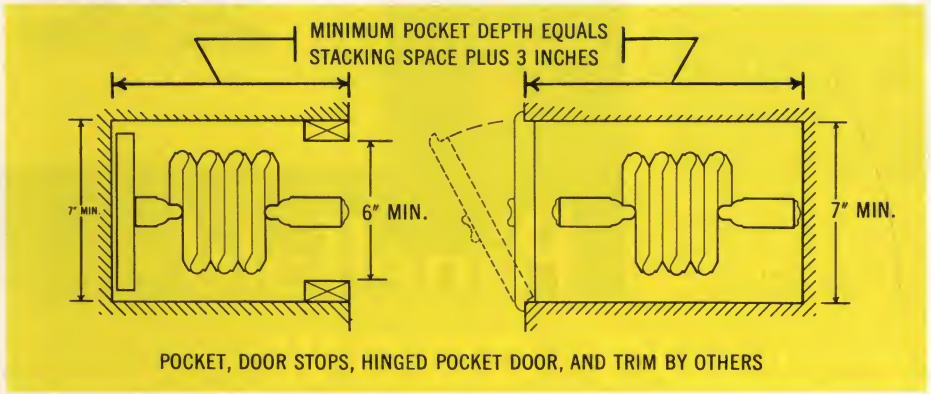
scale: ⅛





Panelfold Doors can be furnished to fit any opening width, as singles, pairs, or single or multiple sections of double end doors. Doors can be equipped with 2-, 3-, and 4-way meeting posts for dividing large areas into any desired combination of smaller areas.

pocket dimensions


MINIMUM POCKET DEPTH EQUALS
STACKING SPACE PLUS 3 INCHES
7" MIN.
6" MIN.
7" MIN.
POCKET, DOOR STOPS, HINGED POCKET DOOR, AND TRIM BY OTHERS

Panelfold tracing files and / or shop drawings available upon request.

specifications:

GENERAL: Folding Doors as shown on the plans are to be manufactured by Panelfold Doors, Inc., Hialeah, Florida.

Panelfold Doors shall be of the wood folding accordion type, top supported only, without floor guides. They shall be carried by nylon wheels traveling on a heavy extruded aluminum track.

PANELS: All panels shall be carefully selected kiln dried solid wood core faced with mahogany, cedar, birch, oak, walnut, ash or pine, as specified, permanently bonded with water-resistant plastic glue.

CONNECTOR SEALS: Panels shall be connector sealed with colorfast, flame-resistant, noncracking extruded vinyl, thus providing continuous wall of solid wood panels and vinyl, sealing out sound, light, and air. Vinyl connector seals shall be equal to those tested by M.I.T. for 950,000 flex cycles without wear or deterioration.

PANTOGRAPH: Panels shall be hinged with a series of quiet pantographic self-aligning stamped mounting units to provide smooth, positive action and to cause all panels to extend and stack equally and simultaneously, thereby dividing operating stress and effort equally along the overhead track. All parts shall be rustproof.

HEAD: Panelfold Doors shall be furnished for recess track or cornice installation as specified.

WEIGHT: Panelfold Doors shall weigh approximately 1.5 lbs. per square foot.

SOUND TRANSMISSION: Panelfold Doors as specified, installed in the normal manner, and effecting a complete closure at top and bottom, shall provide a sound transmission average loss of 27.5 decibels over a frequency range of 350 to 4,000 cycles per second, as tested by independent laboratory.

SWEEPSTRIP: Panelfold Doors shall be furnished with matching vinyl sweepstrips to effect a complete closure, thus minimizing sound transmission and light and air passage.

SECURITY: Panelfold Doors shall be furnished with the following security units as specified: BASIC NYLON UNIT; PRIVACY LATCH UNIT; LOCK AND PRIVACY LATCH UNIT; MASTER KEY UNIT.

FINISH: Panelfold Doors shall be furnished factory finished with lacquer to emphasize color and grain of wood, as specified.

WARRANTY: Panelfold Doors shall be guaranteed for 1 year against defects in materials and workmanship.

installations:

INLAND STEEL BUILDING:
Chicago, Illinois
Architects and Engineers:
Skidmore, Owings and Merrill

MISSION VALLEY COUNTRY CLUB:
San Diego, California
Architects and Engineers:
Paderewski & Assoc.

FONTAINEBLEAU HOTEL:
Miami Beach, Florida

CAPEHART HOUSING PROJECT:
Marine Corps Air Station,
Cherry Point, North Carolina
Architect: J. M. Edwards, Jr.,
Arthur McKimmon, II,
Robert Etheredge, Jr.,
Raleigh, North Carolina

LON CHANEY, JR. RESIDENCE:
Van Nuys, California

MAYTAG RESIDENCE:
Colorado Springs, Colorado

MORTON SALT CO., BURLINGAME:
San Francisco, California
Architects and Engineers:
Graham Anderson Probst and White

LAKE BURIEN PRESBYTERIAN CHURCH:
Washington
Architects and Engineers:
John Graham & Company

PENSACOLA NAVAL AIR STATION:
Officers Club, Pensacola, Florida

WINTHROP ROCKEFELLER RESIDENCE
Winrock Farms, Arkansas

HOLIDAY INN OF AMERICA:
Baton Rouge, Louisiana
Architect: Blakewood Associates

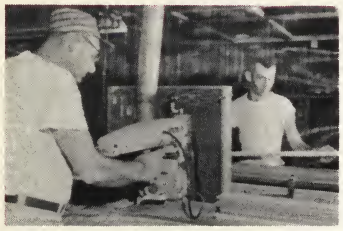
INTERNATIONAL MINERAL BUILDING:
Skokie, Illinois
Architects: Perkins and Will

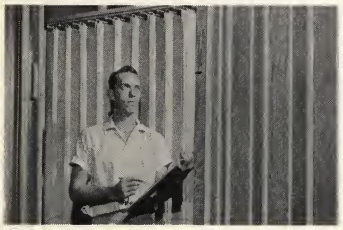
RICH'S, INC.:
Atlanta, Georgia
Designers: The Raymond Loewy Corp.

BLOOMSBURG STATE TEACHERS COLLEGE, G.S.A.
Bloomsburg, Pennsylvania
Architects: L. P. Kooken Co.

HOUSE OF THEOLOGY
St. Leonard College
Centerville, Ohio
Architect: Brother Cajetan, J. B. Bauman O.F.M., A.I.A.

Panelfold Architectural Exhibit Architects International Bureau of Building Products, Dupont Plaza, #1 Miami, Florida





Panelfold Doors, Inc., with years of experience in the manufacture of wood folding doors ONLY, devotes its complete engineering and construction facilities to the constant quality production of the finest, most dependable and beautiful folding doors known to the building industry.

PANELFOLD DOORS, INC. 1090 E. 17th STREET, HIALEAH FLORIDA

REG. TRADE MARK, patents by the U.S. Patent Office. Copyright—Panelfold Doors, Inc., 1959

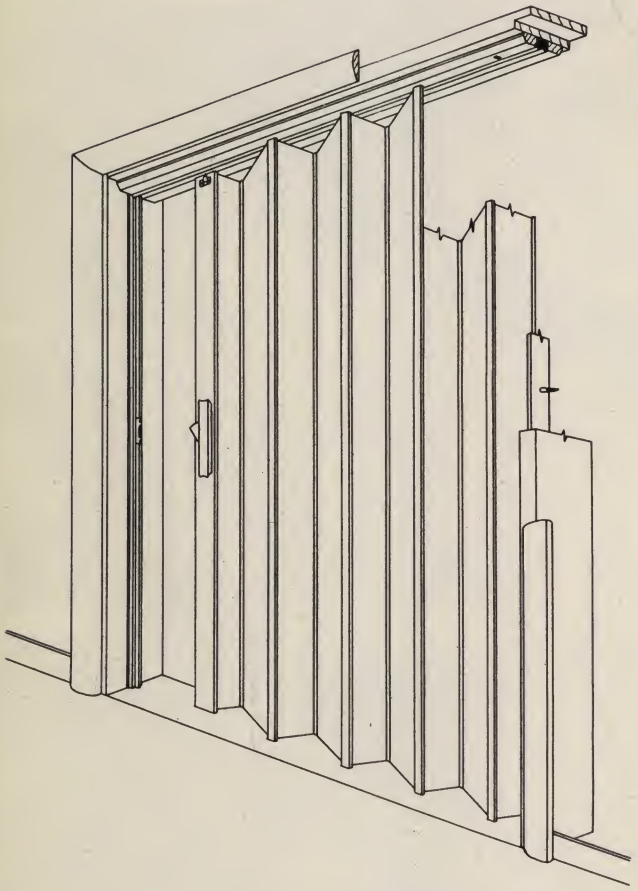
Panelfold doors

16e
RO
Pella
®
WOOD FOLDING DOORS
pine • oak • mahogany • birch • walnut • ash
ROLSCREEN COMPANY · PELLA, IOWA

Pella®

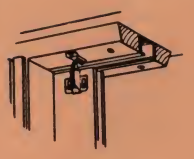
WOOD FOLDING DOORS

The reputation for quality, enjoyed by the Pella Wood Folding Door, is based on efficient design, finest materials and conscientious workmanship. Many thousands of these doors now in residential, commercial and institutional use attest to their decorative appeal and durability.



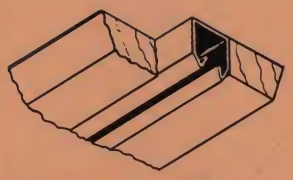
WOOD FOR NATURAL BEAUTY—All-wood construction is one of the reasons that Pella Folding Doors have achieved this high degree of acceptance. The warm, natural beauty of wood lends itself to any decorative scheme in combination with paneling or other wood trim. Or, Pella Folding Doors may be painted or stained as desired.

WOOD FOR DURABILITY—In addition to its decorative qualities, wood has long enjoyed a reputation for durability. Pella Folding Doors of wood are constructed by



• HEAD STOP

Spring-action catch at top of end post engages head stop to insure tight stack.



• CONCEALED TRACK

No exposed hardware to mar the beauty of Pella Doors. Track is concealed by beveled wood mould to match door. Track and mould are drilled and furnished with screws.

Architect: J. M. Little and Associates, Toledo, Ohio

Architect: Graffunder-Nagle & Associates, Minneapolis, Minnesota

modern methods which utilize a built-up core of solid wood blocks, warp-free and possessing exceptional strength and rigidity. Fine veneers are then bonded to the core. The result is a wood folding door which will maintain its functional utility and beauty for many years. Pella Wood Folding Doors are available in Pine, Philippine Mahogany, Birch, Oak, White Ash and American Walnut.

EFFICIENT SPACE UTILIZATION—Pella Wood Folding Doors used in standard door opening widths require only a fraction of the space taken by ordinary swinging doors. The average swinging door uses from 5½ to 11 square feet of floor space and 18 square feet of wall space, while the Pella Door converts this area to usable space by stacking within its own frame. When used as movable partitions, Pella Wood Folding Doors divide large rooms into smaller, private areas in a matter of minutes.

MATERIALS SAVING—You make substantial material savings with Pella Folding Doors. By simply carrying the wall material around door openings you can omit finish trim and jambs. Where large doors are used for room dividers or wardrobe doors, specify floor-to-ceiling Pella Doors and run them from wall to wall. This eliminates the need for costly header and "stub" wall construction. It also gives the effect of a beautiful wood paneled wall. Expensive double wall construction, necessary to provide recess for sliding doors, is also eliminated with Pella Wood Folding Doors.

SIMPLIFIED INSTALLATION—THREE stock size Pella Doors can be installed in the time normally required to install ONE swing-type door. Pella Doors come as a packaged unit, completely factory assembled. Doors exceeding 8′ in width are shipped in sections for ease of handling and installing.

• HANGERS

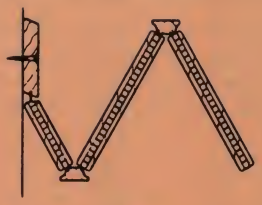
Free-riding hangers attached to every other panel provide easy, gliding action. Nylon rollers furnish quiet operation. No adjustment required to insure proper fit and optimum operation in even slightly out-of-plumb openings.

• HANDLE AND LATCH

Matching wood handle and spring-type latch are standard equipment on all Pella Doors at no extra cost. Thumb locks or keylocks available as extras where required.

• LAMINATED PANELS

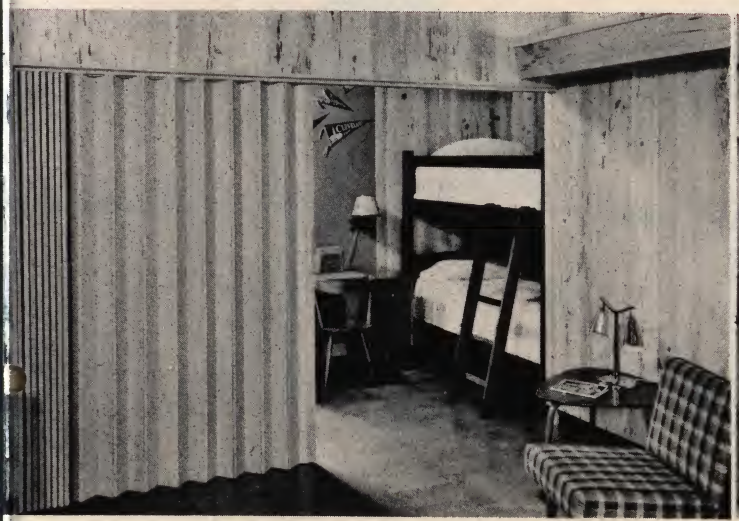
Core blocks of Pella Door panels are laminated with water-resistant, plastic glue. Pella's exclusive "Lamicor" process assures panel straightness and vertical alignment indefinitely.



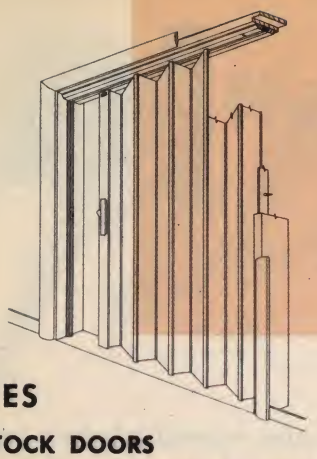
• SPRING HINGING

Special steel alloy springs hold Pella Door panels together and act as hinges. These spring connectors run horizontally and are spaced 14-7/10″ apart.

Architect: Frederick J. Schweitzer, Milwaukee, Wisconsin



Architect: Brown and Healey Company, Cedar Rapids, Iowa



WOOD FOLDING DOORS

SIZES

• STOCK DOORS

Stock doors are available in the following sizes: 2′ 4″, 2′ 8″ and 3′ 0″; height of all stock doors is 6′ 8″. Pine, Birch, Ash or Philippine Mahogany can be furnished in these sizes as stock doors. Available either finished with scratch-resistant lacquer or unfinished. Unfinished doors are sanded and ready for on-the-job matching and finishing.

• CUSTOM DOORS

Custom Doors are available in heights up to 12′ 1″. Maximum widths single, double end post, and joining doors shown on Page 5 under "ADAPTATIONS."

Pine, Plain Red Oak, Unselected Birch, American Walnut, White Ash and Philippine Mahogany can be supplied either finished or unfinished.

• SIZE CHART

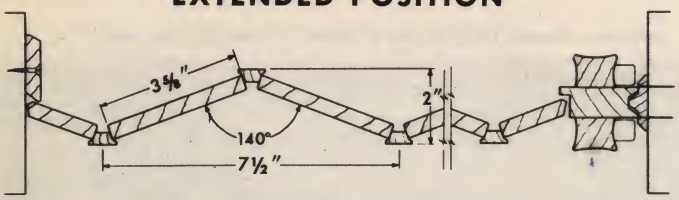
Shown below is a chart in which stack dimensions are related to opening widths. *Double End Post Doors have a stack size 2″ greater per opening width than shown in this chart.* This is especially important when designing recessed stacking installations. (See Page 5).

Opening Width	*Stack Size	Opening Width	*Stack Size	Opening Width	*Stack Size	Opening Width	*Stack Size	Opening Width	*Stack Size	Opening Width	*Stack Size
1′ 9″	4″	6′ 9″	10″	11′ 9″	16″	16′ 9″	22″	21′ 5¼″	27⅜″	26′ 1½″	33¼″
2′ 0¾″	4⅜″	7′ 0¾″	10⅜″	12′ 0¾″	16⅜″	17′ 0¾″	22⅜″	21′ 9″	28″	26′ 5¼″	33⅝″
2′ 4½″	4¾″	7′ 4½″	10¾″	12′ 4½″	16¾″	17′ 4½″	22¾″	22′ 0¾″	28⅜″	26′ 9″	34″
2′ 8¼″	5⅛″	7′ 8¼″	11⅛″	12′ 8¼″	17⅛″	17′ 8¼″	23⅛″	22′ 4½″	28¾″	27′ 0¾″	34⅜″
3′ 0″	5½″	8′ 0″	11½″	13′ 0″	17½″	18′ 0″	23½″	22′ 8¼″	29⅛″	27′ 4½″	34¾″
3′ 3¾″	5⅞″	8′ 3¾″	11⅞″	13′ 3¾″	17⅞″	18′ 3¾″	23⅞″	23′ 0″	29½″	27′ 8¼″	35⅛″
3′ 7½″	6¼″	8′ 7½″	12¼″	13′ 7½″	18¼″	18′ 7½″	24¼″	23′ 3¾″	29⅞″	28′ 0″	35½″
3′ 11¼″	6⅜″	8′ 11¼″	12⅜″	13′ 11¼″	18⅜″	18′ 11¼″	24⅜″	23′ 7½″	30¼″	28′ 3¾″	35⅞″
4′ 3″	7″	9′ 3″	13″	14′ 3″	19″	19′ 3″	25″	23′ 11¼″	30⅜″	28′ 7½″	36¼″
4′ 6¾″	7⅜″	9′ 6¾″	13⅜″	14′ 6¾″	19⅜″	19′ 6¾″	25⅜″	24′ 3″	31″	28′ 11¼″	36⅝″
4′ 10½″	7¾″	9′ 10½″	13¾″	14′ 10½″	19¾″	19′ 10½″	25¾″	24′ 6¾″	31⅜″	29′ 3″	37″
5′ 2¼″	8⅛″	10′ 2¼″	14⅛″	15′ 2¼″	20⅛″	20′ 2¼″	26⅛″	24′ 10½″	31¾″	29′ 6¾″	37⅜″
5′ 6″	8½″	10′ 6″	14½″	15′ 6″	20½″	20′ 6″	26½″	25′ 2¼″	32⅛″	29′ 10½″	37¾″
5′ 9¾″	8⅞″	10′ 9¾″	14⅞″	15′ 9¾″	20⅞″	20′ 9¾″	26⅞″	25′ 6″	32½″	30′ 2¼″	38⅛″
6′ 1½″	9¼″	11′ 1½″	15¼″	16′ 1½″	21¼″	21′ 1½″	27¼″	25′ 9¾″	32⅞″		
6′ 5¼″	9⅝″	11′ 5¼″	15⅝″	16′ 5¼″	21⅝″						

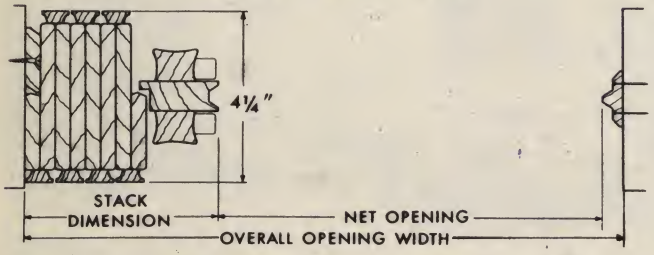
*Double End Post Doors have a stack size 2″ greater per opening width than shown above.

DIMENSIONS FOR DETAILING

EXTENDED POSITION

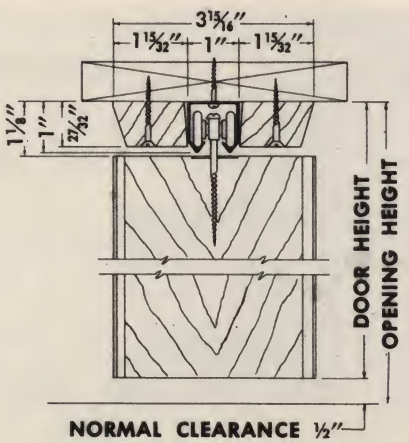


STACKED POSITION



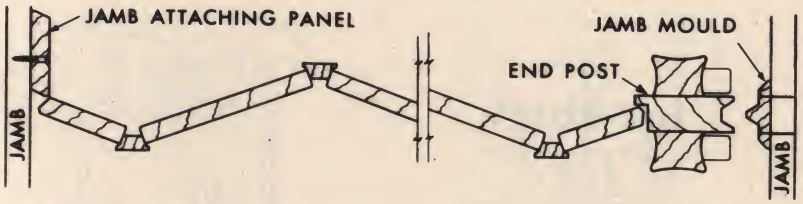
(not to scale)

FINISHED OPENING HEIGHTS

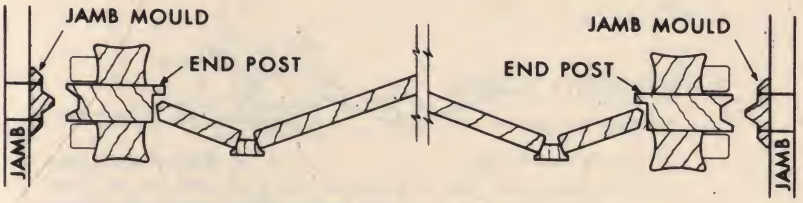


ADAPTATIONS

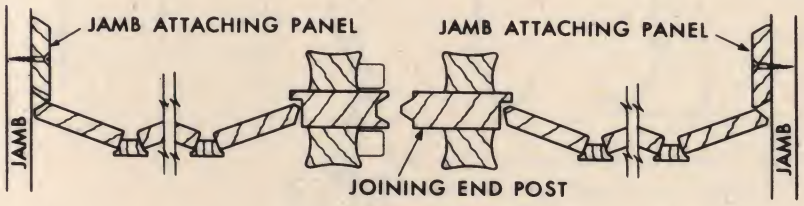
Scale: 3″ = 1′0″



• single door
Single doors fold back compactly. Jamb stack width is only 4¼″, fitting neatly within average door frame. Single doors available in heights up to 12′ 1″ and widths up to 30′ 2¼″.



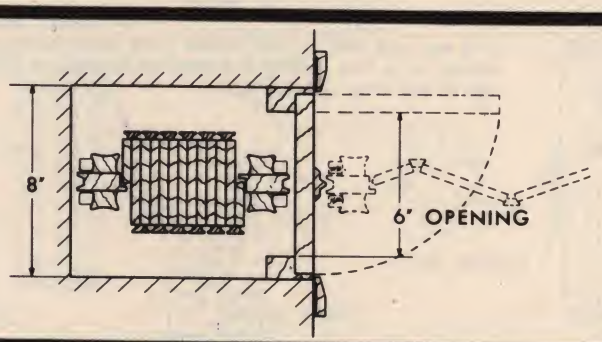
• door with double end post
Pella Folding Doors with double end posts can be used for double closets, providing full accessibility to either side, or in multiple use where large areas are to be divided. Latch or lock securely to either or both jambs. Double end post doors available in heights up to 12′ 1″ and widths up to 30′ 4¼″.



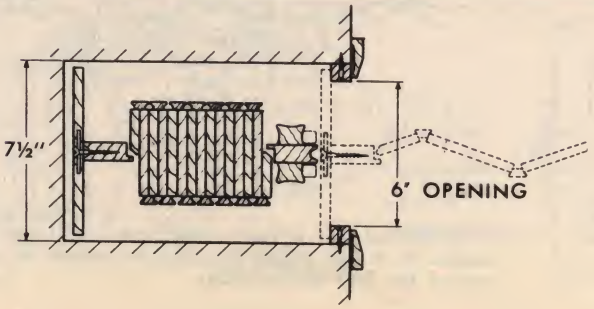
• door with joining end post
Where joining pairs of doors are preferred, two Pella Doors can be installed with end posts joining at the center or at any designated point. Doors are also available as joining pairs with double end posts to accommodate special job conditions. Pairs of joining doors are available in heights up to 12′ 1″ and widths up to 60′ 4½″.

RECESSED APPLICATIONS

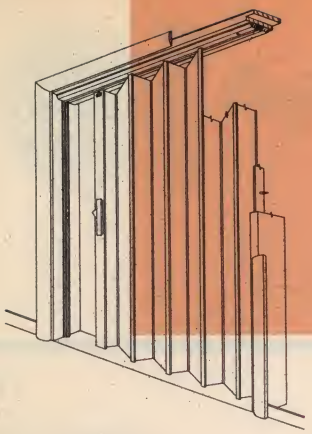
Scale: 1½″ = 1′0″



• hinged recess door
This type installation enables a Pella Door to be stacked into the recessed area and the panel closed to cover end of door. Depth of pocket is determined by adding 2″ to the stack dimension of the *double end post door* required. *See size chart.* (Door stops, hinged pocket door, and trim by others.)

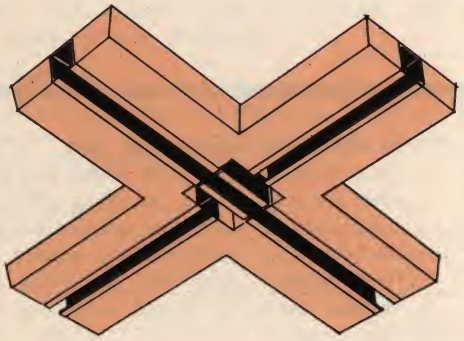


• sliding recess panel
This type installation also enables entire door to be stacked into the recessed area. When door is in use, panel travels forward and covers opening of recessed area. Pocket depth is determined by adding ½″ to stack dimension of *double end post door* required. *See size chart.* (Sliding panel extra. Door stops and trim by others.)



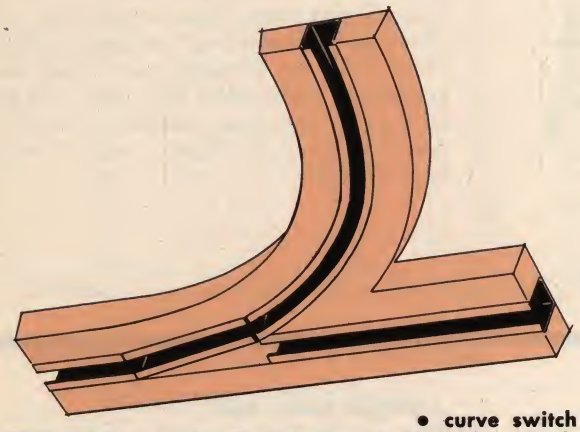
WOOD FOLDING DOORS

SPECIAL TRACKS



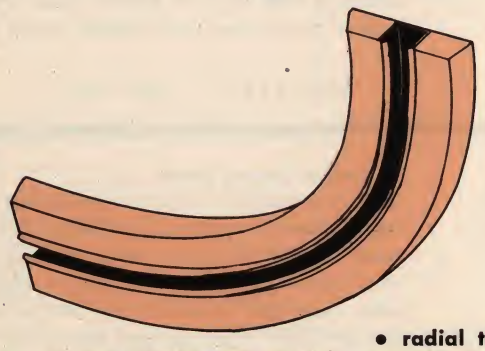
• cross-over switch

Permits one Pella Door to cross track of another door section which operates at a right angle. Cross-over frog is manually operated.



• curve switch

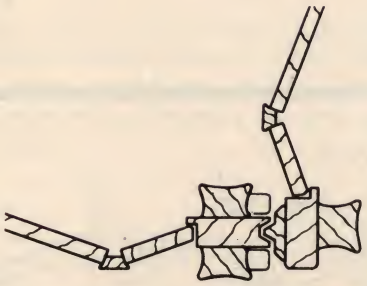
With this switch, one door section can be used to divide a room into two parts at predetermined points. Also useful for storing folded doors parallel to wall. Switch is operated by engaging end post of door and turning.



• radial track

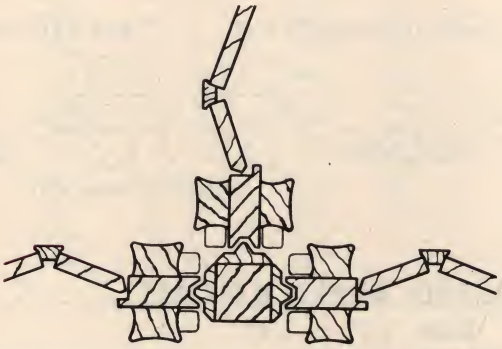
Ideal for moving Pella Doors around structural members and for achieving free-form wall effects. Pella curved track and track mould are available in the following radii: 1, 1½, 2, 3, 4, 6, 8, 10 feet.

END POSTS



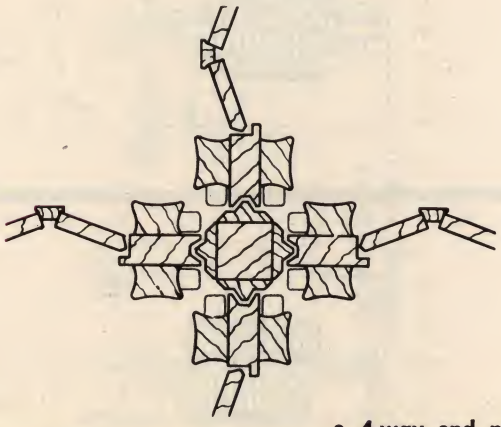
• 2-way end post

A 2-way end post is a special end post used on one door where two meet at right angles. The other door carries a standard end post.



• 3-way end post

A 3-way end post is used where three doors meet at right angles. It is free rolling but may be latched or locked to any of the three joining doors.



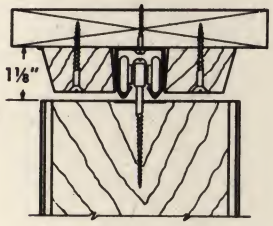
• 4-way end post

A 4-way end post is used where four doors meet at right angles. It is free rolling but may be latched or locked to any of the four joining doors.

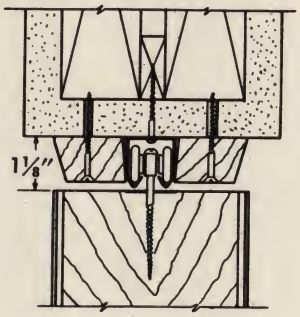
TYPICAL HEAD SECTIONS

Scale: 3″ = 1′ 0″

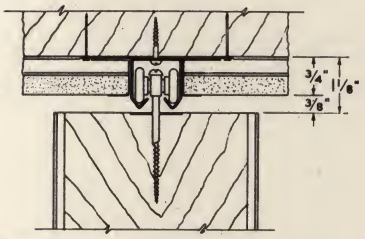
SURFACE MOUNTED ON WOOD



SURFACE MOUNTED ON PLASTER

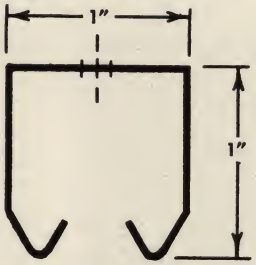


RECESSED IN PLASTER



TRACK DIMENSIONS

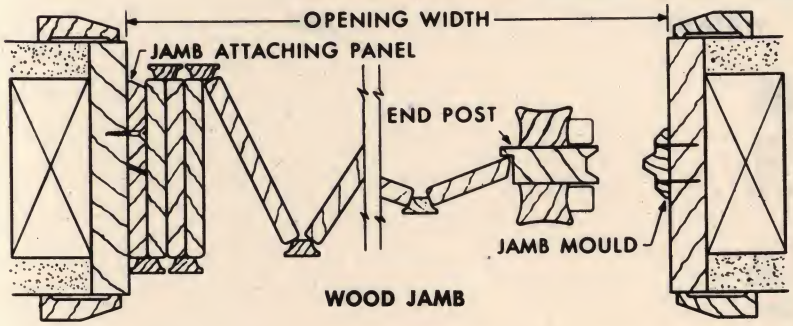
(not to scale)



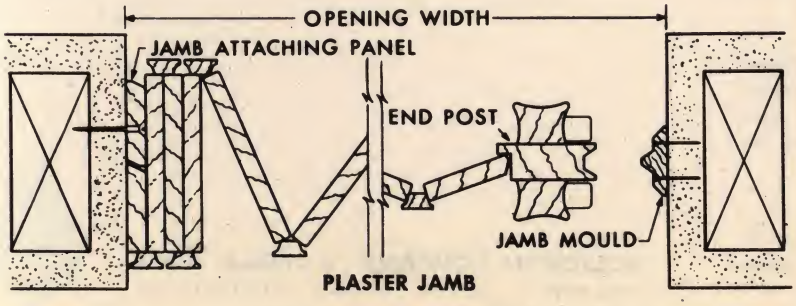
The track shown above is standard with all Pella Doors, regardless of height. It has been engineered for maximum load. Track is steel with baked enamel finish.

TYPICAL JAMB SECTIONS

Scale: 3″ = 1′ 0″



WOOD JAMB



PLASTER JAMB

SPECIFICATIONS

GENERAL—Doors shall be of wood, folding, accordion-type, suspending from a track at the head. There shall be no guides or track at the floor. All spring hinges shall be concealed in the closed position. Doors shall be factory assembled.

TRACK AND HANGERS—Track shall be no less than 20 gauge in thickness and shall have a corrosion-resistant coating. Track dimensions shall be 1″ x 1″. Hanger assemblies and bearings shall be of all-nylon construction designed for free, quiet operation. Hangers shall be installed on alternate panels.

PANELS—All panels shall be made of carefully-selected, kiln-dried lumber. "Lamicor" process of glued-up wood block cores faced with veneers bonded with water-resistant plastic glues shall comprise the panels. Panels shall be ⅜″ thick and 3⅝″ wide.

HARDWARE—All metal parts shall be plated with suitable corrosion-resistant coating. Spring hinges shall be made of .024 hard-drawn, high-carbon spring wire, galvanized before drawing, and shall be 5/32″ in diameter. Doors shall be supplied complete with all necessary screws, latches and installation hardware. It shall be possible to install all hardware without cutting or mortising the door openings.

TRIM—Doors shall be supplied with wood head mould to conceal the track and a jamb mould for jamb closure.

NOTE: Specifications subject to change without notice.

VENEER SELECTION AND FINISH

Pella Wood Folding Doors are available with standard clear finishes in the six natural veneers shown below. All Pella Doors can be ordered unfinished for on-the-job treatment. Unfinished doors are sanded and ready for paint, varnish, or other finishes.

Color and grain patterns will vary from finished samples shown. Veneers used in Pella Wood Folding Doors are Philippine Mahogany, Plain Sliced Red Oak, Pine, American Walnut, White Ash and Unselected Birch.

PHILIPPINE MAHOGANY

OAK

BIRCH

PINE

WALNUT

ASH

GENERAL INFORMATION

ORDER DIMENSIONS

For WIDTH, use the *exact* opening width in inches at point of installation.

For HEIGHT, use the *exact* height in inches from top of the finished floor or floor covering to the point where the track will be attached to the head. Factory makes allowance for ½" clearance at the bottom.

COMPLETELY PACKAGED

Pella Wood Folding Doors are prefitted and factory-assembled for quick, easy installation. Package contains door, all necessary hardware (including latch) fittings, track, track mould, and illustrated installation instructions. The average size Pella Door can be installed in 30 minutes or less.

PELLA REPRESENTATIVES

Rolscreen Company distributors are located in all major cities in the United States and Canada. Consult your local telephone directory or write Rolscreen Company, Pella, Iowa.

ROLSCREEN COMPANY • **PELLA, IOWA**
Form FD60
LITHO IN U. S. A.

THE PRODUCERS COUNCIL
AFFILIATED WITH THE AMERICAN INSTITUTE OF ARCHITECTS

16 e
Sp

METAL
FOLDING DOORS

it folds . . . it's metal

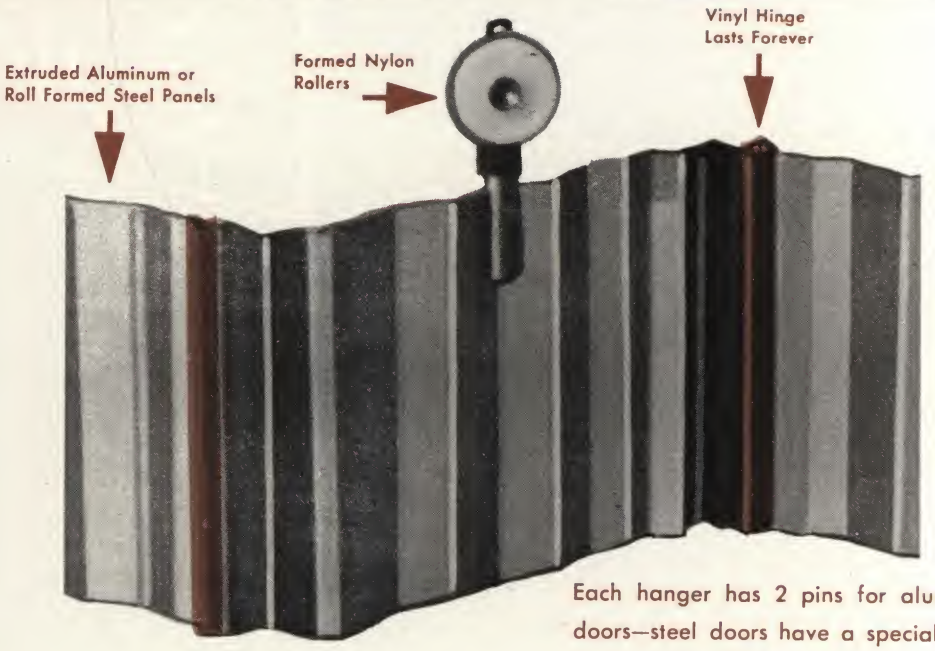
contents

Pages

- general description 2-3
- architectural details 4-5
- installations 4-5, 8
- power operation 7
- accessories 6-7
- specifications 8

SPLENDOR CORPORATION, 501 NEW YORK AVENUE, NEW CASTLE, INDIANA

Splen-door



Each hanger has 2 pins for aluminum doors—steel doors have a special lancing operation for support, strength and long, long life.

GENERAL DESCRIPTION

SPLEN-DOORS consist of specially designed panels of factory finished steel or extruded aluminum to form an accordion type folding door to be provided for permanent usage as a movable partition for rooms in churches or schools.
SPLEN-DOORS are equally useful for room division in gymnasiums, hospitals, offices, institutions, restaurants, hotels, motels and residences. SPLEN-DOORS are desirable to utilize large areas or to form small areas in various numbers for size and location.

features

- It's metal . . . It folds
- Easy to clean
- Fireproof
- Economical
- Aluminum or Steel
- Hear better with Splen-door
- Durable Vinyl Hinge
- Locks or Latches
- Switches
- Sweep Strips
- Fits any opening
  To 12' high in Steel
  To 25' high in Aluminum
- Mildew Proof
- Nylon Wheels and Aluminum Track
- 6063 ST 5 Extruded Aluminum

construction...

The entire frame is made of metal—Aluminum or Steel—which represents the finished door. The units ride in an aluminum track with nylon rollers. Each panel has its own hangers. The vinyl hinge is web-held to the panels. The panels are extruded aluminum or roll formed steel.

ranch...

Constructed of 24-gauge roll formed steel panels that are all one piece—no welds—for durability and economy. Heights to 12-feet and unlimited widths in 10 baked enamel colors.

apex...

These are the aristocrats of doors. Each panel is .056 extruded aluminum with an anodized finish in a choice of 3 permanent decorator colors. The Alcoa Gold is completely sunproof and is ideal for outdoor use. Other colors are Tasco Silver and Aztec Gold. Apex model maximum height is 25' in unlimited widths.

accessories...

Keyed cylinder locks and latches . . . three types of switches, crossover, pivot or left and right hand side. Also floating jambs . . . meeting posts . . . foot bolts . . . sweep strips . . . recessed tracks . . . open cornice . . . curved tracks to any specification. (See page six for complete descriptions.)

sizes...

Splen-doors are available in heights from 2-feet to 25-feet and widths from 2-feet to 100-feet, or more if desired. (See pages 4-5).

METAL FOLDING DOORS

13 harmonizing colors

RANCH COLORS

(1) Bermuda Blue
(2) Bedford Blue
(3) Sunsand
(4) Ivory
(5) Fiesta Cream
(6) Dawn Grey
(7) Willow Green
(8) Cumberland Green
(9) Rock Island Gold
(10) White

APEX COLORS (anodized)

(11) Aztec Gold
(12) Tasco Silver
(13) Alcoa Gold

finishes and colors...

All Ranch finishes are baked on. The steel is first heat treated to 600° to oxidize and temper it and to make it hold the finish perfectly. The enamel is baked on at 350° for lasting beauty and durability. The colors are decorator-selected for eye appeal and restful color harmony in any surrounding.

guarantee

All Splen-doors are guaranteed for 1 full year against defective workmanship and materials.

Splen-doors open a new era in acoustical confidence...

At last! A folding door that is acoustically correct for practically all applications. Large or small, steel or aluminum, all have the same acoustical properties.

- Greatly attenuate the transmission of sound from room to room.
- The shape of the panels does it . . . like a multi-faced acoustical deflector.
- These same properties greatly enhance the acoustics *inside* the room closed off with Splen-doors.

speak softer—yet hear better in a Splen-door room.

Speakers are often amazed and pleased when they speak in a Splen-door room. No hollow "booming" when PA systems are used and no need for PA systems at all in many rooms. The shape of the panels does it!

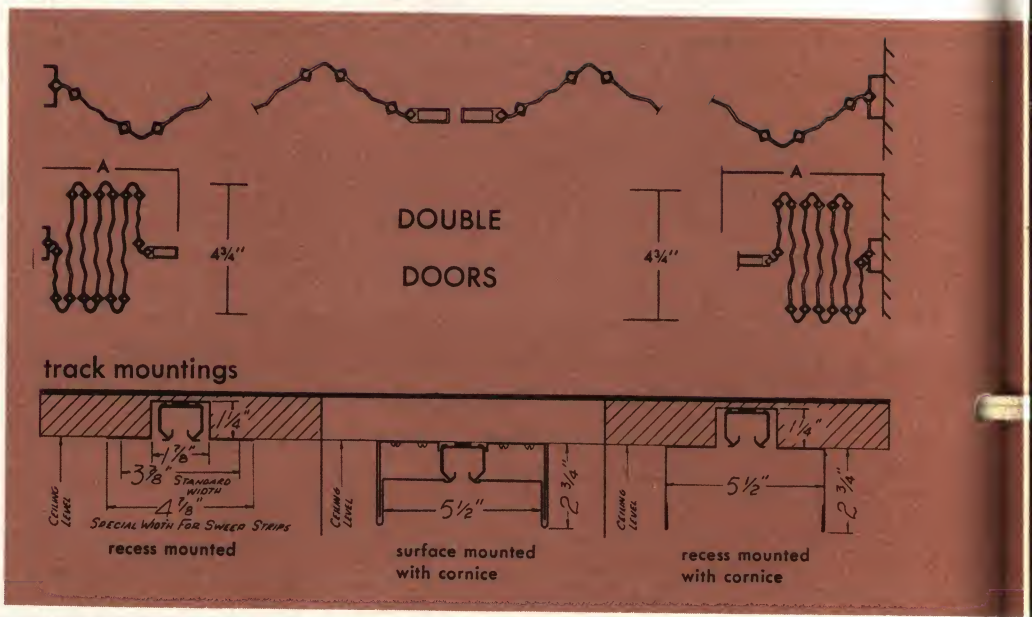
test data

Splen-doors have been carefully tested by a recognized acoustical laboratory and have been found to be desirable in most any type of installation.

Splen-door

architectural details

Ranch SPLEN-DOORS are manufactured up to 12'0" and Apex SPLEN-DOORS are manufactured up to 25'0" in height. Widths may extend to any requirements in both the Ranch and Apex Models. On double SPLEN-DOORS that meet on the same track, a center track stop automatically locates doors at desired stop. Stacking dimension for doors wider than 15 feet is 1½" per foot of opening width, plus 5½". Doors less than 15 feet have a stacking dimension of 1⅛" per lineal feet of opening, plus 4¼". (See Dimension A.)



representative installations

A. company cafeteria

ARGUS CAMERA COMPANY
DETROIT, MICHIGAN
Giffels & Rossetti, Architects
Company cafeteria is divided to provide recreation or multi-purpose room.

A.

B. school

CAHOKIA HIGH SCHOOL
EAST ST. LOUIS, ILL.
Splen-door's durability functions best in schools.

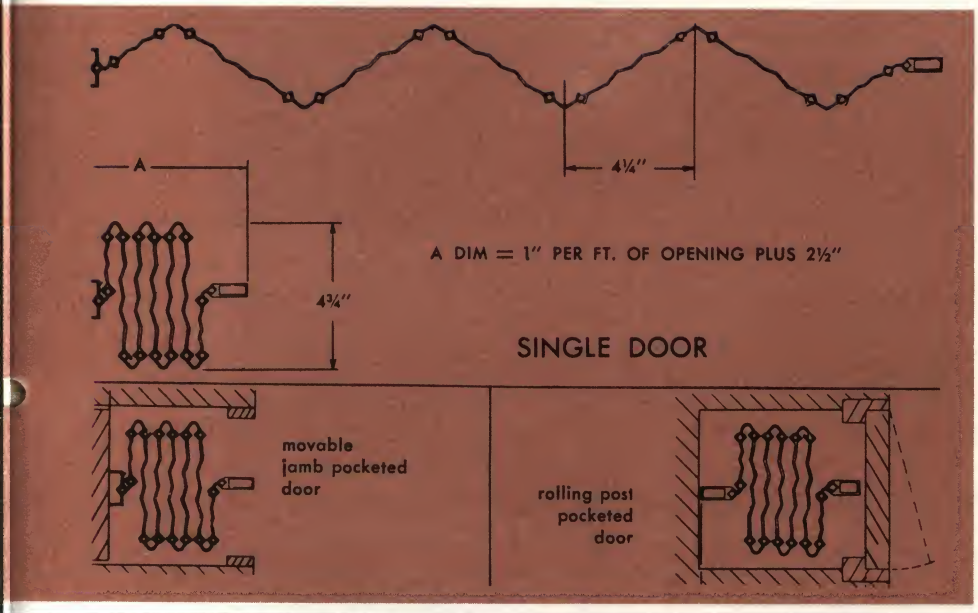
B.

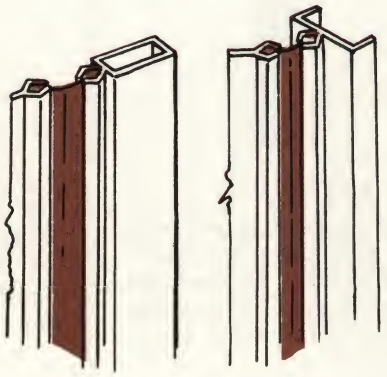
C. residence

BEDFORD, INDIANA
Curved Splen-doors provide two rooms for more liveable space.

C.

METAL FOLDING DOORS





rolling post detail

jamb installation detail

D. church

EAST 49th ST.
CHRISTIAN CHURCH
INDIANAPOLIS, INDIANA
3-way multiple meeting post used to divide a large classroom into two smaller rooms and provide a corridor for access to both.

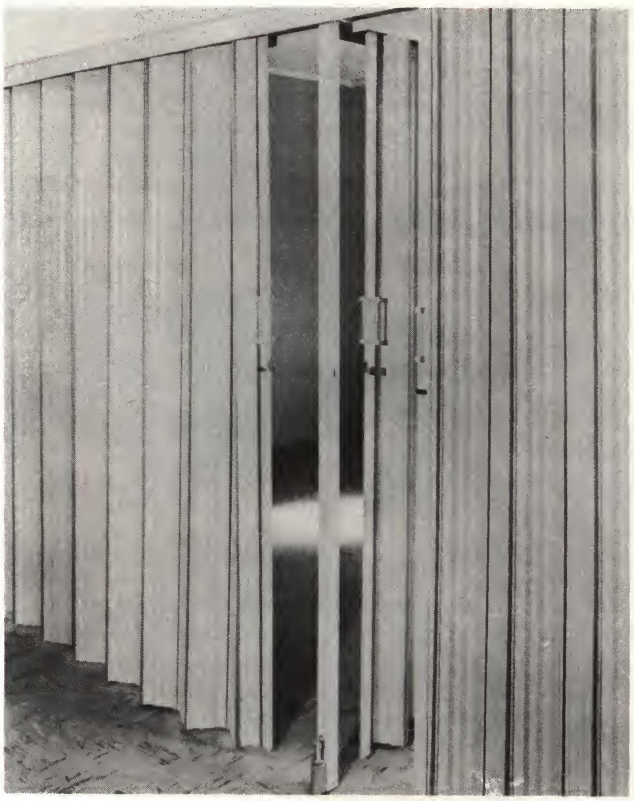
E. gymnasium

BUTLER 2nd WARD
SALT LAKE CITY, UTAH
Richard H. Johnson—J. Leonard Harman, Architects
Two Apex Splen-doors form a hallway and separate the main auditorium from the recreation room.

F. circular installation

FIRST EVANGELICAL AND REFORMED CHURCH
WAUKESHA, WISCONSIN

Circular Splen-doors are provided by circular track only to the radius you desire. (Minimum 4'0").



D.

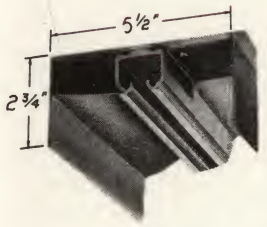
E.

F.

Splen-door accessories

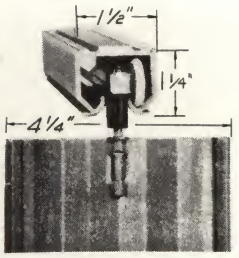
handles...

Splen-door Handles are engineered to fulfill the most exacting requirement of sturdiness and refinement. Cast aluminum handles are of neutral aluminum finish.



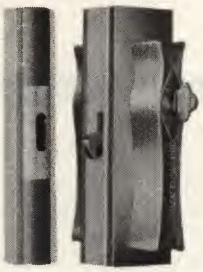
regular cornice

The Splen-door Regular Cornice for installations where the track is mounted at the ceiling line serves as a sound barrier and its adequate valance adds dignity and charm to the opening.



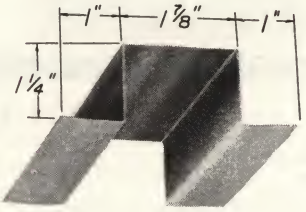
track and roller assembly

Specially engineered aluminum track helps to insure permanent operation of Splen-doors in your building. Virgin nylon rollers move quietly and smoothly and are attached to EACH PANEL by sturdy trouble-free swivel blocks and pins.



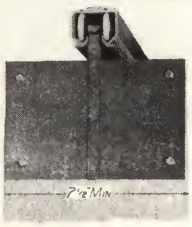
locks

Splen-door Locks consist of a 5 tumbler type lock which may be master keyed. They offer a high degree of security, with the door itself being metal.



sub channel

Where it is appropriate to recess the Splen-door track in the ceiling, a Sub Channel is first installed, making possible the plastering or securing of any ceiling material and afterward mounting the track within the channel.

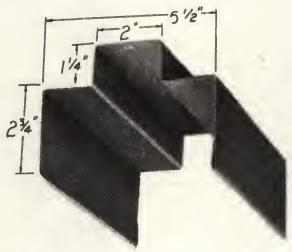


floating jambs

Many times, it is an advantage to store Splen-doors in a pocket. To conserve the width of the door that extends into the pocket, the Floating Jamb can be used. It rolls on the track at the jamb end of the door, and as the door is extended or closed, the jamb moves with the door to the face of the pocket. Minimum practical pocket width, 7½ inches.

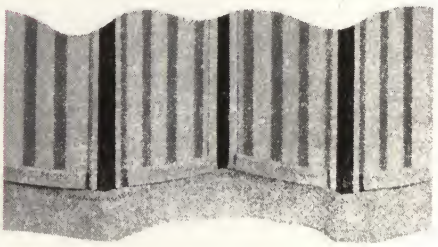
latches

Splen-door Latches are the ultimate in doing a task with the minimum of superfluous, tricky, gadget-like parts. Refined — easy to use and secure.



acoustical cornice

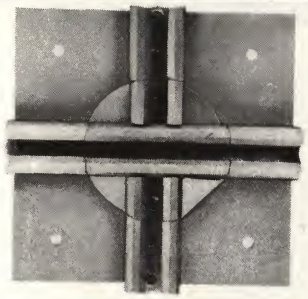
Splen-door's Acoustical Cornice is designed to cope with the strictest sound retarding requirement. It is installed so that the track is above the ceiling.



sweep strips

Splen-door Sweep Strips were engineered as a necessity where sound transmission must be held to a minimum. Continuous sweep strips are attached to each panel top or bottom. They are of the most durable vinyls.

METAL FOLDING DOORS

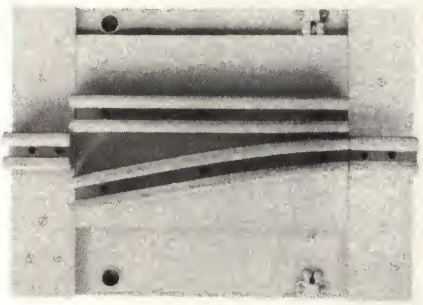


cross over switch

The Splen-door Cross Over Switch makes possible the crossing of a through track on a simple 90 degree turn. The switch must be mounted 5/8" (five-eighths inch) above the level of the tops of the adjoining tracks which attach securely to the switch base plate.

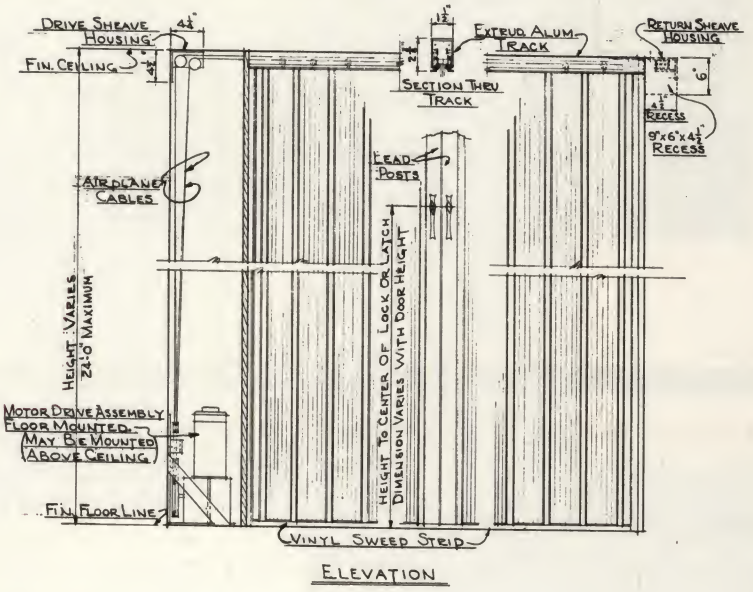
multiple meeting post and foot bolt

Splen-door's Multiple Meeting Post is an individual unit and is suspended and moves on nylon rollers along the track. It simply and uniquely allows each Splen-door, from any of three directions, to meet and be latched securely in position. The spring-loaded Foot Bolt is used with each Multiple Meeting Post. It fixes it securely at any point along the track. The Foot Bolt also is used on lead posts to secure the rigidity and prevent swaying.

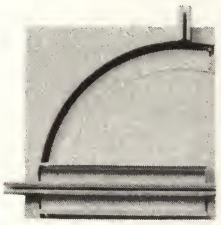


side switch

Splen-door Side Switches insure complete clearance of the opening and permit Splen-doors to be moved across the switch in a straight line, or may be shifted to move in a curve to another track.



ELEVATION



pivot switch

The standard Splen-door Pivot Switch makes possible right angle turns of Splen-doors up to 20 feet in width. Larger switches are available to suit. The Pivot Switch is particularly functional where doors are to be stacked along a wall or close another opening at 90°. The Pivot Switch must be mounted 1¾" (one and three-quarter inches) above the level of the top of the track, while the 42" and 48" wide Pivot Switch must be mounted 2" (two inches) above the top of the track which attach securely to the switch base plate.

electrically and mechanically operated Splen-doors

Splen-door electrical or mechanical remotely controlled doors are most efficient and positive as singles or pairs. They are moved by 3/32" airplane cables. Splen-door engineers study each installation and plans are submitted to suit the requirements. Special track is used to isolate the moving draw cables from the regular Splen-door rolling parts. Motors are available in ½ or ⅓ horsepower, 110 or 220 volt, AC or DC. They are lubricated for life and require no maintenance. Complete wiring diagrams are supplied for each installation for the convenience of your electrical contractor. Key switches are provided for the electrical contractor to be located anywhere in the building in sight of door operation.

representative Splen-door distributors

(only a few are listed due to limited space)

ATLANTA VENETIAN BLIND
Atlanta, Georga

JONES SOUND CONDITIONING
Ardmore, Pennsylvania

R & E STEEL COMPANY
Austin, Texas

E. R. YOUNG COMPANY
Billings, Montana

O. C. WITTE, COMPANY
Detroit, Michigan

METALFOLD DOOR OF CA.
Edmonton, Alberta, Ca.

SPLENDOR OF INDIANAPOLIS
Indianapolis, Indiana

GEORGE WILL COMPANY
Kansas City, Missouri

CALDER DOOR SALE
Lancaster, Pennsylvania

SPLENDOR OF CALIFORNIA
Los Angeles, California

MORTON SALES COMPANY
Montgomery, Alabama

INSULATION SERVICE
Milwaukee, Wisconsin

E. C. HOLLAND
Oswego, Oregon

MISSOURI BUILDERS
St. Louis, Missouri

SPLENDOR OF UTAH
Salt Lake City, Utah

SPLENDOR OF FLORDA
Tampa, Florida

suggested architect's specifications

Ranch

Splen-door Ranch folding doors as manufactured by Splendor Corp., New Castle, Indiana, comprised of a series of specially rolled 24 gauge voluted prime steel panels connected longitudinally by a vinyl equalizing hinge (guaranteed for life of Splen-door) and other component parts with factory bonded finish and all suspended and movable in an opening and closing manner from extruded aluminum track, complete with cornice, hardware and necessary installation items.

Apex

Splen-door Apex folding doors as manufactured by Splendor Corp., New Castle, Indiana, comprised of a series of specially extruded aluminum panels connected longitudinally by a vinyl equalizing hinge (guaranteed for life of Splendoor) and other component parts etched and color anodized and all suspended and movable in an opening and closing manner from extruded aluminum track, complete with cornice, hardware and necessary installation items.

distribution

The Splendor Corporation has distribution and warehousing points in nearly every major city. See your yellow pages "Doors-Folding."

"IT FOLDS" Splen-door IT'S METAL NEW CASTLE, INDIANA

SPLENDOR CORPORATION
501 EAST NEW YORK, NEW CASTLE, INDIANA
phone: Jackson 9-3036

printed in USA

16e
St

A. I. A. File No. 16-M

The Straits ACCORDION folding door

INSTALLATIONS and SPECIFICATIONS

Very important sound information see page 14 —

Architecturally Correct for...

RESIDENTIAL . . .

COMMERCIAL . . .

AND

INSTITUTIONAL

BUILDINGS

The Straits ACCORDION folding door

TOMORROW'S FABRICS TODAY

The eye appeal of a successful fabric, to the public, seldom exceeds three years. Consequently, Straits is always striving to present a fashion first in its decorator fabrics. Compare this line of "Tomorrow's Fabrics Today", from such famous mills as U. S. Rubber, Naugahyde, Textileather, Tolex, General Tire, Boltaflex, Terson, Athol, Joanna Western, Columbus Coated, DuPont, Fabrilite, and other nationally known producers.

FOR DOORS OR WALLS

To meet the new trend Straits now has available wall covering to harmonize with the folding doors. This attractive vinyl covering is impervious to grease and resists abrasion. It is easily washable and will please the most discriminating decorator. It is particularly adaptable for restaurants, hospitals and commercial applications as well as residential.

Available for doors or walls in more than 75 colors in 12 textures, such as Boucles, Brocatells, Matelasses, Tapestries, Grass Cloths, Antique finishes, straw patterns and leather finishes. See your local distributor for color swatches of complete line.

KITCHEN-DINING ROOM

When not in use, your kitchen can be concealed behind beautiful Straits Accordion Folding Doors. Or your kitchenette can be changed into a dining room with a pull of these practical "movable walls."

LIVING ROOM

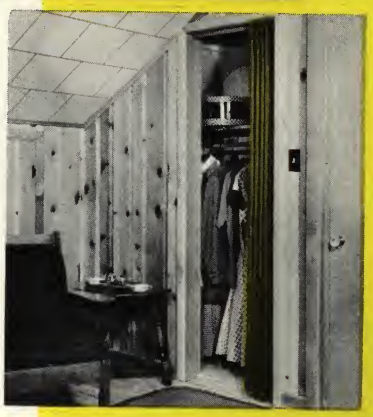
One of the finest applications of a Straits Accordion Folding Door is a closure between living and dining room. When the hostess must leave the group to prepare dinner she simply slides the easy closing Straits Accordion Folding Doors together and goes about her task without bother or interruption. But just as important is the home decorative feature of these striking doors.

RECREATION ROOM

You'll have finer parties and better fun in your recreation room if you'll close it off from the rest of the basement with colorful Straits Accordion Folding Doors.

ATTIC ROOM

Swinging or sliding doors usually won't work in attic rooms due to involvement with the roof. Straits Accordion Folding Doors will work and well.



By transforming one room into many and back again in seconds the versatile Straits Accordion Folding Door is proving extremely useful in Schools, Hospitals, Professional Offices, Funeral Parlors and for other specific institutional and commercial needs.

SPACE SAVING

Most dress shop dressing rooms are hampered by narrow hallways and a general lack of space. Here Straits Accordion Folding Doors are a good-business "must."

MATERNITY MODES—Northland, Detroit, Michigan—Architect—Henry Abrams

FOR PRIVACY

In this restaurant various club meetings and private parties can be held in complete privacy, behind this attractive folding door, yet the entire area can be opened up for the evening rush hour.

PARADISO CAFE—Detroit, Michigan—Architect—Al Krinicki

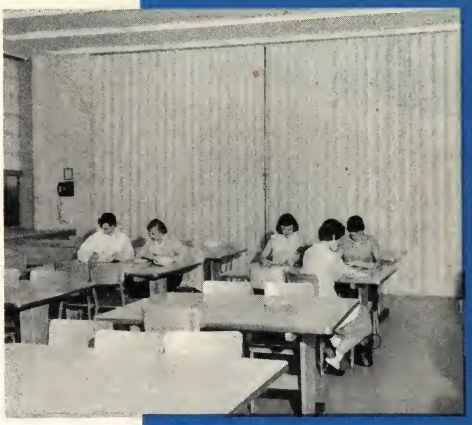
SPECIAL REQUIREMENTS

In this executives' conference room two meetings can be held simultaneously or this versatile room divider can be folded back to accommodate one large group.

FORD MOTOR COMPANY—Executives Conference Room—Dearborn, Michigan
Architects—Skidmore, Ownings and Merrill.

INCREASING FACILITIES

Schools and Colleges find Straits Accordion Folding Doors useful in libraries and student buildings to form small study rooms. In school buildings they can be used successfully for dressing rooms, additional classrooms, cloakrooms and clubrooms.



LAURA F. OSBORNE HIGH SCHOOL—Detroit, Michigan
Architects—Smith, Hinchman and Grylls

FOR MEETING ROOMS

The grand ballroom in this hotel can be converted into many small conference or display areas in a matter of seconds. Versatile Straits Accordion Folding Doors enable various groups to conduct meetings simultaneously with privacy.

GRAND BALLROOM—SHERATON HOTEL—Philadelphia, Pennsylvania
Architects—Perry, Shaw, Hepburn and Dean.

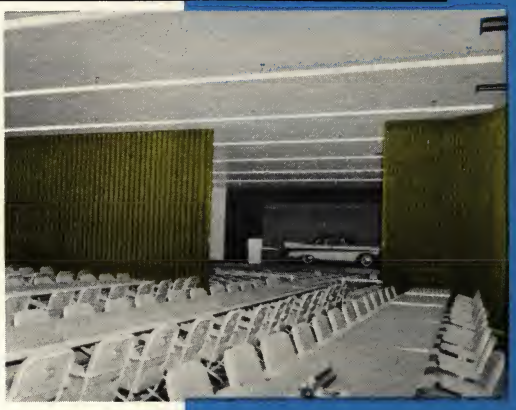
ROOM DIVISIONS

This dining room can be made larger or smaller at will, to suit the Governor or his staff at this State Capitol Building. Whatever your problems may be: Space Saving, Privacy, Space Division or any one of the host of closure requirements, Straits Accordion Folding Doors can solve that problem.

GOVERNORS EXECUTIVE DINING ROOM—Topeka, Kansas
Architect—Dwight Brown.

COMMERCIAL ARRANGEMENTS

The commercial and institutional uses of Straits Accordion Folding Doors are unlimited. Where space is always at a premium, Straits Accordion Folding Doors more than pay their way. As an attractive display background, they've proven to be colorful and expert "super salesmen."



CHRYSLER CORPORATION SALES TRAINING ROOM—Detroit, Michigan
Architects—Austin Engineers Inc.

STRAITS QUALITY CONSTRUCTION MAKES THE BIG DIFFERENCE

The Straits Accordion Folding Door is built with many additional features, to please the most discriminating customer.

SEAMS

All seams are stitched with nylon thread reinforced with pre-shrunk cotton tape. If cross stitch is broken, tape prevents seam from opening.

HINGE

Hinges are 18 gauge channel type, reinforced at the corners. Hinges, as well as the 3/16" reinforcing rods, are galvanite rust resistant steel.

LOCK

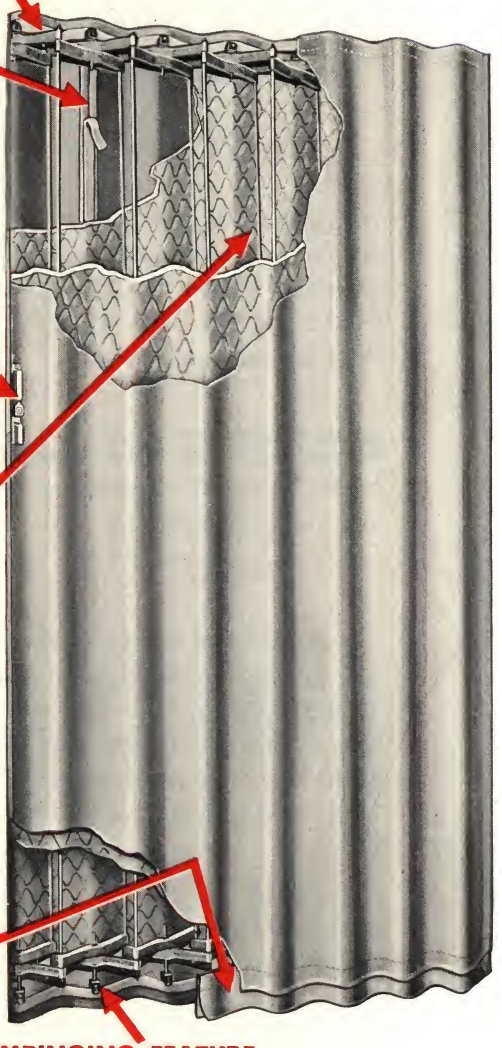
The lock is an optional but sometimes highly desirable feature. Comes in a lifetime chrome finish. CAN BE LOCKED ON ONE SIDE AND OPENED WITH A KEY FROM THE OTHER SIDE. This is a Straits FIRST. This lock can also be used as a latch only.

INSULATION

Where sound insulation is required doors can be furnished with two aircraft type fiberglass blankets each stitched between layers of clear poly vinyl chloride flame resistant sheeting affording the utmost in sound retarding.

SWEEP STRIP

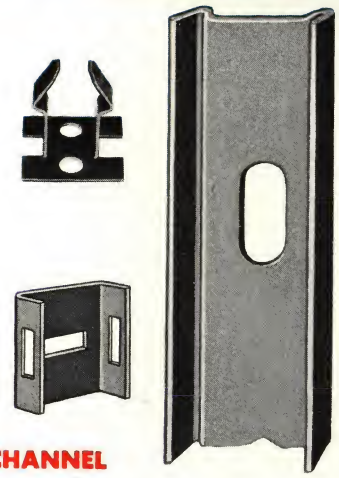
The sweep strip is a composition rubber, flexible sheeting which can be attached to the bottom of the door when extreme privacy and the ultimate in sound-proofing is desirable.



IMPINGING FEATURE

The curtain is impinged to the curtain clip with an automotive type Dot fastener, through a heavy duty cotton webbing, which is sewn to the curtain with nylon thread.

The curtain is impinged at the bottom of the valleys and immediately in back of the lead post and immediately in front of the jamb post assuring evenness of drape and making the most wrinkle-free door available.

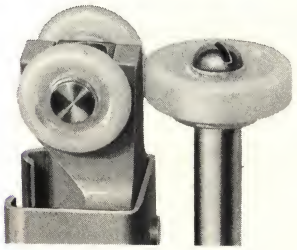


CHANNEL

Heavy duty 16-gauge galvanite steel back channel, beaded for rigidity and reinforced at all flanged points for strength.

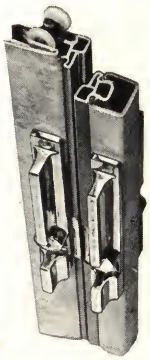
JAMB CLIPS

Clips for residential doors made of tempered spring steel that snap into channel and hold door to jamb. Heavy duty U shaped clips furnished for large commercial and institutional doors.



TROLLEY

That all lead trolleys will have a horizontal guide wheel, a bronze casting, or both where needed to prevent twisting and insure positive alignment when latching.



ASTRAGAL

A flexible rubber bumper that fits flush with the door jamb on single doors, and when doors are used in pairs it has an overlap feature that assures can't-see-through privacy.

GENERAL SPECIFICATIONS

FRAME

Straits Accordion Folding Doors shall consist of a rust-resistant, 18 gauge or heavier, steel frame of interlacing collapsible and extensible hinges having a pantograph action. Hinges shall be provided top and bottom and connected by means of 3/16" galvanite vertical rods to provide resistance against side-sway and to guarantee balanced action. Rods not to be structurally weakened nor protective coating burned off as in a weld but rather shall be fastened by means of a speed nut with a minimum tensil strength of 350 lbs. All doors 7' 6" in height will have an intermediate row of hinges and each 3' 6" in height thereafter will have an additional row of hinges to provide positive operation of all folds. Hinges and rods will be so constructed and with the aid of limit chains on doors 7' 6" wide and wider as to cause the folds of door to extend uniformly. All mechanism for producing stability and pantographic action shall be contained within the door frame and fabric covering. Hinges shall consist of 16 gauge carbon steel and shall be so formed as to provide a bushing action at axis points and shall be formed in "U" channel shape to provide an average hinge strength of 161 lbs., under transverse load tests as certified by an independent testing laboratory and certificate of same shall accompany doors to prevent substitution.

TRACK AND HARDWARE COMPONENT PARTS

All track shall be rust-resistant and have a silver grey baked-on enamel finish. Track shall be so formed of 18-gauge or heavier steel as to provide raceways for the hanger trolleys. Straits Accordion Folding Doors shall be equipped with tempered spring steel jamb clips so as to provide a full concealed attachment at the jamb. On large commercial installations a heavy duty U shaped jamb clip shall also be furnished. Lead posts shall be fitted with a heavy rubber insert gasket to fit into cloth covered jamb molds for a more uniform appearance and to help seal against sound leakage. All intermediate trolleys as well as front trolleys shall be adjustable. All front trolleys or lead trolleys will have a horizontal guide wheel, a bronze casting or both where needed to prevent twisting and assure positive alignment when latching. All locks and handles shall be fastened by means of studs and speednuts on the inside of the lead post and such attachments shall be wholly concealed. The chrome exterior hardware shall be guaranteed against rust and discoloration.

COVERING

The frame of "Straits Accordion Folding Doors" shall be covered with a durable, sunfast, flame-resistant, mildew-proof vinyl plastic coated fabric, having a minimum weight of 27 ounces per lineal yard of 54" wide material. Vinyl plastic shall be of a type that will not peel, craze or crack. The manufacturer of the vinyl coated material shall guarantee a shrinkage of 1% or less. Where it is necessary to make a seam in the fabric, the cloth shall be joined and sewed together with nylon thread and then double-stitched with a webbing reinforcement to prevent the cloth from pulling apart at the seams and at all times vertical seams shall be placed in the bottom of the volutes. The vinyl covering shall be attached to the frame at the top and bottom by sewing a heavy webbing to the fabric that is wide enough to completely protect the outer covering from hinges and attaching thereto an automotive fastener which shall impinge on a special fastener clip of the framework. Fastening points shall be in each valley of each fold and immediately in back of the lead post and immediately in front of the jamb post in order that the glueing of the fabric to the lead and jamb posts is relieved of all strain and stress and not counted on to hold the folds in position at those points.

ACCESSORIES

Available are sub-channel for concealed track installations, as also are locks, latches, various switches and meeting posts, as well as, fiber glass sound insulation. As in the case of sound insulated doors, they shall have a minimum Noise Reduction Coefficient of 44% as certified by an independent testing laboratory tested under ASTM procedure C423-58T. Insulated doors to consist of two fiberous glass blankets, each stitched between layers of poly vinyl chloride sheeting that will not support combustion. The total door weight, including track, not to exceed 1.41 lbs., per sq. ft. of opening.

As in the case of single doors, they shall have an average transmission loss of 20.9 dbs tested in accordance with ASTM procedure E90-55.

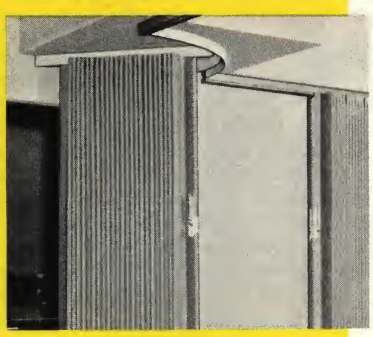
The Acoustical Door (double door) shall have 31.7 dbs over the full range of nine frequencies from 125 cps to 4000 cps tested in accordance with procedure ASTM E90-55.

SPECIAL STRAITS FEATURES

Straits manufactures various switches, meeting posts and operators that when used in conjunction with Accordion Folding Doors greatly increase the utilization of space. Complete specifications and shop drawings on request.

GLIDE SWITCH

Glide switch is available electrically operated with a self timing wall switch. Also available as a manually operated switch with a metal pole. With the use of Glide switches many doors may be stored in one location along one wall in the room. CAUTION: *Doors must be in the stacked position when run through switch.*)

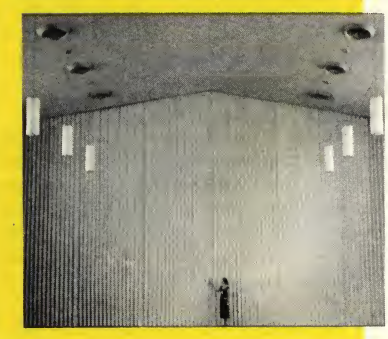


PIVOT SWITCH

The Pivot Switch may be used to make one door serve as a closure or partition at different locations within the room. The door when stacked can be swung through a 90° angle and extended at right angles. When not in use it may be swung flat against the wall or extended to form a closure along the wall. (NOTE: Pivot switches are available in four sizes: Small for doors to 8′ wide; medium for doors 8′ to 15′ wide; large for doors 15′ to 20′ wide; and extra large for doors 20′ to 26′ wide.) Doors must be made with Rolling Post Construction. Available for medium and large tracks only.

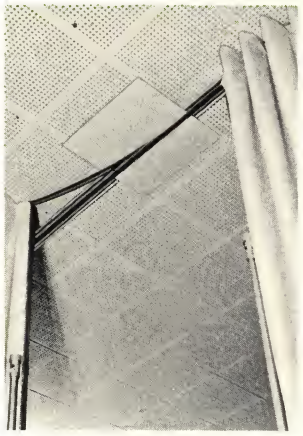
MEETING POST

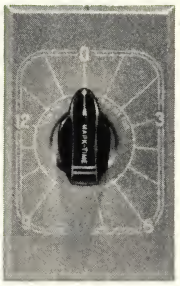
With the use of various meeting posts a large room can be made into many class rooms accommodating various separate groups at one time, eliminating the need for unsightly upright columns.



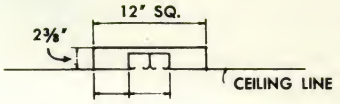
ELECTRICAL OPERATOR

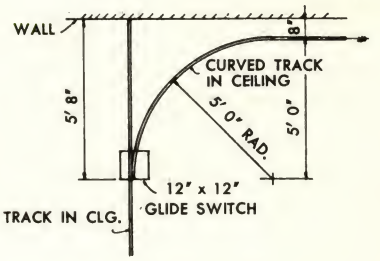
When manual operation is impractical on large installations an electrical operator is available with push button control to open and close doors. Manual operators with hand crank are also available to open and close doors. Doors not exceeding 25 ft. in width or 300 sq. ft. in area may be operated with 3/32″ dia. cables within the track. Over 300 sq. ft. 5/32″ dia. cable is essential and the 5″ wide recess pan is used to accommodate the operating cables.

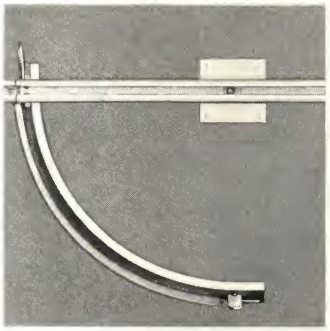


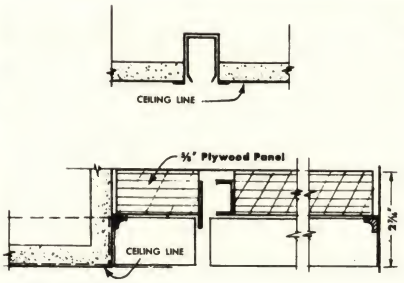


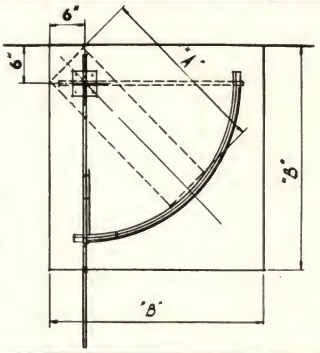
Self Timing
Wall Switch



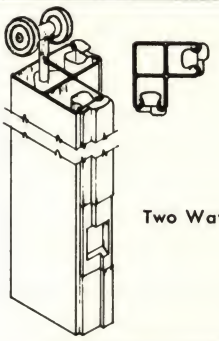




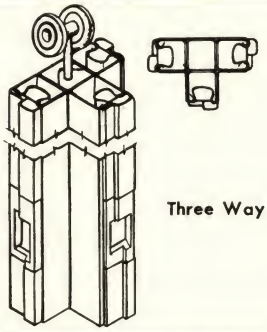




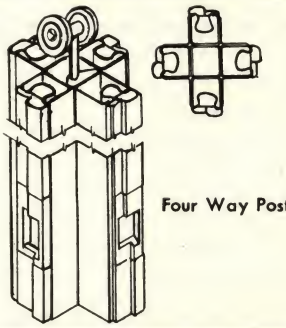
SWITCH SIZE	A	B
SMALL	18"	21"
MEDIUM	30"	36"
LARGE	42"	48"
EXTRA LARGE	54"	60"



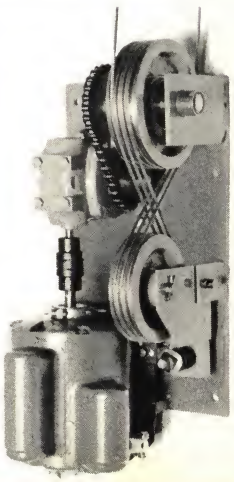
Two Way Post



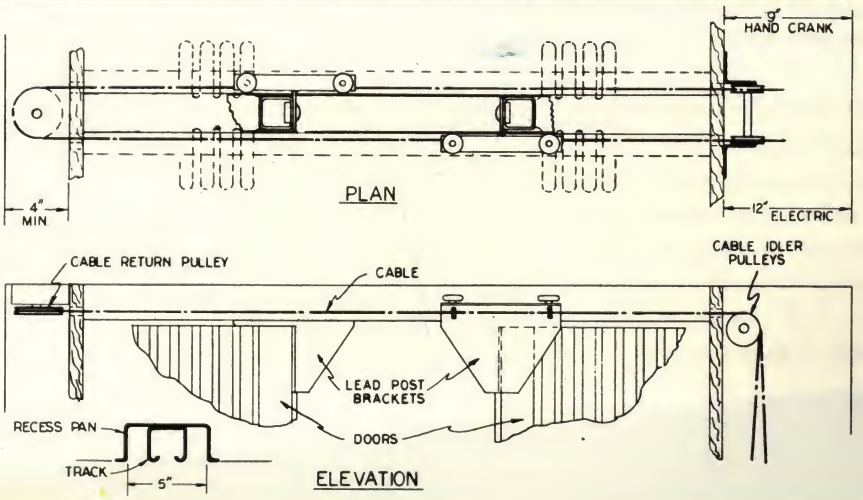
Three Way Post



Four Way Post



Instant
Contact
Wall
Switch
Safety Fused



Imperial 8 folding door

Straits manufactures a complete line of Straits Accordion Folding Doors to meet any closure problem. These doors fall into four general classifications: the Stock Imperial 8 door, the Standard Imperial 8 door, the Custom Imperial 8 door illustrated on this page and page 11, and the Monarch Custom 12 door illustrated on pages 12 and 13. Factors which distinguish the four groups are noted throughout this catalog.

STOCK AND STANDARD IMPERIAL DOORS
Stack and Weight Information

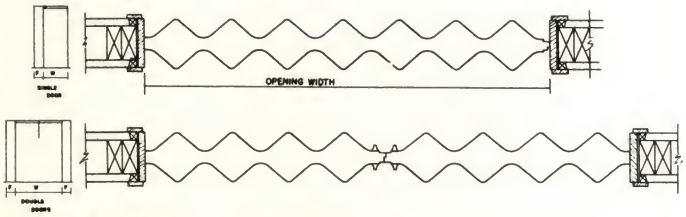
WIDTH	6'6" HEIGHT APPROX. STACK	6'6" HEIGHT SHIP WGT.	6'8½" HEIGHT APPROX. STACK	6'8½" HEIGHT SHIP WGT.	8'0" HEIGHT APPROX. STACK	8'0" HEIGHT SHIP WGT.
2'6"	6"	28#	6"	28#	6"	31#
3'0"	7"	32#	7"	32#	7"	37#
3'6"	8"	36#	8"	36#	8"	43#
4'0"	9"	40#	9"	40#	9"	49#
4'6"	10"	46#	10"	46#	10"	55#
5'0"	11"	51#	11"	51#	11"	61#
5'6"	12"	56#	12"	56#	12"	67#
6'0"	13"	61#	13"	61#	13"	74#
6'6"	14"	66#	14"	66#	14"	80#
7'0"	15"	72#	15"	72#	15"	86#
7'6"	16"	77#	16"	77#	16"	92#
8'0"	17"	82#	17"	82#	17"	98#
8'6"	18"	87#	18"	87#	18"	104#
9'0"	19"	92#	19"	92#	19"	110#
9'6"	20"	97#	20"	97#	20"	116#
10'0"	21"	102#	21"	102#	21"	122#
10'6"	22"	107#	22"	107#	22"	128#
11'0"	23"	112#	23"	112#	23"	135#
11'6"	24"	117#	24"	117#	24"	141#
12'0"	25"	122#	25"	122#	25"	147#
12'6"	26"	127#	26"	127#	26"	153#
13'0"	27"*	133#**	27"*	133#**	27"*	159#***

*For each additional lineal foot of opening width add 2" for stack per foot.

**For each additional lineal foot add 10 lbs. 6'6" and 6'8½" high.

***For each additional lineal foot add 12 lbs. 8'0" high.

Sizes shown in colored portion of chart are stock doors, prepackaged in choice of five colors, beige, opal, ivory, light green and white. These are priced lower than those shown in white portion of chart. All sizes shown are for standard opening heights. Any heights not shown are considered special and Custom Imperial 8 doors can be built to fit these specific openings. These are priced slightly higher than stock and standard doors.

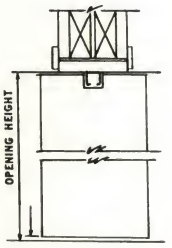


WIDTH MEASUREMENT

The width measurement is the distance between finished jambs. Door widths are in approximate 6" increments. Illustration shows finished opening width for one or a pair of doors in a typical opening.

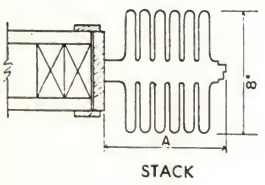
HEIGHT MEASUREMENT

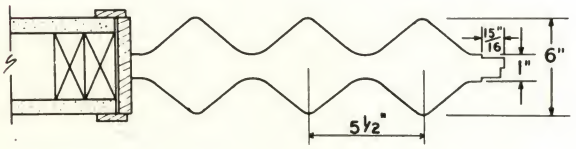
The height measurement is the distance from finished opening at the top to finished floor or carpet. It is important to make finished openings 6'6", 6'8½" or 8' high when possible to make use of the lower priced stock and standard sizes.



STACK

Dimension "A" refers to the compressed dimension or "stack" of the door. Refer to large chart for proper stack dimensions per opening width. For easy calculation Figure 2 of "stack" per lineal foot of opening. Example: a 10' door would stack width 20".





Physical dimensions for door in extended position, including measurements of lead post.

TRACKS

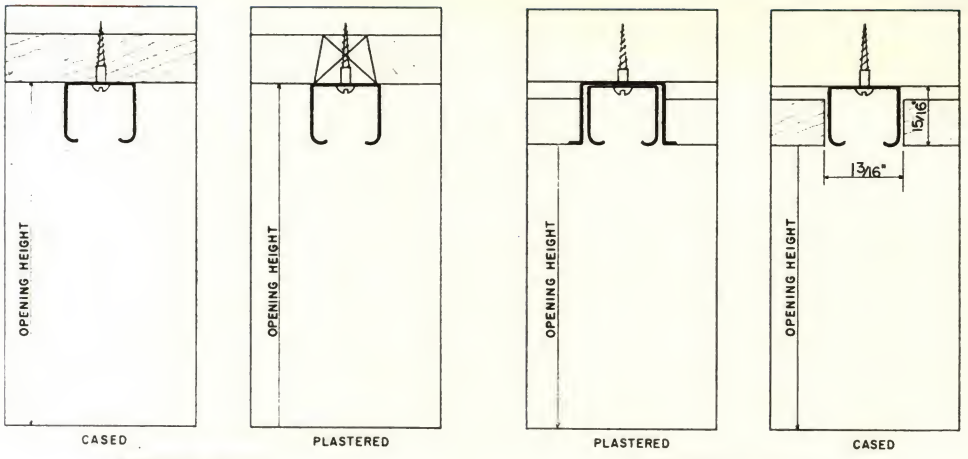
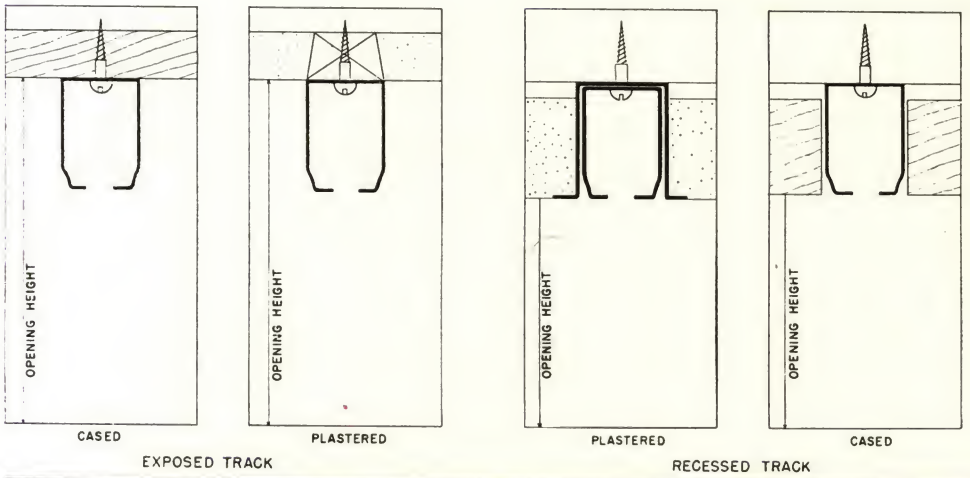


Illustration at left shows standard track that is furnished for doors to 10′6″ in height, or for a single door to 16′ in width, or for a pair of doors to 32′ in width.



CAUTION!

Door opening height should ALWAYS be specified from BOTTOM of finished ceiling to TOP of finished floor or carpet.

Illustration at left shows medium track which is standard above 10′6″ in height regardless of width. Standard on single doors 16′ and wider regardless of height. Standard on pairs of doors 32′ or wider regardless of height. Also available as an accessory for doors narrower or lower than above.

EXTRA HINGE:

Doors 7′6″ in height will have an extra intermediate row of hinges and every 3′6″ of opening height beyond 7′6″ will have an additional row of hinge plates.

LIMIT CHAINS:

Limit chains are added to doors 7′6″ and wider to assure eveness of drape and full volute's the full width of door.

POCKET OR DOOR RECESS INSTALLATIONS

Illustration below shows sliding jamb recessed in pocket. This sliding jamb is covered with door material. Cloth will be furnished to contractor for covering sliding jamb. For depth of pocket refer to chart on page 10 and add 4″ to door stack (dim. A).

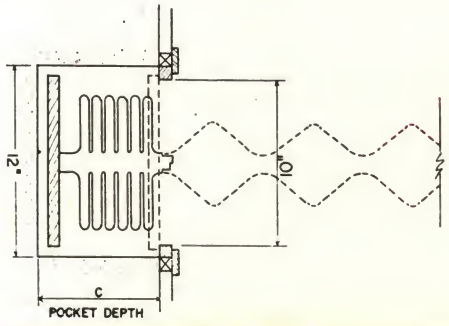
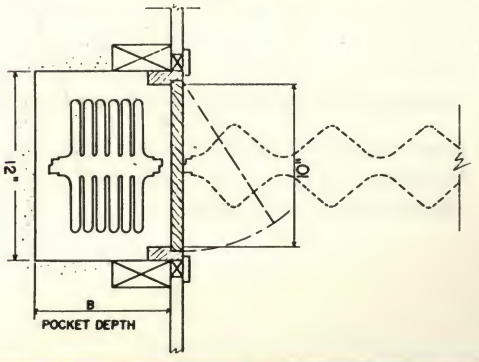


Illustration below shows a recessed pocket installation. This door must be made with a Rolling Post (see page 14). For depth of pocket refer to chart on page 10 and add 4″ to door stack (dim. A.). NOTE: Hinged doors and stops are not furnished by Straits.



Monarch 12 folding door

CONSTRUCTION

Since the Monarch Custom 12 Accordion Folding Door is designed for use in Commercial and Institutional buildings, where openings are large and use is heavy, straits construction is correspondingly stronger to accept the greater demands. Hinges, and other parts which bear the strain are gauged for heavy duty throughout.

APPLICATION

The Monarch Custom 12 Accordion Folding Doors are used extensively in auditoriums and large meeting rooms as room separators. The Monarch Custom 12 Accordion Folding Door can be a partition that transforms one room into many rooms and back again in seconds. The Monarch Custom 12 Straits Accordion Folding Door is recommended and used in commercial installations or in situations requiring wider and higher than average openings. The C-12 Custom Accordion Folding Door when stacked is 12″ wide, whereas its companion door, the Imperial-8, when stacked is 8″ wide.

WIDTH MEASUREMENT

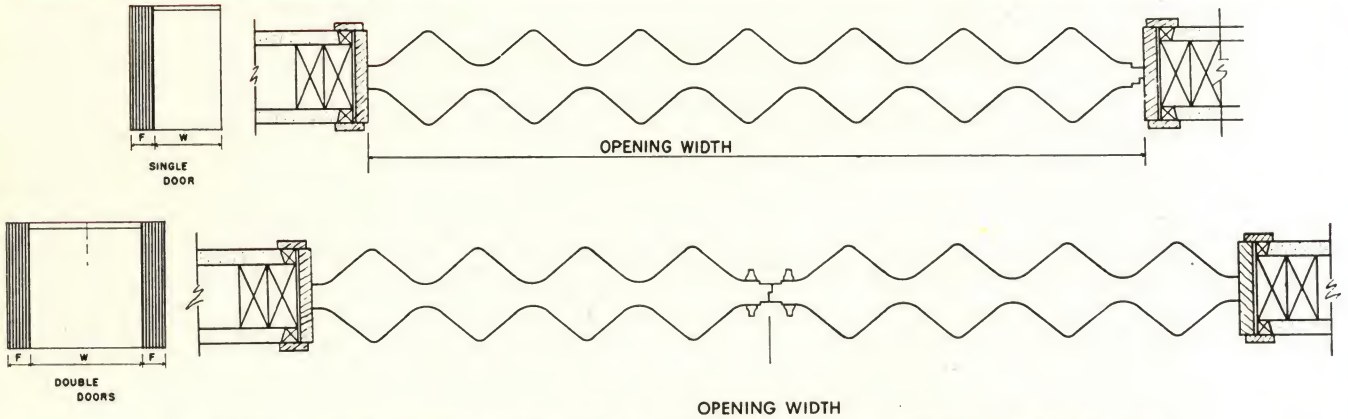
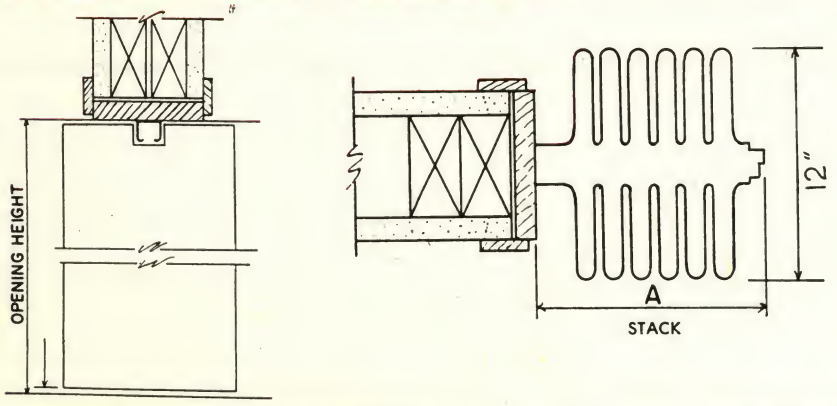


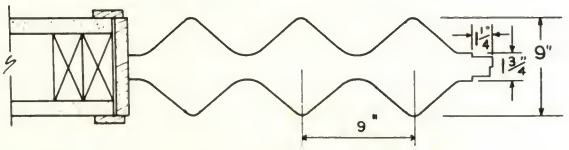
Illustration above shows dimensional diagram of Monarch Custom 12 single and double door installations. The width measurement is the distance between finished jambs. Door widths are in approximate 6″ increments. Illustration shows finished opening width for one or a pair of doors in a typical opening.

STACK AND HEIGHT MEASUREMENT

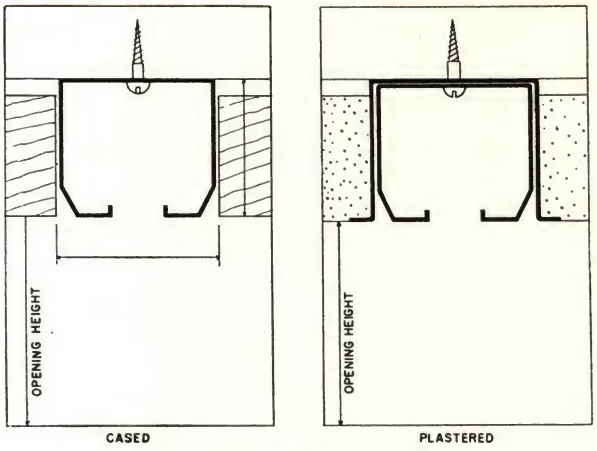


STACK SPACE—All Folding Doors require stack space. Stack and height dimensional diagram for Monarch Custom 12 Folding Door is shown at left. Dimension "A" for a door which would fit a 4′ wide opening is 6″. Add 1″ of stack for each 1′ of opening beyond 4′ in width. Example: A door which would fit a 5′ wide opening would stack 7″, etc.

Illustration at right shows the Monarch Custom 12 Folding Door in an extended position with the dimensions of lead post.



TRACKS

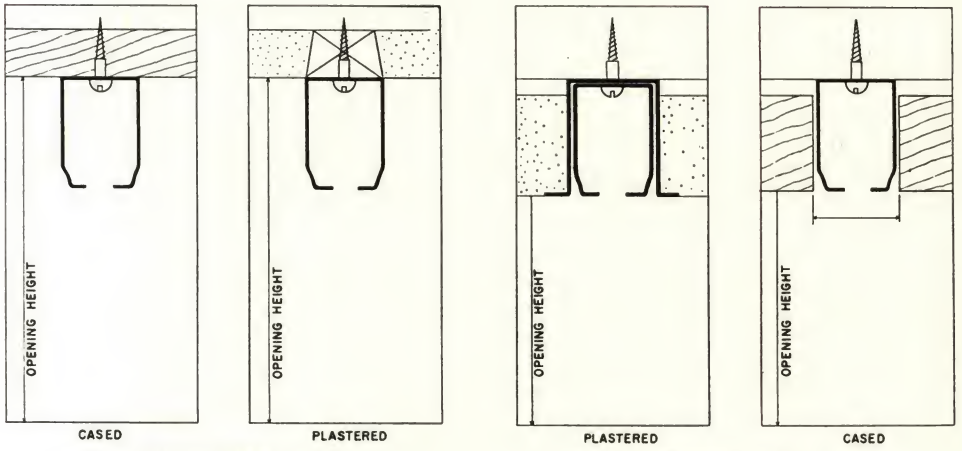


RECESSED TRACK

This large track, as illustrated at left, can be used only as a concealed installation. Pan and track illustrated on page 15.

CAUTION!

Door opening height should ALWAYS be specified from BOTTOM of finished ceiling to TOP of finished floor or carpet.



EXPOSED TRACK

RECESSED TRACK

Medium track, illustrated at left, can be used on Monarch Custom 12 Folding Doors, from 8′ up to 20′ in height. Either exposed or concealed in ceiling. Medium track is recommended when it is to be exposed. Pan and track illustrated on page 15.

POCKET OR DOOR RECESS INSTALLATIONS

Illustration below shows sliding jamb recessed in pocket. This sliding jamb is covered with door material. Cloth will be furnished to contractor for covering sliding jamb.

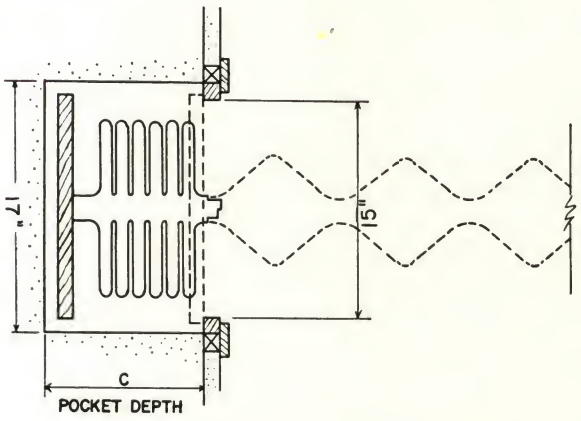
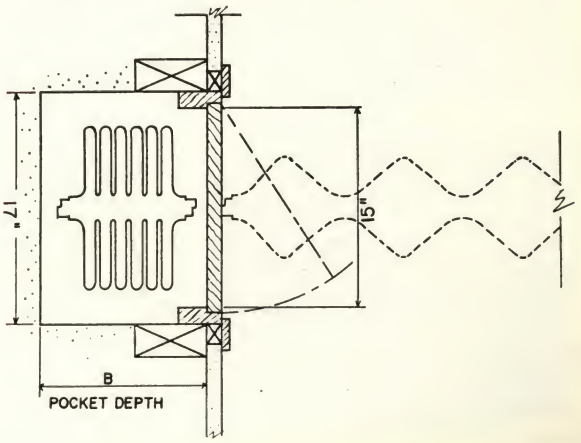


Illustration below shows a recessed pocket installation. This door must be made with a Rolling Post (see page 14.) For depth of pocket refer to stack detail on page 12, and add 6″ to total door stack.



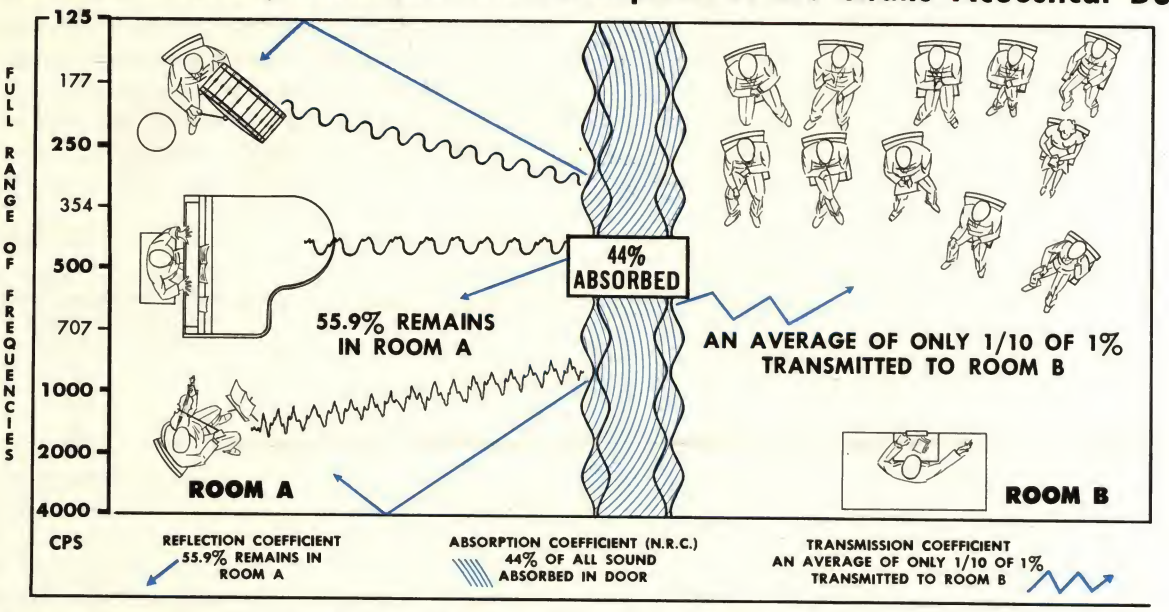
The Straits ACOUSTICAL folding door

COMPARES FAVORABLY WITH ACOUSTICAL TILE IN ABSORPTION QUALITIES . . .

Engineers at the Straits factory were given the project of developing the finest acoustical door possible. They experimented with a great many acoustical materials to find the most effective sound barrier to be incorporated into this door. Many were rejected. For example, they found that hardboard folding door surfaces reflected sound much the same way that bare, undraped walls and uncarpeted floors do.

The Engineers did find that the use of insulating blankets, dead air space and soft coverings acted much the same as acoustical tile in absorbing sound and eliminating bounce back. At this point, the acoustical door was designed, which in reality is two doors joined side by side with one common front post in such a way as to provide 19 sound barriers. In addition an acoustical baffle is provided at the ceiling. ***Write for bulletin, "When Quiet is a Must"***

SOUND: Transmission, Reflection and Absorption of the Straits Acoustical Door



Tests proved a very high absorption coefficient of 44%; a low reflection coefficient of 55.9%; a transmission of only 1/10 of 1%; a minimizing of reverberations, and much less build up of sound in rooms. In other words, each room will be more quiet even to the extent of absorbing the leakage of outside traffic noise. The absorption on each side of the door is the same. This coupled together with a very favorable weight factor makes the ideal solution for sound control. Each door weighs only 1.41 lbs. per sq. ft. including track. This is due to the stronger channel hinge (less steel needed) and the fact that fiber glass weighs only 1 oz. to a sq. ft.

TYPICAL ACOUSTICAL ½" THICK CEILING TILE

Sound Absorption Coefficient at frequency of						
125	250	500	1000	2000	4000	N.R.C.
.05	.15	.64	.87	.76	.78	.54

ASTM Designation C423-58T

ACOUSTICAL TILE—At the frequency of 250 cps, the acoustical tile absorbed only 15% of the noise in the room. At the low frequency of 125 cps the acoustical tile absorbed 5% of the noise in the room. From 500 cps through the higher frequencies up to 4000 cps, the acoustical tile absorbs more sound than the door, however, this is offset by the fact that the human audience in the room will also absorb these high frequencies.

STRAITS ACOUSTICAL DOOR

Frequency in cps	125	177	250	354	500	707	1000	2000	4000	Average Attenuation
Attenuations in decibels	24.	26.	29.	31.	40.	44.	47.	51.	51.	38.2 db

ASTM Designation E90-55 Test Number STR-2T

Averaged over all *nine* frequencies the Straits Door has an attenuation expressed in decibels of 38.2

SINGLE INSULATED STRAITS DOOR — The sound absorptive feature of the double door construction is also encompassed in the single door construction. Each has a Noise Reduction Coefficient of 44%. However, where sound conditions are not so critical, a transmission loss of rating

STRAITS ACOUSTICAL DOOR

Sound Absorption Coefficient at frequency of							Mounting No.	Thickness Inches
125	250	500	1000	2000	4000	N.R.C.		
.26	.60	.43	.38	.34	.30	.44	Special	

ASTM Designation Test No. C423-58T

STRAITS ACOUSTICAL DOOR—At the frequency of 250 cps the Straits Door absorbed 60% of the sound or 5 times as much as acoustical tile. At the frequency of 125 cps the Straits Door absorbed 26% of the sound or more than 5 times that of the acoustical tile. Again the human audience in the room absorbs the higher frequencies. For all practical purposes the acoustical tile and the Straits Door are equivalent in absorption.

NOTE: The Noise Reduction Coefficient of 44 indicates that the door absorbed 44% of all sound striking it.

SINGLE INSULATED STRAITS DOOR

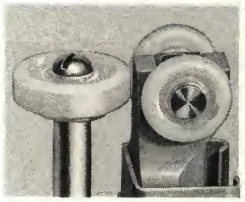
Frequency in cps	125	177	250	354	500	707	1000	2000	4000	Average Attenuation
Attenuations in decibels	17.	21.	18.	21.	23.	30.	35.	44.	45.	27.9 db

ASTM Designation E90-55 Test Number 1T

Averaged over all *nine* frequencies the single insulated door has an average attenuation expressed in decibels of 27.9

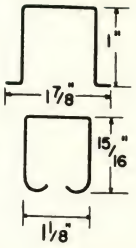
27.9 db will probably suffice. For example, there are many conditions in practice where no more than 27.9 db are required, between rooms such as adjacent stenographic pools—computer rooms, groups talking on each side of doors or outside traffic noise entering each room.

STANDARD TRACK (for Imperial 8 Door)—

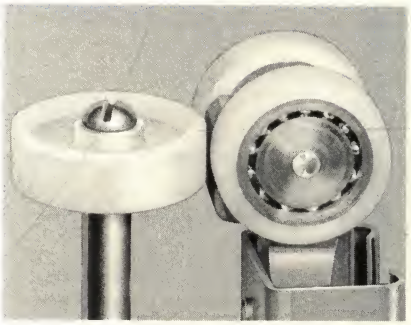


Adjustable nylon wheel trolley that swivels to eliminate binding in track.

is standard to 10′6″ in height on a single door narrower than 16′ or a pair of doors narrower than 32′. Comes with standard adjustable nylon wheel trolley. Can be either exposed or concealed in pan. Available in Silver-Gray Hammertone baked enamel finish.

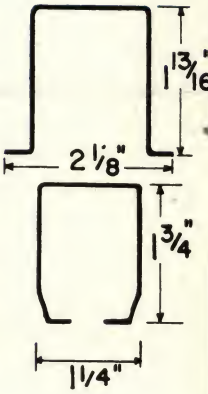


MEDIUM TRACK (for Imperial 8 or Monarch Custom 12 Door)



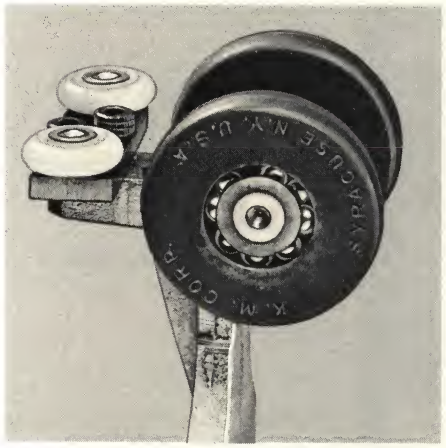
Nylon tired ball bearing trolley with metal inner and **outer** race for smooth quiet durable service.

is standard above 10′6″ in height regardless of width. Standard on doors 16′ and wider regardless of height. Standard on pairs of doors 32′ or wider regardless of height. Also available as an accessory for doors narrower or lower than above. Used on Monarch Custom 12 Doors regardless of height when track is to be exposed. Available in Silver-Gray Hammertone baked enamel finish.

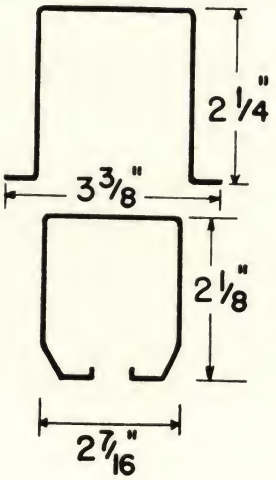


LARGE TRACK (Monarch Custom 12 doors only)—

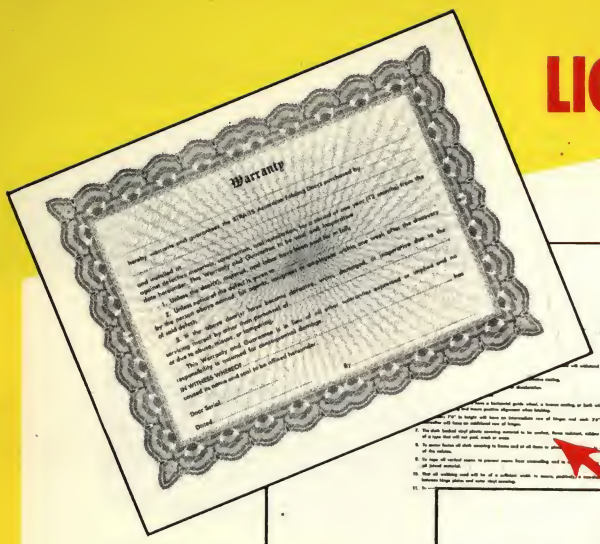
To be used on concealed installations only. Track is of 16-gauge heavy duty steel available in Silver-Gray Hammertone baked enamel finish.



Neoprene tired ball bearing trolley with nylon guide wheels. Neoprene gives the smoothest, most quiet and longest wear. Neoprene and nylon are impervious to grease and oil.



LIGHTER YET STRONGER

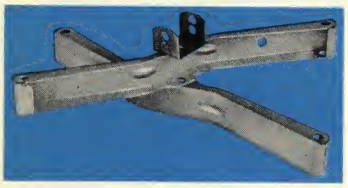


Not only warranted, but an unprecedented construction guarantee as well.

CONSTRUCTION GUARANTEE

Straits Products Inc. guarantee in the construction of the Straits Accordion Folding Doors—the following—

1. That each individual hinge plate will be formed in a channel shape and will withstand a minimum transverse load test of 144 pounds.
2. Not to weld any of our vertical rods and burn off protective coating.
3. That all trolleys will be adjustable.
4. That all lead trolleys will have a horizontal guide wheel, a bronze casting, or both where needed to prevent twisting and insure positive alignment when latching.
5. That doors 7'6" in height will have an intermediate row of hinges and each 3'6" in height thereafter will have an additional row of hinges.
6. Hinges and rods will be so constructed and with the aid of limit chains on doors 7'6" wide and wider as to cause the folds of door to extend evenly and uniformly and prevent door from pulling flat.
7. That all webbing used will be of a sufficient width to assure, positively, a non-chaffing action between hinge plates and outer vinyl covering.
8. To tape all vertical seams to prevent seams from unraveling and to assure a secure binding of all joined material.
9. To center fasten all cloth covering to frame and at all times to place vertical seams in the bottom of the volutes.
10. To use nylon thread exclusively on all sewn seams.
11. The cloth backed vinyl plastic covering material to be sunfast, flame resistant, mildew proof and of a type that will not peel, craze or crack.
12. The chrome exterior hardware against rust or discoloration.



AVERAGE HINGE STRENGTH 161 LBS.

Straits will furnish a certified copy of tests by an independent laboratory attesting to an average hinge strength of 161.6 lbs., assuring you that this is the hinge that will be incorporated into the construction of the door you specify. Avoid substitution.

FOR COMPLETE COPY OF TESTS IN CATALOG AND COLOR SWATCHES WRITE:

STRAITS PRODUCTS, INC.

Manufacturers of Quality Precision Products since 1933

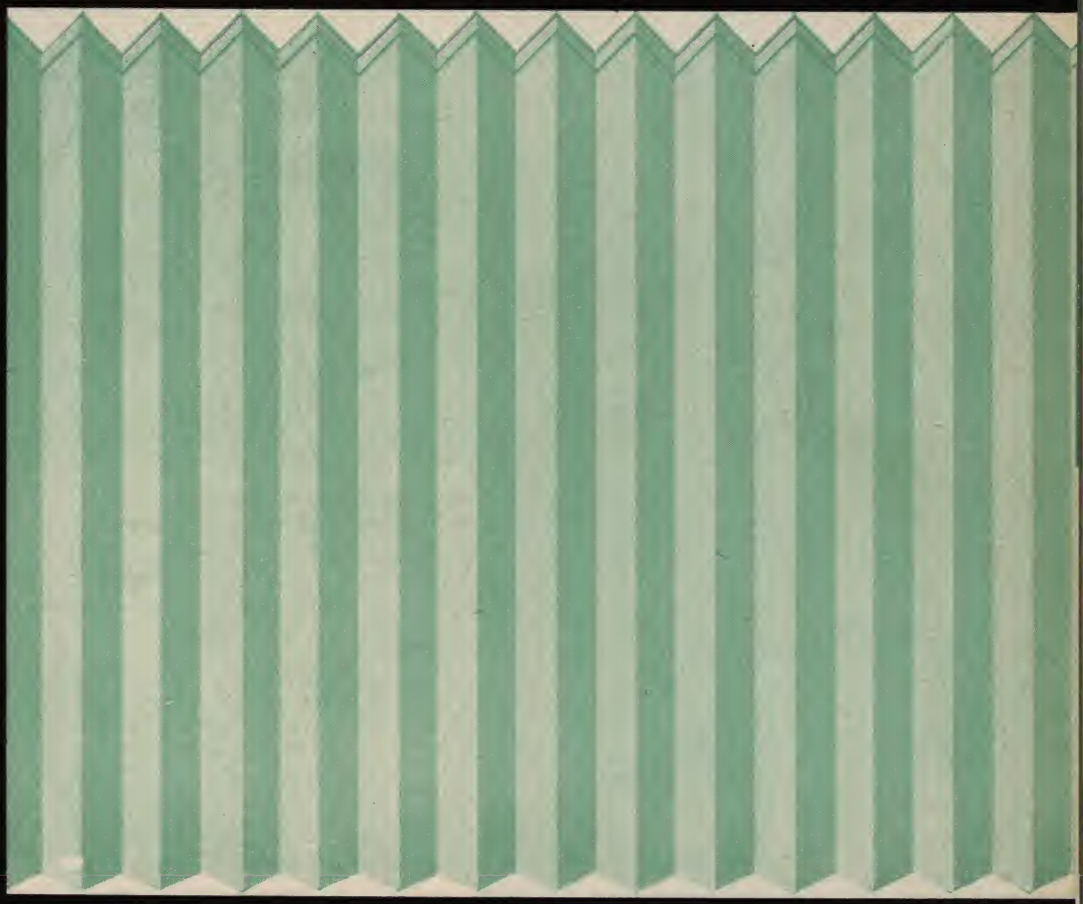
2700 Franklin Street **Detroit 7, Michigan**

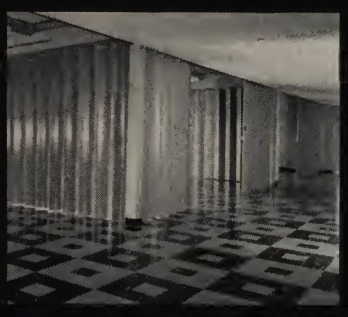
Distributed By

LITHO IN U.S.A.

WACO TRANSWALL

folding partitions





TRANSWALL COATED PRODUCTS

division of WACO *Manufacturing Company*
3565 Wooddale Avenue
Minneapolis 16, Minnesota

WACO TRANSWALL

THE FOLDING PARTITION WITH A HUNDRED USES

used in

- aircraft hangars
- apartment buildings
- auditoriums
- cafeterias
- churches
- concession stands
- dormitories
- gymnasiums
- homes
- hospitals
- hotels
- industrial plants
- laboratories
- motels
- offices
- restaurants
- schools
- showrooms
- stores
- studios
- warehouses
- workshops

used for

- backdrops
- doors
- enclosures
- noise barriers
- partitions
- photographers' curtains
- room dividers
- noise barriers
- security areas
- stage curtains
- testing areas
- welding curtains

approved by

- architects
- builders
- fire departments
- users

TransWall: what it is . . .
TransWall is a different kind of folding partition, so simple in concept and design that it is easily the most economical in its field . . . a folding partition which offers resistance to fire, a dependable noise barrier, draft control, and other advantages equal—often superior—to other types of folding partitions.

TransWall is made of a sound absorbent sheet of sturdy fabric impregnated and coated with a selected fire-resistant vinyl plastic, available in a variety of colors and finishes. The fabric itself forms the hinges, eliminating internal rods and stays, pantograph designs, and other heavy hardware. There is no internal mechanism to get out of order.

Super TransWall, too . . .
For higher, wider enclosures—for areas that are too large to permit use of other, ordinary types of folding partitions, there is Super TransWall illustrated and described on page 8.

features and advantages

saves space
TransWall retracts into 1⅛″ of space for each 12″ of extended width, plus 2½″ for the end post. Compare for compactness!

saves money
Simple design and the absence of internal mechanisms cut cost as much as 40 per cent below that of other types of folding partitions. Installation costs are minimum, too. Durability of materials and simple construction make maintenance and repair costs virtually nothing.

makes floor space more useful
Large areas can be subdivided into smaller rooms for multiple activities. Costly new construction or alteration is avoided.

operates easily, silently
At finger tip pressure, TransWall moves silently on nylon rollers.

light weight
TransWall weighs substantially less than other folding partitions of comparable size, although the plastic-covered TransWall panels are approximately three times as heavy, per square foot, as the covering fabric on other types. There are no heavy wooden or metal parts in TransWall—the weight is in the fabric, where it's needed.

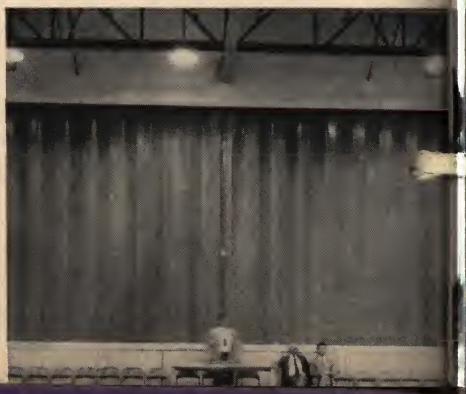
wide size range
TransWall is available for openings up to 14 feet high and any width. Please refer to our Super TransWall Partitions for larger openings.

proved fire resistance
TransWall is fire safe, as proved by tests of the Boston (Mass.) Fire Department, whose tests are among the toughest in the country.

easy to clean
You can wash TransWall with any mild detergent or mineral spirits.

Sunday School classrooms in a church basement

High school auditorium with TransWall stage curtain



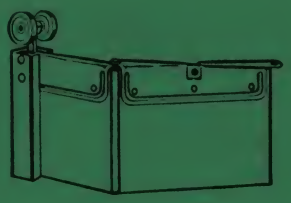
WACO TRANSWALL

design and construction

TransWall is designed for strength, simplicity, beauty, and long life. It is built with unfailing adherence to the high standards which have made the Waco name a synonym for dependable quality.

trouble-free long-lasting hinges

The hinges between the 7⅜" wide vertical panels are made by scoring the plastic coating. These hinges have been tested to fold more than a hundred thousand times without deterioration—far beyond the requirements they'll meet in actual use.



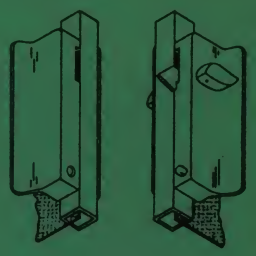
simple suspension

TransWall partitions are suspended on silent-running, long-wearing nylon rollers moving in a rigid steel channel track. Formed double plates, connected with sturdy hinge pins, are riveted with the sound absorbent fabric between them. Top hardware and fabric form a continuous hinged assembly.

Careful selection of every material, modern production techniques, rigid inspection, and able workmanship combine to make TransWall a wise choice for any building where folding partitions can be used to advantage.

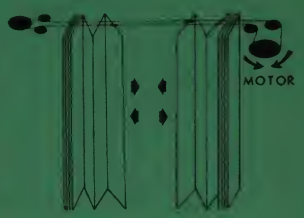
latches

Simple, sturdy latches are available for all TransWall installations, in two-piece units as shown or for standard jamb latching. TransWall latches can be furnished with standard cylinder locks operated by a key.



cable operator

A silent cable operator is available for one-point control. This is particularly useful with stage curtain and similar installations — but there are Super TransWalls as large as 24′ high and 60′ wide being used every day without need of a cable operator. Cable operators, when installed, can be manually or electrically controlled.



curved track

Curved track can be furnished to meet the needs of any TransWall installation. The standard curve has a 30" radius, but track with a radius of 24" or 36" is available from stock. TransWall operates equally well on straight or curved track.

rolling multiple-meeting posts

Where two or more enclosures with common walls are established, multiple meeting posts are furnished.

optional mounting

TransWall can be mounted to a ceiling surface or on tracks recessed in a ceiling. Track can also be installed below ceiling level from wall to wall, from wall to post, in doorways, as backdrops on walls, or on its own mounting posts when island construction is desired.

special switches

TransWall can be extended in any direction for which tracks have been provided—or stacked flat against a wall when not in use.

Available special switches include:

Glide switch—shunts TransWall from one track to another running in any direction.

Crossover switch—permits TransWall to cross a track installed at 90°.

Pivot switch—permits TransWall to pivot through 90° angle.

Stacking switch—permits TransWall partitions to be stacked in sections.

patterns and colors

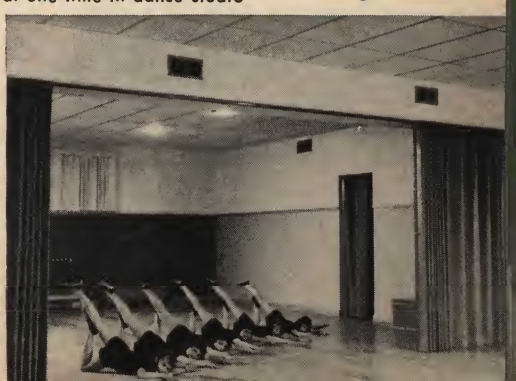
TransWall offers beauty as well as utility. It is available with both sides smooth or in a pleasing textured pattern.

Three decorator colors in grey, green, brown, are standard. Consult the manufacturer for any special color requirements.

TransWall is both backdrop and room divider for photographer

TransWall separates work areas in this aircraft factory

TransWall permits several classes at one time in dance studio



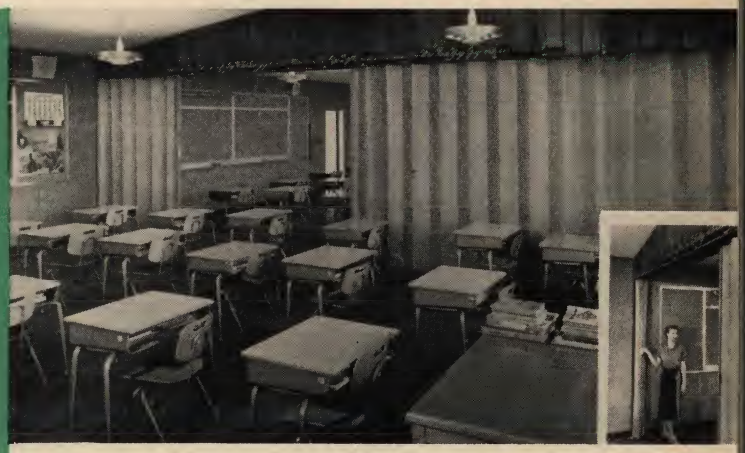
in a hospital In this Spokane (Wash.) hospital, needed bed space was created by the use of TransWall, at a cost far less than that of conventional construction. Elimination of a conventional swinging door permitted utilization of every square inch.

in an airport terminal In this airport terminal at Moline, Illinois, TransWall is used to enclose this concession stand. Outside business hours the fixtures, merchandise, and cash register are protected by the sturdy TransWall enclosure.

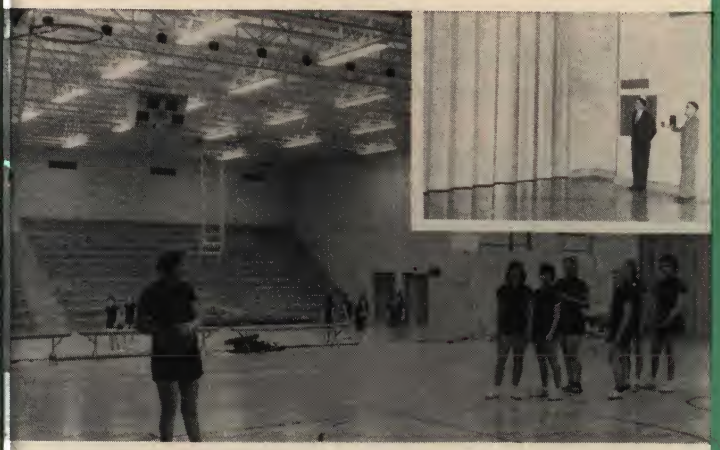
in a technical college The fire-safe properties of TransWall are utilized at North Dakota State Agricultural College, where TransWall partitions are used to separate electric welding units and the students operating them.

in a cafeteria In this factory cafeteria, TransWall was used to divide dining area from service counters. With TransWall retracted, there is direct access from counters to tables. Extended, TransWall makes area available for other uses.

in a church In this church at Cheviot, Ohio, a dual TransWall installation permits use of the social hall for two simultaneous meetings, with direct access to each from outside. Area between the TransWall partitions becomes a corridor.



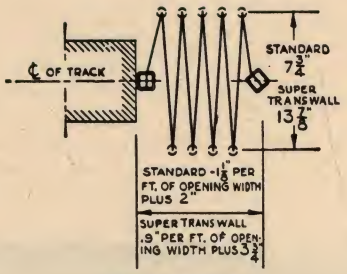
in a school TransWall made additional class room space easily and inexpensively available in this school at Phoenix, Arizona. The remarkably good noise barrier properties of TransWall afford protection to each class.



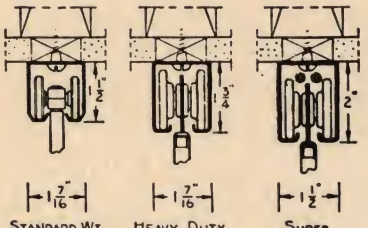
in a gymnasium Gymnasiums are often multi-purpose rooms, and easily retractable partitions are urgently needed. Super TransWall solved the partition problem for this Wisconsin high school. Operation is remotely controlled (inset).

in a photo studio The wide variety of work which falls to an industrial photographer's lot requires unusual versatility in studio arrangement. This firm solved that problem easily, quickly, and economically with a TransWall installation.

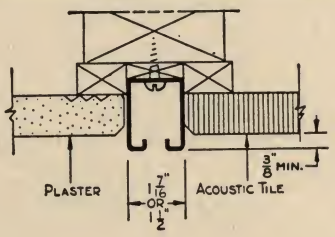
INSTALLATION DETAILS


℄ OF TRACK
STANDARD 7¾"
SUPER TRANSWALL 13⅞"
STANDARD -1½" PER FT. OF OPENING WIDTH PLUS 2"
SUPER TRANSWALL .9" PER FT. OF OPENING WIDTH PLUS 3¾"

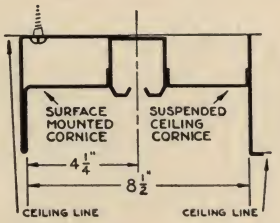
STACK SPACE



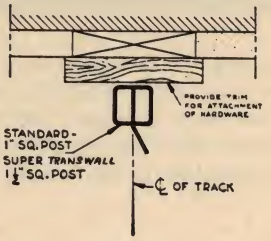
EXPOSED TRACK
(PLASTER GROUND NOT BY WACO)



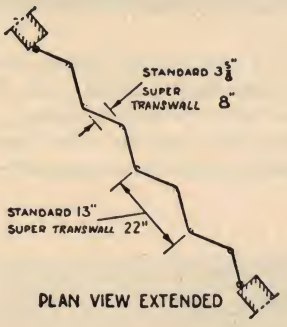
RECESSED TRACK
(FURRING STRIPS AND PLASTER CASING NOT BY WACO)



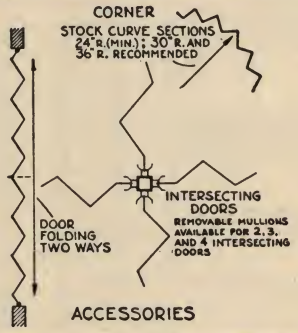
ONE-PIECE STEEL CORNICE



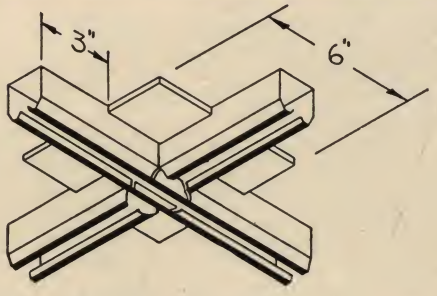
EXPOSED JAMB
(WOOD TRIM AND PLASTER GROUND NOT BY WACO)



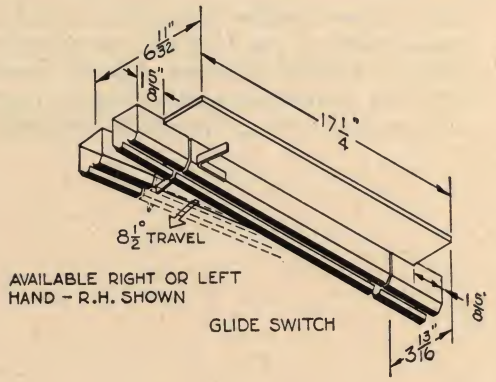
PLAN VIEW EXTENDED


CORNER
STOCK CURVE SECTIONS 24" R.(MIN.); 30" R. AND 36" R. RECOMMENDED
INTERSECTING DOORS
REMOVABLE MULLIONS AVAILABLE FOR 2, 3, AND 4 INTERSECTING DOORS
DOOR FOLDING TWO WAYS

ACCESSORIES

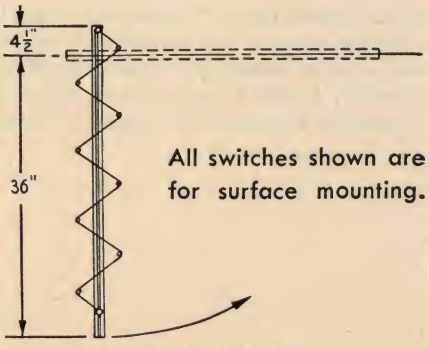


CROSSOVER SWITCH



AVAILABLE RIGHT OR LEFT HAND - R.H. SHOWN

GLIDE SWITCH



All switches shown are for surface mounting.

PIVOT SWITCH

Installation Method

Installation of TransWall is simple and inexpensive.

For direct ceiling installation, the track is fastened with wood screws, toggle bolts, or other fastenings sufficient to support an average weight of one pound per square foot of opening. The end fastenings must, however, be strong enough to hold the full weight of the TransWall when it is retracted. Where more than one track section is used, the track must, of course, be properly aligned.

The roller carriers are assembled in the partition, and the partition is hung on the track. When the roller carriers are lubricated and all hardware and track sections are tight, the installation is complete.

TransWall folding partitions have the unique advantage that they can be trimmed to match the contour of an uneven floor, if they are carefully marked or scribed before cutting.

Precise installation instructions are furnished with each TransWall unit. We recommend, however, that the job be done by an authorized TransWall representative, whose experience and knowledge assure satisfaction and easy, efficient installation at minimum cost.

Suggested Specifications

general

Folding partitions shall be furnished and installed as shown on drawings.

material

Folding partitions shall consist of a single layer of plastic-coated, laminated fabric coated on both sides to a minimum total weight of 72 ounces per square yard and scored to form folding panels of equal width. Fabric panels shall be supported at the top to form a folding partition substantially free of wrinkles or puckers. Fabric shall be coated with flexible, flame resistant vinyl and sealed where necessary to form an inconspicuous seam.

Fabric color and surface texture shall be as selected and approved by the architect.

The partition shall be capable of being trimmed by a simple scribing and cutting operation to compensate for any unevenness of floors. Otherwise, manufacturer shall provide $\frac{3}{8}$ inch clearance.

All are manufactured and furnished under the trade name TransWall by Transwall Coated Products, a division of Waco Manufacturing Company of Minneapolis, Minnesota.

hardware

Top or supporting plates, tracks, and end posts shall have a rust-resistant phosphate coat, with an exterior coating of a color harmonious with the color of the fabric. Provision shall be made in manufacture for equispacing the folds when partition or door is fully retracted.

Partitions shall be top supported without auxiliary floor track by means of roller carriers, with a minimum of one double wheel carrier for each full fold. Wheels shall be of molded nylon and run in heavy gauge steel track.

Latching shall be provided as indicated, with satin finish rustproof handles. Where latching is specified, provision shall be made for anchoring the fixed end post.

dimensions

The stacking or retracted width of the door shall not exceed $1\frac{1}{8}$ inches per foot of extended width, plus $2\frac{1}{2}$ inches for end posts. Retracted thickness of the door shall not exceed $7\frac{7}{8}$ inches.

guarantee

The manufacturer shall guarantee partition or partitions for one (1) year against defects of material or workmanship.

These are only a few of the people who use TransWall

Alhambra School
Phoenix, Ariz.

Argonne National Laboratory
Lemont, Ill.

Barron High School
Barron, Wis.

Bell Aircraft Corp.
Buffalo, N. Y.

Benson County Ag. School
Maddock, N. D.

Bronx Municipal Hospital
New York, N. Y.

Bryan Memorial Hospital
Durant, Okla.

Central Mold & Mach. Co.
Akron, Ohio

Clemson College Baptist Church
Clemson, S. C.

Department of Mines
Ottawa, Ontario

Douglas Lodge
Lake Itaska, Minn.

Dow Chemical Co.
Denver, Colo.

Electrochemical Co.
Niagara Falls, N. Y.

Fitchburg Teachers College
Fitchburg, Mass.

Foster High School
Blackstone, Va.

Hamline University
St. Paul, Minn.

Howe Military Academy
Howe, Ind.

International Shoe Co.
St. Louis, Mo.

Arthur Knapp School of Dancing
Milwaukee, Wis.

Massachusetts Institute of Technology
Cambridge, Mass.

National Reactor Testing Station
Idaho Falls, Idaho

New Jersey Bell Telephone Co.
Collingswood, N. J.

Ozark Air Lines
Milwaukee, Wis.

Quincy Senior High School
Quincy, Ill.

Riverside Women's Club
Riverside, Calif.

St. Mary's Russian Orthodox School
Minneapolis, Minn.

Scott Farrar Home for the Aged
Peterboro, N. H.

Texas Christian University
Houston, Texas

Troy Motel
Troy, Alabama

United Air Lines
Denver, Colo.

U. S. Army
Fort Snelling, Minn.

U. S. Naval Air Station
Alameda, Calif.

U. S. Naval Torpedo Station
Keyport, Wash.

U. S. Marine Corps Supply Center
Barstow, Calif.

University of Chicago
Chicago, Ill.

Young Men's Christian Assn.
Bedford, Ohio

WACO SUPER TRANSWALL

for high, wide enclosures

If the opening you wish to enclose seems too high and too wide for a truly efficient folding partition, you need Super TransWall. Super TransWall is the folding partition specially designed and engineered for higher, wider openings —like that shown at the right!

Super TransWall is made of the same sturdy, attractive sound absorbent fabric used in TransWall. It operates easily and silently on ball bearing carriers with double ball bearing rollers. Super TransWall moves so smoothly that even the largest unit can be extended or retracted with finger pressure.

Super TransWall folds back into a depth of little more than one inch per foot of extended width and a thickness of no more than 14 inches.

Standard switches are available. Consult manufacturer.

Consider these other Super TransWall advantages:

- Effective sound barrier
- Easy installation
- Simple, trouble-free design
- Economical maintenance
- Lightweight, yet durable
- Highly resistant to fire
- Choice of manual or electric power unit open and closing.
- Low cost. Super TransWall costs up to 40 per cent less than other types of folding partitions adequate for the same jobs.

Double ball bearing rollers glide easily in overhead channel track carrier mounted firmly in steel headplates which grip sound absorbent fabric sheet.

Nationwide Distribution and Installation

TransWall and Super TransWall can be furnished and installed through a nationwide network of factory representatives and distributors. Ask the Minneapolis office for the name and address of our nearest representative and your local distributor. We are happy to help you solve your enclosure problems.

TRANSWALL COATED PRODUCTS Division of Waco Manufacturing Co.
3565 Wooddale Avenue • Minneapolis 16, Minnesota WEst 9-6733

Printed in U.S.A.

elegance in folding wood

Space-Saver Door by Wood Specialty Products, Inc.

1960 A.I.A. File No. 16-M

Space Saver GIANT doors in sitka spruce

Space Saver REGULAR doors in Philippine mahogany.

A wall-to-wall Space Saver gives this bedroom
a richly paneled wall
and a luxuriously large closet.

The circus panels of a Space Saver door assure
quiet naps but open
wide for a large play area.

The rich mahogany of a Space Saver partition
makes two living rooms when
gun fire intrudes on the quiet hour.

(color and grain patterns will vary from samples shown)

WALNUTGLO
stain on philippine mahogany

BIRCHGLO
stain on spruce

SITKA SPRUCE

PHILIPPINE MAHOGANY

WESTERN RED CEDAR

elegant to the touch

philippine mahogany

all height adjustment is done by trimming the bottom of the door with a finish saw . . . no factory adjustment required

regular door

for opening sizes to 10′ in height and 15′ in width

Specially designed aluminum extrusion track can be bent on custom radii. (Min. radius, 12″) No rust . . . no discoloration.

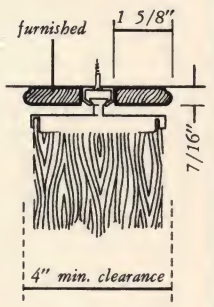
Silent bearing-grade nylon gliders support *every* panel.

Plated, pressed steel caps give superior head strength. Glider is riveted to cap, eliminating any danger of splitting panels when door is subjected to hard use.

Laboratory tested vinyl extrusion hinge is silent, light-tight, and, because it is under no tension, *does not cause the door to "creep"* when left in an intermediate position.

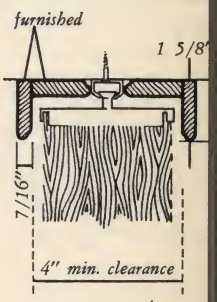
Solid wood panels give body to the door. Can be finished to compliment or match any interior color.

Adjustable spring-loaded bullet catch provides a simple, positive device for holding door in stacked or extended position.



TRACK TRIM

RECESSED TRACK



WITH VALANCE

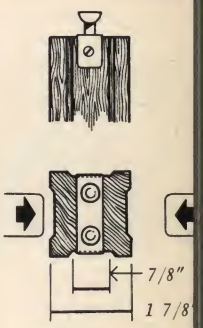
specifications

GENERAL. Folding doors shall be wood panel, accordion type "Space-Saver Doors" or equal. Each panel shall be connected with a full height hinge of extruded virgin vinyl. Panel shall be suspended by a crimped-on metal cap incorporating a nylon glide which operates in an extruded aluminum track at the top of the door. Door shall be free of any binding and operate silently.

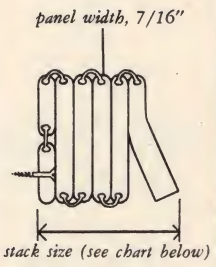
PANELS. All panels shall be kiln dried of a single species of wood. Edges shall be routed to receive and lock vinyl hinge in place. Size of panels shall be 7/16″ thick and 3-1/2″ wide.

FINISH. Panels shall be sanded; sanded, sealed and buffed; sanded, sealed, buffed and clear lacquer finished at the factory; or shall be custom finished to match samples submitted.

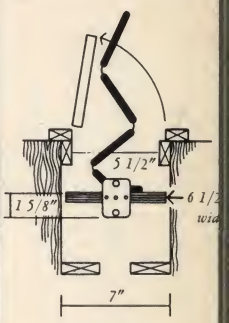
TRACK CURVE



ROLLING POST



STACK

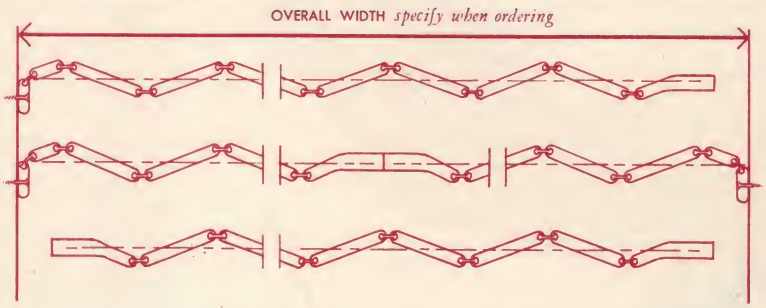


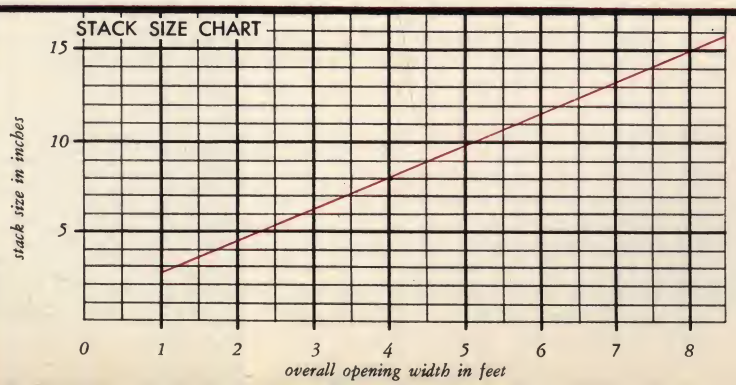
POCKET

SINGLE

PAIR

FLOATING
lead panel each end





(color and grain patterns will vary from samples shown)

WALNUTGLO
stain on philippine mahogany

BIRCHGLO
stain on spruce

SITKA SPRUCE

PHILIPPINE MAHOGANY

inger-touch operation

sitka spruce

all height adjustment is done by trimming the bottom of the door with a finish saw . . . no factory adjustment required.

giant door

for heights up to 14′ and widths up to 50′

Precision extruded aluminum track engineered for heavy duty and pre-drilled for flat-head hanger screws. V-groove track assures smooth dust-free operation of rollers.

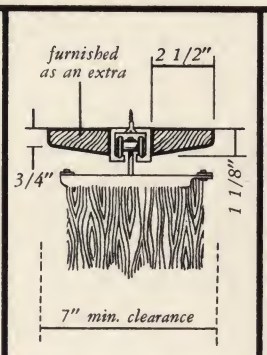
Ball bearings in *double steel races* minimize friction. Nylon tires assure silent operation.

Clamp-on hangar of 14 gage steel incorporates an exclusive angle-stop which eliminates any possible strain on the vinyl hinge and wood panels.

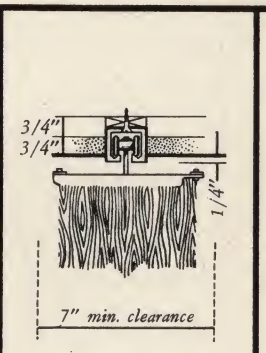
X-washers facilitate installation of large doors by permitting on-the-job assembly in sections.

Vinyl hinge is silent, light-tight, and durability tested. Available in a variety of colors.

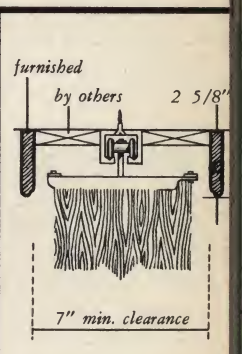
Door is easily operated by applying force at *any height* on the lead panel *without the aid of pendant pulls.*



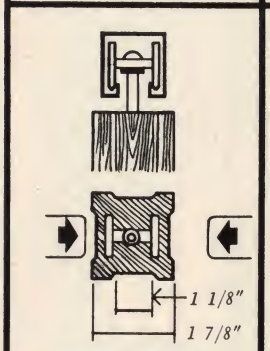
TRACK TRIM



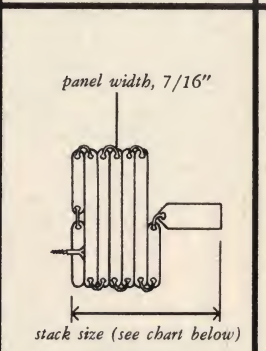
RECESSED TRACK



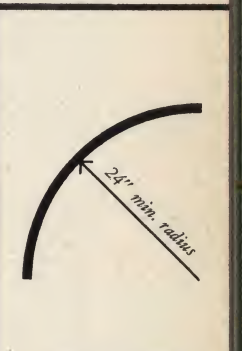
WITH VALANCE



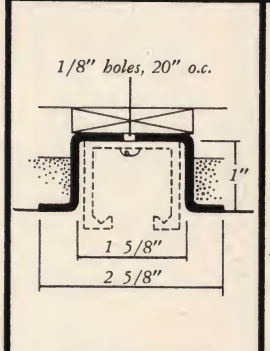
ROLLING POST



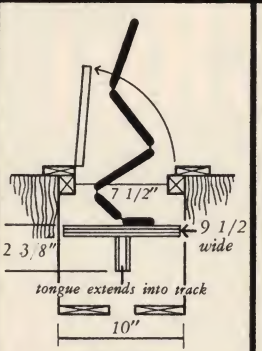
STACK



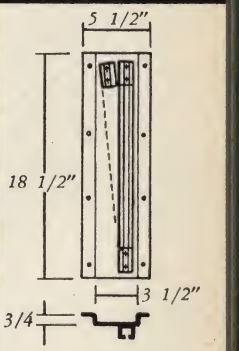
TRACK CURVE



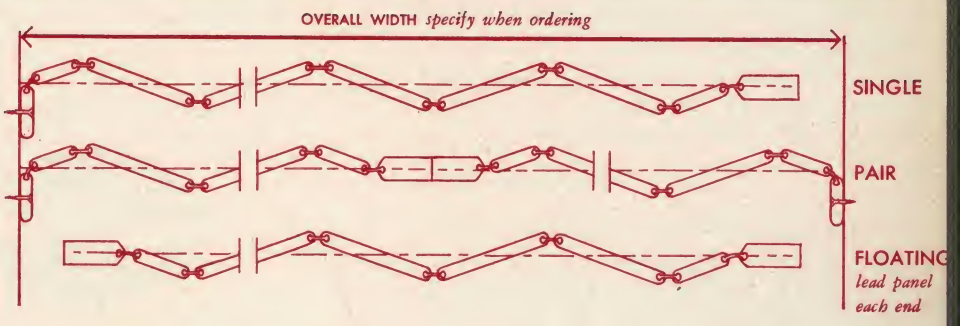
TRACK CHANNEL

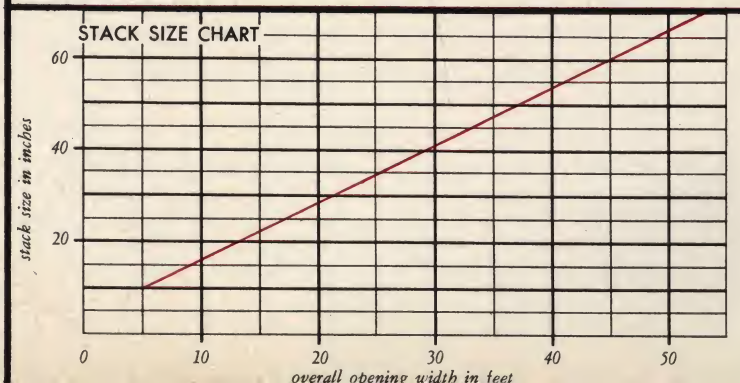


POCKET



SWITCH





specifications

GENERAL. Folding doors shall be wood panel, accordion type "Space-Saver Giant Doors" or equal. Each panel shall be connected with a full height connector-hinge of extruded virgin vinyl. Panel shall be capped with a crimped-on heavy duty angle-stop hinge. Alternate hinges shall have riveted hinge pins with removable lock washers. Alternate panels shall be suspended and roll on double ball bearing rollers with steel races and nylon tires. Track shall be extruded aluminum with two "V" groove channels for nylon tires. Door shall operate without pendant pulls and be free of binding when operated by pulling or pushing from any vertical position on the lead panel.

PANELS. All panels shall be kiln dried of a single species of wood. Edges shall be routed to receive and lock vinyl hinge in place. Size of panels shall be 7/16" thick and 5-1/2" wide.

FINISH. Panels shall be sanded; sanded, sealed and buffed; sanded, sealed, buffed.and clear lacquer finished at the factory; or shall be custom finished to match samples submitted.

accessories

1. Keyed lock, specify right or left.
2. Positive latch.
3. Dummy plate. (for pairs)
4. Privacy latch, specify right or left.

1.

2.

3.

4.

durability

Laucks Laboratory tests show that after 250,000 cycles of opening and closing, the Space-Saver Door still operates smoothly.

sound resistance

Riverbank Acoustical Laboratories of the Armour Research Foundation found the average sound transmission loss to be 21.86 decibels over frequency ranges of 250 to 4,000 cycles per second.

engineering

Sound product engineering by Industrial Designer Robert A. Jorgensen is demonstrated by the simplicity of the door. There are no complicated parts to lubricate. Individual panels can be replaced easily, in the field if necessary. Height adjustments can be made by trimming the bottom of the door with a finish saw.

warranty

The Space-Saver Door is warranted free from inherent defects in material and workmanship for one year from date of shipment from the factory when used for the purpose intended and not subject to abuse or accident. Finished doors, including those with the penetrating sealer coat, are warranted free from warpage which will either affect the appearance or action of the door.

MANUFACTURED BY WOOD SPECIALTY PRODUCTS, INC., 24300 WEST 60th ST.,

MOUNTLAKE TERRACE, WASHINGTON

FACTORY SALES OFFICE: 252 BROADWAY, TACOMA 3, WASHINGTON

TWX — TA 023 telephone FUlton 3-3434

in Canada: CELWOOD INDUSTRIES, LTD., P.O. DRAWER 70, ABBOTSFORD, B.C.

in Mexico: PERSIANAS LUMMEX, S.A., AV. COL. DEL. VALLE NO. 615, MEXICO 12, D.F.

SPACE SAVER folding wood Door ®

LITHOGRAPHED IN U. S. A.-FARWEST

REVOLVING DOORS

ALUMINUM • BRONZE • STAINLESS STEEL • NICKEL SILVER

* FEATURING . . .

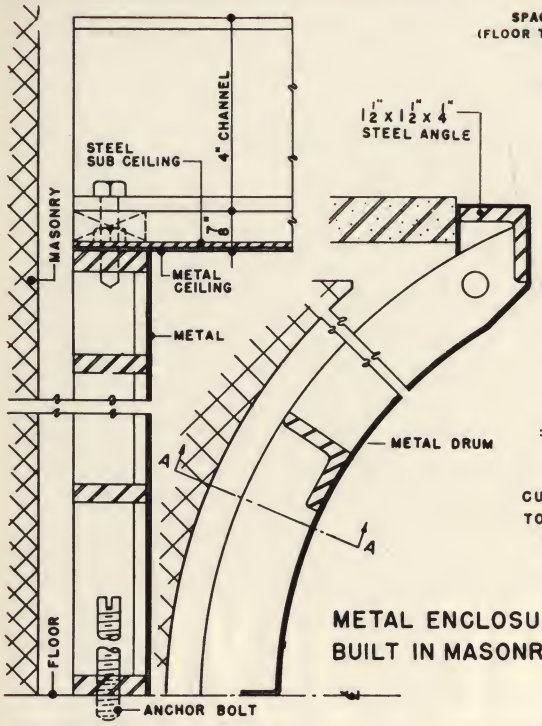
- ADJUSTABLE WEATHERSTRIPPING
- AUTOMATIC COLLAPSIBLE PANIC PROOF MECHANISM
- AUTOMATIC SPEED CONTROL
- TAMPERPROOF ADJUSTMENTS
- TROLLEY WITH AUTOMATIC LOCKING DEVICE
- ADJUSTABLE PANIC BOLT ARRANGEMENT TO MEET VARIABLE WIND PRESSURES

GENERAL BRONZE CORPORATION
711 STEWART AVENUE, GARDEN CITY, L. I., N. Y.
District Offices: 3849 W. Lake Street, Chicago; 100 Park Avenue, New York

GENERAL BRONZE CORPORATION GB

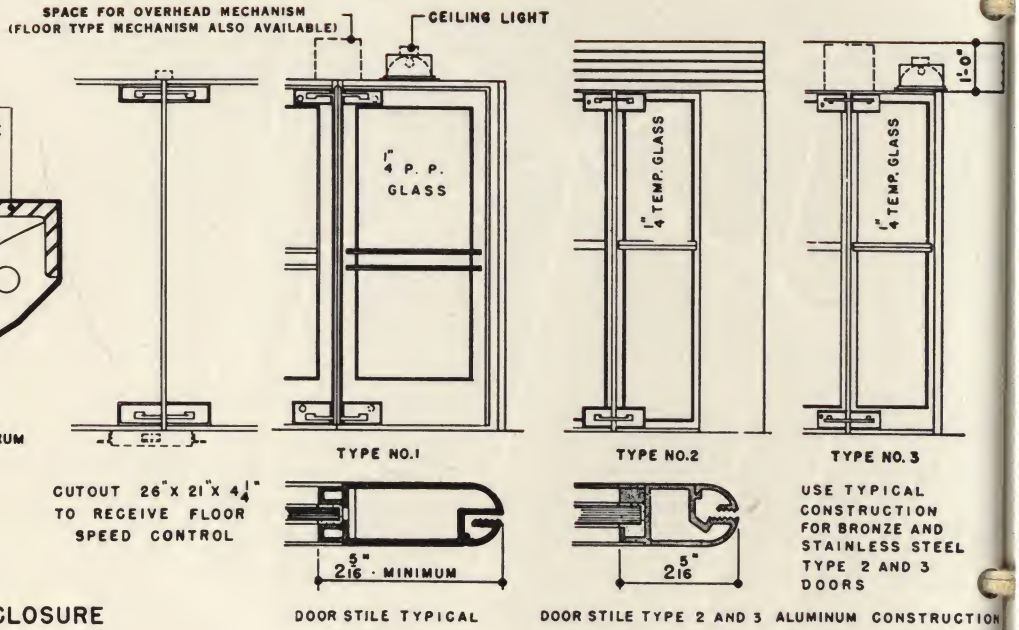
1960

General Details



METAL ENCLOSURE BUILT IN MASONRY

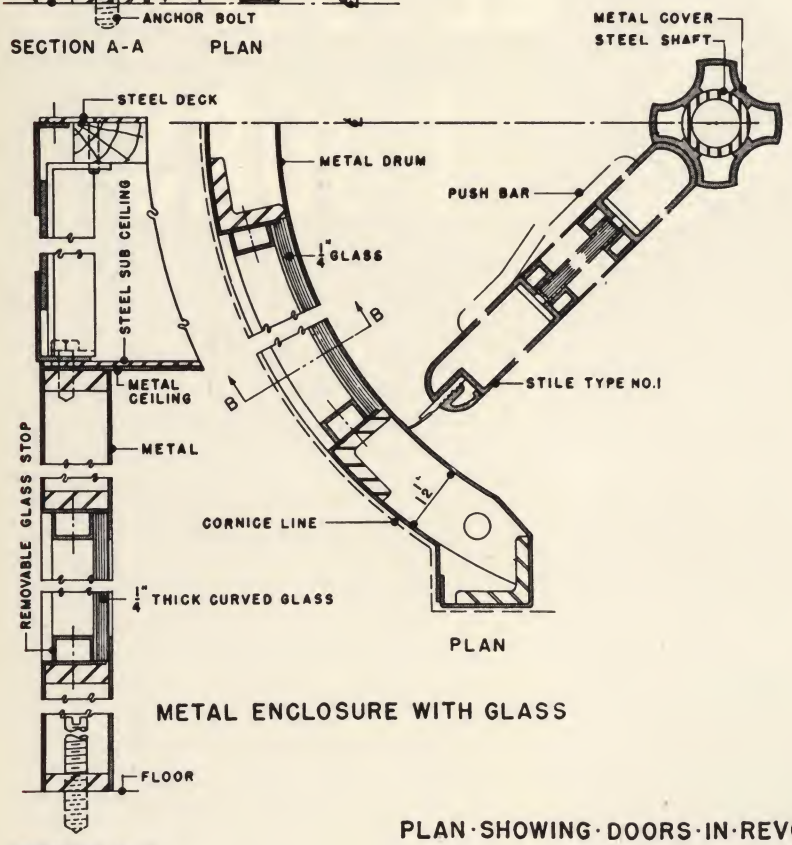
SECTION A-A PLAN



DOOR STILE TYPICAL

DOOR STILE TYPE 2 AND 3 ALUMINUM CONSTRUCTION

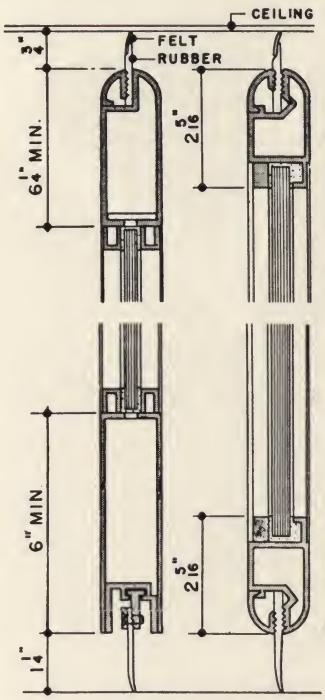
USE TYPICAL CONSTRUCTION FOR BRONZE AND STAINLESS STEEL TYPE 2 AND 3 DOORS



PLAN

METAL ENCLOSURE WITH GLASS

SECTION B-B



USE TYPICAL CONSTRUCTION FOR BRONZE AND STAINLESS STEEL TYPE 2 AND 3 DOORS

VERTICAL SECTIONS

TYPICAL TYPE 2 ALUMINUM

" 3 " WITH 6" BASE

PLAN · SHOWING · DOORS · IN · REVOLVING; LOCKING · AND · FOLDING · POSITIONS.

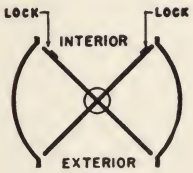


FIG. 1

REVOLVING AND LOCKING POSITIONS.

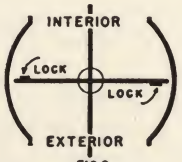


FIG. 2

REVOLVING AND LOCKING POSITIONS.

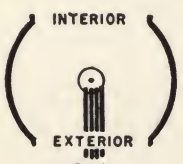


FIG. 3

FULL PANIC COLLAPSED POSITION.

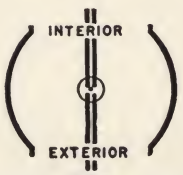


FIG. 4

CENTRAL OPEN POSITION.

FIG. 5 AND FIG. 6

OVERHEAD SPEED CONTROL ONLY

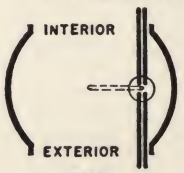


FIG. 5

FULL OPEN SIDE POSITION. DOORS ARE FOLDED IN PAIRS.

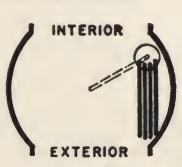
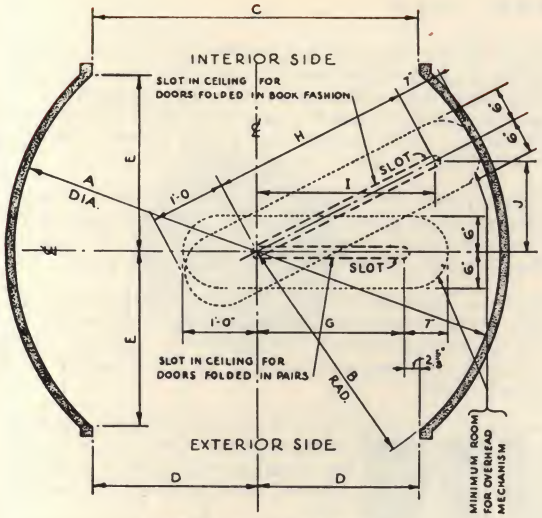


FIG. 6

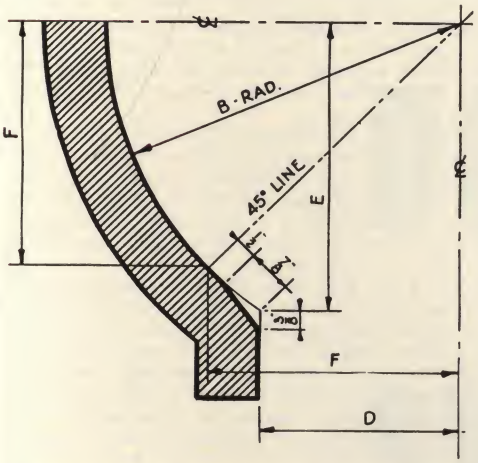
FULL OPEN SIDE POSITION. DOORS ARE FOLDED IN BOOK FASHION.

GENERAL BRONZE CORPORATION

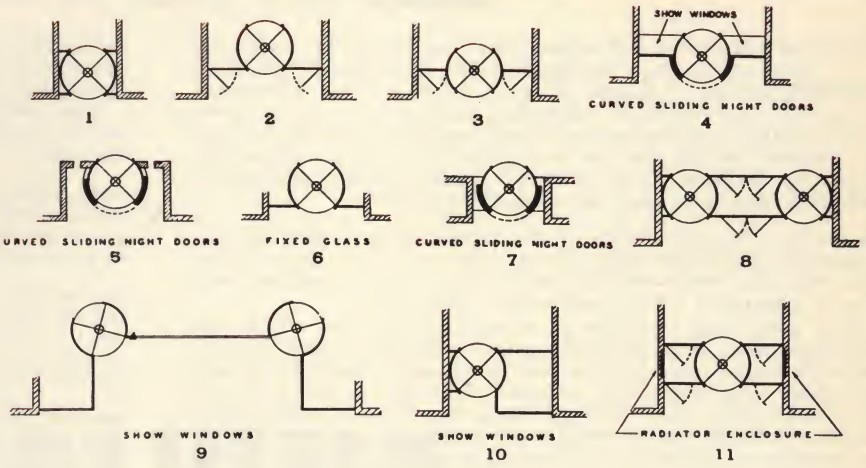
711 STEWART AVENUE GARDEN CITY, L. I., N. Y.



STANDARD DIMENSIONS FOR ENCLOSURE AND CEILING SLOT



ENLARGED PORTION OF DRUM SHOWING STANDARD DIMENSIONS



REVOLVING DOOR LAYOUT SUGGESTIONS

TABLE OF DIMENSIONS

A	B	C	D	E	F	G	H	I	J
5'- 6"	2'- 9"	3'- 8¾"	1'-10⅜"	2'- 0¼"	1'-11 11/32"	1'- 7¾"	2'- 2¾"	1'-11⅝"	1'-0½"
5'- 8"	2'-10"	3'-10⅛"	1'-11 1/16"	2'- 1"	2'- 0 1/32"	1'- 8 7/16"	2'- 3¾"	2'- 0½"	1'-1"
5'-10"	2'-11"	3'-11½"	1'-11¾"	2'- 1 1/16"	2'- 0¾"	1'- 9⅛"	2'- 4¾"	2'- 1⅜"	1'-1½"
6'- 0"	3'- 0"	4'- 0⅞"	2'- 0 7/16"	2'- 2 7/16"	2'- 1 15/32"	1'- 9 13/16"	2'- 5¾"	2'- 2¼"	1'-2"
6'- 2"	3'- 1"	4'- 2⅜"	2'- 1 3/16"	2'- 3⅛"	2'- 2 15/32"	1'-10 9/16"	2'- 6¾"	2'- 3⅛"	1'-2½"
6'- 4"	3'- 2"	4'- 3¾"	2'- 1⅞"	2'- 3 13/16"	2'- 2⅞"	1'-11¼"	2'- 7¾"	2'- 4"	1'-3"
6'- 6"	3'- 3"	4'- 5⅛"	2'- 2 9/16"	2'- 4 9/16"	2'- 3 19/32"	1'-11 15/16"	2'- 8¾"	2'- 4⅞"	1'-3½"
6'- 8"	3'- 4"	4'- 6⅝"	2'- 3 5/16"	2'- 5¼"	2'- 4 5/32"	2'- 0 1/16"	2'- 9¾"	2'- 5¾"	1'-4"
6'-10"	3'- 5"	4'- 8"	2'- 4"	2'- 5 15/16"	2'- 5"	2'- 1⅜"	2'-10¾"	2'- 6⅝"	1'-4½"
7'- 0"	3'- 6"	4'- 9½"	2'- 4¾"	2'- 6⅝"	2'- 5 11/16"	2- 2⅛"	2'-11¾"	2'- 7½"	1'-5"
7'- 2"	3'- 7"	4'-10⅞"	2'- 5 7/16"	2'- 7⅜"	2'- 6 13/32"	2'- 2 13/16"	3'- 0¾"	2'- 8 5/16"	1'-5½"
7'- 4"	3'- 8"	5'- 0¼"	2'- 6⅛"	2'- 8 1/16"	2'- 7 3/16"	2'- 3½"	3'- 1¾"	2'- 9 3/16"	1'-6"
7'- 6"	3'- 9"	5'- 1⅝"	2'- 6 13/16"	2'- 8 13/16"	2'- 7 13/16"	2'- 4 3/16"	3'- 2¾"	2'-10 1/16"	1'-6½"
7'- 8"	3'-10"	5'- 3"	2'- 7½"	2'- 9½"	2'- 8 17/32"	2'- 4⅞"	3'- 3¾"	2'-10 15/16"	1'-7"
7'-10"	3'-11"	5'- 4½"	2'- 8¼"	2'-10 3/16"	2'- 9¼"	2'- 5⅝"	3'- 4¾"	2'-11 13/16"	1'-7½"
8'- 0"	4'- 0"	5'- 5⅞"	2'- 8 15/16"	2'-10⅞"	2'- 9 15/16"	2'- 6 5/16"	3'- 5¾"	3'- 0⅝"	1'-8"

REVOLVING DOOR SPECIFICATIONS

ALUMINUM, BRONZE, STAINLESS STEEL AND NICKEL SILVER

Scope: Furnish and install where shown on drawings, Type No. .....revolving doors as manufactured by GENERAL BRONZE CORPORATION of Garden City, L. I., New York. The wings are to be of full automatic collapsible, panic-proof type, equipped with operating mechanism and speed regulator to control speed of rotation. Include circular enclosure, flat ceiling, cornice, (if required) revolving wings, hardware, glass, complete mechanism including speed regulator, as hereinafter specified.

Mechanism: The mechanism of the revolving door shall be full automatic collapsible, panic-proof, braceless type. Each of the four revolving wings shall be held in their normal rotating position by hangers at the top and bottom of the wings.

The mechanism shall be so constructed that the wings will fold from their revolving position to a wide open panic position instantly, when forces are exerted in opposite directions on any two wings. The wings thus collapsed shall fold on each other, in the line of egress. The tension holding the wings in their normal rotating position shall be readily adjustable to provide a collapsing pressure of from 60 to 175 pounds when applied at any point 42 inches or more from the floor on the outer stiles of two wings. Provision shall be made for varying such adjustment quickly without dismantling any of the hardware or fixtures.

The mechanism shall also permit the wings to be folded manually in a central open position, in pairs; in a full open side position, in pairs; and in a central position with the four wings folded like a book. A simple manual release of the tension holding the wings in normal rotating position shall be provided to permit manual collapsing or folding of the wings without exerting the pressure needed for automatic collapsing of the wings. Each wing shall have self-contained in the supporting hardware a simple automatic device or a simple readily removable device to hold the wings in position when folded in pairs—this to hold the folded wings firmly in balanced position for rolling to the side of the enclosure and to retain them in that position until released.

The center shaft carrying the wings shall be supported overhead by a ball bearing in a universal mounting carried on a four wheel trolley which, in turn, is set on a steel track to permit the wings to be moved to the side of the enclosure when folded. This center shaft shall be held in position by a locking device in the overhead track and by a socket and pivot bolt in the floor. The bottom pivot shall not rotate in the floor socket.

The raising of the bottom pivot shall release the center shaft at both top and bottom, freeing it for movement to the side of the enclosure. Or this same action may be accomplished by raising the floor pivot and tilting the doors slightly from their perpendicular position.

Hardware: Hardware shall include keylocks and bronze push bars as shown. All locks to be keyed alike, and masterkeyed (if desired).

Speed Regulator: The speed of rotation shall be controlled by a mechanical device to be installed in the overhead mechanism chamber in conjunction with the standard trolley. This device shall permit free rotation of the revolving wings up to any predetermined rate of speed, but prevent spinning at uncontrolled speed. An adjustment shall be provided to regulate the maximum speed to meet the particular traffic needs of each entrance.

Optional—Speed regulator shall be placed in floor. *Regulator in this position will not permit shaft and wings to be moved to the side of the enclosure.*

Glass: Glass, excepting that for ceiling lights, shall be first quality ¼-inch thick polished plate glass. (If required in enclosure walls, the glass shall be accurately bent to radius.) Glass for ceiling lights shall be best quality ⅛-inch thick frosted sheet glass.

Ceiling Lights: Provision shall be made in each revolving door ceiling for two flush lights, each having a removable glass cover. This work shall include reflector and reflector housing. The electric wiring, fittings, fixtures and lamps will be furnished and installed by another trade.

Material: Stiles and rails of wings shall be of tubular construction of not less than 12 B & S gauge thickness for bronze and nickel silver, 8 B & S gauge thickness for aluminum and 14 U.S. gauge thickness for stainless steel of selected quality without serious defects, free from twists and dents.

Joints shall be carefully machined. Corners and intersections shall be reinforced, carefully welded and finished to an even surface. Cut-outs to accommodate hardware and operating mechanism shall be properly reinforced, accurately formed and closely fitted to receive the hardware. Removable glass stops shall conform to detail, carefully mitred and fitted at corners and secured with oval head countersunk machine screws of composition to match color of balance of material. Screws to be equally spaced approximately 10 inches on centers.

Provide weather stripping in the stiles of the wings engaging the enclosure, the top rails and bottom rails. The weather stripping is to be manufactured of pliable rubber with sewed on woven felt contacts except at the bottom rail where the rubber is to contact the floor. The weather stripping is to be secured in place by holding devices which will permit convenient adjustment and replacement without dismantling the wings.

The enclosure shall be of not less than 12 B & S gauge thickness for bronze and nickel silver, 10 B & S gauge thickness for aluminum and 14 U.S. gauge thickness for stainless steel. Sheet metal must be of first quality, patent leveled, free from dents and serious defects. Provide for each enclosure a complete skeleton frame of heavy steel, formed to a radius and reinforced with continuous vertical steel supports, welded at intersections to a complete unit and painted with heavy bitumastic paint to prevent electrolytic action between steel and other material.

Sheet metal shall be formed to radius or shape required by design, carefully machined, fitted, reinforced and secured to the steel construction by means of machine screws or spot welding as may be required. Provide cut-out in the ceiling to receive ceiling light. Where enclosures are fully built-in, provide a carefully fitted flush-hinged panel in each ceiling for access to overhead mechanism. Provide automatic cover to close opening in ceiling when wings are in operation. Exposed surfaces are to be finished to the required texture and colored as desired by architects or owners.

TYPICAL INSTALLATIONS OF GENERAL BRONZE REVOLVING DOORS

Hartford Hospital	Hartford, Conn.
Department of Justice Building	Washington, D. C.
LaSalle National Bank	Chicago, Illinois
Scottish Rite Temple	Covington, Kentucky
Commercial Credit	Baltimore, Maryland
National Institute of Health	Bethesda, Maryland
Chrysler Engineering Building 130	Highland Park, Mich.
City National Bank	Kansas City, Mo.
Globe Indemnity Company	Newark, N. J.
Johns-Manville Company	Manville, N. J.
J. N. Adams Company	Buffalo, N. Y.
C. I. T. Building	New York, N. Y.
New York Coliseum	New York, N. Y.
New York Life Insurance Co.	New York, N. Y.
Seagram Building	New York, N. Y.
Deering Milliken & Co. Inc.	New York, N. Y.
Rockefeller Center Buildings	New York, N. Y.
Supreme Court	Brooklyn, N. Y.
United Nations Secretariat	New York, N. Y.
Union National Bank	Troy, N. Y.
Department of Justice	Raleigh, N. C.
Toledo Museum of Art	Toledo, O.
Philadelphia National Bank	Philadelphia, Pa.
Pittsburgh Home Saving & Loan Association	Pittsburgh, Pa.
Mercantile Securities	Dallas, Texas
Utah Copper Company	Bingham, Utah
Hotel John Marshall	Richmond, Va.
First National Bank	Roanoke, Va.
Winnebago County Court House	Oshkosh, Wisc.

GENERAL BRONZE CORPORATION

711 STEWART AVENUE GARDEN CITY, L. I., N. Y.

For PERMATITE Window catalogue and list of representatives, see Section 17a/Ge

For Curtain Wall catalogue and list of representatives, see section 3a/Ge

For Architectural Metal catalogue, see Section 3a/Ge

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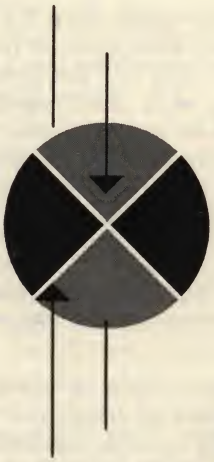


REVOLVING DOORS

SWING DOORS

REVOLVING DOOR
AND ENTRANCE DIVISION

INTERNATIONAL STEEL COMPANY

EVANSVILLE 7, INDIANA, U.S.A.

Complete **PACKAGED** *Entrances*

CATALOG
600

WORLD'S LARGEST MANUFACTURERS OF REVOLVING DOORS

HOW TO PLAN AND USE INTERNATIONAL

USAGE AND PLANNING. There is a design, size and type of International-Van Kannel Revolving Door for every entrance purpose or kind of business.

Before planning your revolving door entrance, refer to local building codes for design limitations and exit requirements. Some codes require supplementary swing doors. **In using revolving doors and swing doors together, the revolving door's purpose should not be forgotten — to handle anticipated normal peak traffic. Swing doors should be planned only to handle excess traffic.**

The number of revolving doors should be based on expected maximum traffic, with swing doors used only as required and thus preclude counteracting the purpose of revolving doors, i.e., control of traffic, temperature, dust and noise.

DOOR SIZES. Accepted standard for normal use is **6'6" diameter by 6'10" high.** Custom-built doors may vary from 5'6" to 7'0" diameter; from 6'8" to 7'6" high. *Doors 5'6" diameter recommended only where space is limited and traffic light.* Doors larger than 7'0" diameter tempt two persons to enter the same section. Doors larger than 7'0" diameter by 7'0" high are not generally recommended for tall buildings with severe stack draft. In accordance with building code requirements, automatic exit mechanism is designed for maximum 180-pound effort to collapse. Combined action of severe stack draft and wind pressure on larger doors causes them to collapse too easily.

5'6" diameter 3-wing revolving doors are recommended for entrances with limited space, where one swing door has handled normal traffic.

ENTRANCE FLOORS. The floor under a revolving door should be level to provide airlock with entrance set plumb, although revolving doors will operate efficiently erected perpendicular to floors with slight gradual slope (up to ½" per ft.). If space is limited, we recommend placing door with swing of the wings approximately 18" from a step going down, or 36" from a step going up.

INTERNATIONAL
STANDARD CRYSTAL MODEL

The Standard Crystal Model combines the sizable savings of production-built revolving doors and swing doors with all custom features that assure operating efficiency. Basic revolving door is floor-supported (but not free-standing), has overhead speed control, collapsing mechanism, single pushbars, bottom rail locks, and tempered wing glass.

Revolving door is standardized 6'6" x 6'10". Swing door is 2'8" or 3'0" x 6'10". Revolving doors or in any desired combination.

Manufactured in stainless steel or bronze satin finish (Model No. 2880-60), and aluminum-alumilite finish (Model No. 2690-60); the standardized size is readily adaptable for most entrance arrangements. In addition to savings in both initial and installation costs, standardization assures uniformly accurate fitting of all components. Pushbars match door material and finish. Top rail locks available at extra cost, when specified. or swing doors may be purchased separately,

How to Determine Your Revolving Door Requirements

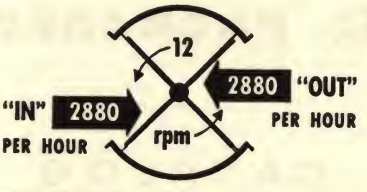
1 Based on past experience or estimated traffic loads select the weekday that strikes a fair average for business and traffic volume.

2 Within the designated working day, and well distributed over it, make at least 6 traffic counts — each covering all entrances to be replaced or remodeled — each of 15 minutes' duration and including both in and out traffic.

3 From the traffic counts you can figure your average traffic rate per minute and hour.

4 To the average traffic per hour add 60% to care for (a) peak load during holiday and other special seasons and (b) anticipated traffic increase (figuring ahead from 10 to 15 years).

5 Dividing the adjusted traffic per hour by 5,760 (normal traffic capacity of one revolving door) will give you the required number of revolving doors.



In normal operation, revolving doors turn from 10 to 12 times per minute. Each revolution permits 4 people to enter, and 4 to leave. The capacity of 1 revolving door is about 2,880 "in" and 2,880 "out" per hour.

EXAMPLE: A well-known department store decided to replace swing doors with revolving doors. Traffic through each of two entrances averaged 167 persons per minute or a total of 20,040 per hour. Adding 60% for growth and peak loads made a total of 32,064. Divided by 5,760 showed the need for slightly more than 5 revolving doors, which could be met by (a) 6 revolving doors or (b) 5 revolving doors and two auxiliary swing doors. Where heavy one-way traffic is the problem, use only the average one-way traffic count per hour, add 60% and divide result by 2,880. This gives the number of revolving doors required.

REVOLVING DOOR ENTRANCES

A kit of tracing sheets is available on request, showing details of numerous entrance layouts.

ENCLOSURE WALLS AND CEILING, must be furnished by the revolving door manufacturer to assure proper radius, efficient airlock and satisfactory operation.

CONNECTING WORK, if by another contractor, should be planned with a separation line between revolving door and connecting entrance work. This facilitates coordination and completion of both contracts. **Connecting work must brace and hold revolving door securely in position.**

MATERIALS AND DESIGN. Except stainless steel, all metals common in revolving door manufacture — bronze, nickel-silver, aluminum — can be extruded. With these metals special designs can often be obtained at minimum cost using extruded shapes available from stock dies.

Special stainless steel shapes must be formed, adding to manufacturing costs. Keeping design specifications within limits of materials used greatly reduces initial costs. Plain narrow lines are least expensive to fabricate.

Due to work required fabricating aluminum entrances, No. 204-A1-R1 satin alumilite finish is best suited; special finishes available for custom-built doors at extra cost.

Fabricated aluminum sheets, extrusions and tubing, though the same alloy, may differ slightly in color when alumilite finish is applied. Exact color match cannot be guaranteed. Stainless steel kick and base plates on aluminum doors protect against strong floor-cleaning materials.

FREE-STANDING, FLOOR-SUPPORTED DOORS, using floor-type speed control, may be designed as a free-standing entrance surrounded by glass at sides and top. Special structural steel framework, part of enclosure wall, extends into floor securing door in position.

GRILLES AND LOUVERS, for heating and ventilating, may be added where desired in the ceiling or enclosure walls.

ELECTRIC LOCK STRIKES, specially wired, available for recording locks and protective systems. (See Specifications, page 8.)

REMODELING OLD DOORS. Where replacement of old, non-collapsing doors is necessary, a very effective, low-cost entrance can often be obtained by installing new CRYSTAL OR ALL-GLASS collapsible wings in present enclosures.

Hotel Statler, Seventh Avenue Entrance, New York City.
Architect: I. N. Simon.

Special Custom-Built
CRYSTAL MODEL
REVOLVING DOORS

Featuring the same basic construction details offered in the Standard Crystal Model. Where conditions preclude use of the Standard Model because of size, design or treatment, Special Custom-Built Crystal Model Revolving Doors can be furnished with matching accessories. Special glazed, framed ceiling is available when specified for special doors.

Baskin's, Chicago, Illinois
Architects: Holabird, Root & Burgee.

Special Custom-Built
ALL-GLASS MODEL
REVOLVING DOORS

Pacing the trend toward greater usage of structural glass, this Special Custom-Built All-Glass Model features a minimum of stiles and rails — is available in a variety of metals. Individually designed and fabricated to match specific project requirements, the International Special Custom-Built All-Glass Model provides maximum visibility and fittingly complements the most modern of architectural treatments. The installation shown above illustrates how effectively these doors can be custom-fitted to suit any preferences as to size, design, and other detailing. Special glazed, framed ceiling is available when specified for special doors.

Sinclair Building, Chicago, Illinois

INTERNATIONAL
Swing Door Entrances

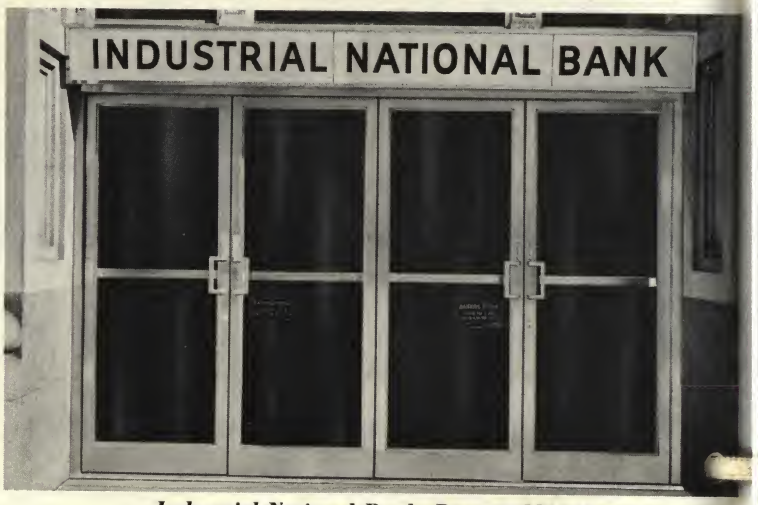
International's Packaged Swing Door Entrances effectively combine stainless steel and crystal construction for outstanding beauty and durability. These modern entrances utilize standard-size doors and typical frame members for side lights, transoms, and vestibules. All auxiliary work is offered by International to make a complete, expertly blended "one package" installation.

All entrance components are precision-fitted *before* shipment — assuring quick, accurate on-the-job assembly, and performance with a minimum of maintenance. The individual sections are designed to be adaptable to virtually any desired entrance arrangement. Pushbars, locks, finish and ornamentation match to form a beautiful entrance . . . a truly customized effect at surprisingly low cost.

First floor entrances, windows, transoms, and panels in special stainless steel can also be provided by International.

A kit of tracing sheets is available on request, showing details of numerous entrance layouts.

Famous-Barr, St. Louis, Missouri



Industrial National Bank, Detroit, Michigan

SPECIFICATIONS INTERNATIONAL SWING DOOR ENTRANCES

GENERAL: Swing door entrances shall be furnished where specified and shown on plans by the International Steel Co., Evansville, Indiana.

All entrances shall be furnished as complete packaged assemblies — carefully fitted and tested at the factory for quick, accurate reassembly on the job site.

MATERIAL: Swing doors of 18-8, type 302 stainless steel 16 USS ga. formed welded construction, reinforced for all hardware.

Jambs, side lights, transoms of stainless steel 16 and 14 USS ga., formed welded construction. Reinforced with steel framing where necessary to provide stability.

FINISH: All exposed surfaces shall have International's No. 4 fine-lined satin finish.

GLAZING: (Optional) International packaged entrances may be furnished with or without glass as specified.

HARDWARE: *All hardware shall be furnished by this contractor,* including pushbars and offset pull handles. Standard cylinder deadlocks in door stiles for active exterior doors. Head and floor bolts for inactive exterior doors. Single-acting center pivoted floor-type door closer. Extruded aluminum threshold.

OPTIONAL HARDWARE: Double-acting Rixson or Dor-o-matic floor closers, active latch locks, (floor-type door stops), (G. J. No. 90B overhead holders and stops), weatherstrips, additional or special push and pull bars available at extra cost upon request.

When specified, door closers shall be factory located and mounted on an under floor cradle jig providing positive location of door closers in relation to jambs and frames.

INSTALLATION: (Optional) International packaged entrances are usually sold erected complete by its nationwide system of service representatives.

Also available delivered complete with erection instructions.

SPECIAL FEATURES INTERNATIONAL REVOLVING DOORS

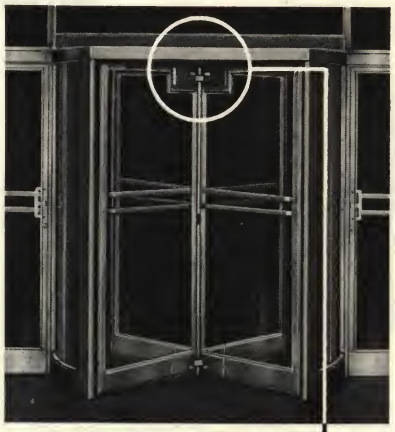
MOTOR DRIVES

International Two-Speed and Single-Speed Motor Drives meet all revolving door entrance requirements. Installation of these tamper-proof, trouble-free safety drives provides positive control of even the heaviest two-way traffic. Both have built-in speed control engineered not to exceed 12 revolutions per minute, the maximum recommended by major insurance companies.

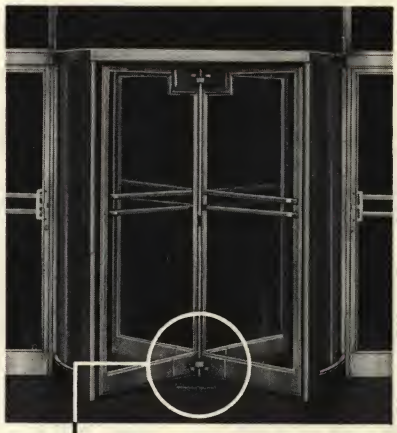
Two-Speed type is driven by two motors: one ¼ h.p., the other ½ h.p., 110/120 volt A.C. The Single-Speed Motor is ¼ h.p., 110/120 volt A.C.

Each type of International Motor Drive can be installed either under the floor or overhead. A space 16″ high, 15″ wide, the full diameter of the door is required above the center over the door ceiling for the overhead-type motor drive. The underfloor drive requires a space 32″ square, 1′6″ deep under the floor slab at the center of the door. Access for maintenance is also required for both types. Lead lines and field wiring should be furnished by electrical contractor.

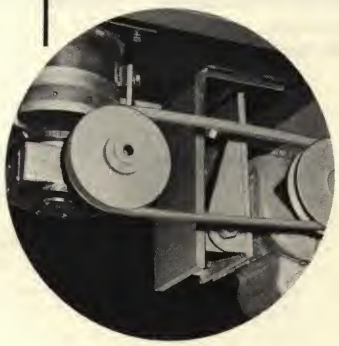
Either International Motor Drive may be added to present installations, and may be furnished with photo-electric or Welcomat control.



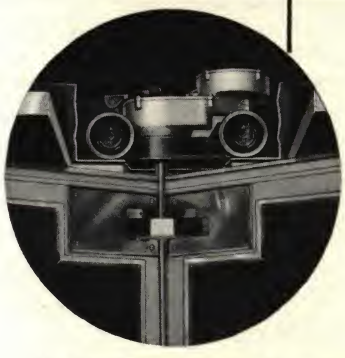
Overhead motor drive, with roll-aside feature.



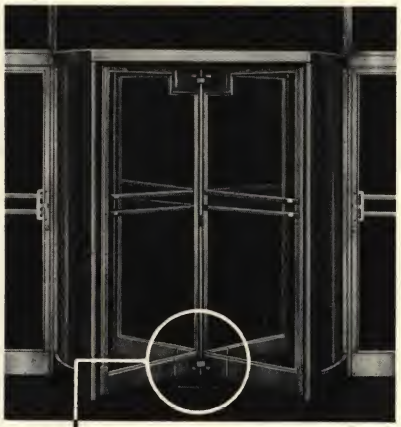
Under-floor type motor drive.

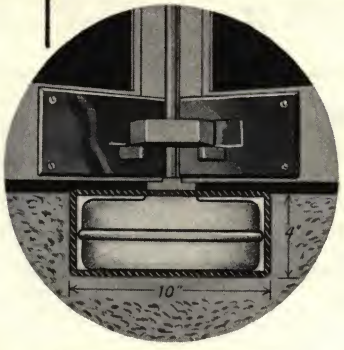


12 RPM MAXIMUM SPEED CONTROLS



Overhead Speed Control Shown with Roll-Aside Feature





Floor-Type Speed Control

International's 12 Revolutions per Minute Maximum Speed Control, developed at the suggestion of major insurance companies, requires no more space than earlier type speed controls. A separate assembly, it can be installed on existing revolving entrances with minor adaptations.

The 12 RPM Speed Control is an automatic centrifugal brake assembly attached to top or bottom of revolving door center shaft and driven by the revolving door. A system of gears increases the speed in the centrifugal brake compartment to 32.8 times as fast as the revolving door, providing momentum needed for effective, instantaneous centrifugal action. The relation of brake shoe pivots to braking surface results in a self-loading effect increasing braking action in proportion to pressure applied and, properly maintained, prevents door from turning at faster-than-normal walking speed.

Mechanism is simple, easy to adjust and regulate, built for years of carefree service. All parts readily replaceable without affecting door operation.

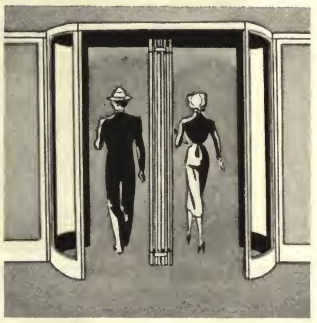
Required by U. S. Standard Specifications and many building codes, 12 RPM Maximum Speed Controls are included and recommended in all quotations.

Safety Features

AUTOMATIC COLLAPSIBLE ACTION OF MECHANISM

1. Panic-stricken group approaches.

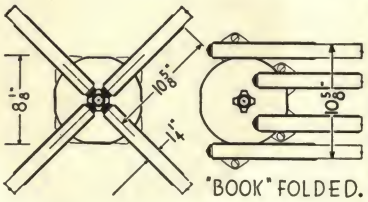
2. Excess pressure releases wings.

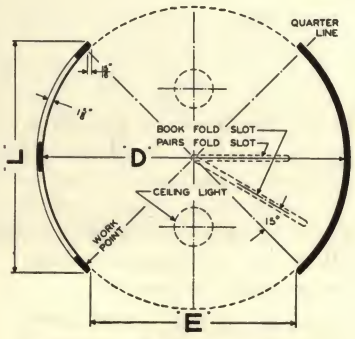


3. Wings fold outward, group emerges.

Excess pressure against any two opposing wings will cause those wings to release and become free to swing in any direction. All four wings can be collapsed and free passage offered. No knowledge of how the mechanism operates is necessary — pressure alone causes the wings to fold. Action is sure and safe at all times.

MECHANISM DIMENSIONS





DETAILED INFORMATION

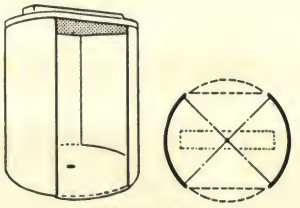
Door heights from 6'8" to 7'6", with 6'10" **standard height** generally preferred. Detailed information on flexed walls, marble walls, or special materials will be furnished upon request.

	D DIAMETER	E OPENING	L WALL LENGTH
	5' - 6"	3' - 8¾"	4' - 3¼"
	5' - 10"	3' - 11½"	4' - 6⅛"
	6' - 0"	4' - 1"	4' - 7⅜"
	6' - 2"	4' - 2½"	4' - 8 3/16"
	6' - 4"	4' - 4"	4' - 10¼"
†	**6' - 6"**	**4' - 5¼"**	**4' - 11⅝"**
	6' - 8"	4' - 6¾"	5' - 1"
	6' - 10"	4' - 8"	5' - 2⅝"
	7' - 0"	4' - 9½"	5' - 3⅞"
	7' - 2"	4' - 11"	5' - 5¼"
	7' - 4"	5' - 0⅜"	5' - 6 1/16"
	7' - 6"	5' - 1¾"	5' - 8 3/16"

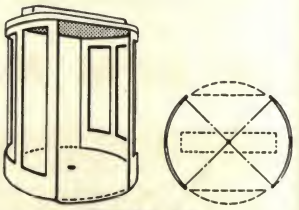
†STANDARD SIZE
6' - 6" DIA. 6' - 10" HEIGHT

BASIC ENCLOSURE DESIGNS

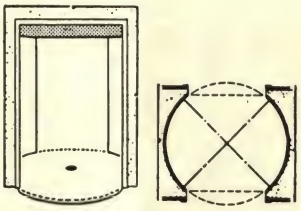
The enclosure designs shown here provide considerable latitude in selecting a style to blend harmoniously with the theme and plan of most buildings. However, International's design department will be glad to cooperate with you in working out special requirements.



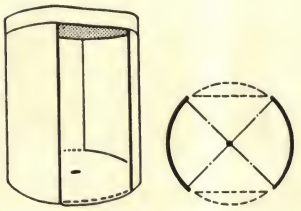
DESIGN 1
Solid walls, finished both sides, 2" or 3" cornice, mechanism cover box, roof.



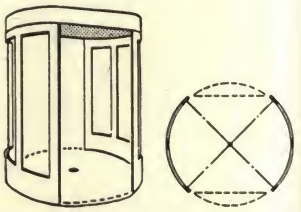
DESIGN 1G
Glazed walls, finished both sides, 2" or 3" cornice, mechanism cover box.



DESIGN 1U
Solid walls, unfinished convex sides, no cornice or roof.



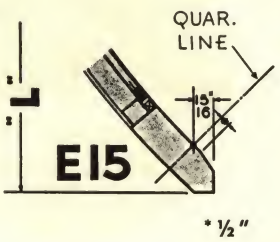
DESIGN 3
Solid walls, finished both sides, 10" cornice, roof.



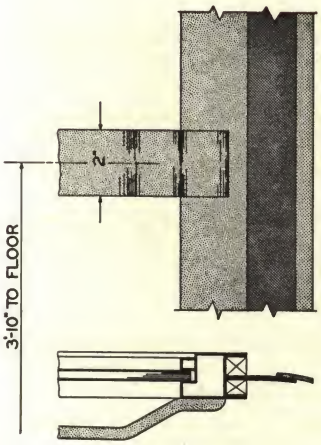
DESIGN 3G
Glazed walls, finished both sides, 10" cornice, roof.

RECOMMENDED CORNER POST

E15 standard for all models. Any other post shown on this page may be substituted on Special Custom-Built Doors, if desired, at extra cost.



INTERNATIONAL REVOLVING DOORS



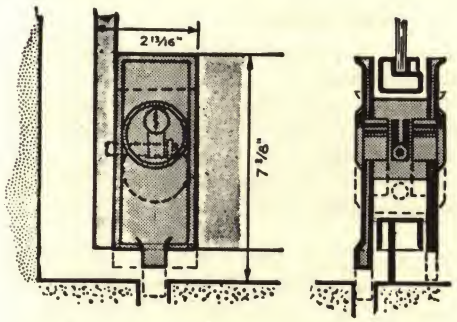
PUSHBARS

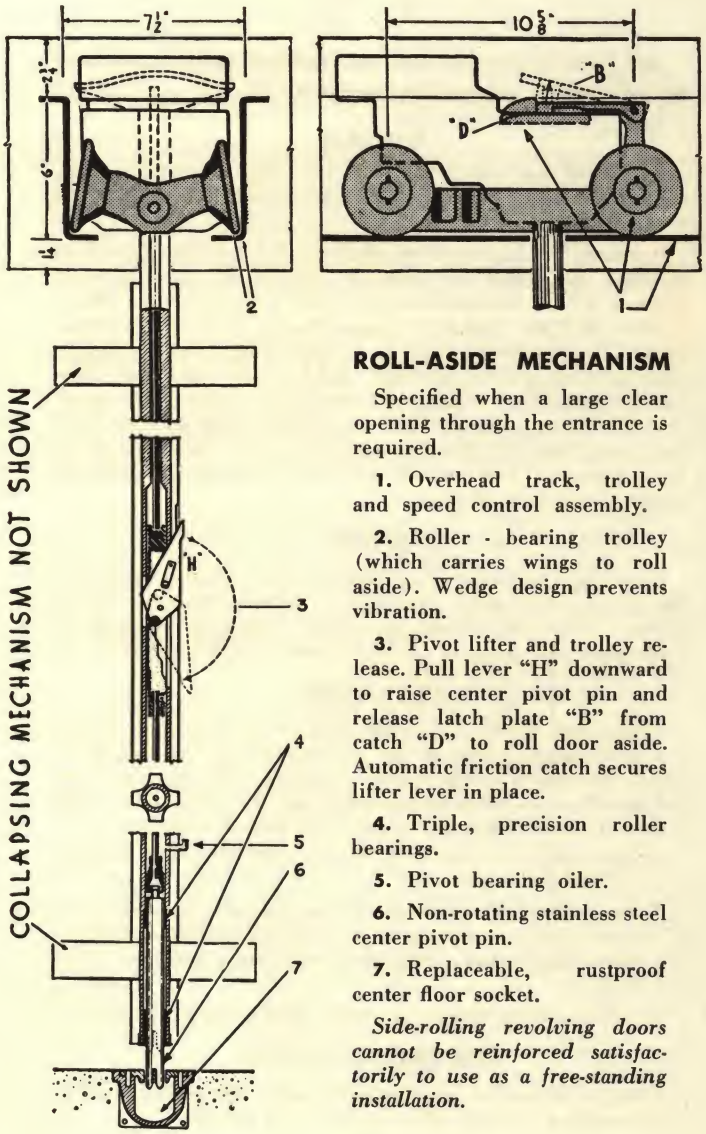
Single pushbars are included on all doors.

LOCKING

Two locks — for opposite or adjacent wings — are required to lock doors in any position specified. Locks may be master-keyed, at extra cost.

Locks at floor are recommended for all revolving doors. Top rail locks can be furnished at extra cost.





ROLL-ASIDE MECHANISM

Specified when a large clear opening through the entrance is required.

1. Overhead track, trolley and speed control assembly.

2. Roller - bearing trolley (which carries wings to roll aside). Wedge design prevents vibration.

3. Pivot lifter and trolley release. Pull lever "H" downward to raise center pivot pin and release latch plate "B" from catch "D" to roll door aside. Automatic friction catch secures lifter lever in place.

4. Triple, precision roller bearings.

5. Pivot bearing oiler.

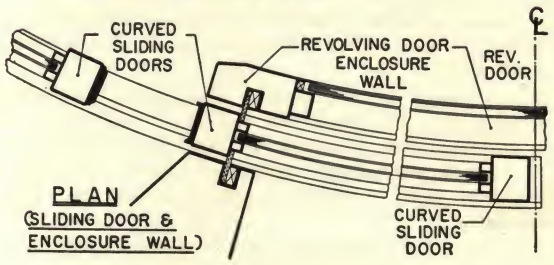
6. Non-rotating stainless steel center pivot pin.

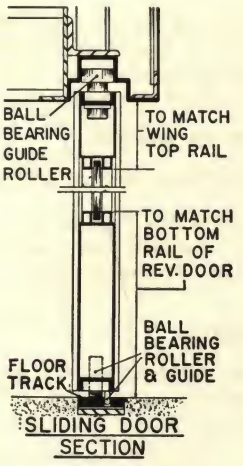
7. Replaceable, rustproof center floor socket.

Side-rolling revolving doors cannot be reinforced satisfactorily to use as a free-standing installation.

SLIDING DOORS

Primarily used in conjunction with specially built revolving door entrances, sliding doors add both design and protective features. By closing off the revolving door with sliding doors, maximum protection is assured against vandalism and the elements alike.




BALL BEARING GUIDE ROLLER
TO MATCH WING TOP RAIL
TO MATCH BOTTOM RAIL OF REV. DOOR
BALL BEARING ROLLER & GUIDE
FLOOR TRACK
SLIDING DOOR SECTION

SLIDING DOOR DETAILS

Minimum thickness 1¾", material should match metal and gauges specified for revolving door.

Hardware consists of: Roller bearing guides, radial floor track, bumpers, cylinder locks and flush pulls.

Sliding doors are also available in flush all-metal design and may be overhead suspended, with overhead track where floor track is not desired.

Floor supported sliding doors are recommended where headroom is limited.

Write for detailed information.

MASTER SPECIFICATIONS

INTERNATIONAL REVOLVING DOOR ENTRANCES

All items in parentheses are multiple-choice and must be selected to suit job requirements.

GENERAL

Revolving door contractor shall have had ten years' experience in the manufacture, installation and servicing of revolving door entrances.

Revolving door contractor shall furnish and install, where specified and shown on plans . . . Revolving doors as manufactured by the International Steel Co., Evansville, Ind. Model of door shall be (Standard Crystal Model No. 2880-60) (Stock Model No. 2690-60) (Special Custom-Built Crystal Model) (Special Custom-Built All-Glass Model). Wings shall be (overhead supported with roll-aside feature and overhead type speed control) (floor supported with fixed center shaft and overhead type speed control). *Note! Specify floor type speed control for floor supported doors where headroom is limited or transom comes above center of door.*

SCOPE

Revolving door contractor shall furnish circular enclosure, flat ceiling (Cornice) (Pilasters) (Sliding Doors) (Swing Doors) (Adjoining Trim), including: revolving wings, hardware, glass and complete mechanism with speed control.

MECHANISM

Wings shall be held in radial position by means of a stainless steel ball engaging in top and bottom disc of each wing. Excess pressure — greater than 60 pounds and not more than 180 pounds, at a point on the outer stile 42″ from floor, shall force ball from socket and leave wings free to collapse.

Tension shall be adjustable, but its maximum shall not prevent collapse of wings.

Wings shall fold in the panic position outward, like the leaves of a book. Any one wing shall be releasable independently of the other three wings. (Manual release levers available when specified.)

No braces, arms, chains, or cables allowed between wings.

SIDE ROLLING DOORS

Wings shall fold in pairs and roll aside. Wings shall fold in panic position outward, like the leaves of a book.

Center post shall be held in position by a locking device at thrust ball bearing carried in a four-wheel, roller-bearing overhead carriage, which rolls aside in a truss-shaped supporting channel.

Center post shall be held in position by a locking device at top, and a pivot entering a socket in floor. Bottom pivot shall not rotate. Pivot lifter shall simultaneously release wings at top and bottom for free movement to side of enclosure.

FLOOR-SUPPORTED DOORS

Wings shall fold at center of door in pairs or in book-fold panic position.

Basic Standard Crystal model and Stock model door wings are supported at the floor, having overhead type speed control, but no overhead carrying device. (Roll-aside feature extra) (floor type speed control extra)

MATERIALS

STANDARD CRYSTAL MODEL No. 2880-60 — Wings and enclosures in (bronze 14 B&S gauge) (stainless steel 16 USS gauge). Hollow metal construction.

STOCK MODEL No. 2690-60 — Wings and enclosures 10 B&S gauge aluminum hollow metal construction. (Crystal design wings extra.)

SPECIAL CUSTOM-BUILT CRYSTAL — Wings and enclosures (bronze) (nickel silver) (aluminum) (stainless steel). Hollow metal construction.

SPECIAL CUSTOM-BUILT ALL GLASS — Wings and enclosures in (bronze) (nickel silver) (aluminum) (stainless steel). Hollow metal construction. All wings specially reinforced at hangers.

Minimum Gauges Recommended — Hollow metal — bronze 14 B&S gauge, nickel silver 14 B&S gauge, aluminum 12 B&S gauge, stainless steel 16 USS gauge.

FINISH

STAINLESS STEEL, BRONZE, NICKEL — All exposed surfaces shall be brought to International's No. 4 smooth, fine-lined, natural satin finish (waxed) (oiled) (lacquered).

ALUMINUM — All finished surfaces shall be given International's No. 204-A1-R1 natural satin alumilite finish.

Special brushed, polished, statuary and etched finishes extra.

GLAZING

STANDARD CRYSTAL MODEL No. 2880-60 — Wings ¼″ tempered plate; walls ¼″ polished plate.

STOCK MODEL No. 2690-60 — Wings and walls ¼″ polished plate. Crystal design wings use ¼″ tempered glass.

SPECIAL BUILT CRYSTAL — Wings ¼″ tempered plate; walls (¼″) (½″) polished plate.

SPECIAL BUILT ALL GLASS — Wings AG1 ½″ tempered plate; AG2 and AG3 ¼″ tempered plate; walls (¼″) (½″) polished plate.

HARDWARE

Exposed hardware shall be (bronze satin) (chromium plated satin) (aluminum alumilite finish).

LOCKS: Mortise bolt type with (Standard) (Master-keyed) cylinders located at (floor) (ceiling). Electric contact strikes and surface bolts extra when specified.

CEILING LIGHTS — Two 9¾″ diameter ceiling lights shall be furnished, glazed, including fluorescent fixture. *Wiring by electrical contractor.*

SPEED CONTROL — (Overhead) (Floor Type) — The speed of rotation of the revolving door shall be controlled by a mechanical speed control. The braking pressure of the governing mechanism must be in proportion to the pressure applied on the revolving door to prevent rapid acceleration, spinning or excessive speed at all times and must be adjustable to provide a positive maximum speed of 12 revolutions per minute.

The opening for floor speed control to be provided by floor contractor.

OPTIONAL EXTRAS

(Ceiling Slot Closer) — For Roll Aside Doors, automatic ceiling slot closer of metal to match door shall be included.

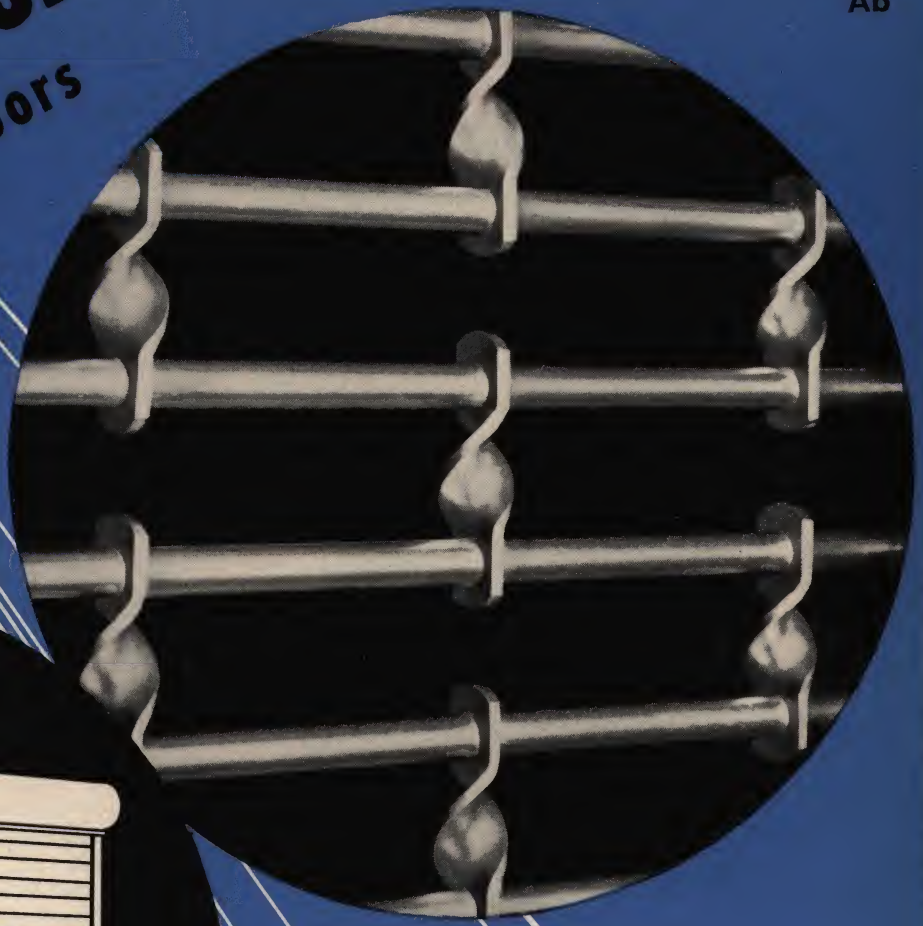
(Sliding Doors) — (Flush) or (Glazed) (Curved) or (Straight), (Floor-Supported) or (Overhead Suspended) constructed of material and design to match revolving doors, shall be furnished complete including hardware consisting of: track and hangers, guide rollers, bumpers, cylinder locks, track stop, and flush pulls.

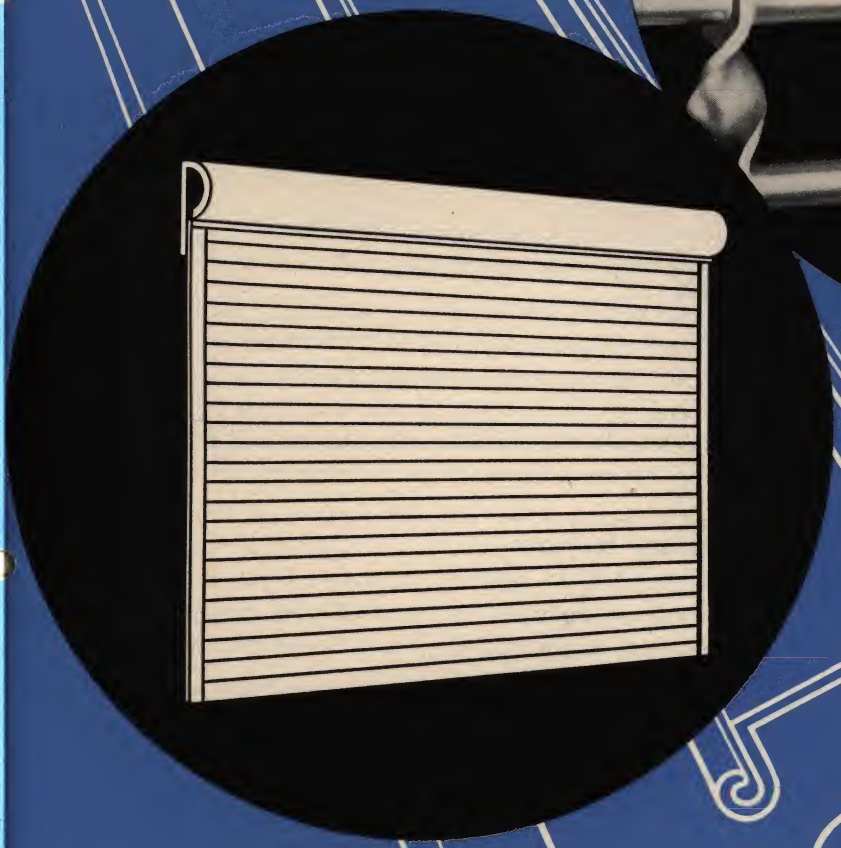
(Swing Doors) — Constructed of material and design to match revloving door, shall be furnished complete including jambs and hardware consisting of (deadlock) (electric contact strike) (center pivoted floor type door closer) (head and floor bolts) (door stop — specify type) push and pull bars and (thresholds).

(Connections) — Consisting of . . . constructed of material and design to match revolving doors included.

16g
Ab

ABBOTSFORD
rolling doors

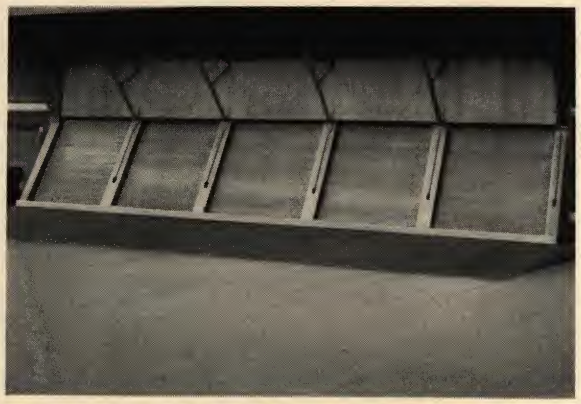




grilles shutters pass windows fire doors
hatch & stairwell covers

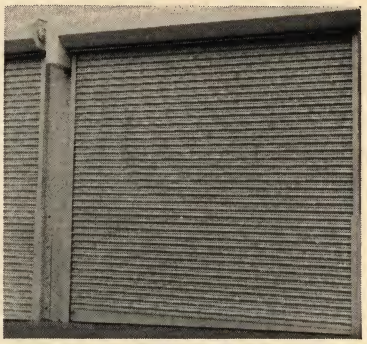
ABBOTSFORD STANDARD ROLLING DOORS

• rolling metal doors



Large, electrically operated pitched rolling doors at dump station, Municipal Waste Disposal Plant, Philadelphia, Pa.

36'-0" wide Abbotsford Electrically Operated rolling door on stage in famous high school auditorium. Acoustically treated, is largest all aluminum rolling doors ever used for this purpose.



When inside headroom is insufficient, Abbotsford outside mounted rolling doors, thru-wall driven, enhance building lines and afford maximum headroom. Door above closes on sloping sill.

A total of 203 large Abbotsford doors installed at Supply and Service Base.

Abbotsford rolling metal doors and grilles are constructed of formed metal sections continuously interlocked and hinged to permit coiling and concealment in a protected and space-saving location under or over the top of the ceiling or doorway.

Rolling doors offer unsurpassed features that give maximum protection against unauthorized entry, fire and damage by vehicles. Full floor space can be utilized to within a few inches of the doorway. Deterioration of the doors is minimized by the heavy all-steel construction. Complete versatility of mounting and operation is available.

Perfect counterbalancing is achieved by pre-tested heavy-duty helical springs contained within the coil overhead with provisions for easy adjustment of spring tension. The doors and balancing mechanism all turn on self-aligning lubricated for life bearings, ensuring permanence and ease of operation.

Galvanizing is hot applied 1.25 oz. thickness on slats. Built-in pass doors are available. Doors can be mounted with grilles in pairs on the same opening, on the same side or opposite sides of the opening.

Choice of metal and slat design widens the range of individual selection to suit all types of buildings and conditions.

All standard metals, galvanized steel, aluminum, stainless steel or bronze, and the new special ALUMINIZED steel are available for doors or shutters. Two factories in Long Island City, N.Y. and Birmingham, Ala., are strategically located for fast service. Permanent records of every door manufactured are kept at the factory for lifetime reference for replacement parts.

engineering features

(Specifications and special equipment are on page 7.)

1 Door entirely supported by structural steel angles running continuous from floor to top of coil to minimize wall load.

2 Counterbalancing helical springs are supplied with high overload safety factor.

3 Bearings—grease sealed flange self-aligning units rated for high speed duty.

4 All manual operated doors have standard pre-arrangement for future motor operation.

5 All doors have standard pre-arrangement for lucite or plexiglass vision windows.

6 Pass doors can be provided for any type door including those electrically operated.

7 Hinged or sliding or removable mullions can be provided for wide openings to divide it into smaller units and still maintain the full width unobstructed.

8 Doors can be operated parallel to the floor (see page 6) or at pitched angles (see photo above).

ABBOTSFORD ROLLING FIRE DOORS

● rolling metal fire doors (automatic closing)

Abbotsford factory inspected rolling metal fire doors are constructed in strict accordance with Underwriter Laboratories requirements. They can be opened or closed and used independently of automatic action.

Abbotsford rolling metal fire doors are used on fire wall door openings to limit fire spread by confining the flames to the room where the fire originates. Installation of fire doors are made to conform to building codes and to effect favorable insurance rates. Types of operation include handle lift, hand crank, and gear and chain. Automatic closing with electrical operation is also available in Underwriters construction, although no label or Certificate of Inspection is issued for this type operation.

Abbotsford rolling metal fire doors close automatically from any position upon melting of equipped interlocked fusible links which part when the temperature reaches 160°F. Downward descent of the door is controlled by a governor as a precaution against accidents and re-setting of the actuating mechanism is easily accomplished after automatic closing of the door for testing or actual fire use.

Underwriter Laboratories label rolling steel fire doors as follows:

Class A to withstand 3 hr. fire exposure on interior fire walls.
Class B to withstand 1½ hr. fire exposure on vertical shafts.
Class C to withstand ¾ hr. on corridor and partition wall.
Class D to withstand 1½ hr. for exterior fire wall.

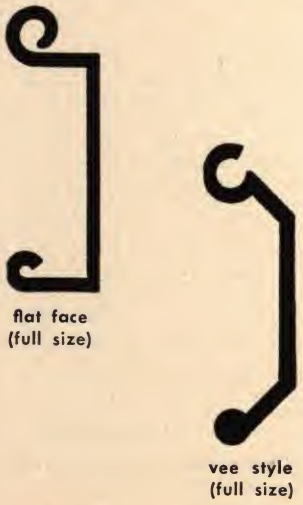
Limiting dimensions for above labeled doors are 120 sq. ft. in area and with no dimension (height or width) exceeding 12 ft.

For openings larger than 120 sq. ft. the Underwriter Laboratories will issue a Certificate of Inspection for Oversize Fire Doors for openings up to 24 x 24 ft. Oversize fire doors can be furnished with any type operation, but Handle Lift is not recommended for openings over 120 sq. ft. in area.

Chain gear operation

Hand crank operation

● door & shutter slat types

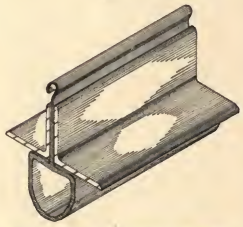


flat face (full size)

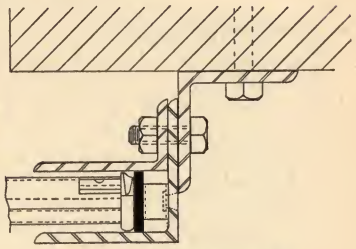
vee style (full size)

"Senior" "Super"

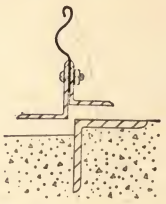
● special rolling door equipment below (furnished at extra cost)



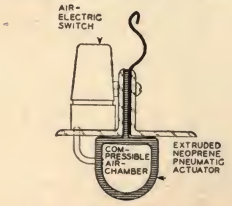
BOTTOM BAR TUBULAR TYPE EXTRUDED ASTRAGAL



COMPRESSIBLE WEATHERSTRIP (stops wind penetration in guides)



Offset angle bottom bar

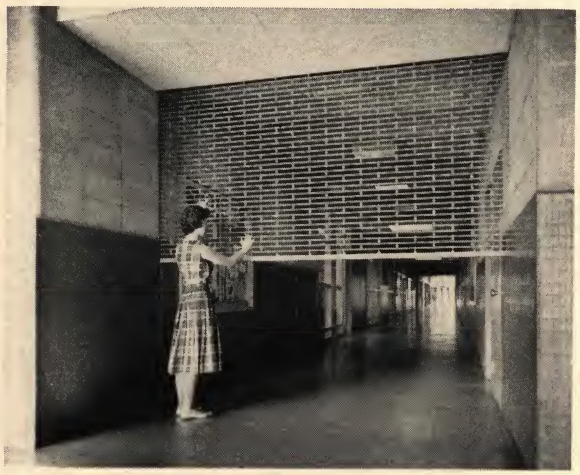


Bottom bar safety contact. Stops door or reverses door upon meeting any obstruction.

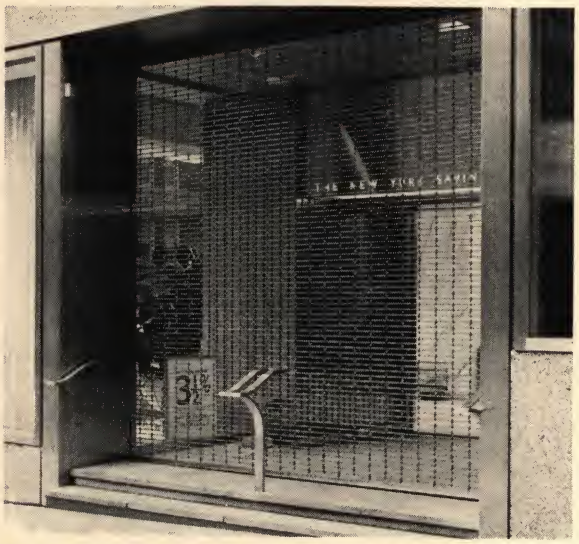
ABBOTSFORD ROLLING GRILLES

• flexible rolling grilles

24'-0" x 16'-0" electrically operated stainless steel grille at Preferred Insurance Company's new offices, Grand Rapids, Michigan. Grille disappears into ceiling when fully opened. Skidmore, Owings & Merrill, Archts., Chicago, Ill.



Abbotsford grilles in Wheatly Hills H.S., L.I.
Alfred Hopkins Assoc., La Pierre, Litchfield & Partners, Architects



Electrically operated stainless steel rolling grille at New York Savings Bank, New York City. John Weber, Archt.

Abbotsford flexible rolling grilles are available up to 40 ft. wide and are constructed according to the same counterbalance principles as Abbotsford rolling doors. By combining utility with good decorative taste, Abbotsford grilles have obsoleted old-fashioned designs and methods of construction while increasing sturdiness and all around durability. The gracefully attractive patterns are without reverse side differences. No rivets or riveting, no screws, welds or other breakable fastenings are employed to assemble the hand woven curtains which are among the heaviest on the market due to the close $1\frac{3}{16}$" spacings between horizontal members.

All Abbotsford grille curtains are free from sag and unbreakable to insure permanence of operation and function.

Specify Abbotsford rolling grilles for all locations requiring egress or entrance with maximum vision and free passage of light and air. School corridors, store fronts, bank drive in, lobbies, stairways, bars and service counters are all enhanced when partitioned with Abbotsford rolling grilles. In addition, fixed grilles of the same pattern can be provided to fill adjacent unused areas.

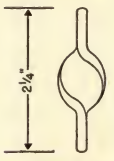
Engineering features and balance of rolling grilles are the same as for Abbotsford rolling doors. Guides can be fully recessed. Soffits are removable. Grille can be arranged to lock by padlock in both open and closed position. Cylinder locking is available. All locks are accessible from both sides. Abbotsford locks are not unsightly, but blend attractively with the pattern of the grille.

Concealed or visible motor operation can be applied to any grille for any type of opening construction either at the side, in front, in back, or on top of the grille coil. Grilles will disappear into suspended ceilings where provided. (Specifications on page 7.)

partial list of installations includes:

U. S. Naval Academy, Annapolis, Md.
Walt Whitman High School, Huntington, L.I., N.Y.
E. I. DuPont de Nemours & Co., Wilmington, Del.
Federal Reserve Bank, Houston, Tex.
Randolph Monroe Parking Garage, Detroit, Mich.
Midland National Bank, Billings, Montana
Orange Bowl, Miami, Florida
S. S. Aquarama
Atlantic National Bank, West Palm Beach, Fla.
St. Louis Park Sr. H. S., St. Louis Park, Minn.
First Federal Savings & Loan Assoc., San Antonio, Tex.
The Essex House, New York City, N.Y.
Peerless Camera Stores, Philadelphia & Pittsburgh

grille link styles



"BEAUFORD"
standard design
wrought in all metals

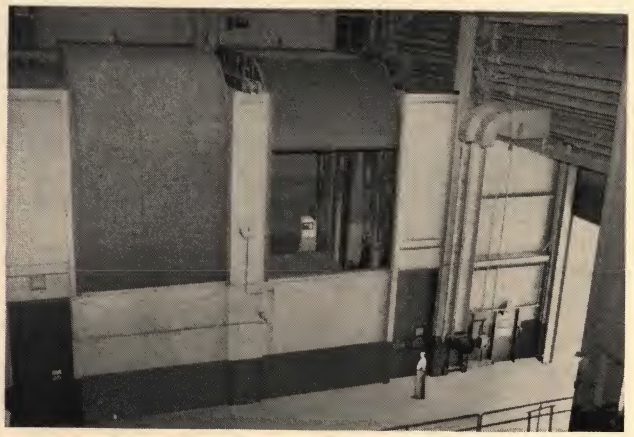
"BRADFORD"

"BERESFORD"

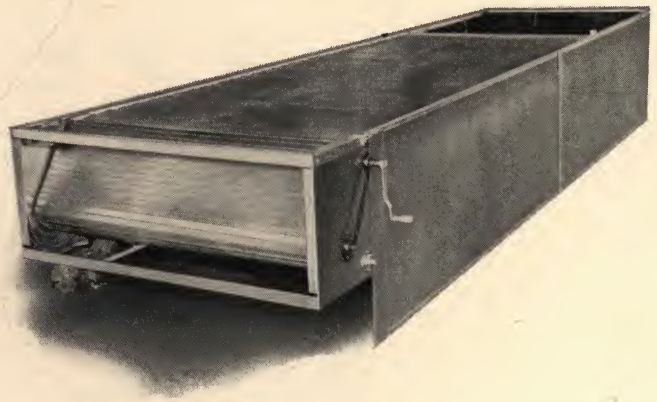
furnished in cast aluminum and bronze only
other designs available on request

ABBOTSFORD ROLLING COVERS

• rolling tank, hatch and stairwell covers



Double hatchway covers motor operated



Rolling tank cover motor or hand crank operated

rolling hatchway covers

Abbotsford rolling hatchway covers are constructed to roll horizontally and vertically in combination for simultaneous open top and open end closing. Pictured at left are 15 ft. wide by 40 ft. long electrically operated hatchway covers in the Re-actor Building at the first Atomic Power Plant, Duquesne Electric Company, Shippingport, Pa. These hatchway covers illustrate the contribution of Abbotsford engineers to the solving of problems in modern Atomic Plant designing.

rolling tank covers

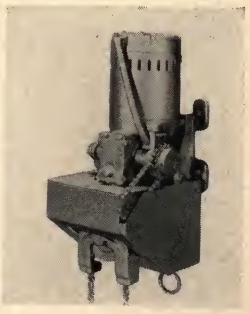
Abbotsford rolling tank covers are constructed for application to degreasing or processing tanks or any tank requiring a roll-up protective closure which can be opened or closed by hand crank or electric motor. These horizontally rolling units can be furnished in galvanized steel or stainless, or any non-ferrous metal required for corrosive conditions. They are easily attached to existing tanks and occupy approximately 30″ of back room. Tank lengths up to 40′ long can be accommodated.

rolling stairwell covers

Abbotsford rolling stairwall covers over moving stairs are available as closures either operated by hand crank or electric motor. The latter type can be equipped with heat or smoke activating devices and made to stop, dead stop and continue, or dead stop and reverse direction of travel. Moving stairways are especially adaptable for this type of protection. They offer fire protection between floors in department stores and public buildings, etc.

• electric door and grille operators

Choice of an electric rolling door operator should be carefully made and final selection should reflect an emphasis on a unit designed to give uninterrupted duty under all conditions. Abbotsford electric operators are heavy duty, high torque, Class A insulated crane and hoist duty motors with integral gear heads continuously submerged in an oil bath. Moving parts are kept at an absolute minimum, resulting in a mechanism thoroughly designed to give years of rugged service. No V-belts or light-duty motors are used. Starters have overload and undervoltage protection. Safety switches are integral with the manual operator to automatically shut off current when the hand operator is in use. Limit switches are not affected by removal of the motor, and all models have emergency hand operation devices, operable from the floor. Drive is by noiseless roller chain. Motors can be mounted in any position in relation to the coil, either at the end, back or front, or on top in the event obstructions occur at the standard end position. They can be mounted completely concealed in suspended ceilings if required. Motors and controls are also available for hazardous locations, in explosion-proof housings or for chemical atmospheres. Horsepower ratings used have capacity plus large overload factor. Specify Abbotsford operators for lifetime performance and durability.



• pass windows and shutters

roll-up and slide-up package units

Abbotsford roll-up and slide-up packaged pass windows and shutters offer a complete range of selection to suit all conditions where a functional and decorative closure is required for school kitchens or soiled dish windows, in cafeterias, for ticket or service windows, tool cribs, newsstands and counter openings of all types as well as down to the floor applications.

Expertly designed for perfect operation, they are pre-tested at the factory and swiftly installed with installation time reduced from a full day on some types to within a few minutes. Abbotsford packaged pass windows and shutters are available in the following types:

Type SBF—Furnished in aluminum, stainless steel, galvanized steel, aluminized steel, bronze or monel. Rolls up inside an integral stainless steel or aluminum frame with trim, tracks and head supports incorporated in the frame. The frame corners are welded and smooth ground and then polished to a #4 finish. The frame is bricked in the wall. At any later date the roll-up curtain can be installed in minutes when needed, to prevent soiling while the job is in progress.

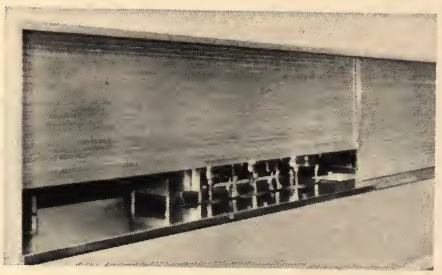
Type SF—Furnished as a roll-up packaged unit in all metals as in Type SFB above, but *without a frame* for face of wall installations to straight masonry or on existing frames or plain or trimmed openings. Standard size roll-up windows occupy only an 8" to 10" square space when fully coiled and are furnished push-up operated as well as hand crank operated up to 20 ft. wide. Easy accessibility for tension adjustment is provided.

Type SB—The same as Type SF except it is designed for installation between the jambs of the opening instead of on the face of the wall. When installed between jambs the clear height of the masonry opening is reduced by 8" or 10" required to accommodate the coil box.

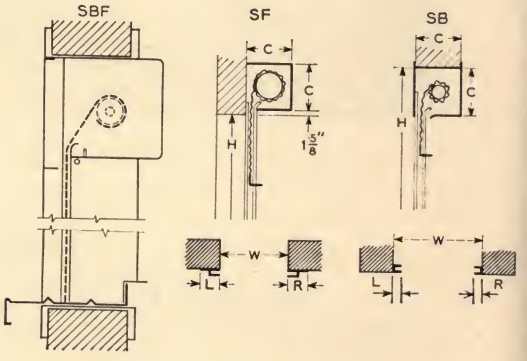
Type SSU—Single panel stainless steel pass windows (which are completely filled with fireproof asbestos acoustical filler) sliding vertically in stainless steel frames and housings. These units are equipped with fusible links for automatic closing during kitchen fires. Completely self-contained, they operate by stainless steel cables riding over ball-bearing nylon sheaves attached to concealed counterweights. Jambs are raised off the dish table for easy and complete sanitary maintenance. A concealed neoprene gasket edges the bottom of the moving panel. These units have incomparable installation features. No bolts or screws are required. They can be installed and removed without tools with resulting savings. Rough masonry openings are concealed and enhanced by the frame.

Type DSU—Same as Type SSU above except two or more units are installed side by side and share a common mullion between pairs or sets. Ideal for laboratories and all types of counter service.

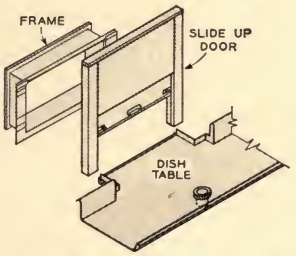
For more details and descriptions, a four-page brochure is available upon request.



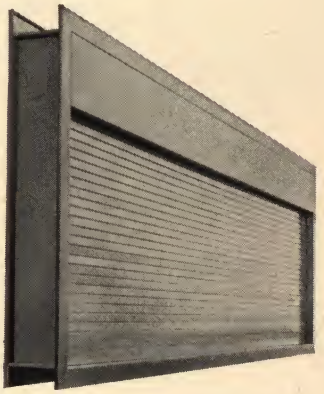
Rolling aluminum shutter Type S at Westinghouse Electric Co. cafeteria. Center mullion is removable for 40 ft. clear opening.



exploded view



Slide-Up Pass windows. Note sanitary raised jambs. Dish Tables are not included but can be supplied as an extra to any width.



Rolling aluminum shutter in stainless steel frame Type SBF. Surrounds are framed and trimmed and opening closed with single integral unit, installed in minutes.

specifications

slide-up pass windows

A. Pass windows shall be of sizes as shown on drawings, completely assembled with stainless steel guides, integral frame and trim. Door panels, jambs and head shall be constructed of not less than #16 gauge stainless steel.

B. Door panel shall be of hollow metal construction, approximately 1⅛" thick, consisting of two (2) thicknesses of #18 gauge stainless steel sheets, completely filled with fire-proof asbestos acoustical filler. Door and guides shall be of removable type, secured to buck frame, furnished with offset band brackets, welded to vertical balance housing. Door panel, riding in stainless steel guides, shall be connected by stainless steel cable, running over ball bearing sheaves to door counter weight boxes. A cable plate shall be provided on kitchen side, covering space between guides and sheave housing.

C. Pass window shall set 4" above table top and shall not require table top as a means of support for vertical housing. Slide-up door shall be equipped with a neoprene concealed, sealing gasket. Pass windows shall be furnished with approved types of fusible links, attached to counterbalance cable. Windows shall be accessible for service by means of removable slide plates, as well as removable top cable plate. Pass window doors shall be equipped with bar type lift and barrel type slide bolts for locking arrangement.

D. Pass windows shall be as manufactured by The Abbotsford Company, Inc., of Long Island City, N.Y., or approved equal.

CHART "SB"

W	H	L	R	C
To 20'	3'	1½"	1½"	8"
To 20'	3'-6"	1½"	1½"	9"
To 20'	4'	1½"	1½"	10"
To 20'	4'-6"	1½"	1½"	10"
To 20'	over 5'	1½"	1½"	12"

CHART "SF"

W	H	L	R	C
To 20'	3'	2½'	2½'	8"
To 20'	3'-6"	2½'	2½'	9"
To 20'	4'	2½'	2½'	10"
To 20'	4'-6"	2½'	2½'	10"
To 20'	over 5'	2½'	2½'	12"

SPECIFICATIONS

rolling doors

Curtains shall be contoured, cold-rolled, galvanized (or as specified metal) sections, 1.25 oz. thickness hot applied zinc coating, not less than 22 gauge U.S.S. thickness, and interlocking on 3⅜" centers. Any section is to be easily removable for repair or replacement.

Curtain is to be aligned and secured against lateral movement by heavy malleable iron-end-castings, riveted to each alternate section by tinned-steel rivets and shall resist a minimum wind load of 40 lbs. per sq. ft.

Windlocks shall be provided on all doors 16 ft. and wider.

Balancing mechanism shall be oil tempered heavy duty steel springs, grease-sealed in steel pipe at least 4" in diameter. Spring tension shall be adjustable at all times and shall turn on life lubricated bearings or graphite bronze bushings.

Guides shall be at least $\frac{3}{16}$" structural steel angles for doors and ⅛" for shutters. The wall angle shall be continuous over the top of the opening and shall fasten to and support the plate coil brackets, in order to distribute the load over the wall area.

Brackets shall be rolled-steel plate, attached to guide-angles. Bracket bearing shall be self-aligning grease sealed for life.

Gears shall be high grade gray iron, cast from machine-cut patterns. Hand chain shall be hot galvanized.

Hoods shall be 24 gauge galvanized steel with reinforced beads and edges for maximum rigidity.

Finish shall be one shop coat of metallic paint on all uncoated steel surfaces.

GUARANTEE shall be for a one year period against defective materials or workmanship.

rolling grilles

16g
Ab

Curtain shall be of woven fabrication throughout and no rivets, screws, welding or other fastenings subject to breakage shall be used in its construction. The curtain shall be free from sag at all times.

Curtain horizontal members shall be full hard tempered round galvanized rods encased in galvanized steel tubing (or aluminum if specified), all not less than ⅜" in diameter. The space between rods shall not be more than $1\frac{3}{16}$".

Curtain connecting links between horizontal members shall be not less than ⅛" x ¾" galvanized steel (or aluminum, stainless, etc.), spaced to maintain a minimum of 8 links per sq. ft. The link pattern shall be Abbotsford "Beauford" and shall be identical when viewed from either side (or "Bradford, or Beresford" as required).

Horizontal member ends shall be aligned and connected by continuous stamped wrought iron links to coil grille in alignment. End connections shall be stainless steel.

Guides shall be 14 gauge steel box channel type with leading edges inbent to seal grille against lateral ejection.

Balancing mechanism shall be oil tempered heavy duty steel springs, grease sealed in steel pipe of at least 4" in diameter. Spring tension shall be adjustable and shall fasten to a power shaft of cold rolled steel, turning on lubricated for life ball bearings, ball or roller type.

Brackets shall be rolled steel plate attached to guide members. Bracket bearings shall be self-aligning grease sealed for life ball bearing.

Hoods shall be 24 gauge galvanized steel (or aluminum, stainless, etc.) contoured to fit brackets and shall fully enclose coil of the grille.

Soffits shall be 24 gauge galvanized steel (or aluminum if specified). Soffits shall be removable on suspended ceiling applications.

Locking shall be by means of round retractable rods, located 3'6" above the floor and locked by padlock (or cylinder lock if specified), accessible from both sides of the grille. Alternate locking shall be to lock grille in open and closed position by padlock and accessible from either side.

Finish on all uncoated steel surfaces shall be one shop coat of sprayed aluminum paint.

GUARANTEE shall be for one year period against defective materials or workmanship.

rolling steel fire doors

Doors shall be Abbotsford Steel Rolling Automatic fire doors labeled by the Underwriters Laboratories, Inc.

Doors shall close automatically upon separation of equipped fusible links at 160° F. Downward descent of the door shall be controlled by an escapement governor.

Doors which are less than 8'-6" high, or do not exceed 80 sq. ft. in area shall be handle lift operated. Larger doors shall be gear chain or crank operation.

Balancing mechanism shall be oil tempered steel helical springs contained in structural steel pipe housings. Balancing mechanism shall have sufficient power to operate the door after automatic closing.

Brackets shall be rolled steel plate 5/16" thickness and guides shall be 3/16" minimum thickness. Fastening holes shall be slotted for expansion. Curtain slats shall be 20 gauge steel with 1.25 oz. hot galvanizing. Curtain bottom bars shall be two steel angles back to back.

Hoods and flame baffles shall be 24 ga. galvanized.

Guarantee shall be for one year from date of acceptance by architect.

roll-up pass windows and shutters

Curtain—Shall be Abbotsford Junior slats, .050 thickness extruded aluminum (or other specified metal) with depth crown not less than full ½" and width not more than 1¼".

Balancing—Shall be by oil-tempered helical springs encased in standard 4" pipe. Deflection shall not exceed .03" per foot of width. Spring mechanism shall be adjustable on all shutters.

Bearings—Shall be lubricated for life, bronze or ball bearings.
Guides—Shall be of extruded aluminum ⅛" thickness minimum.

Bottom bar—Shall be of extruded aluminum ⅛" thickness minimum, with continuous full width lifting device.

Hood—Shall be 20 ga. aluminum with reinforced beads and edges. (Locking shall be by slide bolts on bottom bar arranged for padlocking.)

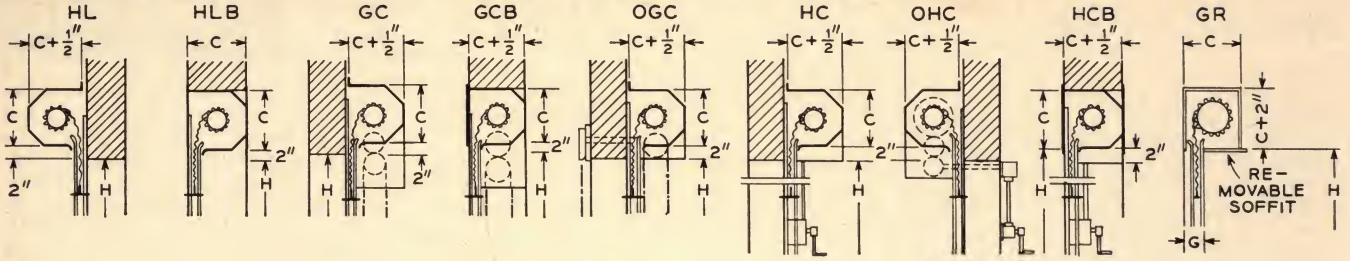
Finish—Aluminum shutters shall be buffed and satin alumilited.

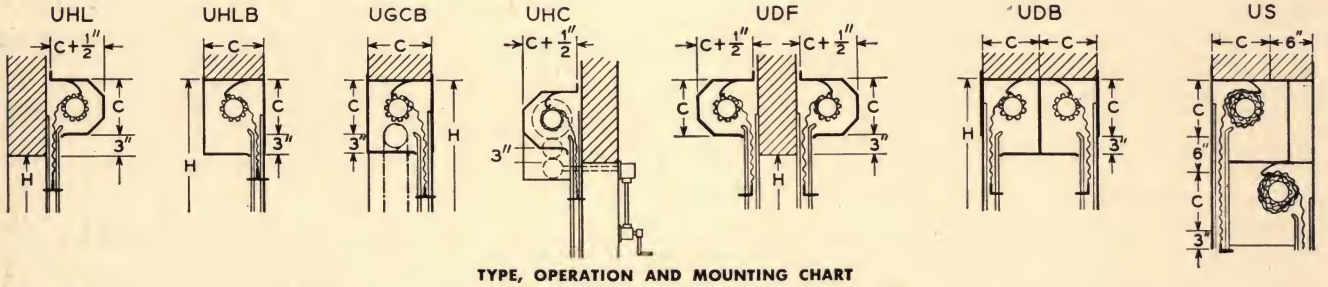
Frame—(if required) Shall be of 14 ga. stainless steel for bucks and sill and 20 gauge stainless steel for covers. Frames shall overlap the opening 3" all around with ½" return bends back to wall. Welds shall be smooth ground. Finish shall be #4 finish.

Guarantee—Shall be for a one year period against defective materials or workmanship.

required clearances and methods of operation

for rolling metal commercial doors, fire doors, shutters and grilles





TYPE, OPERATION AND MOUNTING CHART

Type	Operation	Mounting	Clearances	Jamb Style	Head Backset	Guide Recess	Locking
HL	Handle Lift	Face of Wall	Chart Z	1	Not required	Not required	Slide bolts on Bottom Bar arranged for padlocking.
HLB	Handle Lift	Between Jambs	Chart W	6	Not required	Not required	Slide bolts on Bottom Bar arranged for padlocking.
GC	Gear Chain	Face of Wall	Chart Y	1	Not required	Not required	Provision for padlocking hand chain. Cylinder lock available.
OGC	Gear Chain	Face of Wall	Chart Y	1	Not required	Not required	Provision for padlocking hand chain. Cylinder lock available.
HC	Hand Crank	Face of Wall	Chart Y	1	Not required	Not required	Provision for padlocking the crank box. Cylinder lock or slide bolts available.
HCB	Hand Crank	Between Jambs	Chart Y	2	Not required	Not required	Provision for padlocking the crank box. Cylinder lock or slide bolts available.
OHC	Hand Crank	Face of Wall	Chart X	1	Not required	Not required	Provision for padlocking the crank box. Cylinder lock or slide bolts available.
GCB	Gear Chain	Between Jambs	Chart X	2	Not required	Not required	Same as GC
HCB	Hand Crank	Between Jambs	Chart X	2	Not required	Not required	Same as HC
UHL	Handle Lift	Face of Wall	Chart V	1	Not required	Not required	Same as HL
UHLB	Handle Lift	Between Jambs	Chart U	2	8	Required	Same as HL
UGC	Gear Chain	Face of Wall	Chart V	1	Not required	Not required	Same as GC
UHC	Hand Crank	Face of Wall	Chart V	1	Not required	Not required	Same as HC
UGCB	Gear Chain	Between Jambs	Chart V	3	8	Required	Same as GC
UHCB	Hand Crank	Between Jambs	Chart V	3	8	Required	Same as HC
UDF	Handle Lift	Face of Wall	Chart V	5	Not required	Not required	Same as HL
UDB	Handle Lift	Between Jambs	Chart U	6	8	Required	Same as HL
US	Handle Lift	Between Jambs	Chart U	6	8	Required	Same as HL
GR	Handle Lift	Between Jambs or Face of Wall	Chart T	9-10	Not required	Not required	Slide bolts 3'6" up constructed for padlocking and operable both sides of grille. Cylinder locking available. Padlocking in open position available.

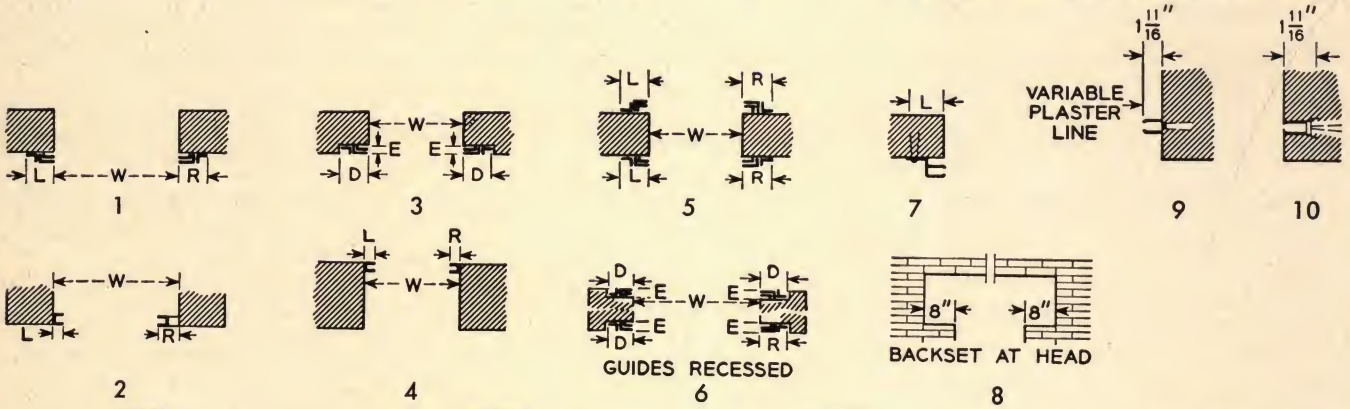


CHART T

W	H	C	G
To 40'	0 to 4'-6"	13"	2⅜"
	4'-6" to 6'-0"	14"	2⅜"
	6'-0" to 10'-0"	15"	2⅞"
	10'-0" to 14'-0"	16"	3½"
	14'-0" to 16'-0"	18'	4½"

CHART U

W	L	R	D	E	H	C
To 4'	3"	3"	6"	3½"	To 4'	14"
To 6'	3"	3"	6"	4 "	To 6'	16"
To 8'	3"	3"	7"	4½"	To 8'	18"
To 10'	3"	7"	7"	4½"	To 10'	18"
To 12'	3"	7"	7"	4½"	To 12'	20"

CHART V

W	L	R	H	C
To 4'	8"	8"	To 4'	14"
To 6'	8"	8"	To 6'	16"
To 8'	8"	8"	To 8'	18"
To 10'	8"	8"	To 10'	18"
To 12'	9"	9"	To 12'	20"

CHART W

W	L	R	H	C
To 12'	3"	3"	To 7'	14"
			To 10'	15"
			To 12'	16"

CHART X

W	L	R	H	C
To 8'	3 "	7"	To 10'	14"
To 12'	3½"	7"	To 12'	15"
To 16'	3½"	7"	To 16'	16"
To 20'	4 "	7"	To 20'	18"

CHART Y

W	L	R	H	C
To 8'	6"	7"	To 10'	14"
To 12'	6"	8"	To 12'	15"
To 16'	7"	9"	To 16'	16"
To 20'	7"	10"	To 18'	18"
To 24'	8"	10"	To 24'	20"

CHART Z

W	L	R	H	C
To 10'	6"	7"	To 7'	14"
To 15'	6"	7"	To 10'	15"
			To 12'	16"

The ABBOTSFORD Company Inc.

main office 38-04 20th Ave. Long Island City 5, N. Y. Tel. RA. 6-3906 RA. 6-4210

factories at Long Island City, New York • Birmingham, Alabama

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From the collection of:

Carol J. Dyson, AIA

16g
Ac

ACME FACTORY • OAKLAND, CALIF.

ACME ROLLING DOORS

STEEL
ALUMINUM
WOOD

manual
hand crank
chain
motorized

ACME CENTRAL METAL PRODUCTS, INC.
3246 ETTIE STREET • OAKLAND 8, CALIF.

SPECIFICATIONS: ACME STEEL ROLLING DOORS

SCOPE OF WORK: Furnish and install rolling doors, manufactured by ACME CENTRAL METAL PRODUCTS, INC., Oakland, Calif., or approved equal, complete with necessary operating mechanism and guides, in quantities as shown on the drawings.

CURTAIN: Curtains shall be constructed of interlocking slats, roll formed from copper bearing, hot-dipped galvanized steel. Galvanizing to be in accordance with ASTM Spec. A93-52T of 1.25 ozs. of pure zinc per square foot of flat metal. Each alternate slat to be fitted with malleable end-locks for protection against wear and to keep curtain in alignment. Curtain to be designed to withstand a wind load of 20-lbs. per square foot. Bottom bar to consist of two angles, back to back.

BARREL: Barrel shall be pipe or tubing of sufficient wall thickness to carry the curtain load with a maximum deflection not to exceed .03 inch per lineal foot of clear span. Spring counterbalance to be enclosed in barrel.

SPRING COUNTER BALANCE: Spring counter balance shall consist of oil tempered, helically wound springs. Spring counter balance to be adjustable from outside of bracket without removing hood.

BRACKETS: Brackets are to be fabricated from steel plate of sufficient thickness to support barrel and curtain.

BEARINGS: Bearings shall be "Oilite" or grease sealed ball bearings.

GUIDES: The guides shall be formed of standard rolled steel angles and of sufficient depth to retain curtains in place under a windload of 20-lbs. per square foot.

HOODS: Galvanized steel hoods will be furnished of not less than USS 24-gauge to enclose curtain roll.

PAINTING: All parts of the door shall be painted with a coat of rust-resistant paint after fabrication.

ERECTION: Doors to be erected according to details and erection instructions furnished by the manufacturer.

OPERATION: (NOTE: Insert one of the following:)

(a) Shall be operated manually by handle on bottom rail.

(b) Shall be chain operated by means of continuous hand chains working on sprocket wheels driving reduction gearing. Necessary pull on chain shall not exceed 35 lbs.

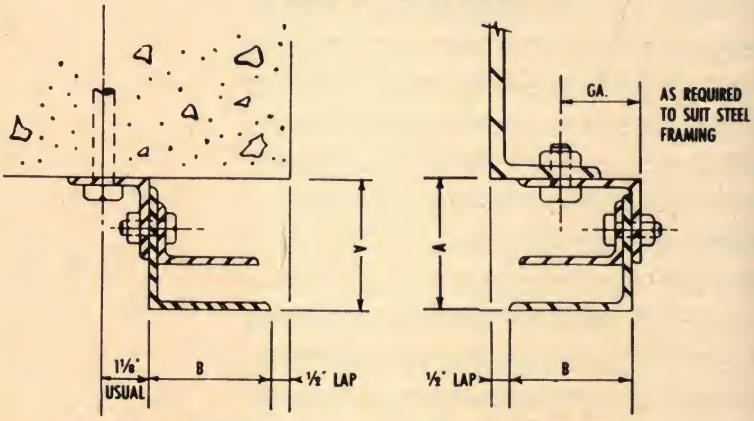
(c) Shall be operated by means of crank operator. The crank shall be located approximately 3'-6" from floor and shall be geared to reduction gearing by proper spur and mitre gears.

(d) Shall be electrically operated with a self-integrated unit including a gear head motor, magnetic reversing switch, necessary limit switches, and "up", "down" and "stop" push button stations. The door shall be equipped with auxiliary chain operator for use in the event of failure of the electrical system. Emergency chain operator to be completely independent of motor and motor reduction gearing. No wiring or conduit shall be included in the contract.

GUARANTEE: Each Acme rolling door will be guaranteed free from defects in material or workmanship for a period of one year after date of installation.

Typical Small Slat Section

GUIDE DETAILS



GUIDE TYPE 1 MASONRY OPENINGS

GUIDE TYPE 2 STEEL JAMBS

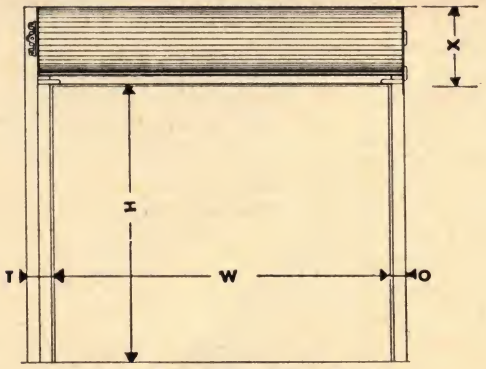
	Opng. Width to 12'-6"	Opng. Width to 16'-0"
A	3¼"	3½"
B	2½"	3"

FOR DOORS WIDER THAN LISTED ABOVE, OR DOORS REQUIRING SPECIAL MOUNTING, REFER TO FACTORY.

STEEL · ALUMINUM · WOOD

MANUAL PUSH-UP

Face of Wall Mounted
FWM-1
Between Jambs Mounted
BJM-1



MANUAL PUSH-UP—FWM-1
8′-0″ Recommended Max. Height & Width

ADDITIONAL ACME FEATURES:

- **CRANK OPERATION**
- **CHAIN THRU THE WALL OPERATION**
- **PASS OR PILOT DOORS**
- **WEATHERSTRIPPING**
- **DUST-PROOF**

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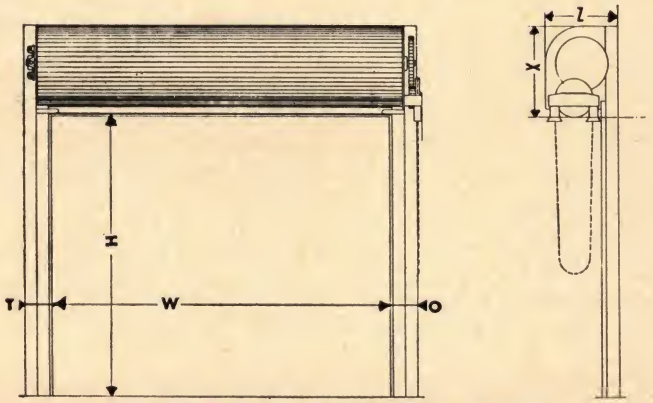
For information on the above, and for special conditions, please refer to factory.

HAND CHAIN OPERATED

Face of Wall Mounted
FWHC-1-Inside
FWHC-2-Outside
Between Jambs Mounted
BJHC-Chain

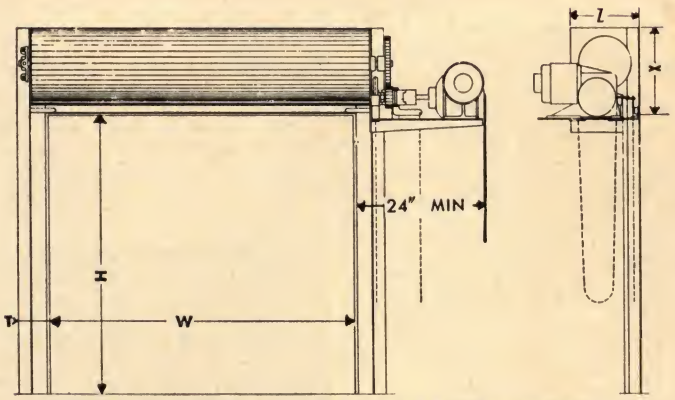


HAND CHAIN OPERATED—FWHC

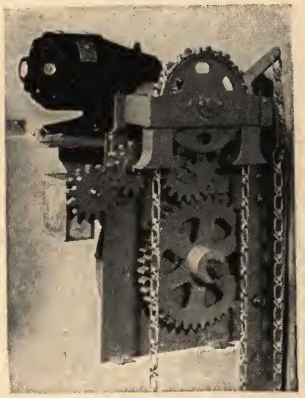
Compound geared chain operator.

MOTOR OPERATED

Side Mounted
Motor Operator
FWMO-1
Over the Hood
Motor Operated
FWMO-2



SIDE MOUNTED MOTOR OPERATED—FWMO



Over the hood motor operated.

CLEARANCE TABLE FOR ALL TYPE DOORS

HEIGHT	0′—10′-4″				10′-4″—12′-4″				12′-4″—14′-4″				14′-4″—17′-4″				17′-4″—18′-4″			
WIDTH	O	T	X	Z	O	T	X	Z	O	T	X	Z	O	T	X	Z	O	T	X	Z
0′ –14′-4″	8″	5½″	15½″	13″	8″	5½″	16½″	14″	8″	5½″	17½″	15″	8″	5½″	21″	18½″				
14′-4″–16′-4″	8½″	6″	17½″	15″	8½″	6″	17½″	15″	8½″	6″	19½″	17″	8½″	6″	21″	18½″	8½″	6″	23″	21″
16′-4″–24′-0″	9″	6½″	19½″	17″	9″	6½″	19½″	17″	9″	6½″	21″	18½″	9″	6½″	23″	21″	9″	6½″	23″	21″

HEIGHT	WIDTH	STEEL GAUGE	ALUM. GAUGE
0′ TO 8′-4″	0′ TO 13′-9″	22	18
	13′-10″ TO 20′-4″	20	18
8′-5″ TO 12′-4″	0′ TO 12′-9″	22	18
	12′-10″ TO 20′-4″	20	18
12′-5″ TO 24′-0″	0′ TO 12′-9″	20	18
	12′-10″ TO 18′-4″	18	16

For door FWMO-1 add 16 inches to "O" dimension for motor side clearance. For door FWMO-2 add 14 inches to "X" dimension for motor head room.

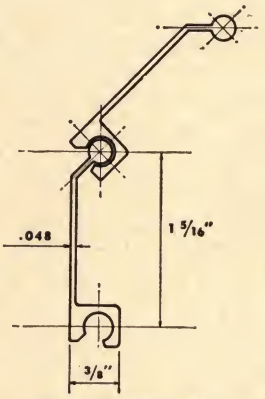
ACME ALUMINUM ROLLING DOORS

SPECIFICATIONS: ACME ALUMINUM ROLLING DOORS

The Aluminum Rolling Doors required by the drawings, and as hereinafter specified, shall be as manufactured by Acme Central Metal Products, Inc., Oakland 8, California, or approved equal.

QUALITY OF MATERIALS AND WORKMANSHIP: All materials shall be of the best quality of their respective kinds. Workmanship shall be equal to the highest standards of the industry.

CURTAIN: Curtain shall be fabricated from either extruded interlocking flat midget slats "Alloy 6063" alumilite finish (shown at right) for counter or small openings; or to be roll formed interlocking slats of alloyed aluminum 52S ½ hard, mill finish for service openings (for rolled slat gauges refer to chart on Page 3). Ends of alternate slats shall be provided with endlocks for protection against wear and to keep the curtain in alignment.



Detail of Extruded Aluminum Slat

BOTTOM BAR: The bottom rail shall be of extruded alloyed aluminum in one piece of proper width for the opening, formed to slide into slats of curtain.

All other door parts and components to be as per Rolling Steel Specifications on page 2.

• • •

Acme Rolling Doors have become a recognized standard for architects, engineers and owners because of Acme's years of experience in the design and manufacture of industrial closures.

Complete design and engineering facilities are available at the factory for any opening requirement or problem. Write for whatever information is needed to assist in layout or planning.

Representative installations are located throughout the U.S. Write for name and address of Acme door installations nearest you.

All Acme doors are fully guaranteed, for a period of one year, against defects in material or workmanship. Emergency parts or service are available immediately from stock.

ACME WOOD ROLLING PARTITIONS

Acme Rolling Partitions for Schools:

Our Acme side-coiling partitions are in use throughout the entire United States. They are ideal for dividing school gymnasiums into boys' and girls' sections. Doors ranging to 50 feet in width and 20 feet in height have been in use for many years. They are easily cranked back into coil boxes when entire floor is required for league games or general assemblies of all kinds. Full electric operation also available.

For Churches:

Our Acme side-coiling partitions are widely used to divide assembly rooms into Sunday School classrooms or meeting rooms, or to separate meeting rooms from the main auditorium. Your rooms serve dual purposes.

For Hotels:

Increase convention revenue! Use dividing partitions in the assembly halls and sample rooms.

Agents Located In All Principal Cities of the U.S.—Write or Wire for Information

ACME CENTRAL METAL PRODUCTS, Inc.

P. O. Box 4313, Bayshore Annex, Oakland 8, Calif. • Phone: Olympic 2-2474

Western Union Fax Service

Balfour
rolling doors

service doors - pages 2-11
fire doors - pages 12-15
pygmee doors - pages 16-18
grilles - page 19

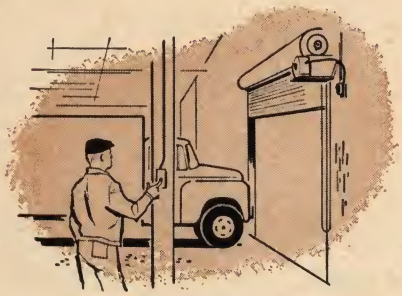
WB
Walter Balfour & Co., Inc.
catalog 1960—1

aia file no 16-d

wB

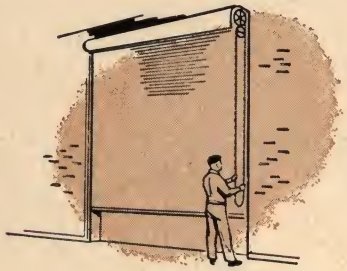
Balfour doors bring to your building

power operated service doors



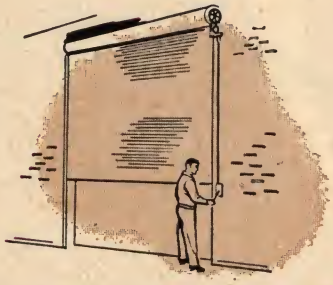
- completely automatic
- operation by remote control
- rapid operation
- reduced heat losses

chain operated service doors



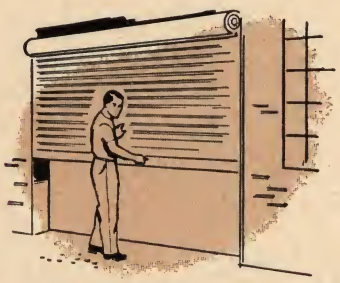
- thrifty–low first cost
- minimum maintenance
- effortless operation
- wide size range availability

crank operated service doors

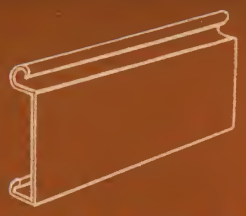


- quiet working
- inside–outside operation
- easily concealed operator

push-up service doors



- space saver–minimum side room
- lowest cost
- excellent balance



an imaginative range of closures of unusual properties

- Outstanding materials and finishes to withstand outdoor abuse, flexible design to harmonize with architectural lines, ability to mount on varied opening structures.
- **the Balfour name** ..... Through past performance and excellence of product as well as by acceptance by architects and builders, the name BALFOUR connotes quality and reliability. To the user it spells increased confidence.
- **Balfour technical service** The engineering department at Balfour makes available to all users and prospective users its knowledge of the door industry and its technical "know-how".

index

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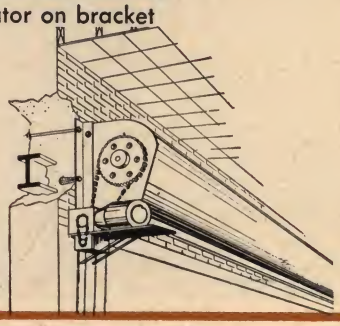
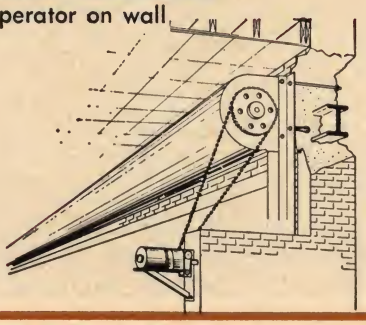
installation clearances	pages 4– 5
condensed specifications	pages 6– 7
slat details	page 6
guide details	page 7
standard specifications	pages 8– 9
optional materials and accessories	pages 10–11

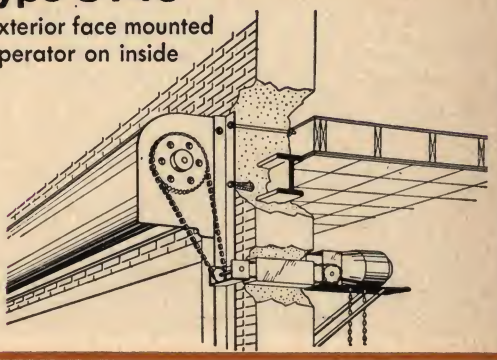
type N40
interior face mounted
operator on bracket



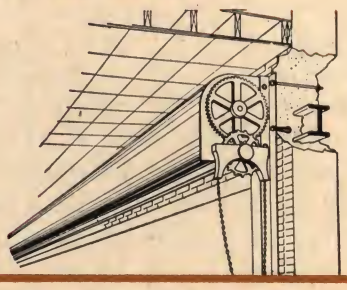
type N40
interior face mounted
operator on wall



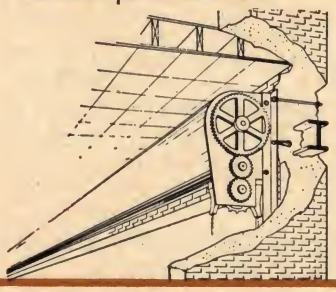
type OT40
exterior face mounted
operator on inside



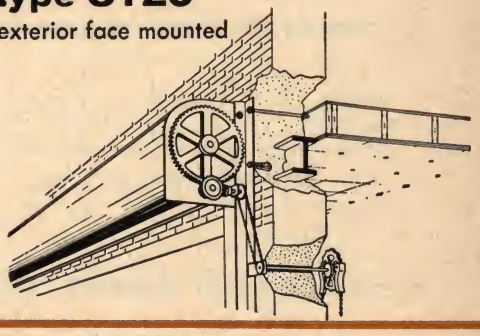
type N20
interior face mounted



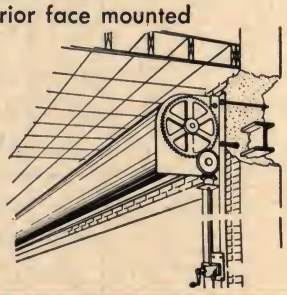
type J20
between jamb mounted



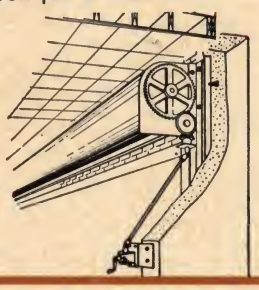
type OT20
exterior face mounted



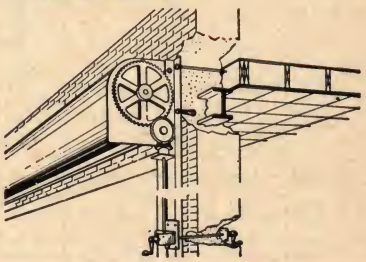
type N30
interior face mounted



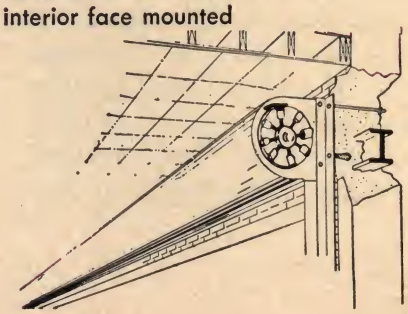
type J30
between jamb mounted



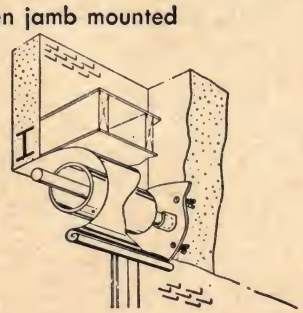
type OT30
exterior face mounted



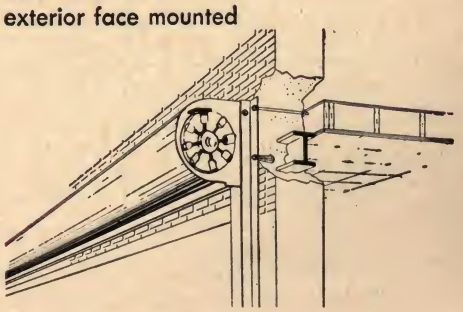
type N10
interior face mounted



type J10
between jamb mounted



type O10
exterior face mounted



service door installation clearances

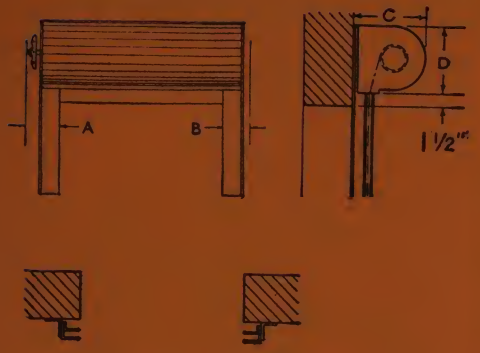
note: 1 data on pages 4, 5, 6, 7, 8 and 9 apply to doors of BALFOUR STANDARD SPECIFICATIONS.

2 consult with Home Office on doors with special features such as shown on pages 10 and 11.

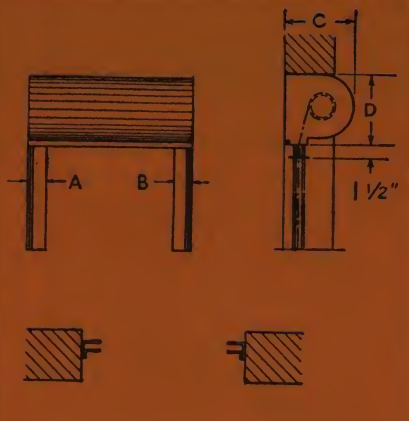
3 push-up doors are not recommended for openings above 100 square feet.

types

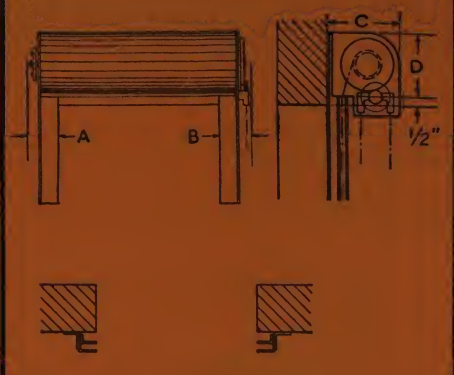
push-up
type N10
face mounted



push-up
type J10
jamb mounted



chain
type N20
face mounted



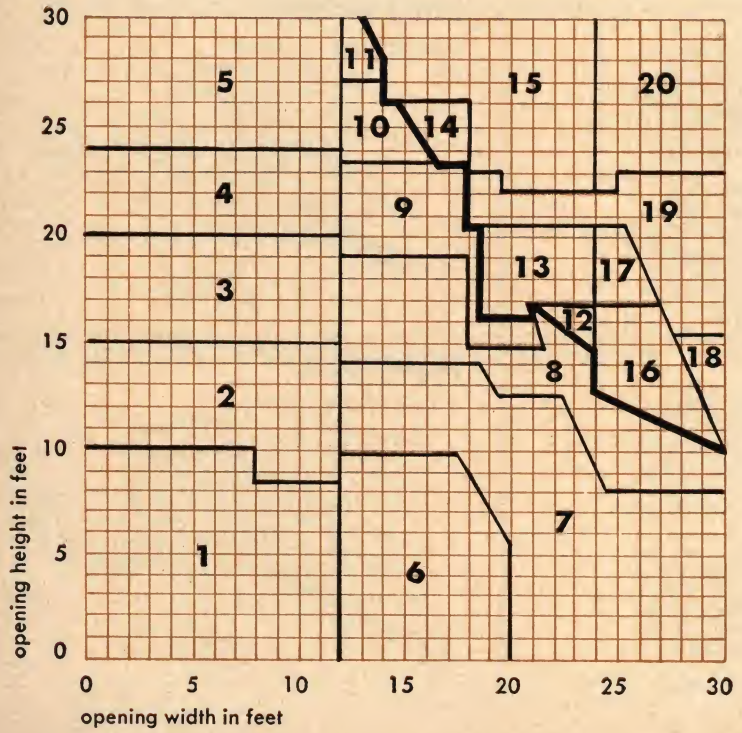
clearances [dimensions in inches]

area number	A	B	C	D
1	5 1/4	5 1/4	12	13 3/4

area number	A	B	C	D
1	2 3/4	2 3/4	12	13 3/4

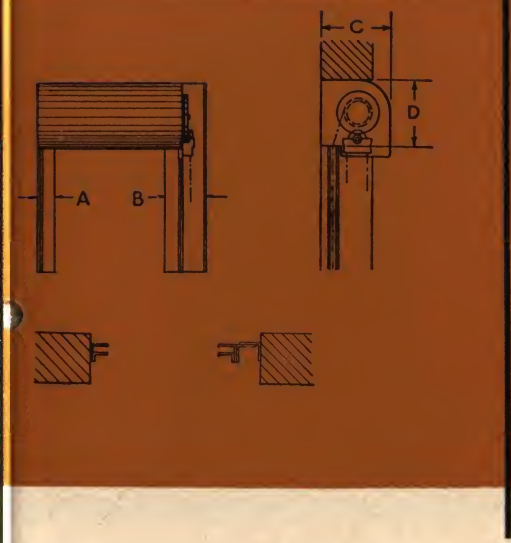
area numbers	A	B	C	D
1	5 1/4	6 1/2	12	13 3/4
2	5 1/4	7	14 1/8	16
3	6	7	16 9/16	18 1/4
4	6	7	18 5/16	20
5	6	7	20 11/16	22
6	5 3/4	7 1/2	14 1/8	16
7	7	8	16 9/16	18 1/4
8	7	8	18 5/16	20
9	7	8	20 11/16	22
10	6 1/2	7 1/2	22 5/8	24
11	6 1/2	7 1/2	25 1/4	26
12	9 1/2	8	18 5/16	20
13	9 1/2	8	20 11/16	22
14	9	7 1/2	22 5/8	24
15	9 1/2	8	25 1/4	26
16	10	8 1/2	18 5/16	20
17	10	8 1/2	20 11/16	22
18	10	8 1/2	20 11/16	22
19	10	8 1/2	22 5/8	24
20	10	8 1/2	25 1/4	26

selection chart [all required clearances are keyed to area numbers on this chart]



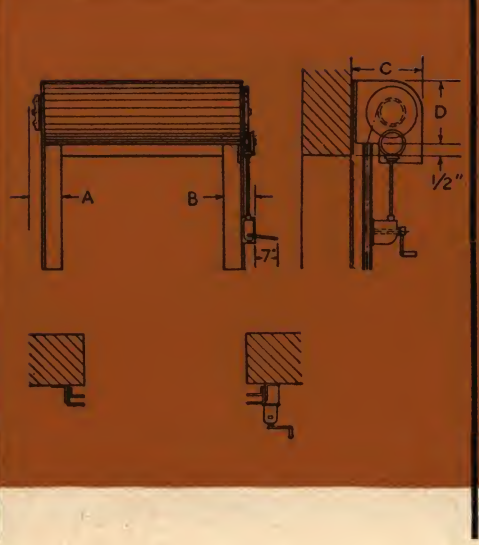
16g
Ba

chain
type J20
jamb mounted



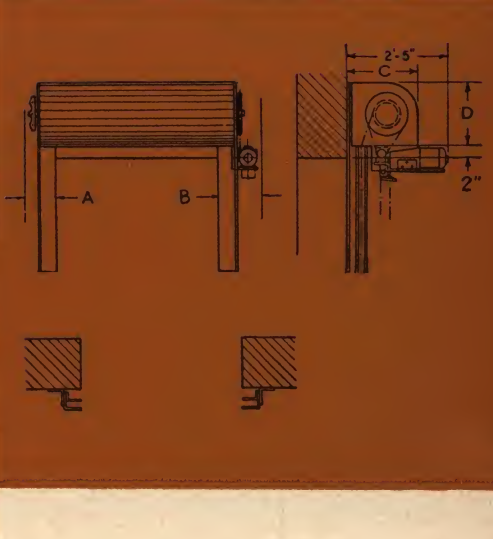
area numbers	A	B	C	D
1	2¾	6	14⅛	16
2	2¾	6	14⅛	16
3	2⅞	7½	16⅝	18¼
4	2⅞	7½	18⅝	20
5	3	8	20⅛	22
6	3¼	6½	14⅛	16
7	3⅞	8½	16⅝	18¼
8	3⅞	8½	18⅝	20
9	4	8¾	20⅛	22
10	3½	8¼	22⅝	24
11	3½	8¼	25¼	26
12	—	—	—	—
13	—	—	—	—
14	—	—	—	—
15	—	—	—	—
16	—	—	—	—
17	—	—	—	—
18	—	—	—	—
19	—	—	—	—
20	—	—	—	—

crank
type N30
face mounted



area numbers	A	B	C	D
1	5¼	7¼	14⅛	16
2	5¼	7¼	14⅛	16
3	6	7¼	16⅝	18¼
4	6	7½	18⅝	20
5	6	7½	20⅛	22
6	5¾	7¾	14⅛	16
7	7	8½	16⅝	18¼
8	7	8½	18⅝	20
9	7	8½	20⅛	22
10	6½	8	22⅝	24
11	6½	8	25¼	26
12	9½	8½	18⅝	20
13	9½	8½	20⅛	22
14	9	8	22⅝	24
15	9½	8½	25¼	26
16	10	9	18⅝	20
17	10	9	20⅛	22
18	10	9	20⅛	22
19	10	9	22⅝	24
20	10	9	25¼	26

motor
type N40
face mounted



▲ motor units are wall mounted

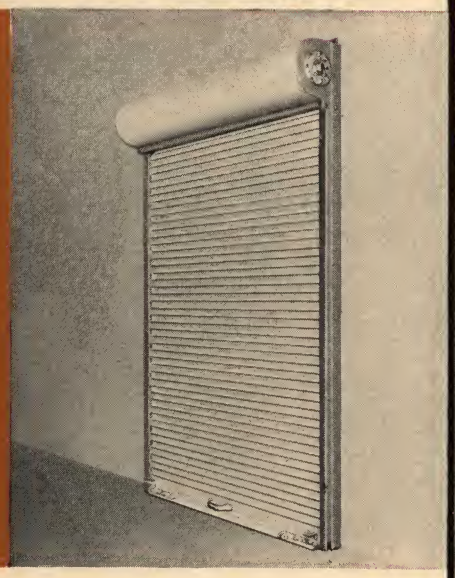
area numbers	A	B	C	D
1	5¼	12	14⅛	16
2	5¼	12	14⅛	16
3	6	12	16⅝	18¼
4	6	12	18⅝	20
5	6	12	20⅛	22
6	5¾	14	14⅛	16
7	7	14	16⅝	18¼
8	7	14	18⅝	20
9	7	14	20⅛	22
10	6½	14	22⅝	24
11	6½	14	25¼	26
▲12	9½	19	18⅝	20
▲13	9½	19	20⅛	22
▲14	9	19	22⅝	24
15	9½	19	25¼	26
▲16	10	19	18⅝	20
▲17	10	19	20⅛	22
▲18	10	19	20⅛	22
▲19	10	19	22⅝	24
▲20	10	19	25¼	26

continued

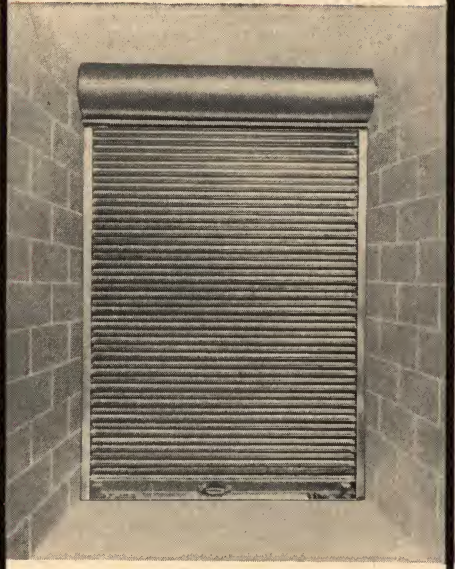
condensed specifications

types

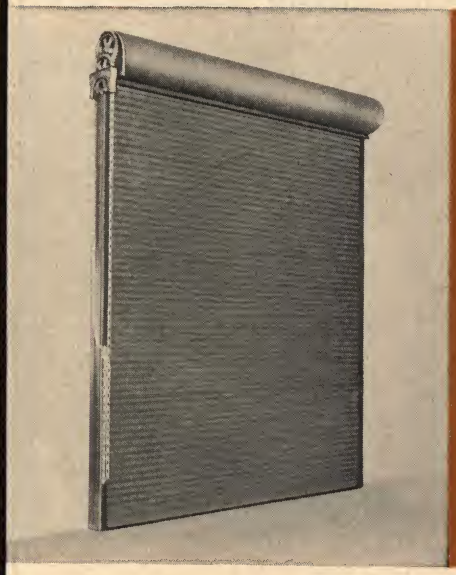
push-up
type N10
face mounted



push-up
type J10
jamb mounted



chain
type N20
face mounted



specifications

type number N10

Doors shall be type N10 conforming to Balfour standard specifications, or approved equal. Curtains shall be cold rolled steel having 1.25 oz. pure zinc coating per sq. ft. of flat metal as per ASTM A93-52T. Slats shall be bonderized for paint adhesion. Counterbalance shall be of helical torsion springs housed in steel pipe and anchored to single torsion rod. Pipe deflection shall be .03" per ft. maximum. Guides and brackets shall be of steel. Hood shall be 24 U. S. gauge sheet metal. Non-galvanized ferrous surfaces shall have a shop coat of paint. Guarantee shall apply to defective materials and workmanship for a period of one year.

type J10

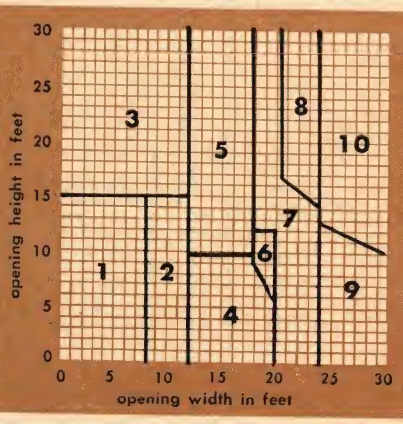
Doors shall be type J10 conforming to Balfour standard specifications, or approved equal. Curtains shall be cold rolled steel having 1.25 oz. pure zinc coating per sq. ft. of flat metal as per ASTM A93-52T. Slats shall be bonderized for paint adhesion. Counterbalance shall be of helical torsion springs housed in steel pipe and anchored to single torsion rod. Pipe deflection shall be .03" per ft. maximum. Guides and brackets shall be of steel. Hood shall be 24 U.S. Gauge sheet metal. Non-galvanized ferrous surfaces shall have a shop coat of paint. Guarantee shall apply to defective materials and workmanship for a period of one year.

type N20

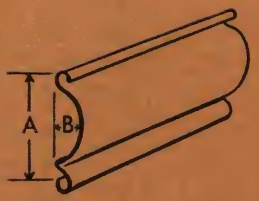
Doors shall be type N20 conforming to Balfour standard specifications, or approved equal. Curtains shall be cold rolled steel having 1.25 oz. pure zinc coating per sq. ft. of flat metal as per ASTM A93-52T. Slats shall be bonderized for paint adhesion. Counterbalance shall be of helical torsion springs housed in steel pipe and anchored to single torsion rod. Pipe deflection shall be .03" per ft. maximum. Guides and brackets shall be of steel. Hood shall be 24 U.S. gauge sheet metal. Non-galvanized ferrous surfaces shall have a shop coat of paint. Guarantee shall apply to defective materials and workmanship for a period of one year.

construction details

slat-guide selection chart



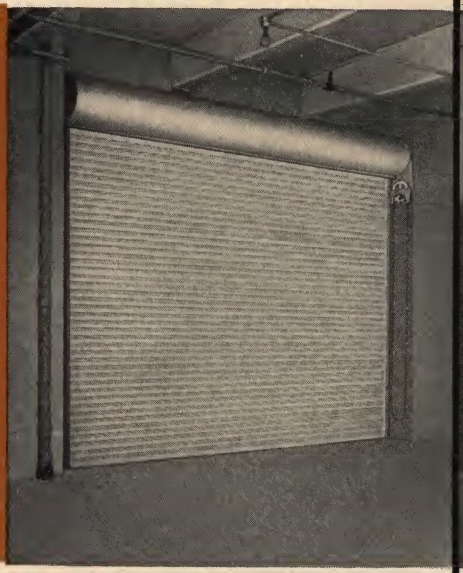
slat



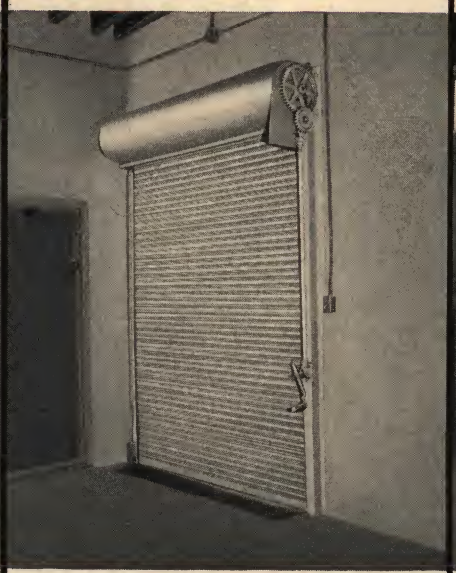
area number	slat type	gage	A	B
1, 2, 3	S	20	1 7/8	17/32
4, 5, 6	L	20	2 3/4	25/32
7, 8, 9, 10	L	18	2 3/4	25/32

16g
Ba

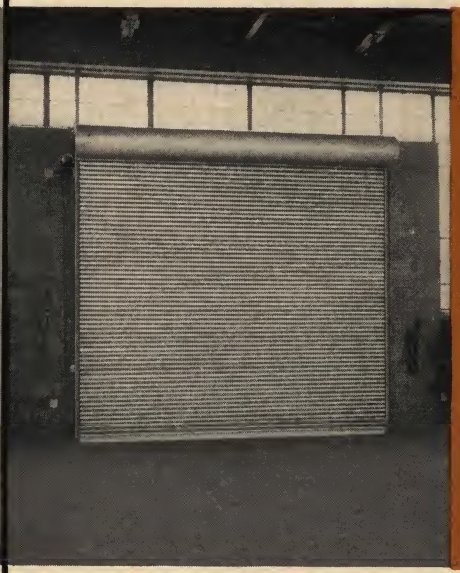
chain
type J20
jamb mounted



crank
type N30
face mounted



motor
type N40
face mounted



type J20

Doors shall be type J20 conforming to Balfour standard specifications, or approved equal. Curtains shall be cold rolled steel having 1.25 oz. pure zinc coating per sq. ft. of flat metal as per ASTM A93-52T. Slats shall be bonderized for paint adhesion. Counterbalance shall be of helical torsion springs housed in steel pipe and anchored to single torsion rod. Pipe deflection shall be .03" per ft. maximum. Guides and brackets shall be of steel. Hood shall be 24 U.S. gauge sheet metal. Non-galvanized ferrous surfaces shall have a shop coat of paint. Guarantee shall apply to defective materials and workmanship for a period of one year.

type N30

Doors shall be type N30 conforming to Balfour standard specifications, or approved equal. Curtains shall be cold rolled steel having 1.25 oz. pure zinc coating per sq. ft. of flat metal as per ASTM A93-52T. Slats shall be bonderized for paint adhesion. Counterbalance shall be of helical torsion springs housed in steel pipe and anchored to single torsion rod. Pipe deflection shall be .03" per ft. maximum. Guides and brackets shall be of steel. Hood shall be 24 U.S. gauge sheet metal. Non-galvanized ferrous surfaces shall have a shop coat of paint. Guarantee shall apply to defective materials and workmanship for a period of one year.

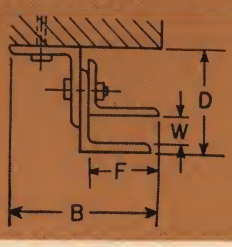
type N40

Doors shall be type N40 conforming to Balfour standard specifications, or approved equal. Curtains shall be cold rolled steel having 1.25 oz. pure zinc coating per sq. ft. of flat metal as per ASTM A93-52T. Slats shall be bonderized for paint adhesion. Counterbalance shall be of helical torsion springs housed in steel pipe and anchored to single torsion rod. Pipe deflection shall be .03" per ft. maximum. Guides and brackets shall be of steel. Hood shall be 24 U.S. gauge sheet metal. Motor operator shall be of sufficient capacity, shall have emergency chain operation with safety mechanical electrical interlock, rotary type limit switch, and shall be furnished with 3 button push button station and magnetic reversing starter. Non-galvanized ferrous surfaces shall have a shop coat of paint. Guarantee shall apply to defective materials and workmanship for a period of one year.

guides

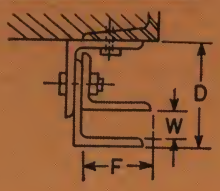
Z type guide

Z type guide is method for connection to masonry or wood jambs



E type guide

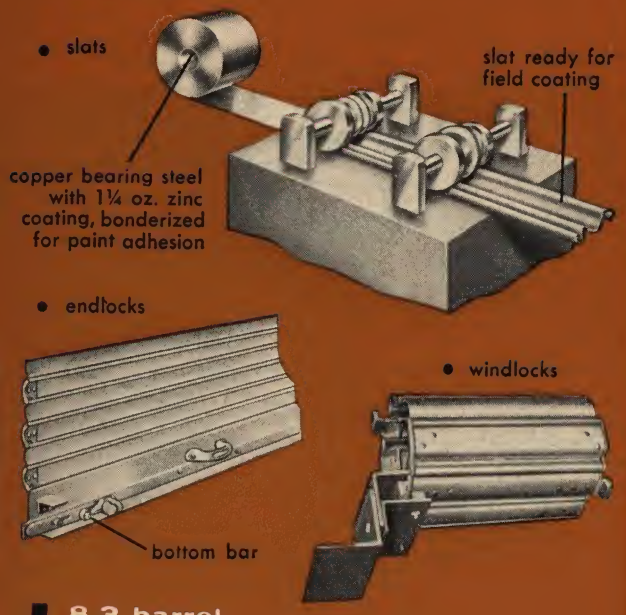
E type guide is method for connection to steel or alternate for wood jambs



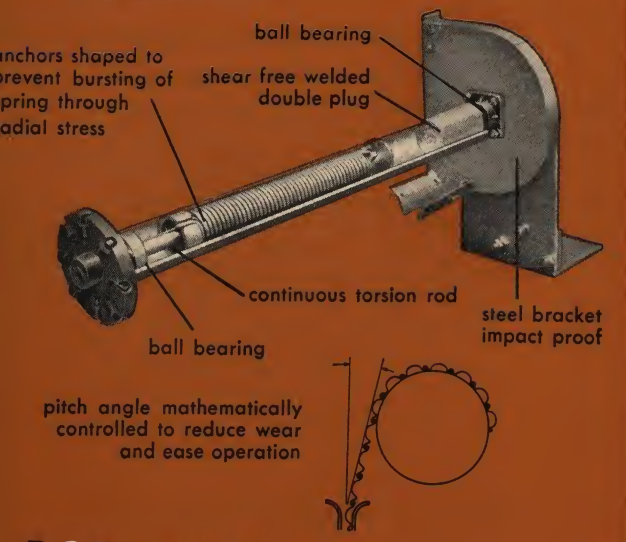
area number	guide gage	dimensions in inches			
		B	D	F	W
1	G-2	4 1/16	3 1/2	2	7/8
2	G-2 1/2	5 3/16	3 1/2	2 1/2	7/8
3	GS-2 1/2	5 3/16	4 5/8	2 1/2	7/8
4	GL-3	5 1/16	3 5/8	3	1 1/8
5	G-3	6 3/16	4 3/4	3	1 1/8
6, 7	G-3 1/2	6 3/4	4 3/4	3 1/2	1 1/8
8	GW-3	6 1/2	4 3/4	3 1/4	1 5/8
9	GW-3 1/2	6 3/4	4 3/4	3 1/2	1 5/8
10	GW-4	7	5	3 3/4	1 5/8

standard specifications

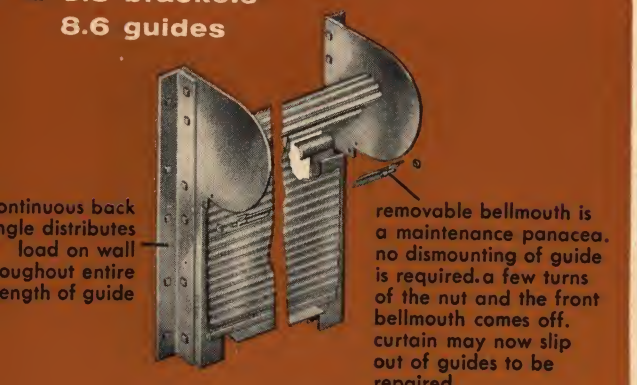
■ 8.2 curtain


• slats
slat ready for field coating
copper bearing steel with 1¼ oz. zinc coating, bonderized for paint adhesion
• endlocks
• windlocks
bottom bar

■ 8.3 barrel
8.4 spring counterbalance
8.5 brackets


ball bearing
anchors shaped to prevent bursting of spring through radial stress
shear free welded double plug
continuous torsion rod
steel bracket impact proof
ball bearing
pitch angle mathematically controlled to reduce wear and ease operation

■ 8.5 brackets
8.6 guides


ontinuous back ngle distributes load on wall oughout entire ength of guide
removable bellmouth is a maintenance panacea. no dismounting of guide is required. a few turns of the nut and the front bellmouth comes off. curtain may now slip out of guides to be repaired

8.1 general Doors shall be of the service type Rolling Steel Doors, mounted (on the face of the wall) (between the jambs), and shall be operated by (hand by means of handles placed on the bottom bar) (endless chain) (hand crank) (motor connected to speed reducer). The doors shall be as manufactured by Walter Balfour & Co., Inc., 404 Oakland St., Brooklyn, N. Y., or approved equal.

8.2 curtain The curtain shall consist of interlocking slats assembled to present a water shedding surface on the weather side, bottom bar made of two steel angles of size sufficient to add rigidity to curtain. The curtain shall be provided with malleable iron endlocks, fastened to alternate slats by means of two rivets per lock. Locks shall prevent slats from moving laterally and from wearing at surfaces riding in guides. Curtains over 340 sq. ft. in area but not less than 20½ ft. in width, and all curtains above 24 ft. in width shall be provided with malleable iron windlocks riveted to slats with three rivets per lock and spaced at 2 ft. interval along the curtain height. The slats shall be of open hearth copper bearing cold rolled steel, hot dipped galvanized before being formed, shall be free from sharp bends and conform to the following:

opening size	slat type	metal gage U.S.G., min.	metal thickness nominal in.	slat width min., in.	depth of corrugations min., in.
refer to chart on page 6	"S"-20	20	.036	1⅞	17/32
	"L"-20	20	.036	2¾	25/32
	"L"-18	18	.050	2¾	25/32

Galvanized coating shall be one and one-quarter ounces of high grade zinc per sq. ft. of flat metal, shall be free from blisters and imperfections and shall conform to ASTM Standards Serial Designation No. A93-52T. All galvanized slats shall be treated with a hot balanced zinc phosphate solution containing nitrate and rinsed first in clear water, then in a mild chromic acid solution, and then dried to provide lasting paint adhesion.

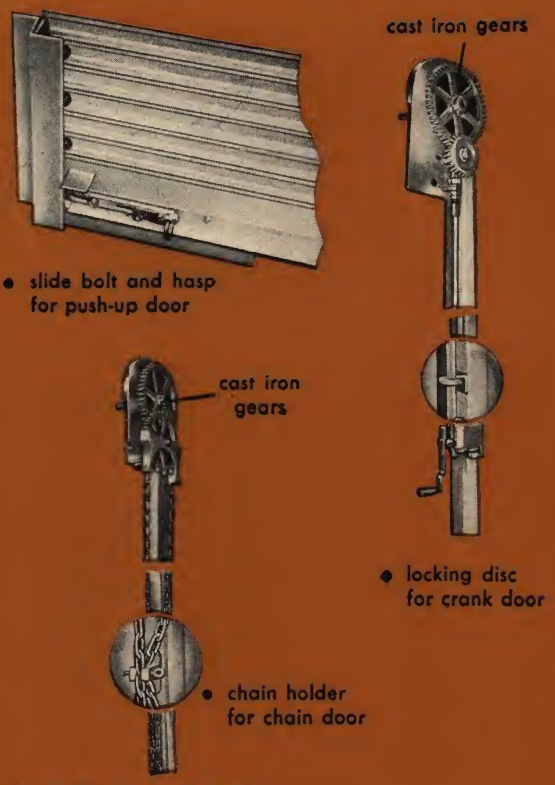
8.3 barrel The barrel shall be a steel pipe whose deflection under load shall not exceed 0.03 inch per ft. of span, shall have on each end a steel plug welded to it so as to eliminate failures characteristic of pinned or screwed plugs, and shall be equipped, whenever allowed by the design, with spiral shaped cast iron rings which will provide for easy and silent operation. The rings shall have a cavity on the surface formed to accommodate the top slat of curtain.

8.4 spring counterbalance The curtain shall be counterbalanced at every point in its travel by means of helical torsion springs placed inside the barrel and fixed on each end to anchors, designed to prevent internal collapsing of springs at contact points. The anchors shall transfer the full spring load to a single torsion rod equipped with a balancing wheel placed on the outside of one of the brackets. Wheel shall be used to apply the initial spring load, and to hold the torsion rod fixed. Springs shall be of tempered steel wire, cold formed and heat treated in a manner so as to retain the most desirable residual stress.

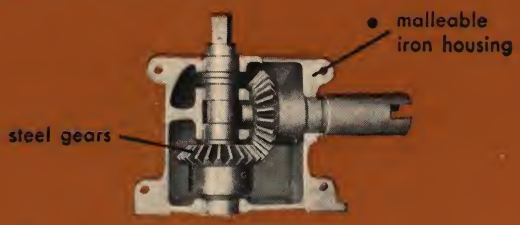
8.5 brackets The brackets shall be made of steel plate, shall be connected to the guides to form a single structural element, and shall have the inside surface flush with guide groove. Each bracket shall be provided with two bellmouths flush mounted with guide groove. The front bellmouths shall be removable to permit rapid sectional installation and replacement of curtain.

8.6 guides Guides shall be of structural steel angles, and shall be constructed in accordance with Chart and details on Pages 6 and 7.

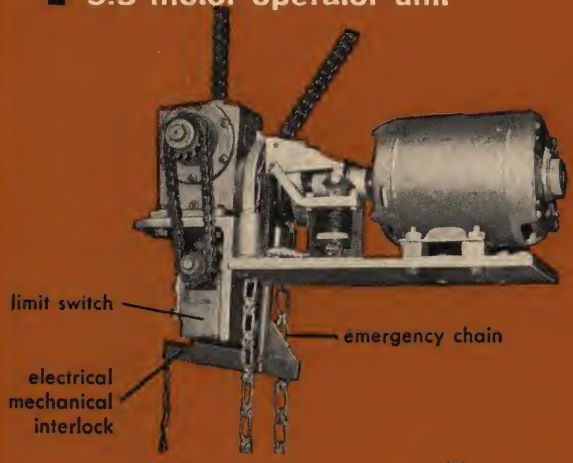
■ 9.1 locking devices


cast iron gears
• slide bolt and hasp for push-up door
cast iron gears
• locking disc for crank door
• chain holder for chain door

■ 9.2 crank box



■ 9.3 motor operator unit



■ 9.10 guarantee

9.1 locking devices Provision for padlocking shall be made as follows: push-up doors shall have slide bolts on the bottom bar. Chain doors shall have chain holder on the operator side guide. Crank doors shall have disk on operating shaft.

9.2 crank box Crank box for crank doors shall consist of cut tooth steel bevel gears, self-lubricating bronze sleeve bearings, and weather sealed, shock proof, malleable iron housings.

▲ **9.3 motor operator units** Each unit shall consist of a motor, directly connected to a speed reducer by means of flexible coupling, a solenoid activated clutch-brake, a limit switch and an endless chain for emergency operation. All electrical equipment shall conform to NEMA standards. The motor shall be of high starting torque and of sufficient capacity to operate the door at a speed not less than ⅔ of a foot per second, shall be suitable for operation on the current characteristics available at place of installation, and shall have overload protection. Each unit shall be provided with a magnetic across the line starter having thermal overload protection, and unless otherwise specified shall be equipped with push buttons marked "Open," "Close," and "Stop." The limit switch shall be of the adjustable screw type, and shall be so mounted as not to have its timing affected when the door changes from motor to manual operation. The speed reducer shall be of the worm gear type, completely housed and running in an oil bath, shall have special nickel phosphor bronze hobbed worm gear and special steel cut worm, shall satisfy the AGMA Standards, and shall be of sufficient capacity for the use intended. Emergency operation shall be through auxiliary hand chains extending to a point easily accessible from the floor, and mounted not to protrude more than 12" all along the wall. Drive from reducer to door shaft shall be through roller chain operating on cut tooth steel sprockets. Each unit shall be provided with electric interlock so the motor cannot be started when door is being operated by hand, and shall be constructed so manual operation may be effected even when motor is disconnected from the unit. Note: Electric wiring, and conduit for hooking up motor operator unit and all other electrical equipment not covered by this paragraph shall not be furnished by the door manufacturer.

9.4 bearings All motor operated doors and all doors over 200 sq. ft. in area shall have self-aligning precision ball bearings of sealed cartridge type. Other doors shall be equipped with self-aligning, self-lubricating bronze sleeve bearings.

9.5 gears Gears, . . ., except those which are part of the motor unit, shall be of high tensile gray iron castings conforming to Federal Specification QQ-1-652, and shall be made from machine cut patterns.

9.6 hoods Hoods shall be made of hot dipped galvanized sheet metal not lighter than 24 U.S. gauge, shall be formed to contour the supporting brackets, and shall have stiffening beads or flanges. Hoods for openings 18 ft. or more in width shall have intermediate supporting brackets.

9.7 workmanship Workmanship shall be of the highest grade and in accordance with the best practice for this type of equipment.

9.8 painting All ferrous metal surfaces (except faying surfaces, work parts of machinery, galvanized surfaces and other surfaces not normally painted in good commercial practice) shall receive one coat of rust inhibitive metal primer.

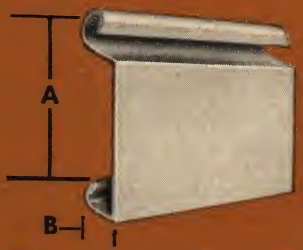
9.9 erection Erection shall conform to the Standards of Walter Balfour & Co., Inc., and shall be done by the company representatives.

9.10 guarantee Doors shall be guaranteed against defective materials and workmanship for a period of one year.

▲ patented

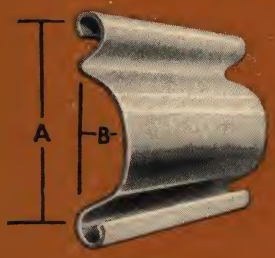
optional materials and accessories

■ 10.1 Delia and Alastor slats



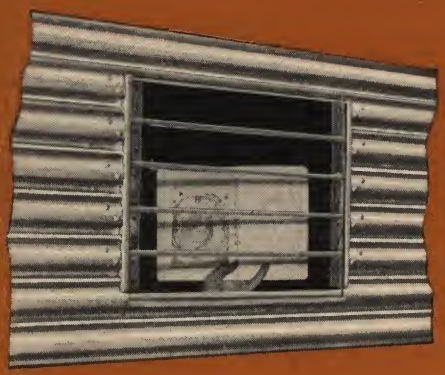
Slat	A	B	thickness
DELIA	1⅞"	½"	.052
ALASTOR	2½"	⅞"	.072

■ 10.2 standard shape slats

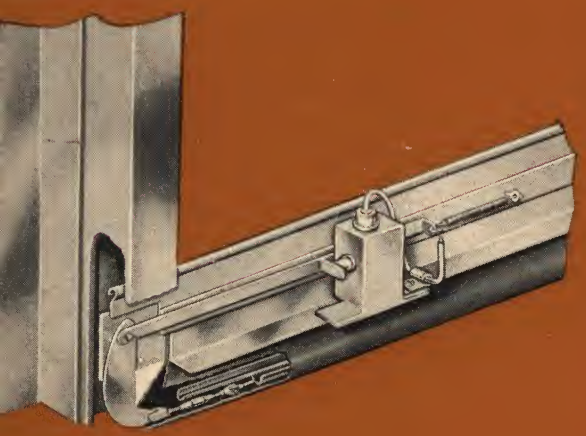


Slat	A	B
"S"	1⅞"	17/32"
"L"	2¾"	25/32"

■ 10.4 vision panel



■ 10.5 safety bottom bar



DELIA slats
ALASTOR slats } specifications

10.1 DELIA and ALASTOR are interlocking extruded aluminum slats formed so that a suspended curtain will lie in a vertical plane, presenting on the outside a flat surface with sharp, straight, uniformly spaced edges, and on the inside a seemingly single ribbed sheet of impressive lines. Balfour has originated these slats for architectural applications of higher order, where both strength and decorative expression are required. Slat material is 63S-T6 aluminum. Size and gauge are as shown on the left. Finish is either mill finish or a dense, thick alumilite coating for protection against weathering and wear. Coating may be plain or colored such as architectural gray, gold or black.

10.2 standard shape slats "S" and "L" slats are cold rolled interlocking slats of dimensions as shown on the left. Slat material may be as follows:

(1) Armco Aluminized Steel, Type 2. This is recommended where strong protection against corrosion is required and yet no paint is used. Aluminized steel possesses the strength of steel; has at least 3 times the corrosion resistance of a galvanized sheet with commercial weight zinc coating; requires no painting; resists higher temperatures and longer heat exposure than galvanized steel. The "S" slat is available in 20 U.S. gauge, and the "L" slat in 20 and 18 U.S. gauges.

(2) 52 S-H 32 Aluminum in mill finish. Aluminum slats are used where weight and surface properties are a consideration. Slat thickness is .040" for the "S" slat, and .051" & .065" for the "L" slat.

(3) 302 Stainless steel in #2 mill finish. This is intended for architectural applications or for satisfying requirements of particular atmospheres. The "S" slat is furnished in 20 U.S. gauge. The "L" slat in 20 and 18 U.S. gauges.

(4) Galvanized steel in 16 U.S. gauge. This is used for excessively wide openings, and for openings in localities where wind load requirements are abnormally high. Galvanized coating is 1.25 oz. zinc per sq. ft. of flat metal as per ASTM A93-52T.

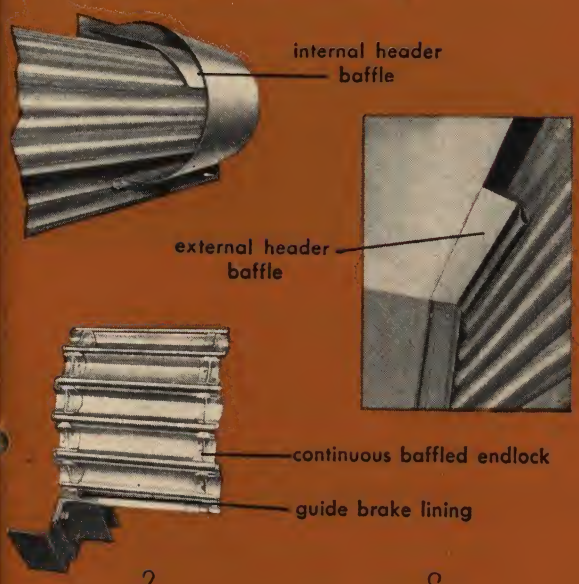
10.3 guides and hoods Guides and hoods may be furnished in aluminum and in stainless steel.

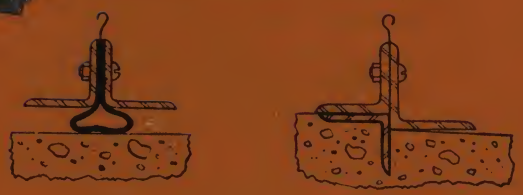
10.4 vision panel Vision panel is a window applied to the curtain to enable to see and to admit light. Panel is approximately 18" x 18" and consists of ⅜" thick plexiglass strips mounted on slats with weatherproof connections. Plexiglass is of the colorless, transparent type with high impact and weather resistance.

10.5 safety bottom bar Safety bottom bar is a safety device applied to the bottom bar by means of which a power operated curtain may either stop as it is moving downward or reverse its travel and return to its fully open position. Safety bar consists of a 7 x 7 stainless steel aircraft cable extending the full length of the bottom bar and housed in a neoprene weatherseal connected to bottom bar. Cable operates a switch located on the bottom bar and forming part of the control circuit. Cable is mounted to remain sensitive to any minimum force applied to it from any direction.

16g
Ba

■ 11.2 weather stripping





bottom bar seal type 1

bottom bar seal type 2

■ 11.5 wicket door

■ 11.6 mullions

11.1 baked on enamel Curtains which require painting are furnished with 2224 Grey vinyl forming enamel coating applied prior to roll forming. This coating resists the action of water, weather and chemicals. Salt spray tests have shown that this coating practically doubles the corrosion resistive life of a galvanized surface.

11.2 weatherstripping Various provisions are available to secure higher resistance against air infiltration and more effective weatherseal. These may be used individually or in combination as required.

11.2.1 internal header baffle Internal header baffle is a hinged 24 gauge galvanized sheet metal cover resting on curtain coil at all times and preventing air passage between hood and curtain coils.

11.2.2 external header baffle This baffle consists of a galvanized sheet metal closure piece sealing the gap between curtain and lintel. The sheet metal piece has a neoprene strip fastened along the edge contacting the curtain.

11.2.3 continuous baffled endlocks Baffled endlocks are of malleable iron and have a rib on the concave side to provide a continuous contacting edge between curtain and guide. Locks are riveted to each slat by means of two rivets per lock.

11.2.4 guide brake lining Brake lining consists of .020" thick spring phosphor bronze strip and 3/16" thick woven brake lining mounted in guide groove. This arrangement together with the baffled endlocks is most effective against air infiltration.

11.2.5 bottom bar seal type I Seal Type I consists of a neoprene loop suspended between the two bottom bar angles.

11.2.6 bottom bar seal type II Seal type II is an arrangement achieved by stepping the bottom bar angles.

11.3 locking devices Motor operated doors may have key-operated push button stations and a padlocking chain holder on the operator side guide for locking emergency chain.

11.4 windlocks Windlocks are available as an optional item on curtains not covered by Balfour standard service door specifications.

11.5 wicket door Wicket door is a built-in pass door which allows convenient access to the building. The door is Kalamein type, with 4" x 4" butt hinges, and is provided with a tubular cylinder lock set. Door frame is steel and is hinged on main door guides.

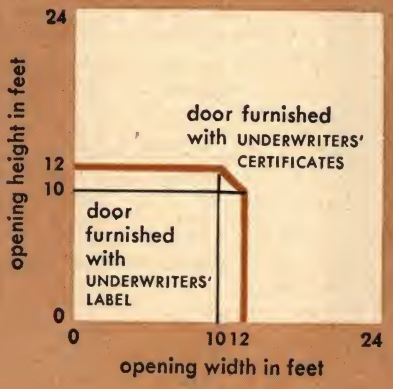
11.6 mullions At times excessively wide doors may not be practical, yet the entire, free width of the opening must be available for use. In such cases multiple doors still may be installed, provided the adjacent door guides are built into either a removable mullion or a sliding mullion. A removable mullion has limitations imposed by its weight. A sliding mullion is easily operable, and is furnished with a roller carriage and track consisting of a steel beam. Both mullions have provisions for being locked in place when functioning as door guides.

wB

Balfour fire doors provide your building with

are approved by

- N. Y. CITY BOARD OF STANDARDS and APPEALS
- UNDERWRITERS' LABORATORIES, INC.
  - UNDERWRITERS' STANDARDS
    - AUTOMATIC DOORS (self closing)
      - 3 HOUR CLASS A fire walls
    - anchor bolts shall extend through the wall. Local authorities may allow guide bolts only to be tapped into steel jambs

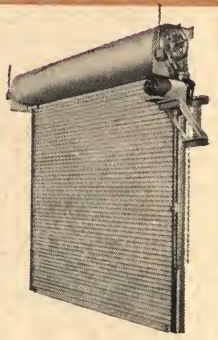


    - AUTOMATIC or NON-AUTOMATIC DOORS (self-closing) (not self-closing)
      - 1½ HOUR CLASS B vertical shafts
      - ¾ HOUR CLASS C corridors
      - 1½ HOUR CLASS D exterior walls

type UN40
power operated

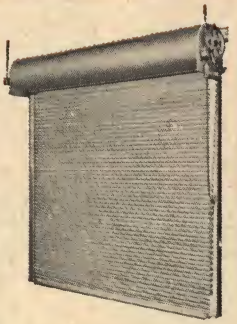
interior face mounted operator on wall

note: this door is in accordance with UNDERWRITERS' STANDARDS but cannot be furnished with UNDERWRITERS' LABEL



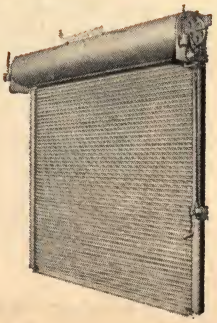
type UN20
chain operated

interior face mounted



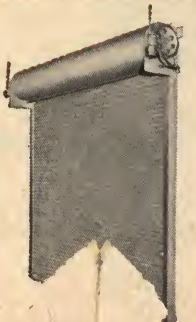
type UN30
crank operated

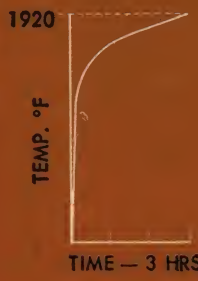
interior face mounted



type UN10
push-up

interior face mounted





- **protection against fire**
- **ordinary service as normal doors**

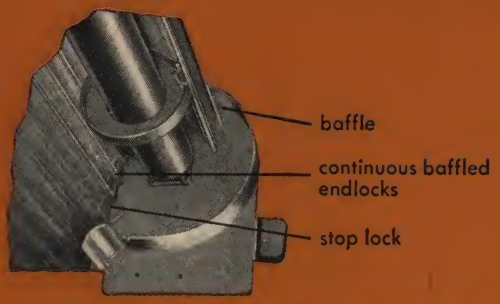
standard specifications page 13

installation clearances pages 14–15

window fire shutter pages 14–15

standard specifications

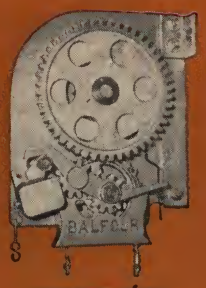
■ **13.2 curtain**
13.7 baffle



■ **13.3 spring counter balance**

■ **13.9 governor**

governor in normal operation



governor after automatic release

■ **13.13 guarantee**

13.1 general Fire Doors shall be (automatic) (non-automatic), Class ———, and shall have (chain) (crank) (push up) type operation. Doors shall be furnished with Underwriters' (Label) (Certificate) and shall be as manufactured by Walter Balfour & Co., Inc.

13.2 curtain Curtain shall consist of roll formed interlocking steel slats, bottom bar made up of two steel angles and steel reinforced top slat. Slats shall be not lighter than 20 U.S. gauge, hot dipped galvanized with 1.25 ounce per sq. ft. zinc coating conforming to A93-52T of the ASTM. Curtain shall be provided with endlocks as required by the Underwriters', and with two stoplocks located so that curtain will retain its full closed position in case of relaxation of springs under fire.

13.3 spring counterbalance Counterbalance shall consist of oil tempered and heat treated steel helical torsion springs housed in steel pipe. Springs shall be anchored to a torsion rod extending the full length of springs. Torsion rod shall have fixed on it a single balancing wheel placed on the outside of one of the brackets. Steel pipe shall not exceed 0.03" per ft. deflection, and shall have cast iron rings fastened to it.

13.4 brackets Brackets shall be of steel plate.

13.5 guides Guides shall be 3/16" minimum structural steel angles assembled with provision for expansion.

13.6 bearings Bearings shall be lubricated-for-life self-aligning ball bearings.

13.7 hood Hood shall be galvanized sheet metal, 24 gauge minimum.

13.8 baffle Baffle shall be 24 gauge sheet metal. Normally it shall be held away from the coil. Upon temperature rise it shall close on the coil thus preventing passage of flame or smoke.

13.9 automatic closing devices Devices shall consist of adjusting-release mechanism actuated by fusible links and coordinated with governor. Mechanism shall force curtain downward and permit lifting of the curtain by hand after automatic drop, and again allow automatic closure after emergency exit.

13.10 governor Governor shall be escapement type capable of limiting curtain drop to an even slow speed to avoid injury and impact. Governor shall be inoperative when door is in normal operation.

13.11 painting Painting shall consist of a shop coat of rust inhibiting primer applied to ferrous surfaces.

13.12 erection Erection shall be done by Walter Balfour & Co., Inc. or its representative.

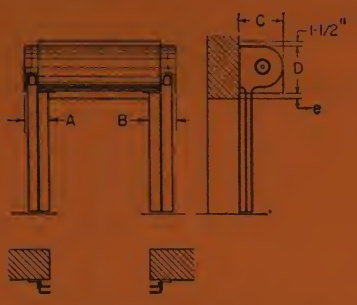
13.13 guarantee Guarantee shall cover defective material and workmanship for a period of one year.

fire door installation clearances

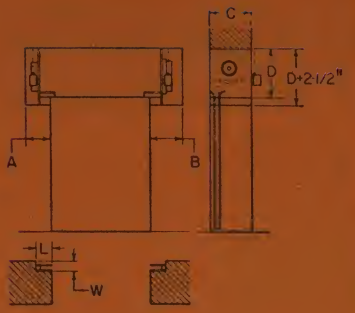
note: 1 data on pages 14 and 15 apply to doors for interior location only.
2 consult with Home Office on doors for exterior walls and power operated doors.
3 push-up doors are not recommended for openings above 80 square feet.

types

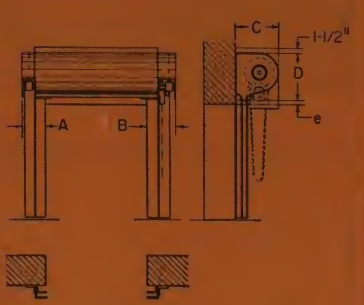
push-up
type UN10
face mounted



push-up
type UJ10
jamb mounted



chain
type UN20
face mounted



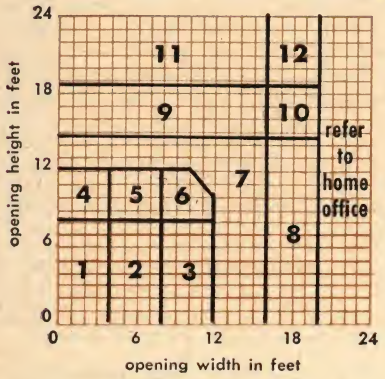
clearances [dimensions in inches]

area numbers	A	B	C	D
1	6 5/8	6 1/8	13 5/8	14 3/4
2	7 1/8	6 5/8	13 5/8	14 3/4

area numbers	A	B	C	D
1	7 5/8	7 1/8	13 1/2	17 1/2
2	8 1/8	7 5/8	13 1/2	17 1/2

area numbers	A	B	C	D
1	6 5/8	8	13 5/8	14 3/4
2	7 1/8	8 1/2	13 5/8	14 3/4
3	7 5/8	9	13 5/8	14 3/4
4	6 5/8	8	16 1/2	17 3/4
5	7 1/8	8 1/2	16 1/2	17 3/4
6	7 5/8	9	16 1/2	17 3/4
7	11 1/2	11	19 1/8	19
8	12	11 1/2	19 1/8	19
9	11 1/2	11	20 3/8	21
10	12	11 1/2	20 3/8	21
11	11 1/2	11	22 5/8	24
12	12	11 1/2	22 5/8	24

selection chart [all required clearances are keyed to area numbers on this chart]

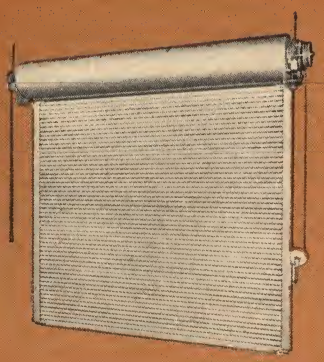


area numbers	header dimension "e"
1-6	1 1/2"
7-12	1/2"

between jamb guide groove clearances

area numbers	L	W
1, 4	4"	3"
2, 5	4 1/2"	3"
3, 6	5"	3"
7, 9, 11	5 1/2"	4"
8, 10, 12	6"	4"

Balfour window fire shutter



specifications

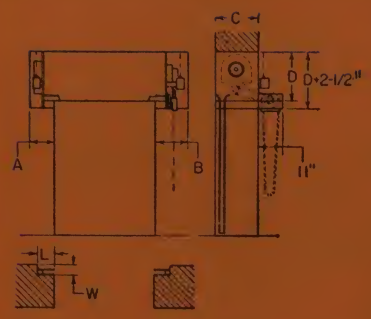
The specifications for the Balfour fire door shall apply to the Balfour fire shutter except as herein modified:

a Governor shall remain operative at all times.

b Shutter shall be provided with test release chain, mechanism resetting chain and gearless rewinding mechanism. These devices shall permit, respectively, to test curtain drop, reset dropping mechanism and crank curtain to its fully open position.

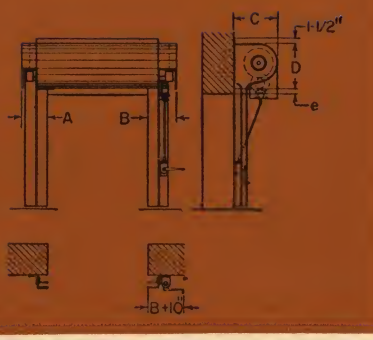
16g
Ba

chain
type UJ20
jamb mounted



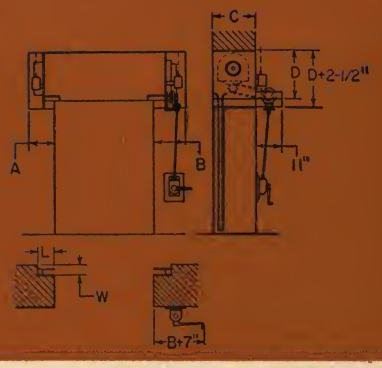
area numbers	A	B	C	D
1	7⅝	9	13½	17½
2	8⅛	9½	13½	17½
3	8⅝	10	13½	17½
4	7⅝	9	16	19½
5	8⅛	9½	16	19½
6	8⅝	10	16	19½
7	11	11½	20	31
8	11½	12	20	31
9	11	11½	21	33
10	11½	12	21	33
11	11	11½	24	35
12	11½	12	24	35

crank
type UN30
face mounted



area numbers	A	B	C	D
1	6⅝	8	13⅝	14¾
2	7⅛	8½	13⅝	14¾
3	7⅝	9	13⅝	14¾
4	6⅝	8	16½	17¾
5	7⅛	8½	16½	17¾
6	7⅝	9	16½	17¾
7	11½	11	19⅛	19
8	12	11½	19⅛	19
9	11½	11	20⅜	21
10	12	11½	20⅜	21
11	11½	11	22⅝	24
12	12	11½	22⅝	24

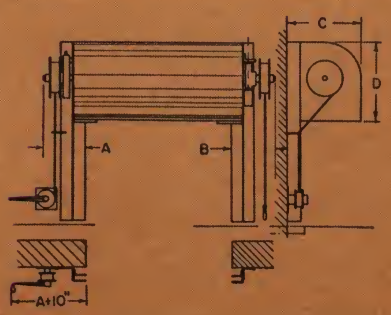
crank
type UJ30
jamb mounted



area numbers	A	B	C	D
1	7⅝	9	13½	17½
2	8⅛	9½	13½	17½
3	8⅝	10	13½	17½
4	7⅝	9	16	19½
5	8⅛	9½	16	19½
6	8⅝	10	16	19½
7	11	11½	20	31
8	11½	12	20	31
9	11	11½	20⅜	33
10	11½	12	20⅜	33
11	11	11½	22⅝	35
12	11½	12	22⅝	35

■ underwriters' labeled

type SN interior face mounted



installation clearances

opening height		up to 8′				up to 12′			
dimensions		A	B	C	D	A	B	C	D
opening width O ft.	to 4′	8½	9	13⅝	14¾	8½	9	16½	17¾
	to 8′	9	9½	13⅝	14¾	9	9½	16½	17¾
	to 12′	9½	10	13⅝	14¾	9½	10	16½	17¾

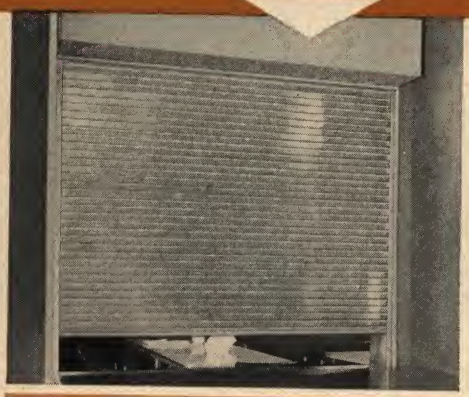
note: consult Home Office for details on exterior and jamb mounted shutters

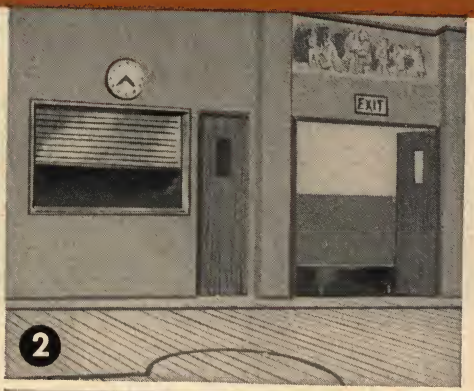
WB

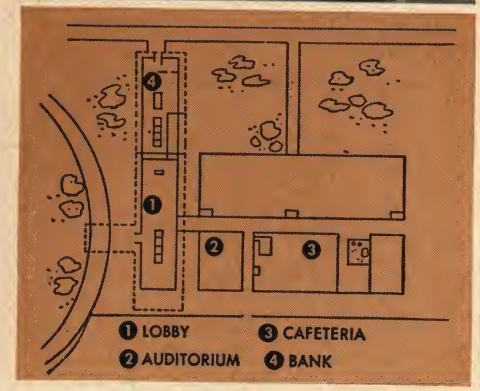
Balfour

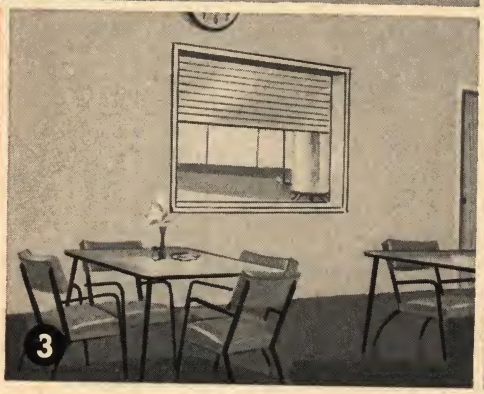
pygmee doors

- recognize the architectural determinants.
- their aluminum exterior combines with tiles, blocks, terrazzo, wood and furniture in creating the effects which reflect the spirit of our times.
- their lines are neat and complete. No recesses or exposed hardware are visible anywhere.
- in obtaining their functional aspects the aesthetics and mechanics are carried out to a peak without either suffering from the other.



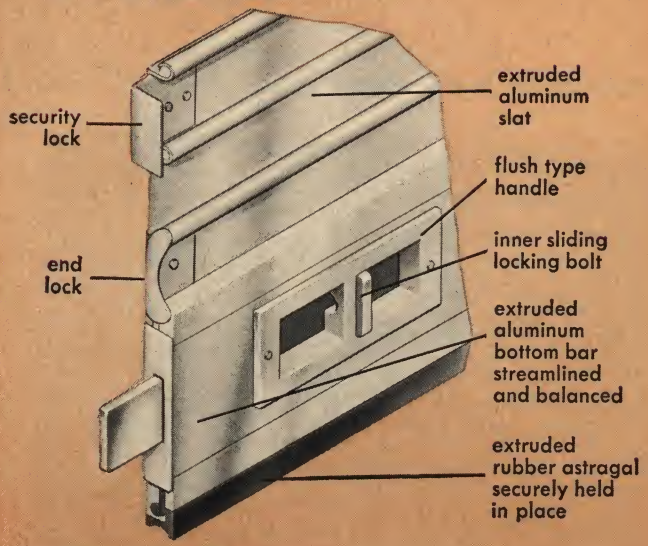






standard specifications

■ **16.2 curtain**
16.3 bottom bar


security lock
end lock
extruded aluminum slat
flush type handle
inner sliding locking bolt
extruded aluminum bottom bar streamlined and balanced
extruded rubber astragal securely held in place

16.1 general Doors shall be of the aluminum Pygmee type Rolling Doors mounted (on the face of the wall) (between jambs) and shall be (push-up) (crank) operation. Doors shall be as manufactured by Walter Balfour & Co., Inc.

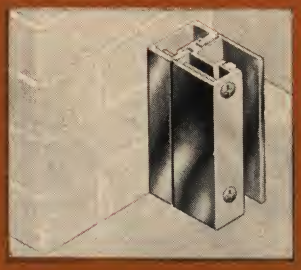
16.2 curtain Curtain shall consist of extruded aluminum slats not less than .048" thick and having a width of 1¼" and crown depth of ⅜". Slat extremities shall be provided with cadmium plated endlocks every second slat and cadmium plated security endlocks every sixth slat.

16.3 bottom bar Bottom bar shall be of extruded aluminum having a hollow rectangular cross-section, and shall be provided with inside located sliding locking bolts, held-in-groove (not glued) extruded rubber astragal, and recessed flush type aluminum handles.

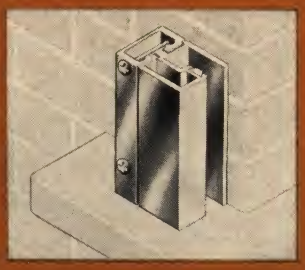
▲ patent pending

16g
Ba

■ 17.1 guides



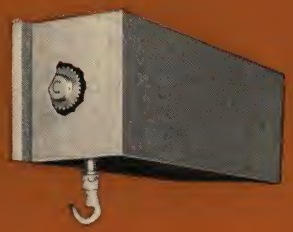
between jamb mounted



face mounted

■ 17.5 crank operator

crank operator with worm and bevel drive



■ 17.2 spring counterbalance

felt faced ring to prevent slat abrasion

■ 17.7 guarantee

▲ **17.1 guides** Guides shall be of the boxed-in frame type made of extruded aluminum and containing security curtain retaining groove to prevent curtain from being pulled out of guides. Guide groove shall have a continuous nylon strip to prevent slat wear and decrease curtain friction.

17.2 spring counterbalance Counterbalance shall consist of oil tempered and heat treated steel helical torsion springs housed in steel pipe. Springs shall be anchored to a torsion rod extending the full length of the springs and having fixed on it a balancing wheel located on interior with respect to bracket. Steel pipe shall not exceed 0.03" per ft. deflection, and shall have felt faced cast iron rings fastened to it.

17.3 hood Hood shall be of aluminum, 22 B & S Gauge.

17.4 brackets Brackets shall be steel plate of ⅛" minimum thickness.

17.5 crank operator Crank operator shall be furnished for doors exceeding 12' in width. Operator shall consist of a worm and bevel drive mounted on bracket and an operating removable arm.

17.6 finish Aluminum surfaces shall be given not less than ½ hour anodic coating. Ferrous surfaces shall be given a shop coat of aluminum paint.

17.7 guarantee Doors shall be guaranteed against defective materials and workmanship for a period of one year.

■ 17.8 removable mullion

■ 17.9 cylinder lock

optional materials and accessories

▲ **17.8 removable mullion** Removable Mullion shall be of the boxed-in frame type made of extruded aluminum, and containing security curtain retaining groove. Mullion shall be provided with inside mounted locking bolt.

▲ **17.9 cylinder lock** Bottom Bar shall be equipped with a centrally located cylinder lock operating two opposite locking bolts mounted on inside of bottom bar.

17.10 material Curtain and hood may be furnished in stainless steel and Armco aluminized steel, type 2. Stainless steel slats shall be 22 U.S. gauge minimum, and aluminized steel shall be 24 U.S. gauge minimum.

▲ patent pending

operation

maximum height	opening width	operation
8′-0″	up to 12′	push-up
8′-0″	12′—18′	crank

large openings

Openings over 18 feet wide shall be provided with two doors separated by a removable mullion to allow use of full opening width when doors are open.

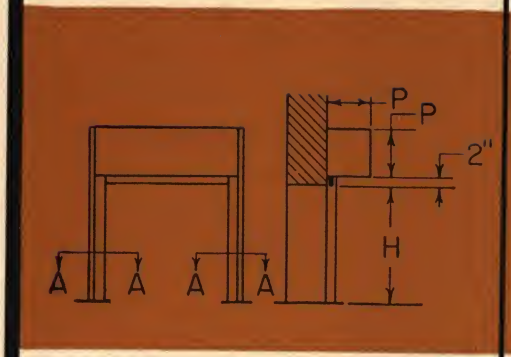
coil clearances

opening height H	coil dimensions P
up to 4′	9″
4′—6′	10″
6′—8′	11″

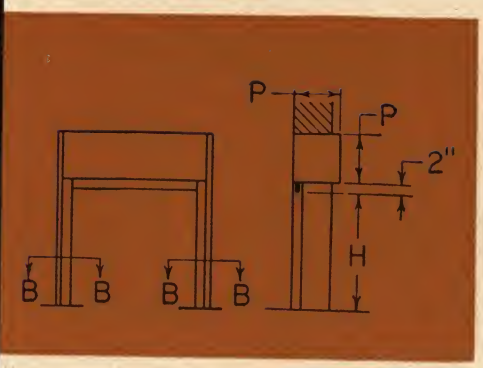
installation clearances

types

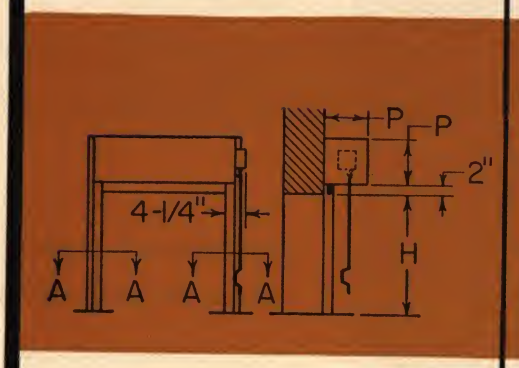
push-up
type YN10
face mounted



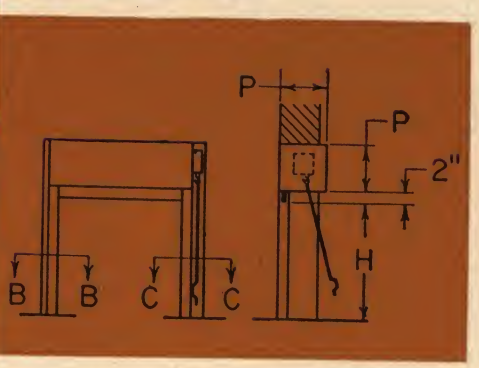
push-up
type YJ10
jamb mounted



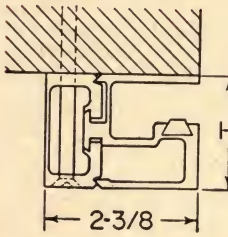
crank
type YN30
face mounted



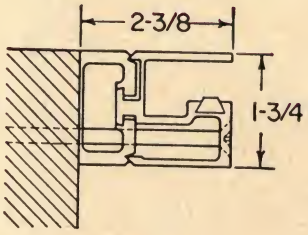
crank
type YJ30
jamb mounted



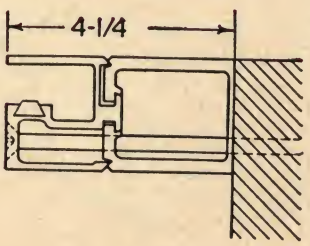
details (no scale)



A-A



B-B



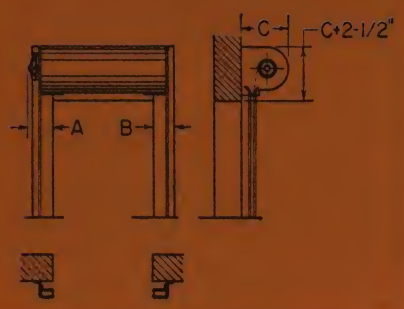
C-C

Balfour grilles bring elegance and protection to openings

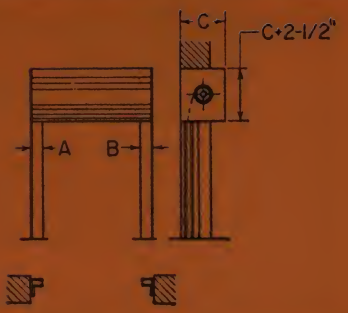
16g
Ba

types

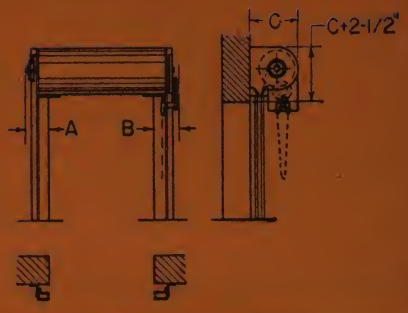
push-up
type GN10
face mounted



push-up
type GJ10
jamb mounted



push-up
type GN20
face mounted



clearances [dimensions in inches]

opening size	A	B	C
to 7′ high to 18′ wide	4¼	3⅛	14⅛
to 10′ high to 18′ wide	4¾	3⅛	16⅝

not recommended above 110 sq. ft.

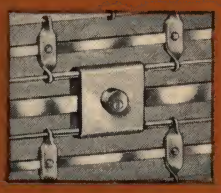
opening size	A	B	C
to 7′ high to 16′ wide	1¾	1¾	14
to 11′ high to 16′ wide	1¾	1¾	16½

not recommended above 110 sq. ft.

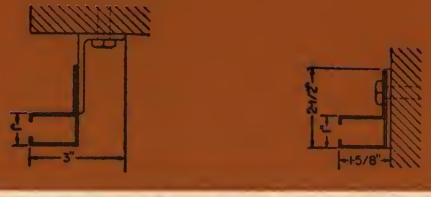
opening size	A	B	C
to 7′ high to 18′ wide	4⅛	6	14⅛
to 10′ high to 18′ wide	4¾	6	16⅝
to 13′ high to 21′ wide	4¾	6	18⅜

standard specifications

19.2 curtain
19.6 locking devices



19.4 guide details



19.1 general Grilles shall be of the spiral link type, shall be mounted (on the face of the wall) (between jambs) and shall be (push-up) (chain) (crank) (motor) operated. Grilles shall be as manufactured by Walter Balfour & Co., Inc.

19.2 curtain Curtain shall consist of spiral steel links fastened to flat steel bars and forming rolling connection with alternating 5/16" round bars. Self-aligning steel or malleable iron endlinks shall be fastened to end of bars to retain curtain in the guides. Clear openings between flat and round bars shall not exceed 1¼". Curtain bottom shall have two steel angles.

19.3 spring counterbalance Counterbalance shall be by means of helical torsion springs housed in steel pipe and anchored to single torsion rod provided with balancing wheel. Pipe deflection shall be .03" per ft. maximum.

19.4 guides and brackets Guides shall be of bent steel shapes. Brackets shall be steel plate 3/16" thick minimum.

19.5 hood Hood shall be galvanized sheet metal 24 U.S. gauge minimum.

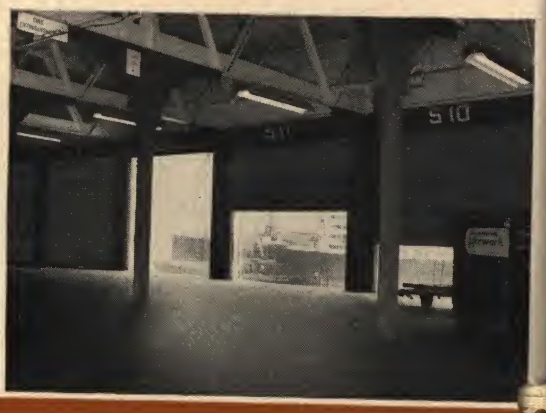
19.6 locking devices A five tumbler cylinder lock working from either side shall be provided along with locking bars.

19.7 finish Curtains shall be galvanized. Non-galvanized ferrous surfaces shall have a shop coat of paint.

19.8 guarantee Grilles shall be guaranteed against defective materials and workmanship for a period of one year.

optional materials
Grille curtain may be furnished in aluminum or stainless steel.

typical installation



PIER "B" PORT OF N.Y. AUTHORITY, HOBOKEN, N.J.

Walter Balfour & Co., Inc.

404 OAKLAND STREET

BROOKLYN 22, NEW YORK

Telephone: EVergreen 3-3220

regional representation

ALABAMA	BIRMINGHAM (8)	ARCHITECTURAL SPECIALTIES CO., INC.	700 Avenue H, Ensley	STate	5-4143
	MOBILE	UNDERWOOD BUILDERS SUPPLY CO.	P. O. Box 1587	HEmlock	2-3581
ARKANSAS	LITTLE ROCK	ARKANSAS BUILDERS SUPPLY CO.	P. O. Box 2996	FRanklin	5-5397
COLORADO	DENVER (9)	EDWARD E. DUSTIN	P. O. Box 4053	SKyline	6-5301
CONNECTICUT	NEW HAVEN	A. R. KIRSCHNER COMPANY	315 Whitney Avenue	LOcust	2-9697
DIST. COLUMBIA	ARLINGTON, VA. (2)	CRAWFORD DOOR SALES CORP. of WASH. D.C.	1233 Jefferson Davis Highway	OTis	4-5422
FLORIDA	DAYTONA BEACH	R. E. GALL	P. O. Box 67	CLinton	3-1421
	MIAMI (42)	A. B. BROWN	3651 N. W. 46th Street	NEwton	4-5011
	ORLANDO	CLYDE C. CARPENTER	P. O. Box 2847	GArden	3-0946
	PENSACOLA	GULF COAST STEEL BUILDINGS, INC.	P. O. Box 127	HEmlock	8-9689
	TALLAHASSEE	W. S. LEE CO., INC.	P. O. Box 908		3-2100
GEORGIA	ATLANTA (3)	WILLIAM E. McGILL & COMPANY	205 Red Rock Building	JAckson	5-7644
ILLINOIS	CHICAGO (8)	CONTINENTAL NU-STEEL METAL PROD. CO.	1248 South Ashland Avenue	CAnal	6-5472
	PEORIA	LUCAS SALES COMPANY	1328 South Washington Street		3-8547
INDIANA	HAMMOND	STANDARD EQUIPMENT & SUPPLY CORPORATION	534-536 Michigan Street	WEstmore	1-3060
	INDIANAPOLIS (1)	BARRISON & CLARKE, INC.	P. O. Box 5227	MElrose	2-9388
	SOUTH BEND (28)	NELSON ENGINEERING SALES, INC.	1612 Lincolnway West	CEntral	2-8245
IOWA	DAVENPORT	MIDWEST METALS CORP.	P. O. Box 899		7-5244
KANSAS	WICHITA (1)	CHESTER L. ANDERSON COMPANY, INC.	P. O. Box 2254	HObart	4-9354
KENTUCKY	LOUISVILLE (2)	THE EQUIPMENT & SPECIALTIES COMPANY, INC.	627 South Jackson Street	JU	4-7114
LOUISIANA	NEW ORLEANS (15)	MATERIALS-SERVICE INC.	4100 Tchoupitoulas Street	TWinbrook	5-3962
MARYLAND	BALTIMORE	ROLLING DOOR SALES & REPAIR COMPANY	620 Anneslie Road	DRexel	7-6747
MASSACHUSETTS	BOSTON	THE CONSTRUCTION SUPPLY COMPANY	P. O. Box 206, Norwood	NOrwood	7-3820
MICHIGAN	DETROIT	FIRE DOORS, INC.	P. O. Box 1097	PRescott	7-9090 & 6-0929
	GRAND RAPIDS	H. EDWARD BRUNHOFF, JR.	P. O. Box 93-C	GLendale	2-4808
MINNESOTA	MINNEAPOLIS (22)	DONNELLY SALES, INC.	5116 - 35th Avenue, North	JU	8-6086
MISSISSIPPI	JACKSON	W. B. BOWERS	P. O. Box 2162	FL	3-4743
MISSOURI	KANSAS CITY (11)	HOWARD & ARNOLD COMPANY	226 West 39th Street	PLaza	3-3980
	ST. LOUIS (17)	AUGUST COURT COMPANY	1110 South Brentwood Blvd.	PArkview	1-2916
NEBRASKA	OMAHA (10)	SIMPSON-GOODWIN COMPANY	4403 Florence Blvd.	PLeasant	7-500
NEW JERSEY	NEWARK (4)	MARVIN METAL PRODUCTS COMPANY	825 Summer Avenue	HUmboldt	5-3200
NEW MEXICO	ALBUQUERQUE	J. C. BALDRIDGE LUMBER COMPANY	P. O. Box 454		
NEW YORK	BUFFALO (3)	A. O. STILWELL COMPANY, INC.	991 Main Street	GRant	6506
	NEW YORK	WALTER BALFOUR & COMPANY, INC.	404 Oakland Street, Brooklyn (22)	EVergreen	3-3220
	ROCHESTER (9)	McKEE DOOR SALES OF ROCHESTER	1292 East Main Street	CUlver	1710
	SCHENECTADY (4)	ERNEST A. BARBEAU	84 Furman Street	FRanklin	4-7030
NORTH CAROLINA	CHARLOTTE	MAXSON-BETTS COMPANY	P. O. Box 1716	EDison	4-5508
OHIO	AKRON	R. J. FLICKINGER COMPANY	1574 Akron—Peninsula Rd.	WAlnut	3-9737
	CINCINNATI (10)	DURBROW-OTTE ASSOCIATES, INC.	1426 Clay Street	PArkway	1-0068
	TOLEDO (2)	JOHN B. ROADHOUSE	1220 Madison Avenue	CHerry	1-8456
	YOUNGSTOWN	SAUSE STRUCTURAL STEEL COMPANY	516 East Indianola Avenue	STerling	8-5049
OKLAHOMA	OKLAHOMA CITY (4)	L. E. ACKER COMPANY	1809 West Main Street	CEntral	2-3771
PENNSYLVANIA	EASTON	GENERAL SUPPLY COMPANY	620 Lehigh Drive	EAston	8-7261
	HARRISBURG	DOORS, INC.	P. O. Box 1095	JOrdan	4-2057
	MILTON	CONSTRUCTION SUPPLY & EQUIPMENT INC.	P. O. Box 71		779
	PHILADELPHIA (42)	HERBERT G. PITTS	6646 Guyer Avenue	SAratoga	7-1919
	PITTSBURGH (16)	ENGINEERED MATERIALS COMPANY	306 Beverly Road	LOcust	1-0744
	SCRANTON	JOHN J. WEIS & SON, INC.	P. O. Box 1286	DI	7-4825
	YORK	JACK HANISH & SON, INC.	130 West Kurtz Avenue	YOrk	8-1481 & 2-6335
RHODE ISLAND	PROVIDENCE (7)	G. FRED SWANSON, INC.	618 Cranston Street	GAspee	1-0788
SOUTH CAROLINA	COLUMBIA	OWEN STEEL COMPANY, INC.	P. O. Box 694	ALpine	6-4951
	CHARLESTON	SOUTHEASTERN STEEL COMPANY	P. O. Box 6373-A, Myers	RAymond	2-8876
TENNESSEE	KNOXVILLE (20)	TENNESSEE STRUCTURAL PRODUCTS COMPANY	P. O. Box 9008		7-2507
	MEMPHIS (12)	MODERN DOORS & WINDOWS, INC.	P. O. Box 5161	GL	8-3332
	NASHVILLE (9)	VOLUNTEER STRUCTURES, INC.	4108 Dakota Avenue	CYpress	7-5358
TEXAS	DALLAS (9)	R. E. L. WHITTEN COMPANY	P. O. Box 7171	EMerson	3-2531
	HOUSTON (21)	ASSOCIATED BUILDERS SPECIALTIES	P. O. Box 14112	MIssion	4-5471
	SAN ANTONIO (2)	THAD ZIEGLER GLASS COMPANY	P. O. Box 2537	CApitol	6-2218
VIRGINIA	NORFOLK (10)	WITHERS CLAY UTLEY, INC.	424 West 21st Street	MAdison	5-6719
	ROANOKE	CATES BUILDING SPECIALTIES, INC.	P. O. Box 2489	DIamond	3-2473
W. VIRGINIA	DUNBAR	WILLIAM EDWARD HORROCKS	1332 Grosscup Avenue	POplar	8-2619
WISCONSIN	MILWAUKEE (12)	BIERSACH & NIEDERMEYER COMPANY	1937 North Hubbard Street	FRanklin	4-4000
PUERTO RICO	SAN JUAN (6)	AMERICAN AGENCIES	P. O. Box 1216		

CAHILL
ROLLING DOORS

Edward Cahill, Inc. | Clifton, N. J.

CAHILL over 50 years of service

For well over a half century EDWARD CAHILL, INC. has welcomed the opportunity to meet the most difficult conditions incidental to the application of Rolling Doors.

Our tradition of top flight design, craftsmanship and the use of the best available materials has resulted in the ever increasing use of CAHILL Doors, where quality is the first consideration.

It is our practice to design each and every door to the particular application for which it is to be used.

installation

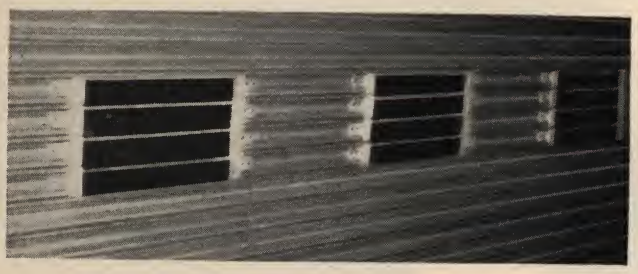
CAHILL Rolling Doors can be installed with mechanic supervised unskilled labor. Erection instructions and shop drawings enable installation to become a routine matter.

maintenance

Elaborate maintenance is not necessary. However, a periodic check of fastenings, gear alignment, lubrication, etc. should be made to insure continued efficient operation.

Features

slats



◀ Illustration of rolling door equipped with unbreakable vision panel.

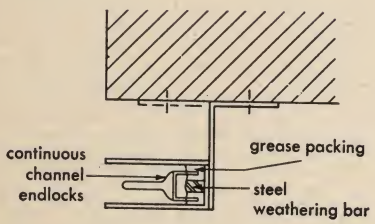
18 and 20 gauge Slats

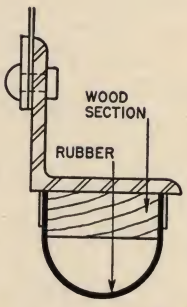
16 gauge Slats

End Locks and Wind Lock Lugs Used for Wide Service Doors

End Locks Used With Underwriters Doors

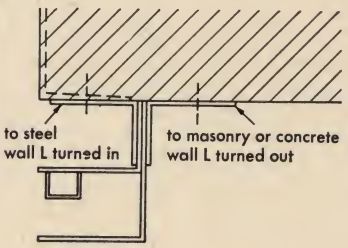
guides

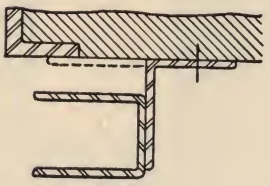




Bottom Bar with Rubber Weathering

weatherstripping





Standard 3 inch Guide

ROLLING DOORS

Underwriters Labeled Doors pages 4 and 5

Cahill Labeled doors are approved by the National Board of Fire Underwriters and meet the requirements of their service and tests.

Operation of the Fire doors are one of the following 3 types:
1. Manual, by means of handles on bottom bar.
2. Hand chain through reduction gearing.
3. Crank operated through reduction gearing.

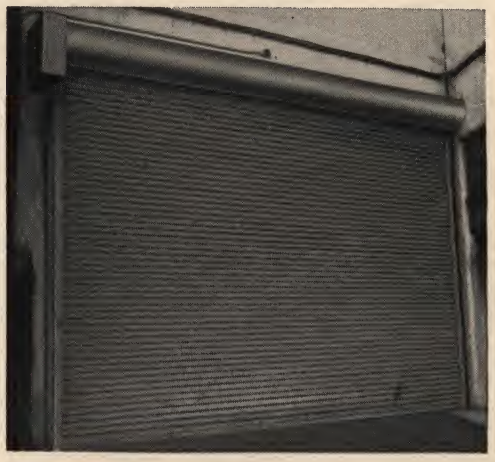
Doors may be installed on the face of the wall; between the jambs or set in reveals or recesses.

Where chain or crank operation interferes with the architectural or structural features of a building, manual operation may be substituted for the chain or crank type.

A complete specification is available upon request.

All Labeled Fire Doors are factory inspected by the Board of Fire Underwriters and installations are also subject to Underwriters' inspection.

Labels are issued as Class A; 3 hour rating, Class B; 1½ hour rating, Class C; ¾ hour rating, Class D; 1½ hour rating. Oversize doors are not labeled, but certificates of inspection, indicating conformity to Underwriters' specifications are furnished, countersigned by the Underwriters with each door.



Commercial and Service Doors pages 4 and 5

"A complete specification, fitting your requirements, is available upon request.

We indicate here a minimum specification for Service Type Doors.

Slats are of No. 20 gauge steel, hot galvanized, or stainless. Aluminum slats are .051 gauge. Galvanized slats have a zinc coating of 1.2 ozs., hot dipped and chemical treatment for paint adhesion is also included.

Malleable end locks are riveted to ends of alternate slats.

Door guides are fabricated from special channels, with a minimum depth of 3".

Shafts are fabricated of pipe or tubing, and counterbalance the door at all points by means of oil tempered helical springs manufactured by EDWARD CAHILL, INC.

All Gray iron Castings from patterns designed from machine moulding.

All Malleable Castings are certified.

All gears are from machine cut patterns.

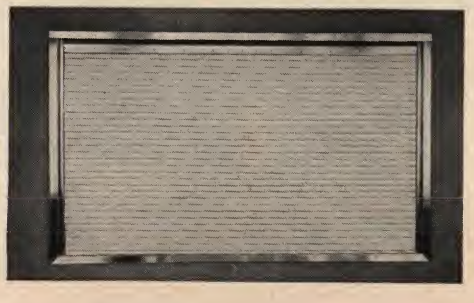
Service Doors are used on any opening not requiring fire protection. They can be applied to openings ranging in size from a few to many hundreds of square feet. They can be used on new or old construction, or on temporary or pre-fabricated buildings.

These doors are available as manually operated doors, by means of handles on the bottom bar, or with a mechanical or motor operator. Mechanical operators are hand chain or crank through reducing gearing.

Details on motor operated doors will be found on Page 6.

Rolling Grilles, Motor Operation and Installations pages 6 and 7

Rolling Grilles are available in galvanized or stainless, as well as in aluminum. Their use is becoming more widespread as designing authorities find more application for them. They may be used in combination with Rolling Doors as a barrier without shutting off light and air.



Shutters

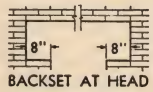
CAHILL Junior Shutters are essentially designed for counter openings. However, it may be put to other applications and inquiries are invited.

Shutters are available in galvanized steel, stainless and in aluminum.

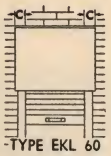
Curtains roll in guides, designed to fit the application and coil on shafts counterbalanced with helical springs. The whole assembly being supported by ball bearings.

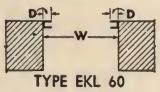
UNDERWRITERS

between jambs

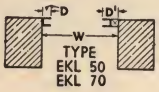


BACKSET AT HEAD


TYPE EKL 60



TYPE EKL 60



TYPE EKL 50 EKL 70

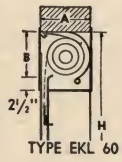
under 120 sq. ft. self coiling

W	C	D	H	A	B
4′-0″	8″	3¾″	4′-0″	15″	15″
8′-0″	8″	4½″	to	15″	15″
10′-0″	8″	5¼″	12′-0″	15″	15″
12′-0″	9″	5½″		15″	15″

over 120 sq. ft. chain or crank geared

W	C	D	H	A	B
4′-0″	10″	3¾″	4′-0″	15″	15″
8′-0″	10″	4½″	8′-0″	15″	15″
10′-0″	10″	5¼″	12′-0″	16″	16″
12′-0″	11″	5½″	14′-0″	16½″	16½″
14′-0″	11″	5¾″	16′-0″	17½″	17½″
16′-0″	12″	6″	18′-0″	18½″	18½″
18′-0″	12½″	6½″	20′-0″	19″	19″
20′-0″	12½″	6¾″	22′-0″	22″	20″
22′-0″	13″	7½″	24′-0″	24″	24″
24′-0″	13½″	7¾″			

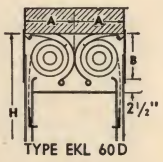
single



TYPE EKL 60

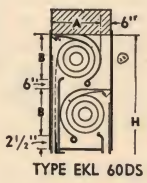
hand
EKL 60•

double



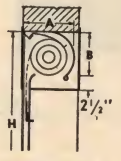
TYPE EKL 60D

hand
EKL 60D•



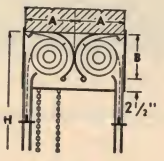
TYPE EKL 60DS

hand
EKL 60DS•



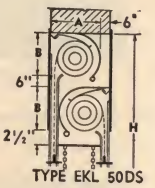
TYPE EKL 060

hand
EKL 060•
chain
EKL 50•



TYPE EKL 50D

chain
EKL 50D•
crank
EKL 70 D•

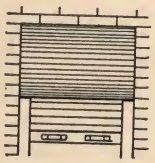


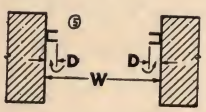
TYPE EKL 50DS

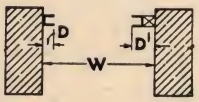
chain
EKL 50DS•
crank
EKL 70DS•

COMMERCIAL

between jambs







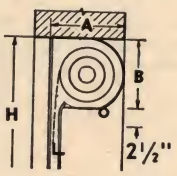
under 80 sq. ft. self coiling

W	D	H	A	B
6′-0″	3½″	4′-0″	10″	10″
7′-0″	3½″	6′-0″	11″	11″
8′-0″	3½″	7′-0″	11½″	11½″
9′-0″	3½″	9′-0″	12″	12″
10′-0″	3½″	10′-0″	12½″	12½″

over 120 sq. ft. chain or crank geared

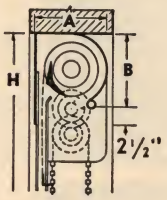
W	C	D	H	A	B
6′-0″	6″	4″	4′-0″	10″	10″
7′-0″	6″	4″	6′-0″	11″	11″
8′-0″	6″	4″	7′-0″	11½″	11½″
9′-0″	6″	4″	9′-0″	12″	12″
10′-0″	6″	4″	10′-0″	12½″	12½″

single



hand
KL 20▲

single



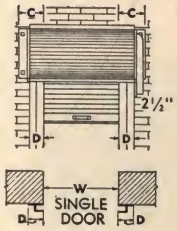
TYPE KL 10

chain
KL 10
crank
KL 30

▲add "R" for recessed guides: D=4″, recess depth=2¼″
•add "R" for recessed guides: recess depth=2¼″

ROLLING DOORS

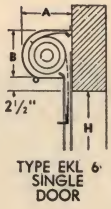
face of wall



under 120 sq. ft. self coiling

W	C	D	H	A	B
4′-0″	8″	3″	4′-0″	15″	15″
8′-0″	8″	3½″	to	15″	15″
10′-0″	8″	4″	12′-0″	15″	15″
12′-0″	9″	4½″		15″	15″

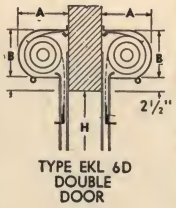
single



TYPE EKL 6 SINGLE DOOR

hand
EKL 6

double



TYPE EKL 6D DOUBLE DOOR

hand
EKL 6D

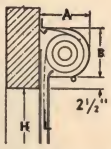
over 120 sq. ft. chain or crank geared

W	D	D¹	H	A	B
4′-0″	3″	8″	8′-0″	15″	15″
8′-0″	3½″	8″	12′-0″	15″	15″
10′-0″	4″	8″	14′-0″	16″	16″
12′-0″	4½″	8″	16′-0″	16½″	16½″
14′-0″	5″	9″	18′-0″	17½″	17½″
16′-0″	5½″	9″	20′-0″	18½″	18½″
18′-0″	5½″	9″	22′-0″	22″	19″
			24′-0″	24″	24″

16g / Ca

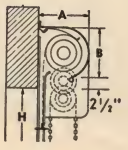
D¹ Side with Operator.

single



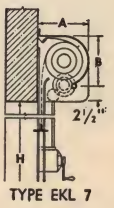
TYPE EKL 06

hand
EKL 06



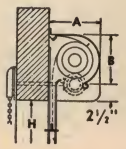
TYPE EKL 5

chain
EKL 5



TYPE EKL 7

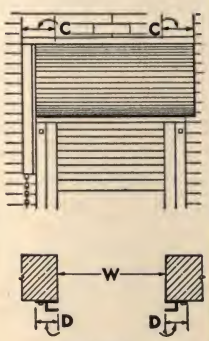
crank
EKL 7



TYPE EKL 500

chain
EKL 500

face of wall

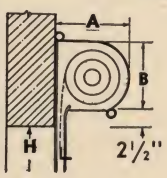


hand
KL 2

under 80 sq. ft. self coiling

W	C	D	H	A	B
6′-0″	8″	4″	4′-0″	10″	10″
8′-0″	8″	4″	6′-0″	11″	11″
10′-0″	8″	4″	9′-0″	12″	12″
16′-0″	9″	5″	12′-0″	14″	14″
20′-0″	10″	6″	15′-0″	16″	16″
24′-0″	11″	7″	16′-0″	17″	17″
			18′-0″	18″	18″
			21′-0″	22″	22″
			24′-0″	24″	24″

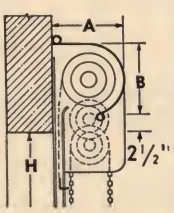
single



over 80 sq. ft. chain or crank geared

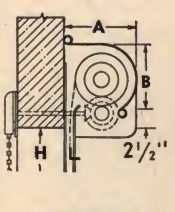
W	D	D¹	H	A	B
6′-0″	3½″	6″	4′-0″	10″	10″
9′-0″	3½″	6″	6′-0″	11″	11″
10′-0″	3½″	6″	9′-0″	12″	12″
12′-0″	4″	8″	12′-0″	14″	14″
16′-0″	5″	8″	15′-0″	16″	16″
18′-0″	6″	9″	16′-0″	17″	17″
			18′-0″	18″	18″
			21′-0″	22″	22″
			24′-0″	24″	24″

D¹ Side with Operator.



TYPE KLI

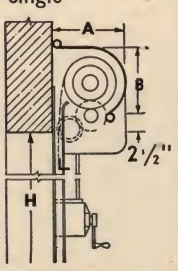
chain
KL 1



TYPE KL 100

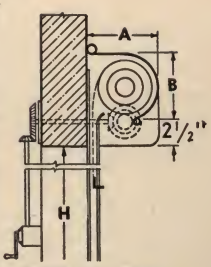
chain
thru wall
KL 100

single



TYPE KL 3

crank
KL 3



TYPE KL 300

crank
thru wall
KL 300

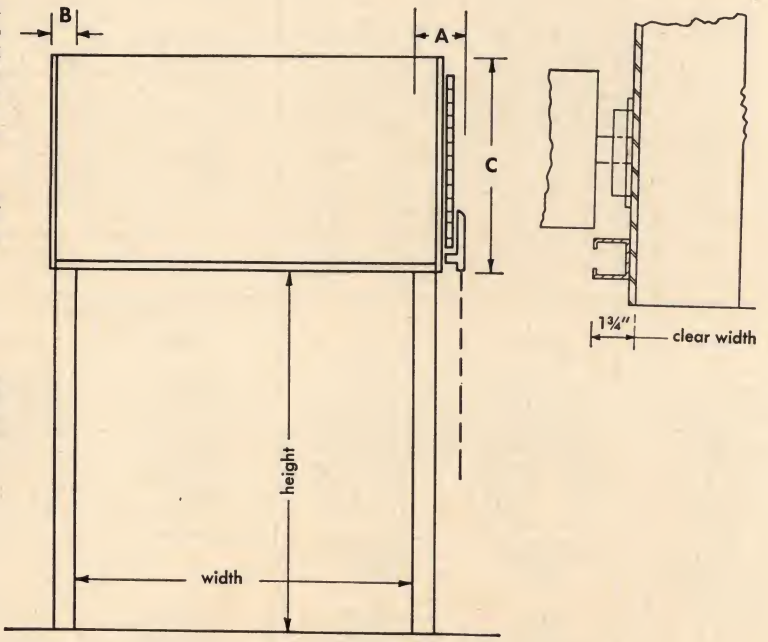
GRILLES

Rolling Grilles are fabricated from 5/16" round rod and 1/8" straps, riveted and secured to the exclusive CAHILL long link. This link affords up to 6 times as much bearing surface on the rods, affording ease of operation and rigidity to the entire curtain. The Grille guides are especially designed to form a locking channel which engage the endlocks so that the entire curtain cannot be removed from the guides under extraordinary stresses.

Rolling Grilles are available in galvanized steel, stainless steel or aluminum, and may be operated by means of handles on the bottom bar, chain gearing, crank gearing or motor operation.

grille dimensions

W	A	B	H	C
To 12'-6"	4¾"	2"	To 10'-0"	1'6-½"
12'-7" To 22'-0"	8¼"	3½"	10'-0"— 15'-0"	1'-8½"



MOTOR OPERATION

The CAHILL motor operator was designed specifically for use with Rolling Doors. It is not an adaptation from another type of door operator. Complicated gearing and clutch arrangements have been omitted with the intent of furnishing the most efficient and rugged type of equipment available for its particular use. The latest NEMA standards for motor frames have contributed to the design of this fine operator.

Motors are totally enclosed, high torque and wound to suit available current. A unique solenoid brake is made one piece with the motor frame and eliminates the possibility of mis-alignment.

Power is transmitted through a rugged bronze and steel worm and wheel reduction unit, running in a continuous oil bath.

Total gear reduction results in door travel of approximately ⅔ of a foot per second.

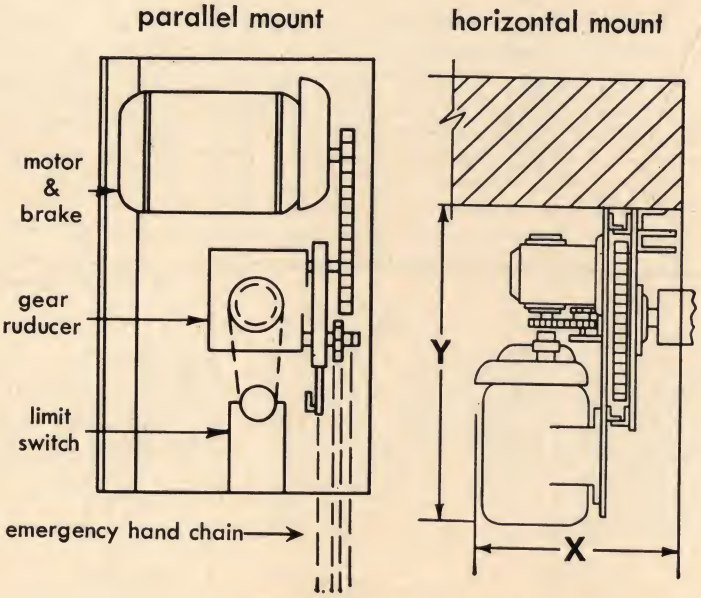
The emergency hand operation is instantly available from the floor. The use of this operator immediately cuts off all current from the motor by means of an electric interlock, which remains effective until the hand chain operator has been released. This special emergency operator is designed for use in the event of power failure. However, if it becomes necessary to remove the motor and brake, the emergency operator is not affected and the door may be used.

A rotary type limit switch terminates door travel in either direction.

Push button switches and magnetic reversing switches with overload protection are furnished as standard equipment.

Transmission to the door shaft is usually by direct gearing. However, where conditions make it necessary, sprocket and chain drives are also available.

Special and explosionproof operators are available to meet conditions requiring the use of such equipment.



dimensions

x	y
1'-3" ±	2'-6" maximum

Installations

A battery of large Motor Operated Doors installed in a shipping area.

A compact arrangement that does not shut off light through the windows when doors are open.

Cahill Doors particularly fitted to the requirements of large stadia.

Motor Operated Door installed in a railroad opening.

Example of a new installation on an existing building.

Pass or Wicket Door to permit pedestrian access.

AGENTS

ALABAMA
Gilsteel, Inc.
2720 Apple Valley Rd.
Atlanta, Georgia

ARIZONA
Clarence R. Yeager
4701 East Lewis Ave.
Phoenix

COLORADO
E. T. Cressman
2244 South Madison St.
Denver 10

CONNECTICUT
A. C. Bauman Company
86 Fitch Street
New Haven 15

FLORIDA
Simpson-McCord Company
742 West Madison Street
Tallahassee

GEORGIA
Gilsteel, Inc.
2720 Apple Valley Rd.
Atlanta 19

ILLINOIS
W. W. Grote
1219 West Loucks Ave.
Peoria

IOWA
Kennedy & Company
110 S.E. Sixth St.
Des Moines

INDIANA
Building Specialties Co.
1102 West 25th Street
Indianapolis 23

MARYLAND
Associated Building
Specialists, Inc.
4320 Old York Road
Baltimore 12

MISSOURI
Ryan & Pigeon
2826 Main Street
Kansas City

Radcliffe Industries, Inc.
8992 Manchester Road
St. Louis 17

NEW MEXICO
S. W. Avery Company, Inc.
3218 Silver Avenue, S.E.
Albuquerque

NEW YORK
Alexander J. Woehrle
377 Wellington Road
Delmar

NEW YORK CITY
Edward Cahill, Inc.
82 Industrial Ave. East
Clifton, New Jersey

NEW JERSEY
Morrison Steel Company
Jersey Avenue
New Brunswick

NORTH CAROLINA
W. Lee McLane
P.O. Box 6125
Charlotte

SOUTH CAROLINA
Bass Building Specialties, Inc.
P.O. Box 5055,
Cedar Terrace
Columbia

TENNESSEE
Jonakin Bldg. Specialties
2907 Haywood Avenue
Chattanooga

George W. Ruth & Company
3819 Richland Avenue
Nashville 5

WASHINGTON D.C. AREA
W. M. Schoenfelder &
Associates
77 Wisconsin Avenue
Bethesda 14, Maryland

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EDWARD CAHILL, INC.

Clifton, New Jersey

ROLLING DOORS AND PARTITIONS

ROLLING SERVICE DOORS	**STEEL OR ALUMINUM**	**PAGE**	
	General Information	2 & 3	
	Special Features	4 & 5	
	Slats and Guides	6 & 7	
	Operator Types	8 & 9	
	Specifications	8, 9 & 10	
"SERVIRE" FIRE DOORS	**UNDERWRITER LABELED**	**PAGE**	
	General Information	11	
	Specifications	12 & 13	
ROLLING GRILLES	**STEEL OR ALUMINUM**	**PAGE**	
	General Information and Specifications	14 & 15	
COUNTER DOORS	**EXTRUDED ALUMINUM**	**PAGE**	
	General Information and Specifications	16 & 17	
SIDE COILING PARTITIONS	**WOOD SLAT DESIGN**	**PAGE**	
	General Information and Specifications	18 & 19	

THE COOKSON COMPANY
SAN FRANCISCO • LOS ANGELES
Sales and Service in Principal Cities

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BULLETIN NO. 6001

A.I.A. FILE NO. 16-D

ROLLING DOORS

designed for user satisfaction—with Architect, Engineer, Builder problems in mind

easier to specify

Simplicity and compactness of design; comprehensive engineering service in providing complete specification detail; and custom manufacturing of each door to meet the requirements of its specific location—all are geared by Cookson to relieve the architect, engineer and builder of technical problems on both standard and special door specifications.

easier to install

Cookson doors are shipped with the curtain fully assembled, avoiding the necessity of matching up sections and applying end locks. The continuous wall angle construction further simplifies installation procedure. Precision factory engineering eliminates need for costly on-the-job modifications. No special skills or equipment are necessary to install Cookson Rolling Doors. Full details are supplied.

more effective use of space

Advanced compact design characteristics, employing proper selection of modern materials for maximum strength without useless weight or bulk, permit optimum use of opening, wall and overhead space, and floor areas. All Cookson doors coil effectively out of the way, with minimum projection, assuring safety of equipment and clean appearance.

proved in service

Through two generations of specialized service, Cookson Service Doors, "Servire" Fire Doors, and Rolling Grilles, and more recently Cookson Side Coiling Partitions, have been in constant operation throughout the Nation. Their easier operation and lower maintenance requirements are a matter of record. Available on request is a representative list of users, which is virtually a "Blue Book" of business, industry, institutions and government.

COOKSON ROLLING DOORS

Providing a wide range of application

The Cookson Company has manufactured highest quality Steel Rolling Doors for a wide variety of uses in all types of commercial, industrial and government and institutional buildings. They meet the most rigid specifications. They provide the greatest possible protection from loss, and against damage of every kind. They can't stick, swell, bind, spilt or crack. Their performance is unsurpassed, and they are particularly noted for smooth operation and little maintenance. Where weather, wind or dust is a major problem, Cookson offers many exclusive, patented special features, some of which are described on the following pages.

Cookson Steel Rolling Service Doors are designed for all applications not requiring an Underwriters' Label, and where fire insurance is not a consideration. However, because of their superior construction from finest heavy duty materials, Cookson Service Doors are fire repellent and afford a high degree of fire protection.

with Cookson Doors you get this extra protection of investment

Rolling COOKSON Doors

The Cookson Company

GUARANTEE

The Cookson Company, 1525 Cortland Avenue, San Francisco California, hereby guarantees to furnish, without cost to the Purchaser, any and all parts of The Cookson Rolling Door furnished at the location hereinafter set forth (but excluding end-locks of which are otherwise hereinafter set forth) which are defective in workmanship and/or material and/or manufacture, within a period of one year from the date of installation, (under normal use and service, provided written notice of such defect is given to The Cookson Company at the above address within the said period of one year.

Shipping charges to and from the factory shall be paid by the customer and included in estimate of shipment.

This Guarantee shall constitute the sole and exclusive liability of The Cookson Company, arising out of the sale and/or installation of the said door.

Dated: THE COOKSON COMPANY

By

Name of Owner Name of Building

Address City Date

Job Number Date

Every Cookson Door is guaranteed for a period of one year from the date of installation against defects in workmanship or material. You can depend on the backing of the long-established Cookson service policy that relieves architect, engineer, builder and user of responsibility for quality, workmanship or material in the manufacture of the door. Lifetime lubricated ball bearings permanently eliminate one of the major causes of door failure.

Complete specifications on every part of every Cookson Door ever built are microfilmed in duplicate for permanent filing. Master microfilms are filed in underground atomic vaults. Copies are maintained at the main Cookson offices for ready reference. This means you can always depend on prompt, accurate replacement of any part or assembly, or duplication of a complete door installation. Together with our Guarantee, established service record and premium quality of our products, Cookson Permanent Door Registry provides maximum protection of your investment.

The Cookson Company reserves the right to make changes in specifications without notice.

Cookson Flat Slat No. 4 is used here for architectural appeal and high weather proofing capabilities.

Interior view of Cookson Aluminum Rolling Door, Type FCA, Alumilited against corrosive action of salt water.

A few of the 26 standard Cookson Type FC Doors, 20 ft. wide, in service in a large pre-fabricated steel building.

ROLLING DOORS

SPECIAL COOKSON FEATURES

Grille-Slat Curtain

This specialty door prevents exposure of the inside of large convention hall to passing traffic, yet permits passage of a large volume of air required by the air conditioning equipment. Sliding mullions move to both sides.

Horizontal Rolling Doors

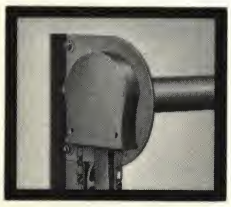
Many unusual applications are found for Cookson Doors, such as this acid dip-tank cover. Tanks remain open for short periods of use, then are quickly closed by means of an electric operator to provide maximum safety and protection.

Large Openings

Solution of another unusual situation by Cookson engineers is illustrated here. Picture shows how Cookson designed multiple doors for extremely large openings of Air Force B-52 maintenance hangars.

Sliding Mullions

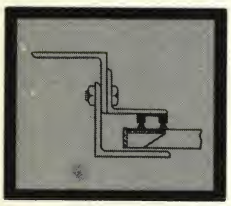
Illustrated is large opening equipped with three rolling doors and two sliding mullions. Track-suspended mullions may be moved to one or both sides, giving large, clear-span opening and permitting use of economical size doors.



Automatic Brake Chain Operator*

A new safety development by The Cookson Company which may be incorporated in chain operated doors. This operator, which is fully enclosed, has a self-locking gearing feature which positively prevents the rapid descent of the curtain while in normal use, or in the unusual event of counterbalance torsion spring breakage.

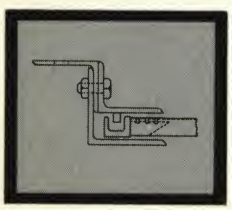
*Patent pending



Dust and Weather Proofing*

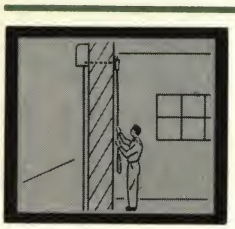
Cookson offers a new, simple, trouble-free design that provides effective sealing under all conditions of weather or dust. Two wool pile weather strips, attached to the weather side of the guides, gives positive dual contact with the curtain at all times. Maximum sealing is obtained when used with No. 4 Flat Face Slats. Long wearing and easily replaced in case of damage.

*Patent pending



Cookson Wind Locks

Wind locks are furnished as standard on all doors 14'6" wide or over, to withstand a 20 p.s.f. wind load. Drawing indicates how guide has special bar secured to inside angle to prevent curtain from leaving guides. This same feature is used in the design of doors to withstand wind pressures up to 40 p.s.f.



Through-Wall Operator

This mechanism can be provided when the door is required to be mounted on one side of a wall but must be operated from the opposite side. It is commonly used when there is a low ceiling which necessitates mounting the door on the outside wall. Operation is through the wall, as illustrated, where it can be reached only by authorized personnel.

Cookson engineers are fully trained and experienced in the design and development of specially constructed doors to provide satisfactory service in all types of unusual situations. Some of these outstanding features, available at extra cost, are illustrated and described here. You can count on Cookson for prompt and reliable engineering recommendations no matter how complicated the problem may be. Your nearest Cookson representative is fully qualified to work with you and the factory in the most profitable solution to your particular needs. See page twenty for list of national representatives, or call on Cookson direct.

Craneway Openings

Inset view shows how a special door design incorporates hinged upper guide sections for craneway. Cookson Door rolls up and out of the way, providing a clear opening for indoor-outdoor crane use.

Special Sloping Footpiece

Graded ground or floor contour is carefully matched by sloping footpiece, giving greatest possible protection against wind and weather. A wide variety of unusual specifications such as this are regularly handled by Cookson.

Ventilated Bottom Section

Where a continuous circulation of fresh air is required by local ordinance, such as in automobile garages, doors can be fitted with special bottom sections. Standard Cookson Door slats are punched to form ventilated section.

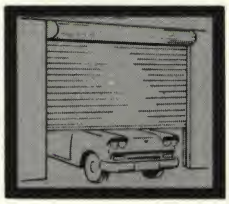
Wicket or Pass Door

Wicket Doors provide a convenient entrance without having to raise the main door. Ideal where the main opening provides the only access. Pass door and frame swing back when curtain is raised. Cylindrical lock is standard, mortise type lock is extra.

New All-Weather Astragal*

A special vinyl astragal or floor-strip may be attached to the footpiece, giving tight three-point contact with floor to seal against rain, wind, weather and dust. Flexible and resilient, it conforms closely to the contour of the floor, regardless of all normal irregularities or roughness. Held rigidly in place by bolts through the footpiece, it can be replaced readily if damaged.

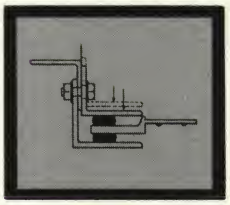
*Patent pending



Cookson "Detectedge"*®

One of many optional electrical features available at extra cost, the "Detectedge" introduces an important factor of safety in the operation of motor operated doors. Employing a special electrical contact bar in the compressible weatherstrip on the footpiece, the curtain automatially stops, or stops and reverses, on contact with any object it encounters during its downward travel.

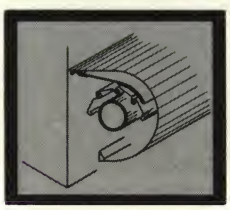
*Patent pending



Spring-Loaded Guide*

Where conditions of dust or weather are critical, special end locks and spring-loaded guides with sealing strips may be specified. Guides are designed so that when door reaches the closed postion the spring-loaded inside angle is forced toward the opposite guide to allow the sealing strips to come in firm contact with curtain end locks.

*Patented



Hood Baffle

The Cookson Hood Baffle is used to minimize the seepage of air around the hood at the head of the door. Baffle plate is hinged to the hood and the neoprene edging makes close contact with the full length of the curtain.

ROLLING DOORS

SLATS

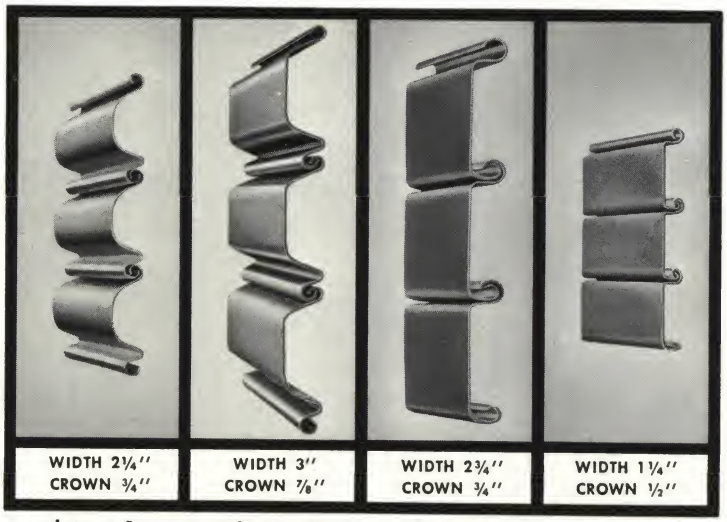
Designed for greater protection, longer life and less maintenance

Premium quality Cookson steel slats are specially designed to combine maximum strength with free rolling action. They shed water effectively and protect against dust, wind and other elements of weather. Fabricated from copper-bearing cold rolled steel, their long term built-in weather resistance is assured by the unique Cookson 3-way finish described at right. End locks are machine riveted to assure absolute uniformity. The grey factory primer offers maximum rust inhibiting qualities and serves as a practical base for any final paint finish desired. Refer to chart for proper selection of slat type and gauge.

other materials

Unless otherwise specified, curtain, hood and guides are furnished in steel. Cookson Rolling Doors are also available in aluminum, wood, stainless steel, and other non-ferrous metals. Consult factory for details.

types



slat no. 1
Combines maximum strength, ease of coiling, water shedding. For doors of average sizes as shown in chart.

slat no. 3
For large industrial doors, this extra heavy-duty slat resists deflection through design using high flat crown.

slat no. 4
A flat-face slat designed for architectural appeal. Eliminates high crown. Easier to weather proof.

slat no. 10
A midget slat of galvanized or stainless steel. Used in place of aluminum slats in Counter Doors where architectural effect not of prime importance.

selection of slats

Determine the Slat Number and gauge of material to be used in the curtain, according to the size of opening indicated in the chart at right. Note slat dimensions also indicated in the chart. These represent standard Cookson specifications. Variations may be required to meet special conditions. Cookson standard doors are designed to withstand 20 pounds per square foot wind pressure.

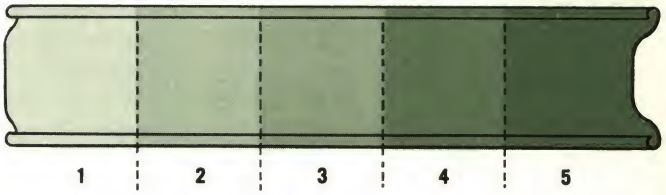
GUIDES

Greater safety and easier installation through unique design

Cookson guides are constructed of *two separate angle members* bolted to the continuous wall angle. This design allows easy replacement or straightening of either part, and ready access to curtain ends and end locks. Slotted mounting holes on wall angles permit simple and accurate leveling adjustment.

four important features distinguish Cookson Guides

- **Exclusive multiple anchor protection with continuous wall angle connected directly to steel plate brackets—equalizes strain on anchor bolts and guards against shock damage — eliminates need for expensive heavy lintel construction.**
- **Wall angle extending above guide groove provides for easy attachment of steel brackets.**
- **Complete accessibility for replacement or straightening of individual angle members—or access to curtain ends and end locks without disturbing mounting.**
- **Easy to install, with a simple adjustment to level curtain and barrel.**

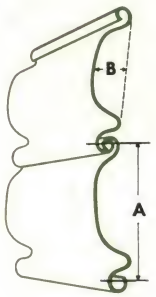


Cookson 3-way protection provides long-term weather resistance:

1—hot dip 1.25 ounce ASTM standard galvanizing
2—phosphate paint bond
3—shop coat of primer

1 Copper bearing strip steel
2 Hot dip galvanized—zinc content not less than 1.25 oz. per sq. ft.
3 Phosphate bonding treatment for paint adhesion before fabrication
4 Factory coat, after fabrication, of rust inhibiting grey primer
5 Field finish coat as desired by others

slat selection and dimension chart

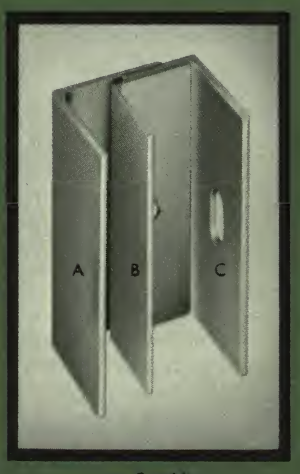


DOOR WIDTH	DOOR HEIGHT	SLAT NO.	GAUGE	DIMENSIONS	
				A	B
0′ to 12′0″	Up to 25′0″	1	22	2 1/4″	3/4″
12′1″ to 18′0″	Up to 25′0″	1	20	2 1/4″	3/4″
18′1″ to 25′0″	Up to 25′0″	3	18*	3″	7/8″
Over 25′0″	Over 25′0″		Consult Factory		

*Slat No. 3 also available in 20 gauge and 16 gauge

no. 1 guide

For fastening to brick, concrete, wood or masonry jambs using expansion or lag bolts

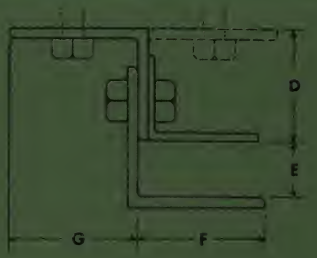


no. 2 guide

For mounting on steel or wood jambs with machine or lag bolts

A — Outside angle B — Inside angle C — Wall angle

Guide Dimensions



guide selection and dimension chart

DOOR WIDTH	DOOR HEIGHT	DIMENSIONS			
		D	E	F	G
0′ to 14′0″	Up to 25′0″	2″ min.	1″	2-5/16″	2-5/16″
14′1″ to 18′0″	Up to 25′0″	2″ min.	1″	2-13/16″	2-5/16″
18′1″ to 25′0″	Up to 25′0″	2″ min.	1-3/16″	2-13/16″	2-5/16″
Over 25′0″	Over 25′0″	Consult Factory			

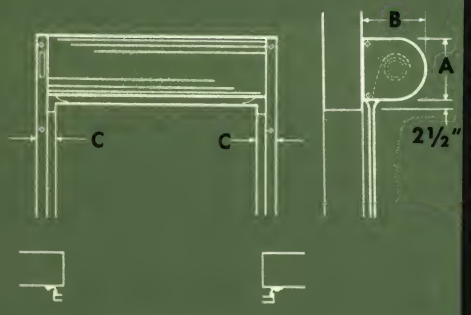
COOKSON ROLLING SERVICE DOORS

DOOR TYPES

Cookson Steel Rolling Service Doors must be specified by TYPE. Shown here are the most common types for standard applications, and are designated according to type of operation and mounting. For doors requiring special design for non-standard applications, or special Cookson features as described elsewhere in this bulletin, consult your local representative or the Factory. Complete Specifications are contained on page 10.

type FP

face of wall mounted
push-up operation



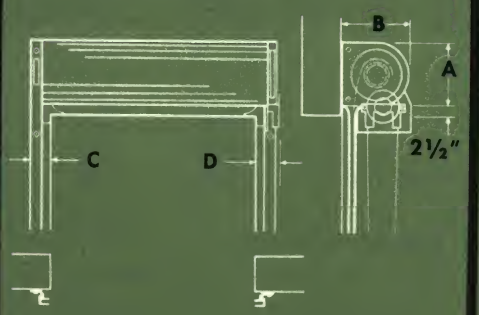
DIMENSIONS

AREA AS PER CHART ABOVE	A	B	C
AREA 1	13	14	5

Not Recommended Over 80 Sq. Ft.

type FC

face of wall mounted
chain operation

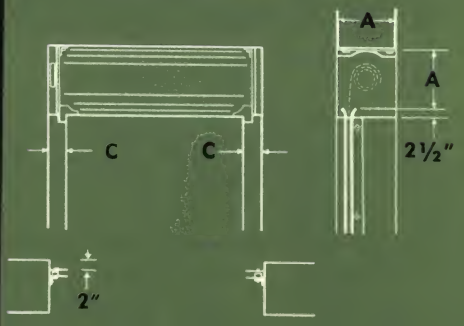


DIMENSIONS

AREA AS PER CHART ABOVE	A	B	C	D
AREA 1	13	14	5½	6¾
AREA 2	15	16	5½	6¾
AREA 3	16	17	6½	7¾
AREA 4	18	19	6½	7¾
AREA 5	20	21	6½	7¾

type JP

between jambs mounted
push-up operation



DIMENSIONS

AREA AS PER CHART ABOVE	A	C
AREA 1	13	5

Not Recommended Over 80 Sq. Ft.

OPERATOR TYPES

smooth, easy operation

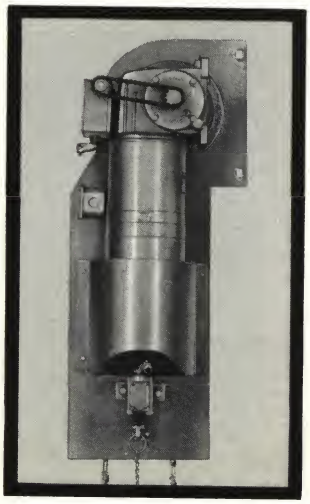
From the users' standpoint, ease of operation is a primary consideration. Cookson doors operate with from 35% to 65% less effort than most steel rolling doors due to sealed ball bearing mounting, patented friction-free method of securing torsion springs, balanced design, and precision construction. These same features assure longer trouble-free life and minimum maintenance. There are no bushings to wear out or replace.

choice of operating methods

Building design, operation requirements, size of door and budget considerations determine which of the four basic types of operation should be selected. Motor, chain and crank operation are described at right. Push-up or Manual, using handles on the curtain, are not recommended for doors over 80 sq. ft. in area.

motor operation

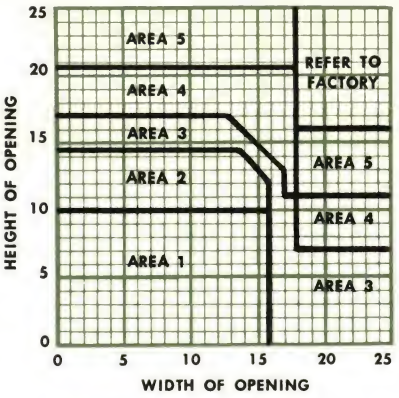
Cookson Motor Units can be supplied with new doors or installed on old doors. They are rugged, compact, smart looking, and completely dependable. Finger-touch remote switch opens, closes, or stops door at any point. Operation is stopped automatically at top and bottom by a geared limit switch. An auxiliary hand chain provides instant operation in case of power failure. Cookson Motor Units are available in Type MU-B, bracket mounted, or Type MU-W, wall mounted—440 or 220 volt 3-phase, 110 or 220 volt single-phase. 3-phase service is recommended for simplicity of electrical reversing operation.



door size selection chart

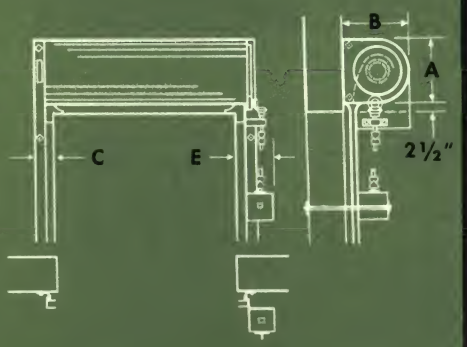
Find the area number of the door to be specified on the chart at right. This Area Number is keyed to the complete dimensional information for Service Doors below.

For doors over 25′ in either dimension, consult factory



type FK

face of wall mounted
crank operation



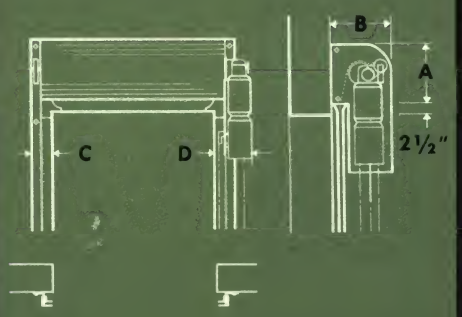
DIMENSIONS

AREA AS PER CHART ABOVE	A	B	C	E*
AREA 1	13	14	5½	8
AREA 2	15	16	5½	8
AREA 3	16	17	6½	8
AREA 4	Not recommended			
AREA 5	Not recommended			

*Add 5" for crank handle clearance

type FCM-B

face of wall mounted
motor operated bracket mount

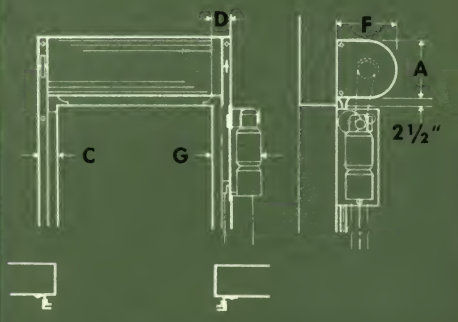


DIMENSIONS

AREA AS PER CHART ABOVE	A	B	C	D
AREA 1	13	14	5	13½
AREA 2	15	16	5	13½
AREA 3	16	17	6	13½
AREA 4	18	19	7	13½
AREA 5	20	21	7	13½

type FCM-W

face of wall mounted
motor operated wall mount

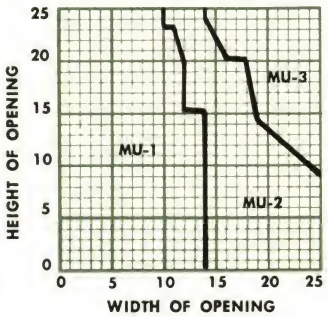


DIMENSIONS

AREA AS PER CHART ABOVE	A	C	D	F	G
AREA 1	13	5	6	14	17
AREA 2	15	5	6	16	17
AREA 3	16	6	6	17	17
AREA 4	18	7	6	19	17
AREA 5	20	7	6	21	17

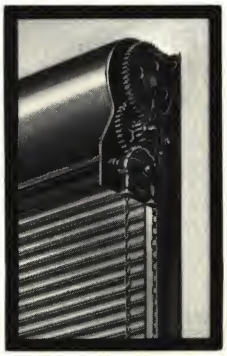
power unit selection

Selection of the proper Cookson Motor Unit for any size door is easily made by referring to chart. Cookson Units are designed to raise a standard door at the average rate of 40 ft. per minute. If the door size required falls on the solid line of the chart, or if curtain gauge is heavier than indicated in SLAT SELECTION CHART on page 7, specify the next higher Motor Unit indicated. For doors larger than 25′ in either dimension, consult factory.



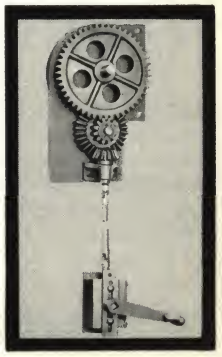
chain

This operation utilizes galvanized endless chain and precision cast iron reduction gears. A popular, low-cost operating method for medium to large area doors. New safety chain operator available if desired. See page 4.



crank

Suitable for doors of all sizes, crank operation utilizes a stationary shaft from reduction gearing to crank box at the operating level. Smooth, quiet, with removable crank.



optional electrical features

Several special electrical devices are available at extra cost. In addition to the Cookson "Detectedge"® Safety Reversing Bottom Bar, described on page 5, Cookson offers:

SAFETY WARNING DEVICES, such as blinking light, horn or bell which indicate when door is in operation.

AUTOMATIC OPERATION DEVICES, including pressure switches or electric eye system at approaches.

COOKSON ROLLING DOORS

DOOR SPECIFICATIONS

work included: Furnish Rolling Doors as manufactured by The Cookson Company, San Francisco 10, California, complete with guides, hoods and operating mechanism as hereinafter specified.

work not included: Preparation of openings, including steel jambs, or other structural or miscellaneous iron work. Field painting after erection. Electric wiring, conduit or disconnect switches required for power operators.

general design: The rolling doors shall be designed to withstand a windload of 20 pounds per square foot. To insure ease of operation, the load of barrel and curtain shall be supported by two grease-sealed ball bearings. Doors shall be guaranteed for a period of one year against defects in workmanship and materials.

curtain: To be formed of interlocking slats fabricated from hot dipped galvanized copper bearing strip steel. Galvanized coating to be 1.25 oz. per sq. ft. in conformance with ASTM standards. Material to be given a phosphate treatment for paint adhesion before fabricating. (For slat type and gauge, see Selection Chart on Page 7.) Alternate slats are to be fitted with malleable iron end locks. Provide Wind Locks on doors over 14'6" wide. The bottom slat is to be reinforced by two steel angles, not less than 1/8" thick.

guides: To be composed of three steel angles bolted with 3/8" bolts to form a groove for the curtain. Wall angle is to be of the continuous type. The guide shall be attached to the wall with machine bolts or lag screws of at least 1/2" on at least 36" centers. Top of each guide shall be well-flared to facilitate entry of curtain, and provided with cast iron stops.

brackets: Shall be fabricated from steel plate of not less than 5/16" thick. Brackets shall be bolted to wall angle with 1/2" bolts.

gears: All gears shall be cast iron with teeth cast from machine cut patterns. The pinion gears shall be not less than 3" pitch diameter. Gear ratio shall be designed for a maximum manual effort of not more than 35 pounds.

barrel: To be not less than 4" diameter steel tubing and designed to limit maximum deflection to .03" per foot. Oil tempered torsion springs shall be capable of correctly counterbalancing weight of curtain. Springs shall be adjusted by means of an exterior wheel.

operation: Shall be of: (select type required)—1) Manual Operation—by means of handle in curtain. Not recommended for doors over 80 square feet in area. 2) Chain Operation—by means of reduction gears and galvanized hand chain. 3) Crank Operation—by means of handle, crank box, and reduction gearing. 4) Motor Operation—push-button control. Recommended on all doors over 20 feet in width or 15 feet in height. (See below for additional specifications.)

hood: To be fabricated from galvanized steel. Hoods shall be formed to fit the curvature of the brackets and attached securely thereto.

paint: Complete door shall be given one coat of rust inhibiting grey primer.

erection: Shall be done in accordance with Cookson Company standards by sales representatives of the Company.

motor operation: Motor to be crane-hoist type with disc brake and shall have sufficient capacity to raise door at 40 ft. per minute. The electrical equipment shall include magnetic reversing starter, push-button station marked "open," "close," and "stop," emergency change-over switch, and a geared type limit switch connected to the main drive. An emergency manual operator shall be provided which will be operable from the floor, to provide instant hand chain operation in case of power failure. An electrical interlock shall be provided to prevent operation of the motor unit when hand chain is engaged. (Note: When specified, motor operated doors can be furnished with Cookson Company's "Detectedge," a safety device to stop downward motion upon contact with an object.)

wicket door specifications: Wicket Doors shall be flush hollow metal type, 2'8" x 6'8" x 1 3/8" in size. Doors shall be complete with hinges, cylindrical locks of standard type, and hinged frame which contains the door. The hinged frame is to be fastened to the Rolling Door Guides. Consult plans for hand and swing.

locks: Push-up doors are to be locked by means of a sliding bolt prepared for padlocking; or a cylinder locking device at extra cost. Chain doors are to be furnished with a chain lock. Crank doors are to be furnished with a sliding lock mounted on crank box. Motor operated doors can be supplied with key operated P/B Stations at additional cost. Cylinders and padlocks, if required, shall be furnished by others.

"SERVIRE"® FIRE DOORS

**Standard labeled and oversize certified doors.
Larger opening protection where label is not required.**

Engineered and built to combine the highest possible degree of both service and fire protection, "Servire" Automatic Drop Fire Doors are inspected and labeled or certified by Underwriters' Laboratories and Factory Mutual Laboratories. Because of their recognized dependability and quality, installation of Cookson "Servire" Doors usually results in important reduction of insurance premiums.

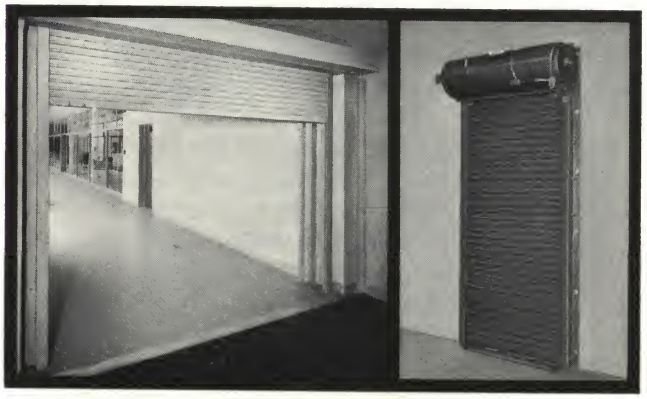
"Servire" Fire Doors combine all of the design and operating advantages of standard Cookson Service Doors, including ball bearing mounting and multiple anchor protection.

special Cookson protection features

- Fully automatic drop mechanism instantly activated by a link which fuses at 160°F.
- Dependable escapement governor which both controls speed of closing and serves as a warning signal when the automatic drop is activated.
- Improved drop clutch which applies an initial downward force to the door to insure positive drop.
- No contact between any two ferrous metal moving parts of the operating mechanism, preventing possibility of jamming due to corrosion.
- Simple resetting of drop lever after automatic closure permits immediate operation as standard service door.
- Automatic drop baffle inside main hood effectively guards against passage of smoke or flames.

Cookson "Servire" Fire Doors are built to the strict requirements of the Underwriters' Laboratories, Inc. and the Factory Mutuals. To bear a label, the fabrication of these doors cannot deviate from their specifications.

New church includes Cookson Fire Doors for full measure of protection. (Left) Photo at right shows Type FD-1 "Servire" access door which can also be used as standard service door.



Oversize certified double "Servire" automatic drop fire doors protect modern bank vault areas from both sides.

Typical application of Cookson "Servire" Fire Doors which qualifies owners for lower fire insurance premiums.

slats

Slats are of galvanized steel in gauges from 18 to 22. Each slat is provided with end locks and flame baffles.

guides

The size and thickness of guides are dependent on the Underwriters' Laboratories specifications for the size of the door. All guides are assembled with slotted holes and galvanized washers to allow for expansion from heat.

operators

Whether it be a push-up, crank, or chain operation, each automatic door is provided with a governor to control the downward speed, and a release tripper mechanism to insure automatic closing of the door.

See specifications on pages 12 and 13.

"SERVIRE" FIRE DOORS

SELECTION OF FIRE DOORS

Underwriters' Laboratories classify fire doors in the following manner:

class A: Division or fire wall. 3 hour rating.
class B: Enclosures to vertical communications through buildings, vertical shafts, etc. 1½ hour rating.
class C: Openings in corridors and room partitions. ¾ hour rating.
class D: Exterior walls—severe fire exposure. 1½ hour rating.
class E: Exterior walls—moderate fire exposure.
class F: Exterior walls—light exposure.

Note: Classes D, E and F are generally non-automatic.

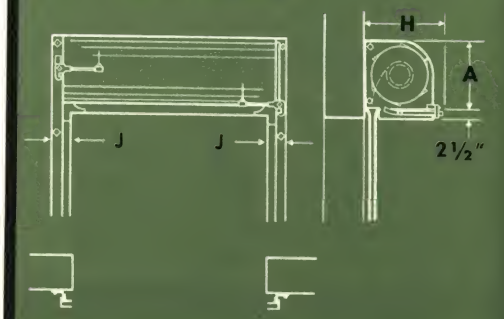
The Underwriters' Laboratories state that steel rolling doors be designed for interior or exterior openings not exceeding 120 square feet with no dimension exceeding 12'0". For doors exceeding these dimensions an Oversized Certificate shall be obtained by the manufacturer. Certified Oversized doors shall not exceed 576 square feet with neither dimension over 24'0".

The Cookson "Servire" Door is designed to meet all of the above requirements. It has been fire tested at the Underwriters' Laboratories, subjected to 1728°F. fire, then water tested by high pressure hoses.

For the ultimate in fire protection, specify Cookson "Servire" Fire Doors. Clearance dimensions and complete specifications are detailed at right. To meet special fire door problems, consult trained Cookson engineers—without obligation.

type FD-1

face of wall mounted
push-up operation



DIMENSIONS

AREA AS PER CHART ABOVE	A	H	J
AREA 1	13	15½	7

Not Recommended Over 80 Sq. Ft.

Note: When door furred-in at ceiling, add 4" to "A" dimension.

FIRE DOOR SPECIFICATIONS

Specify "Servire" Automatic Drop Steel Rolling Fire Door as manufactured exclusively by The Cookson Company. The various types and dimensions are shown above.

"SERVIRE" TYPE FD-1
Face of wall mounted, push-up operation
"SERVIRE" TYPE FD-2
Face of wall mounted, chain operation
"SERVIRE" TYPE FD-3
Face of wall mounted, crank operation
"SERVIRE" TYPE FD-4
Under lintel mounted, push-up operation

work included: Furnish "Servire" Steel Rolling Fire Doors as manufactured by The Cookson Company, San Francisco 10, California. These doors shall bear the label of Underwriters' Laboratories, Inc. and shall be manufactured to their specifications.

work not included: Preparation of openings, including steel jambs, other structural or miscellaneous iron work, or the furnishing of shear or protective plates above hood.

curtain: Composed of interlocking galvanized steel slats and malleable iron endlocks as required by U.L. specifications. Top slat is to be reinforced by means of a flat steel bar.

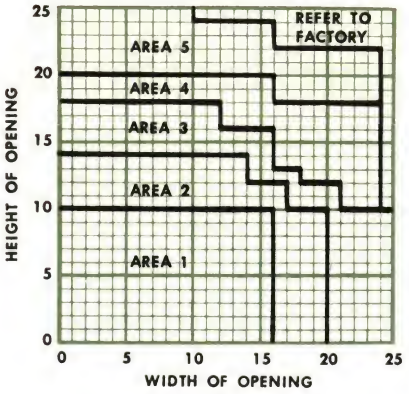
footpiece: Composed of two steel angles held together by ¼" bolts at a distance not to exceed 12" on center. All holes shall be slotted to allow for expansion. Bolts to be complete with galvanized washers.

guides: To be fabricated from steel angles of not less than 3/16" thick. The assembly bolts are to be spaced at not more than 12" on center and provided with galvanized washers on one side. A clearance of at least ¾" is to be provided between the bottom of guide and the

door size selection chart

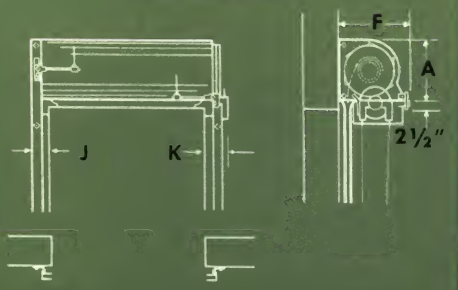
Find the area number of the door to be specified on the chart at right. This Area Number is keyed to the complete dimensional information for "Servire" Fire Doors listed below.

For doors over 25' in either dimension, consult factory



type FD-2

face of wall mounted
chain operation

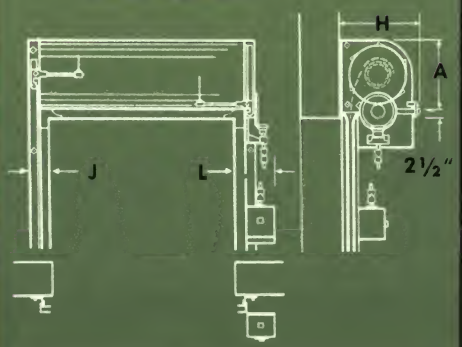


DIMENSIONS

AREA AS PER CHART ABOVE	A	F	J	K
AREA 1	15	16	7	8
AREA 2	16	17	7	9
AREA 3	18	19	8	10
AREA 4	20	21	8	10
AREA 5	CONSULT FACTORY			

type FD-3

face of wall mounted
crank operation



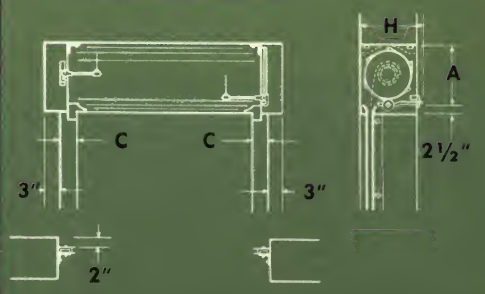
DIMENSIONS

AREA AS PER CHART ABOVE	A	H	J	L*
AREA 1	15	18	7	9
AREA 2	16	19	7	9
AREA 3	18	21	8	9
AREA 4	20	23	8	9
AREA 5	CONSULT FACTORY			

*Add 5" for crank handle clearance.

type FD-4

under lintel mounted
push-up operation



DIMENSIONS

AREA AS PER CHART ABOVE	A	C	H
AREA 1	13	5	15½

Not Recommended Over 80 Sq. Ft.

sill. Holes in guides for fastening to wall shall be slotted for expansion and shall not exceed 18" on center. G.C. shall set anchor bolts to dimensions given by this Contractor.

brackets: To be fabricated from steel mill plate of not less than ⅜" thick. Brackets to be attached to wall angle by bolts of not less than ½" diameter.

barrels: To be made of steel pipe or tubing of sufficient size to prevent deflection in excess of .03" per foot of opening width. Barrel shall enclose counterbalancing mechanism consisting of oil tempered torsion springs of proper size.

hood: To be galvanized steel not less than 24 U. S. gauge formed to fit curvature of the brackets and attached by means of self tapping screws. Hood to be attached to wall by means of bolts at not more than 24" centers.

baffle: Hoods to be complete with flame baffle as per U.L. requirements.

operation: shall be of: (Select type required)

1) Manual Operation—by means of handle in curtain.

2) Chain Operation—by means of reduction gears and galvanized hand chain.

3) Crank Operation—by means of handle, crank box, and reduction gearing.

automatic closing: All "Servire" Fire Doors shall be equipped with automatic closing device and governor which shall engage upon the fusing of a 160 degree fusible link. (Note: Underwriters' Laboratories, Inc. permits Class B, C and D Labeled Doors to be non-automatic, subject to local ordinances.)

ROLLING GRILLES

STEEL OR ALUMINUM

free visibility and ventilation—plus high protection factor

school corridors
garages
store fronts
courtyards
open air markets
industrial plants
stairways

Both attractive and practical, Cookson Rolling Grilles are designed to combine strength, security against entry, high visibility and free ventilation. They offer the same basic factors of ease of installation and operation that have made Cookson Service Doors so universally satisfactory. Available in steel or aluminum, for push-up, chain, crank or motor operation.

Main corridor entrance to this modern high school is attractively and effectively protected by Cookson Rolling Grilles.

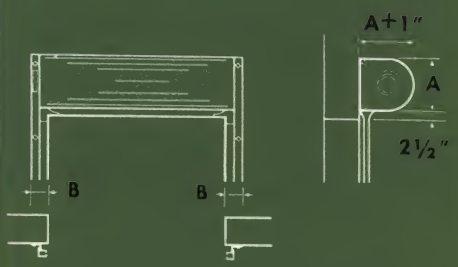
New clean-lined Cookson Grille construction combines maximum visibility, ventilation and protection. Newly designed linkage and hinge action adds to operating ease, reduces wear.

Cookson Grilles are used extensively in garage entrances, where local ordinances require a continuous circulation of fresh air.

Grilles find wide acceptance for large interior and exterior openings in commercial, industrial and governmental facilities.

type FPG

face of wall mounted
push-up operation



DIMENSIONS

HEIGHT		7'0"	11'6"
TO 14'0" WIDE	A	13"	15"
	B	5"	5"

NOT RECOMMENDED OVER 80 SQ. FT. IN STEEL AND 120 SQ. FT. IN ALUMINUM

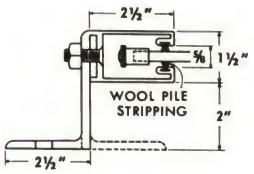
ROLLING GRILLE SPECIFICATIONS

work included: Furnish (Steel) or (Aluminum) Rolling Grilles as manufactured by The Cookson Company, San Francisco 10, California.

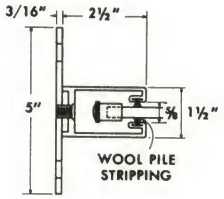
work not included: Preparation of openings, including jambs, or other structural or miscellaneous iron work. Field painting after erection. Electric wiring, conduit or disconnect switches required for power operators.

grille curtain: Shall be formed of steel (or aluminum) 5/16" round horizontal members spaced 1½" on center, with straight-line vertical connecting links spaced at 9". The horizontal bars shall not act as hinge pins, but shall merely be supported by the vertical members which shall hinge upon themselves. The footpiece shall be of angles riveted back to back.

guide detail for types:



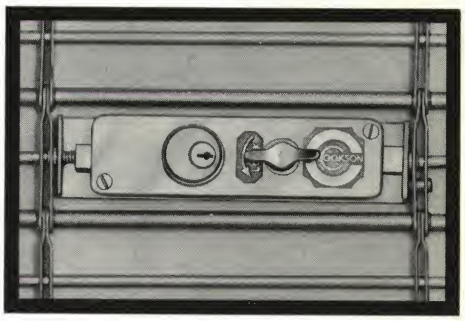
FPG
FCG
FKG



JPG
JKG

reversible grille cylinder lock

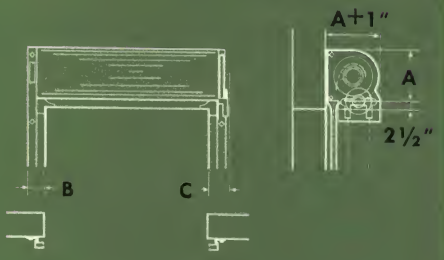
This is a cremone type of locking device that engages the throw-bars into both side guides. The lock rotates freely around the throw-bar, permitting operation from either side of the grille. Provision is made to take a 1-5/32" diameter mortise cylinder. The entire lock is made of brass, then chrome plated for an attractive, durable finish. Furnished at additional cost and should be specified if required.



type FCG

Note: FKG (crank) similar

face of wall mounted
chain operation

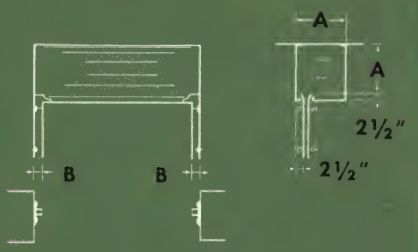


DIMENSIONS

HEIGHT		7'0"	11'6"	13'6"	14'0"
TO 14'0" WIDE	A	13"	15"	16"	18"
	B	5"	5"	5"	5"
	C	6"	6"	7"	7"
TO 20'0" WIDE	A	15"	16"	18"	CONSULT FACTORY
	B	5"	5"	5"	
	C	6"	6"	7"	

type JPG

between jambs mounted
push-up operation



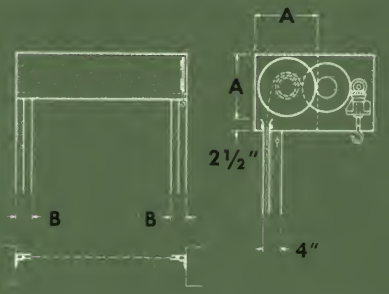
DIMENSIONS

HEIGHT		7'0"	11'6"
TO 14'0" WIDE	A	13"	15"
	B	2½"	2½"

NOT RECOMMENDED OVER 80 SQ. FT. IN STEEL AND 120 SQ. FT. IN ALUMINUM

type JKG

between jambs mounted
crank operation



DIMENSIONS

HEIGHT		7'0"	11'6"	13'6"	14'0"
TO 14'0" WIDE	A	13"	15"	16"	18"
	B	5"	5"	5"	5"
TO 20'0" WIDE	A	15"	16"	18"	CONSULT FACTORY
	B	5"	5"	5"	

guides: To be fabricated from extruded aluminum shapes designed with a return lip feature to prevent Grille from pulling out of guides under excessive pressure. Upper end shall be properly flared to facilitate entry of Grille curtain. Guides to be complete with wool-pile stripping to eliminate metal-to-metal contact between curtain and guide.

brackets: Shall be fabricated from steel plate and to be bolted to wall angle by ½" bolts.

barrel: To be not less than 4" diameter steel tubing and designed to limit maximum deflection to .03" per foot. Grille curtain to be counterbalanced by means of oil-tempered torsion springs. To insure ease of operation, the weight of barrel and Grille curtain shall be supported by two grease-sealed ball bearings.

operation: Door shall be of: (Select type required.)

1) Manual or push-up operation with sliding bolt locks on footpiece (not recommended for doors of over 80 sq. ft.).

2) Chain operation by means of galvanized hand chain which shall be locked by means of chain lock on guide.

3) Crank operation by means of handle, crank box and reduction gearing.

4) Crank operation by means of hand crank with a removable operating arm (used to eliminate the necessity of a crank box).

5) Motor operation by means of push-button control (see motor operation specifications on Page 10).

finish: *Steel Grilles:* All parts of Grille curtain to be electro galvanized before fabrication, then given shop coat of aluminum paint.

finish: *Aluminum Grilles:* All Aluminum parts: (Select type of finish required.)

1) Shall be of mill finish.

2) Shall be given a shop coat of aluminum paint after fabrication.

3) Shall be "Alumilited" after fabrication.

erection: Shall be done in accordance with Cookson Company standards by sales representatives of the Company.

COUNTER DOORS

EXTRUDED ALUMINUM

with exclusive wool-pile guide* stripping for snug, quiet, friction-free operation

schools
cafeterias
offices
stores
post office windows
service entrances
ticket windows

Because they provide the most practical and attractive answer to all counter closure applications, Cookson Counter Doors are specified more than any other door of this type. Durable slats of "Alumilited" extruded aluminum are resistant to denting, scratching or other damage. They are corrosion and rust proof, with nothing to chip or wear off. Nor do they introduce any of the other costly problems associated with ordinary light-weight "mill finish" aluminum. They require no painting or maintenance, and are easy to clean. Counterbalanced for easy operation and equipped with lubricated ball bearings, they are effortlessly coiled up and out of the way, or snugly fitted to counter in the closed and locked position.

Cookson Extruded Aluminum Counter Doors combine a trim appearance, fully compatible with modern architectural design, with the ultimate in truly practical performance. They are custom built to specified openings, easy to install, operate and maintain.

Cookson Counter Door for pass window, with cremone type of cylinder lock recessed in tubular footpiece.

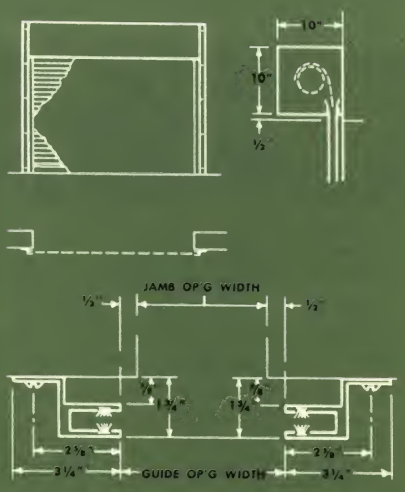
Distinctive hotel installed a Cookson Aluminum Door to close off the entrance to a lobby news stand. "Alumilited" slats provide both durability and smartness.

Multi-purpose room of new church uses Cookson push-up full Aluminum Door for storage areas. An ideal choice where durability and neatness are required.

Compact installation and ease of operation are among the many reasons why Cookson is so widely specified for school cafeteria counter applications.

type CD8-1

face of wall mounted
push-up operation



COUNTER DOOR SPECIFICATIONS

ALL COOKSON COUNTER DOORS ARE CUSTOM BUILT TO THE SPECIFIC SIZE OF THE OPENING

curtain: To be formed of extruded aluminum, "Alloy 6063," flat faced Midget Slats (Cookson Slat No. 8). Width of slats 1-5/16". Depth of crown ⅜". Footpiece shall be tubular in shape and provided with double vinyl astragal.

barrel: Curtain to be coiled around a steel tubing of not less than 4"

slats and guides

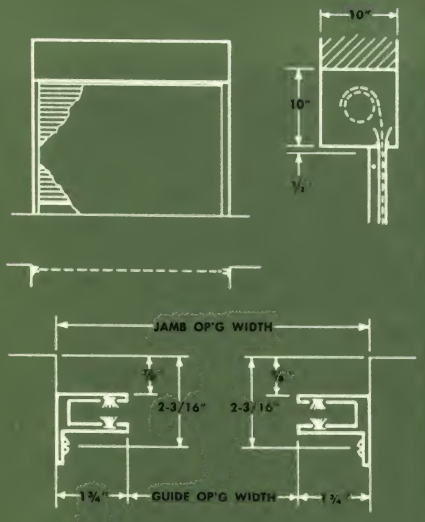
Exclusive Cookson Midget Slats are sturdy, smartly styled "Alumilited" extruded aluminum. They provide lifetime beauty, a permanent muted luster that defies all forms of wear. Guides are fitted with a locked-in wool-pile stripping that eliminates metal-to-metal sliding contact. This results in a smooth, easy action, virtually noise-free operation, and provides a highly effective seal against dust and weather. Rugged Cookson guide stripping has been proved for durability in long service everywhere.

operation

It is recommended that all doors over 12 feet in width be furnished with a simple hand crank operator with a removable operating arm. This compact unit is mounted at the top of the door, up and out of the way, eliminating the need for a crank box at the counter level. With operating arm detached, unauthorized persons are prevented from opening or closing the door. Doors less than 12 feet wide have handles mounted on the bottom bar for easy push-up operation.

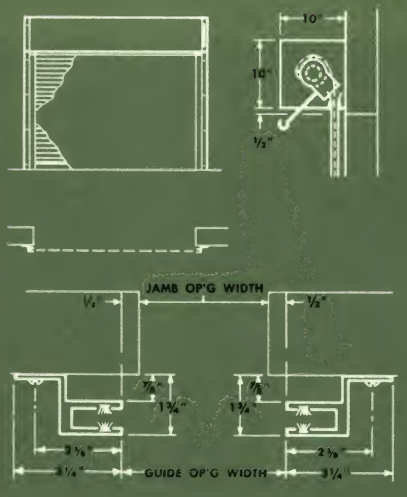
type CD8-2

under lintel mounted
push-up operation



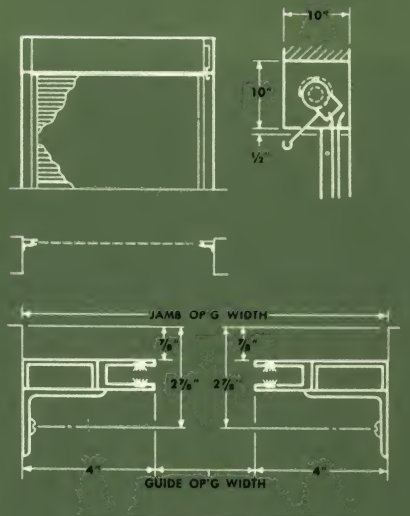
type CD8-3

face of wall mounted
crank operation



type CD8-4

under lintel mounted
crank operation



diameter. Counterbalancing unit to be enclosed and shall rotate on grease sealed ball-bearings.

counter balance: Shall consist of oil tempered torsion springs capable of counterbalancing weight of curtain.

operation: Doors under 12'0" wide shall be of push-up operation with finger lifts mounted on the bottom bar. Doors over 12'0" wide shall be operated by means of a hand crank with a removable operating arm to eliminate the necessity of a crank box at counter elevation.

guides: To be fabricated from aluminum extruded shapes, "Alloy 6063." Guides to be fitted with wool-pile stripping*.

locking device: Footpiece of curtain shall be furnished with a concealed sliding bolt lock operated by a knob. At additional cost a cylinder lock, operable from one side of opening, can be furnished.

hood: Aluminum hood of .040" minimum thickness shall be furnished when necessary, to encase curtain roll.

finish: Curtain, bottom bar, guides and hood shall be buffed and then "Alumilited" after fabrication. All other parts to be given a shop coat of aluminum paint.

*Patent pending

SIDE COILING PARTITIONS

single openings to 125′ wide
double openings to 250′ wide
heights to 24′

gymnasiums
cafeterias
classrooms
churches
factories
showrooms
stores
stages
homes

Cookson Wood Side Coiling Partitions are designed to give a feeling of permanent integral structural walls in each of the rooms or areas they divide. They roll completely out of the way, giving the combined areas the appearance as well as practical application of a single larger unit. Both floor and overhead tracks are particularly inconspicuous. Whether power, crank or manually operated, the partitions roll quickly and easily in a straight line, so that no furniture or equipment need be moved to permit opening or closing. Extremely high strength of the partition and supporting members offers maximum protection against damage. Materials and workmanship are carefully controlled from the selection of finest kiln dried vertical grain woods to the final assembly of the completed coil box, operating mechanisms, track and partition. Each partition is custom built and shipped in unitized assemblies for easy specification and installation.

As the wood curtain is coiled, its weight is transferred from the overhead track to the radial bearing supported bottom plate, as shown above.

Cookson Side Coiling Wood Partitions quickly divide gymnasiums and other large rooms into smaller areas for multi-purpose use.

Arch, peak or other unusual ceilings offer no problem for Cookson Partitions. Illustrated is 54′ x 14′ partition, crank operated.

SPECIFICATIONS

partition: To be constructed of vertical grain kiln dried 1"x 2" douglas fir, milled to the Cookson modified tongue and groove "V" faced pattern. To prevent separation of curtain and assure perfect alignment, it shall be assembled with concealed cables and spring steel ribbons. (Other woods are available subject to factory approval.)

coil box: Partition to coil around a steel pipe supported by a lifetime-lubricated Timken precision thrust bearing. Coil housing frame to be fabricated from structural steel shapes to form a single integrated unit. Application of facing is to be by others as specified by the architect.

operation: A. *Push-pull operation.* Partitions up to 80 sq. ft. and not exceeding 8 ft. in height may be manually (push-pull) operated. Type SCP-1.

B. *Hand crank operation.* Partitions up to 420 sq. ft. and not exceeding 14 ft. in height or 30 ft. in width may be hand crank operated in both directions. With this operation the curtain shall move at constant speed. Type SCP-2.

C. *Motor operation.* All partitions up to 24 ft. in height and 125 ft. in width may be electrically operated with push button control. With this operation the curtain shall move at constant speed. Drive mechanism shall consist of drive gears and cables suitably arranged to coil and uncoil curtain into box at constant speed. Drive gears shall furnish motivation force in both directions with cables, keeping curtain under constant tension at all times. No mechanical or electrically operated clutches will be permitted. The above requirements must be strictly adhered to in the interest of public safety. Any bidder desiring to quote on this item must furnish proof to the architect that his standard product complies with these requirements. Type SCP-3.

upper track: Shall be one-piece construction of extruded aluminum to support full curtain load, and is to be fully adjustable to permit compensation for deflection of truss or other mounting surfaces.

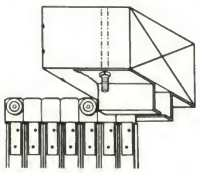
floor guide: Shall be furnished complete with cleanout boxes and shall be installed by the general contractor as per Cookson Company recommendations.

meeting stile: To be formed from "Alumilited" Aluminum with a compressible nosing. (Note—When specified on motor operated Partitions, the front edge of the Meeting Stile will be furnished, at extra cost, with Cookson Company's "Detect-edge,"® a safety device to stop forward motion upon contact with an object.)

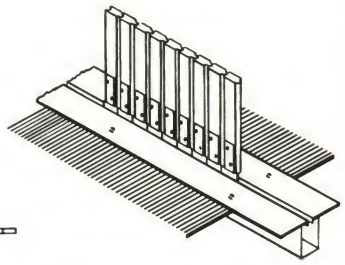
finish: Stain or treatment by others.

assembly: Partition shall be shipped completely assembled in coil box when practicable.

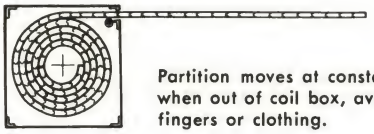
special features



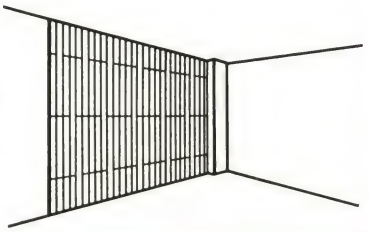
Exclusive nylon curtain-support wheels mounted on ball bearings — running in an adjustable continous track mounting — provide maximum safety, sound resistance, ease of operation.



Exclusive continuous bottom end lock and guide design retains constant alignment, gives maximum sound resistance.

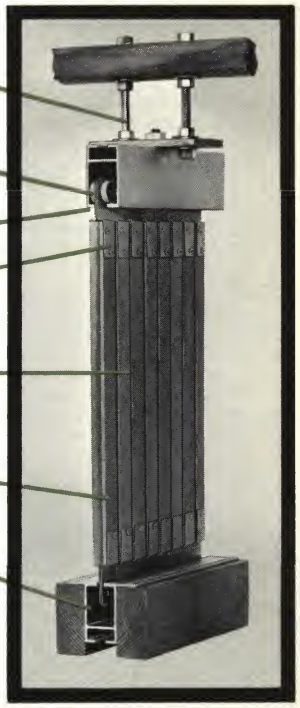


Partition moves at constant speed in a direct line when out of coil box, avoiding danger of pinched fingers or clothing.



Special adjustable concealed cables at properly engineered intervals maintain constant alignment for full length of slats.

design and construction



Adjustable track bolts can be attached to any steel or wood beam members

Nylon ball bearing wheels

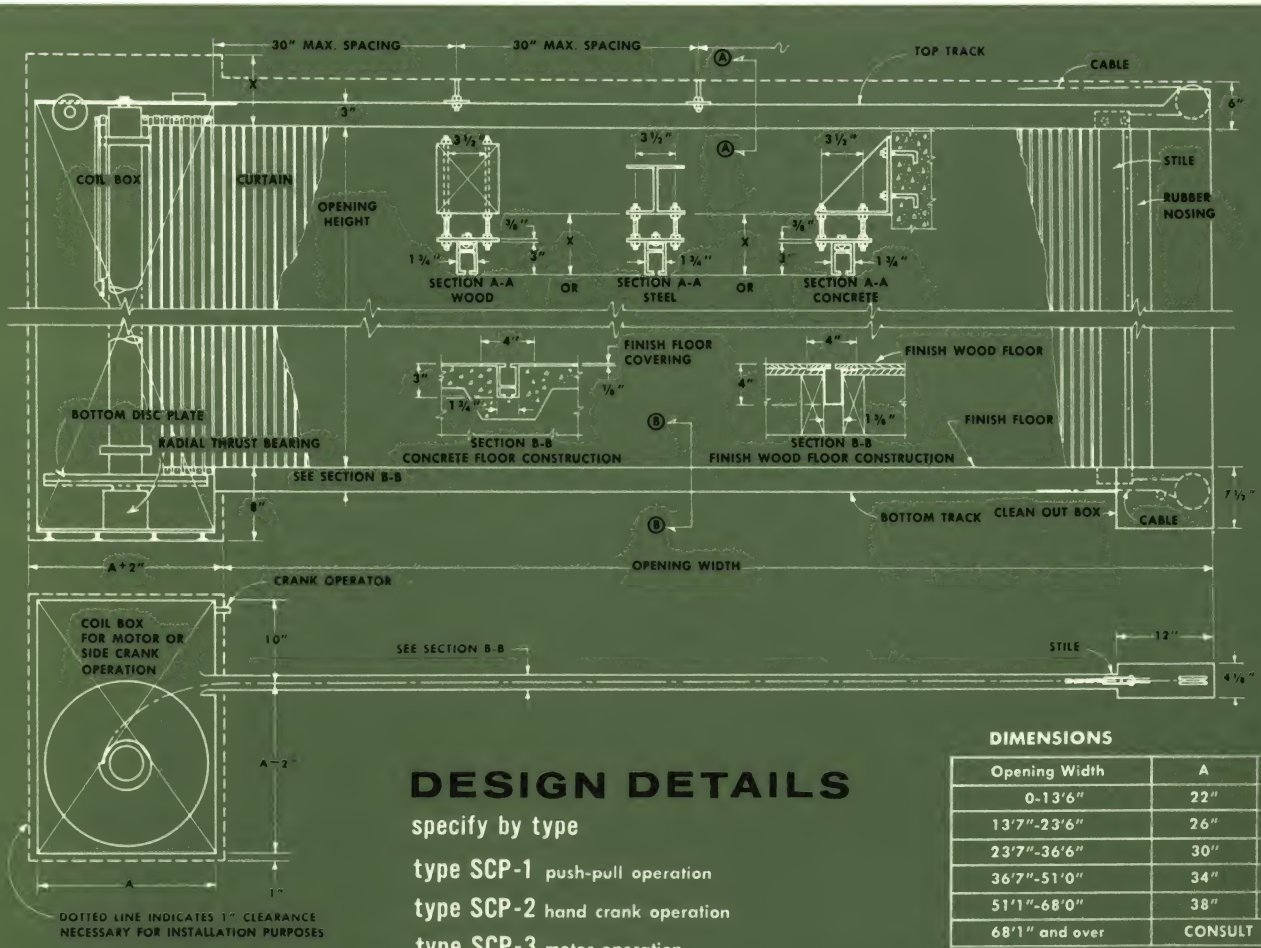
Extruded aluminum track

Continuous shoes

Curtain of vertical grain wood, assembled with concealed cables and spring steel ribbons

Curtain load is only 4 lbs. per sq. ft.

Extruded aluminum floor guide



DESIGN DETAILS

specify by type

type SCP-1 push-pull operation

type SCP-2 hand crank operation

type SCP-3 motor operation

DIMENSIONS

Opening Width	A	X
0-13'6"	22"	6"
13'7"-23'6"	26"	7"
23'7"-36'6"	30"	8"
36'7"-51'0"	34"	8"
51'1"-68'0"	38"	9"
68'1" and over	CONSULT FACTORY	

The Cookson Company reserves the right to make changes in specifications without notice.

INSTALLATIONS in every State and in important centers around the world demonstrate the wide acceptance and dependability of Cookson Doors. A representative list of users, covering every phase of business, industry, government, and institutional application, will be furnished upon request.

SALES and SERVICE, including trained and experienced installation service, is available through the competent Cookson representatives listed below. Each of these well-established organizations has been selected for a sound knowledge of building requirements, personnel and facilities capable of providing accurate sales information, efficient installation and prompt service.

ALABAMA

BIRMINGHAM
Wilson Door & Window Supply Company
716 - 8th Court, West — AL 1-4533
MOBILE — Elmer Ezell, Inc.
166 Morgan Avenue — GR 9-6754

ARIZONA

PHOENIX — Allison Steel Mfg. Company
19th Ave. & Southern Pacific Tracks
AL 8-7731

CALIFORNIA

BAKERSFIELD — G. H. Slack & Son, Inc.
231 Sonora Street — FA 5-5878
EUREKA — Geo. C. Jacobs Company
60 West 4th Street — HI 2-6484
FRESNO — Healey & Popovich
1703 Fulton Street — AM 4-4737
MODESTO — Valley Asbestos & Supply Co.
1601 McHenry Street — LA 4-5188
SACRAMENTO — Openings, Inc.
2636 Redding Avenue — GL 1-2100
SAN DIEGO — Chas. H. Lentz
P. O. Box 727 — BE 2-1868
SAN JOSE — West Coast Steel Company
1131 Auzerais Avenue — CY 2-5802

COLORADO

DENVER — Leever-Post Company
4350 N. Broadway Avenue — AM 6-2475

CONNECTICUT

BRIDGEPORT — Hawley Hardware Co.
1120 Main Street

FLORIDA

CORAL GABLES — Carl J. Hanson Co.
1417 Palancia Avenue — MO 7-8392
JACKSONVILLE — Southern G. F. Company
1507 Industrial Blvd. — EV 8-9258
TAMPA — T. E. Jacobson Company
P. O. Box 8006 — WE 9-4161

GEORGIA

ATLANTA — Southern G. F. Company
257-263 Decatur Street — JA 3-7223

IDAHO

BOISE — The Casco Company
2008 S. Latah Street — 3-3758

ILLINOIS

CHICAGO — Butters Building Spec. Co.
20 North Wacker Drive — FR 2-5795

IOWA

DAVENPORT — Ramco
3420 Miller Street — 3-8013
DES MOINES — Swanson Sales, Inc.
2737 Douglas Avenue — CR 9-9793

KANSAS

TOPEKA — Building Spec. & Equip. Co.
603 Topeka Blvd. — CE 2-1252
WICHITA — Building Spec. & Equip. Co.
1727 E. 2nd Avenue — AM 5-2821

KENTUCKY

LOUISVILLE — John W. Bishop
5330A South Third Street
Suite 106, Iroquois Bldg. — EM 8-1691

LOUISIANA

BATON ROUGE — A. B. Broussard & Son
2937 Greenwood Drive — DI 4-3703
LAKE CHARLES
Robert T. Mutersbaugh, Bldg. Specialties
P. O. Box 136 — HE 9-5616
NEW ORLEANS
Louisiana School Supply Company
833 Howard Avenue — MA 0643
SHREVEPORT — Building Service Company
1245 Texas Ave. — 3-7106

MARYLAND

BALTIMORE — The Jennings & Winters Co.
3834 Falls Road — TU 9-6126

MASSACHUSETTS

WEST NEWTON — William Davies Co.
1463 Washington Street — DE 2-2500, 1, 2

MICHIGAN

DETROIT — O. C. Witte Company
1003 Donovan Bldg. — WO 2-1001
FLINT — J. P. Burroughs & Son
625 West Second Street — CE 2-2181
GRAND RAPIDS — G. W. Clements Co.
816-828 Cherry Street, S. E. — GL 4-2593

MINNESOTA

MINNEAPOLIS — J. R. Burtis Company
384 Sexton Bldg. — FE 6-8551

MISSISSIPPI

JACKSON — Laughlin Company
313½ W. Pascagoula Street — 3-4870

MISSOURI

KANSAS CITY — The Houston Company
Rm. 201, 3221 Troost Ave. — VA 1-2915
ST. LOUIS — Howard F. Willis
P. O. Box 3818, Kirkwood Station — YO 6-3555

MONTANA

BILLINGS — Stroup Hardware Company
2816 Minnesota Avenue — 3-3186

NEBRASKA

OMAHA — Builders Products Company
3928 Lake Street — PF 2600

NEVADA

LAS VEGAS — Contractors Service Co.
219 W. Colorado Street
RENO — Meredith Steel Const.
P. O. Box 278 — FA 3-3782

NEW HAMPSHIRE

MANCHESTER
United Glass & Aluminum Co., Inc.
78-80 Douglas Street — NA 3-3517, 8

NEW MEXICO

ALBUQUERQUE — Don J. Cummings
P. O. Box 3103, Station D — AX 9-2411

NEW YORK

NEW YORK — Narragansett Industries, Inc.
4 East 39th Street — MU 5-0791

NORTH CAROLINA

CHARLOTTE
Delph Hardware & Specialty Co.
2109 Hutchison Ave. — FR 6-3671
RALEIGH
Delph Hardware & Specialty Co.
223 Bickett Blvd. — TE 3-1603

OHIO

AKRON — A. E. Hotard Company
790 Thayer Street — FR 6-7129
CINCINNATI — Architectural Products Co.
7036 Poplar Lane — PO 1-8282
TOLEDO — D. A. Valo & Associates
3243 Van Fleet Parkway — TU 2-5246
ZANESVILLE — The Jay Doak Company
P. O. Box 307 — 2-9397

OKLAHOMA

OKLAHOMA CITY — Remco, Inc.
1205 N. Pennsylvania — JA 5-7463

OREGON

PORTLAND — Fought & Company
5595 N. Lagoon Avenue — BU 5-4531

PENNSYLVANIA

HANOVER — Theron G. Cromer Associates
920 Sherwood Street — ME 3-0191
PITTSBURGH — Haulib Company
646 Washington Road — LE 1-2288

RHODE ISLAND

PROVIDENCE — General Sash Supply Co.
35 Turner Street — UN 1-7760

SOUTH CAROLINA

COLUMBIA — Southern G. F. Company
1606 Westminster Drive — 3-7359

SOUTH DAKOTA

RAPID CITY — Midwest Builders Supply, Inc.
813 Quincy — FI 2-5932

TENNESSEE

JOHNSON CITY — O. M. Jones Company
P. O. Box 38 — 458
NASHVILLE — Boyd Jacoway
P. O. Box 6151 — CY 7-1348

TEXAS

AMARILLO
Amarillo Architectural Products
1212 E. 9th Avenue — DR 2-4893
AUSTIN — R. A. Gilbert Company
Perry-Brooks Bldg. — 6-6229
CORPUS CHRISTI — Safety Glass Company
412 N. Staples Street — TU 3-9324
DALLAS — John Wall Company
P. O. Box 9784 — DA 7-6572
EL PASO — Neff, Buckner, Holt, Inc.
600 West Paisano Drive — KE 3-1405
HOUSTON — Shelton W. Greer Company
P. O. Box 7327 — UN 4-4487
SAN ANTONIO — Straus Frank Co.
3800 San Pedro

UTAH

SALT LAKE CITY
S. A. Roberts & Company
109 West Second South Street — EM 4-4431

VIRGINIA

ALEXANDRIA
Eastern Engineering Company
3834 Mt. Vernon Avenue — TE 6-6032

WASHINGTON

SEATTLE — Bradley-Zesbaugh, Inc.
505 White-Henry-Stuart Bldg.
MA 4-1570, 71, 72
SPOKANE — Brant Bernhard Corporation
West 34 Second Ave. — RI 7-2081

WISCONSIN

MILWAUKEE — Jim Michel Bldg. Spec., Inc.
3247 W. Hampton Avenue — UP 3-7700

CANADA

VANCOUVER, B.C.
Permasteel Engineering, Ltd.
1089 West Broadway — BA 6531

HAWAII

HONOLULU — Lewers & Cooke, Ltd.
404 Piikoi Parkway — 5-1961

PUERTO RICO

SANTURCE — Lausell Commercial, Inc.
Pesante 266 — 2-3009

THE COOKSON COMPANY

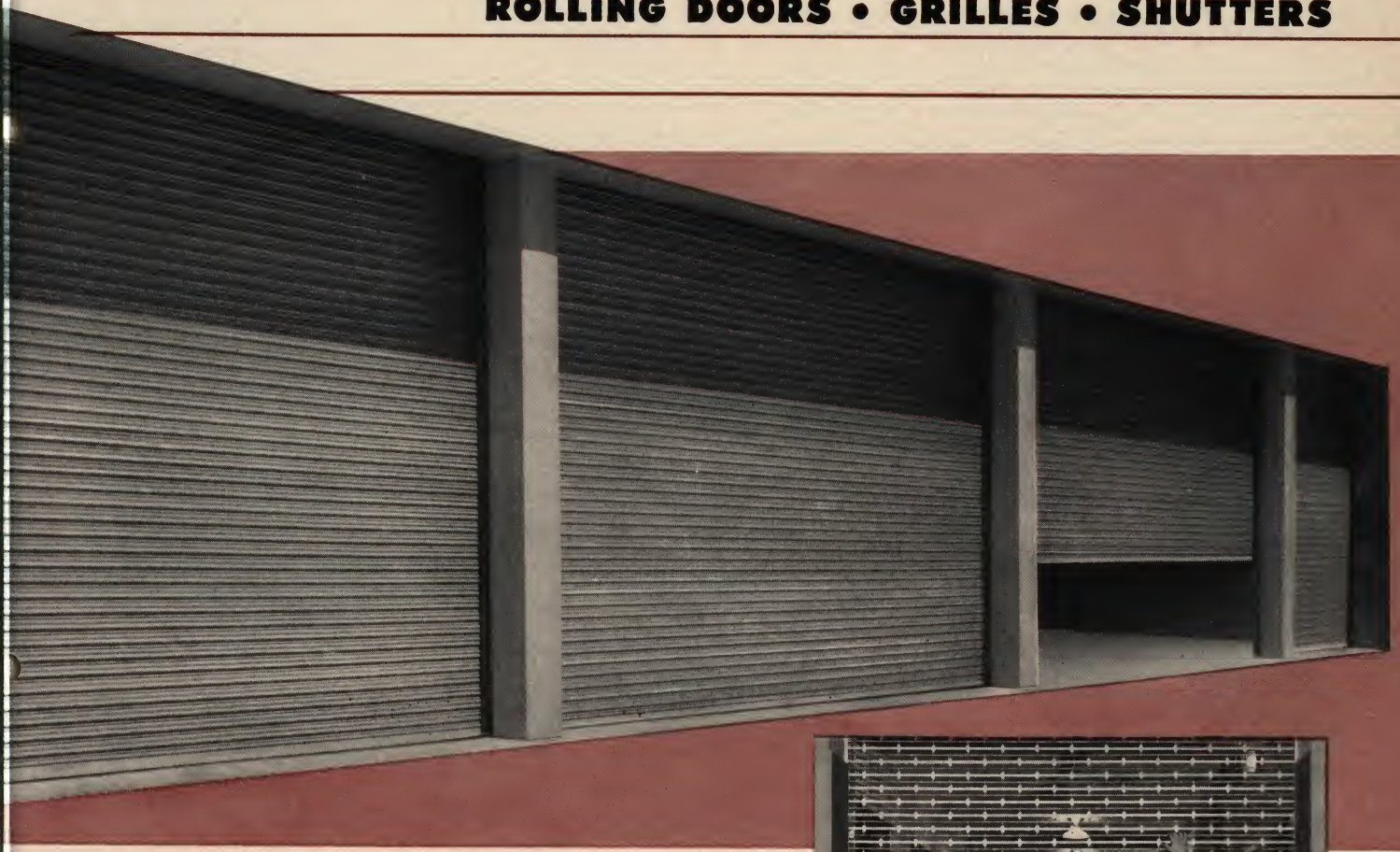
1525 Cortland Avenue, San Francisco 10, Calif.

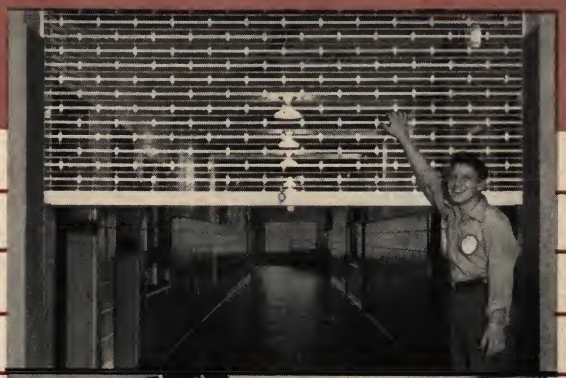
Southern California Office — 120 East Palm Avenue, Burbank, Calif.

CORNELL

steel, aluminum, stainless, bronze

ROLLING DOORS • GRILLES • SHUTTERS





1828 — 132 YEARS — 1960

CORNELL IRON WORKS, INC.

LONG ISLAND CITY 6, NEW YORK

CATALOG I36

CORNELL ROLLING DOORS

* member of the Hundred Year Association of New York, Inc.

..... since 1828

Makers of fine doors, shutters and grilles. CORNELL IRON WORKS, INC., owes its origin to George CORNELL who purchased his employer's metal business in 1828 and established his shop in New York City. His younger brothers, John B. and Wm. W. succeeded him and John B. acquired one of the first patents on Rolling Steel Doors in 1854, incorporating them into CORNELL cast iron store fronts for protection. Contributions from the Company shops to the Civil War included turret tops for the Monitors and gun bases for General Grant's artillery during the Seige of Vicksburg. John M. succeeded his father and uncle. It was during his period that the CORNELL IRON WORKS erected the frame work for the Statue of Liberty furnishing all the supporting iron work and interior stairways for the bronze shell donated by France. John M's sons Milton L. and John B. succeeded him launching the present period of specialization in Rolling Steel Doors and allied products. In 1925 the shops were moved to present modern one Story Factory Buildings in Long Island City, N. Y.

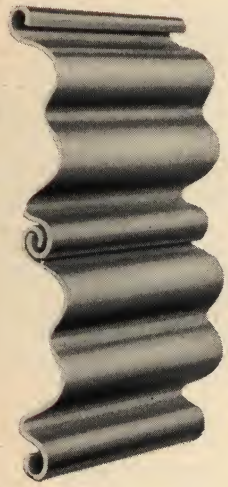
The company since its founding has been continuously managed by succeeding generations of the CORNELL family. Now in its 131st year CORNELL has an unrivalled term of experience and a reputation for responsibility and uninterrupted service to the users of its products.

recommended uses

CORNELL Rolling Doors have become a standard in the industry with existing installations in use for over ninety years.

CORNELL Rolling Doors can be installed in practically all door openings and are in wide demand for piers, warehouses, factories, truck terminals, military installations, garages, power plants, hospitals, shopping centers etc.

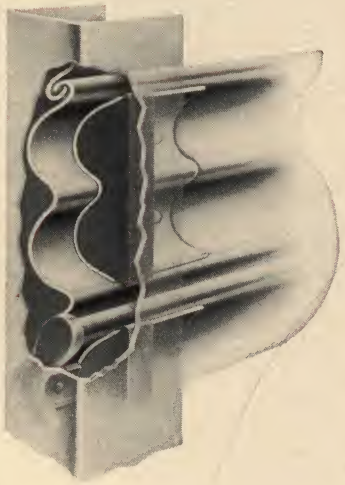
Since CORNELL Doors are available in all metals—aluminum, stainless steel and bronze, installations are architecturally correct for monumental structures like museums, banks and public buildings of all types.



slats

CORNELL special design slats with interlocks are formed to shed water and to allow frictionless coiling.

The unique double arch 7/8" deep and 3 5/8" wide construction is stiffer and more rugged. The clean horizontal lines harmonize with any Architectural treatment.

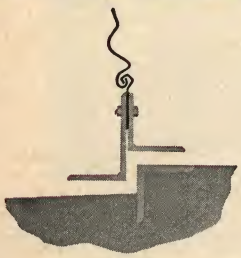


weathering baffles

CORNELL Compressible Weathering Baffles are made of DuPont Neoprene compressible sponge, firmly bonded to a metal retainer. This replaceable assembly is secured to both ends of each slat where it enters the guides. The Baffles close the gaps in the slats without adding friction to the normal operation of the door, as with the usual weathering. The heavy structural steel door guides at the jambs are entirely unobstructed by weathering attachments, making maintenance and repairs quick and uncomplicated. The Baffles reduce the passage of wind and water very appreciably. The replaceable construction makes it readily available for existing doors.

The Baffles give the advantage of practically noiseless operation, a real asset in an all metal door.

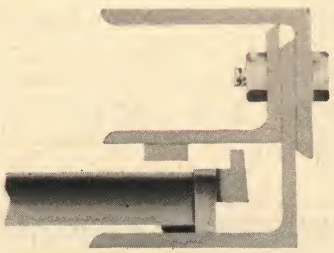
bottom bar weathering



All metal consisting of two angles back to back with 1/2" step down on the weather side over a step up sill provided by others.

Compressible rubber extrusion attached to double angle bottom bar. The sill is flush. The Rubber Seal is replaceable.

windlocks



Special windlock-endlock castings attach to slats at suitable intervals and engage locking bar in guides preventing curtains from blowing out. Castings are designed to take weathering baffles

if desired. Windlocks are not required with CORNELL heavy rigid guide and double arched slat construction except on very wide openings under severe wind exposure conditions.

general description

CORNELL Rolling Doors roll up out of the way overhead and conserve valuable floor space.

They are quick and easy to operate, durable as only an all metal structure can be, afford fire protection and excellent general protection.

The CORNELL door proper is built up of a series of interlocking metal slats. The door is stiff against pressure but flexible to roll up around a counter balance shaft. CORNELL doors are economical to install, neat in appearance and will operate for years with minimum maintenance.

See "ELEMENTS" of a CORNELL Rolling Door this page for a pictorial description of the component parts and assembly of a standard chain operated CORNELL door.

fine workmanship

CORNELL Rolling Doors, Shutters and Grilles are manufactured by skilled craftsmen in a modern factory equipped with every facility for cold rolling, fabricating, machining, welding, finishing and spraying.

Metals and other materials used are the best produced by American mills. The quality of both workmanship and material is evident in the fine appearance of the finished product.

service and guarantee

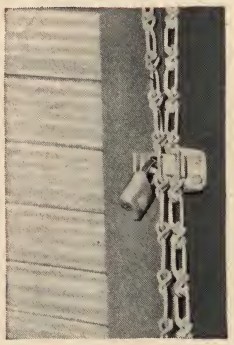
CORNELL Doors, Shutters and Grilles are guaranteed against defect in workmanship and material for one year. An installation need never be replaced for want of a part or service.

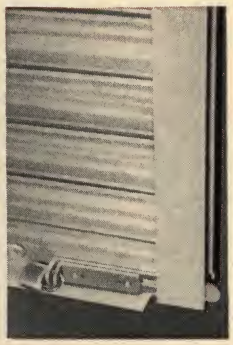
A permanent engineering record of every order is filed in a fire proof vault. In case of damage or accident CORNELL can quickly supply genuine replacement parts. Such parts are available today for CORNELL doors and other products installed many years ago and CORNELL representatives in principal cities throughout the country can provide the necessary field service when required.

progress

The unique weathering features and full vision windows for rolling doors, the rolling grille introduced by CORNELL to America in 1931, the refinement of Architectural aluminum extrusions, with concealed fastenings for counter shutters and grilles, and the wider use of stainless steel and nonferrous metals are evidence that the development of finer Doors, Shutters and Grilles is a continuing process at the CORNELL IRON WORKS.

locking





Self-coiling Doors are secured by malleable iron slide bolts fastened to the bottom bar and engaging slots in the side guides.

Hasps are provided for padlocking. (Cylinder Locks can be provided at additional cost.)

Hand Chain Doors are provided with a latch fastened to the guide to which the hand chain is secured. Provision is made for Padlocking.

Hand Crank Doors are arranged for padlocking at the crank gear box.

full vision window

Introduced and patented by CORNELL in 1952 for Rolling Steel Doors. Available in 14", 18" and 22" heights, 20" wide, 3/4" thick, of clear shatter-resistant acrylic type plastic. Each transparent plastic slat has a convex top edge and a concave bottom edge, making a ball and socket type of joint which gives a weatherproof and flush surface both inside and out, and permitting full vision which is often an important security factor. The window adds appreciably to the light inside. Two or more are often used on larger doors.

pass door

CORNELL Doors can be equipped with a pass or wicket door. These small doors and their frames are hinged to the rolling door guide and swing clear of the opening when the Rolling Door is open. Not recommended unless impossible to provide a service entrance elsewhere.

movable posts

CORNELL Doors can be furnished with intermediate posts or pilasters for very wide openings. They hinge up, slide to one side, or lift out to clear the full opening. Hinged type operated by hand winch or motor drive.

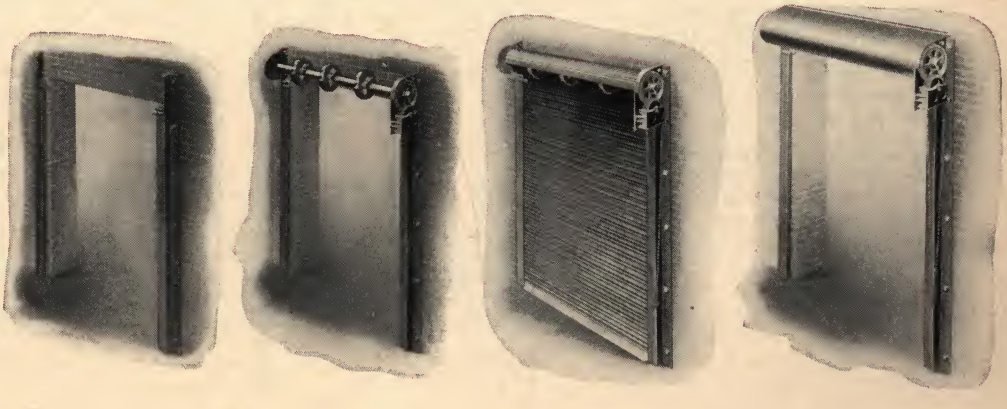
elements

1 Heavy structural steel Guides support vertical load on jambs to which they are usually fastened with through bolts at top and expansion bolts below.

2 Steel Brackets attach to Guides and support counter balance Shaft—a single rigid assembly assuring proper alignment and uniformly distributing entire vertical load on jambs. NO LOAD IS CARRIED BY LINTEL.

3 Heavily galvanized Door Curtain in place, fastened to Shaft, is then coiled up and covered with a self supporting galvanized steel hood fastened to the Brackets.

4 Chain and gearing shown may be left or right hand. See other methods of operation Pages 4 and 5.

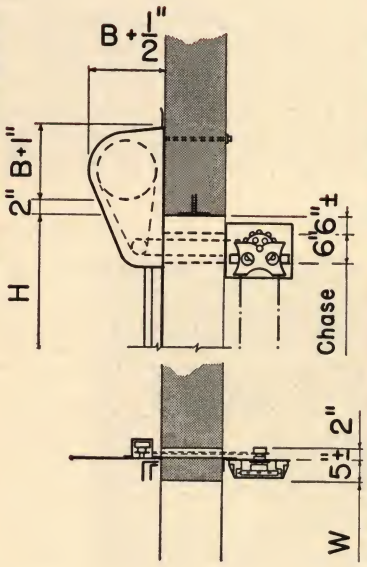


1 self coiling types SCF and SCB

The quickest method of operation for small door and window openings. Lifting handles and locking device on bottom bar can be furnished on either or both sides of opening. **Self Coiling Face of Wall,** Type SCF construction, is suitable for openings up to 100 square feet and leaves masonry opening clear and unobstructed. **Self Coiling Between Jambs,** Type SCB construction, permits door to coil under lintel with guides on jambs projecting into opening or protected in reveals in jambs.

2 chain and gear types CGF and CGB

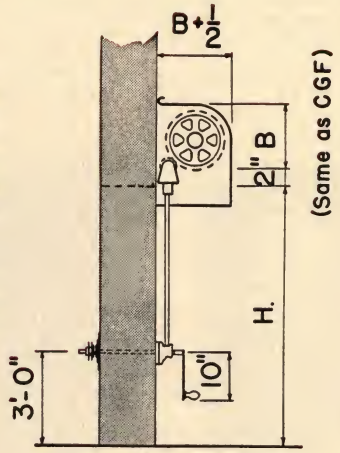
For doorways of any size exceeding practical area and height for self-coiling push-up operation. Shaft revovled by endless hand chain, sprocket, and either single or compound gearing. Standard **Chain Gear Face of Wall** type CGF is generally desirable. Where headroom above lintel will not permit face mounting, **Chain Gear Between** jambs type CGB may be used. Door coils under lintel with guides on jambs projecting into opening or protected in reveals in jambs.



thru wall type CGTF. Doors mounted on the exterior face of wall may be operated from the interior by using a continuous roller chain through a slot in the wall to connect the hand chain sprocket with door shaft outside. The standard location shown may be varied to suit special conditions. The exterior hood is designed to shed water and the gears are protected from the weather.

3 hand crank & gear types HCF and HCB

Slower and more expensive than standard hand chain, doors may be **Hand Crank Face** of Wall mounted type HCF or **Between** Jambs type HCB. Though less efficient in translating the operating force, the operator is neat and the crank handle readily removable. Always allow space to swing the crank.



SIDE ELEVATION
TYPE HCTF

thru wall type HCTF. Doors may be **Hand Crank** operated **Thru Face** of Wall from opposite or both sides of opening. Operator will work easily from either side with thrust and ball bearings thruout.

4 motor operated

CORNELL motor drives and remote controls rapidly pay for themselves through savings in operating man-hours, heat loss, and damage to door curtains left partially open thru man failure. Rate of operation is approximately .67 feet per second for the smallest to the largest of openings. CORNELL operators are made in self contained units completely assembled and mechanically tested in shop. They are specially constructed for the severe service for which CORNELL doors are designed. Standard motor drive assemblies are mounted on independent brackets for greatest flexibility of location on face of adjacent walls and maximum accessibility of operating parts for maintenance and adjustments. If side clearance is not available for standard wall mounted drives type MF, special bracket mounted drives Type MB are available. Doors mounted on the exterior face of wall can be operated by motor drives located inside Type MTF with roller chain connection thru a wall slot. All CORNELL standard and special power operators are available for right and left hand mounting. Special assembly allowing removal of motor without affecting Hand Chain operation available at extra cost.

CORNELL motor drives can be applied to existing CORNELL doors or new doors can be arranged for future motor operation. CORNELL door shafts are especially designed for motor operation, running on heavy duty high grade ball bearings. Heavier than standard endlocks are used on the curtains of all motor doors.

■ motor and controls

Motors are of special high torque elevator type with electric brakes. The gearing is completely enclosed and runs in an oil bath. An emergency hand chain operator is engageable from the floor, releasing the solenoid brake and opening the motor circuit. The emergency operator does not affect the setting of the limit switch. The motor cannot run when the emergency hand gears are in mesh. The motor is protected by overload relays. Automatic reversing starters and push button stations are furnished with all installations. Transformers are furnished when a low voltage control circuit is required.

Motor Doors are self locking through the solenoid brakes which are set when the doors are not operating. Push button stations can be provided with Padlocks or Cylinder Locks when required.

■ operation

On pushing the button the solenoid acts to open the motor brake and the door moves up or down at a rate of approximately .67 ft. per second. On reaching the top or bottom of the door travel, the limit switch operates, stops the motor, automatically cuts off the brake magnet and lets the brake go on with full power, locking the entire mechanism against further travel. The action is fool-proof. The door can be halted at any point by pushing the STOP button. Push button stations for outside use can be furnished in waterproof boxes.

Wires and wiring by others to wiring diagrams furnished by CORNELL.

Radio, electric eye, treadle, and electronic devices may be applied and wired into the control circuits of Cornell Doors.

■ other

fire doors

CORNELL Automatic Closing Fire Doors, manufactured in complete accordance with Underwriters requirements, can be equipped with motor operators. Doors so equipped cannot bear Underwriters labels but they are fully as effective as labeled fire doors.

Where Underwriters doors with mechanical fuse link automatic closing devices are not required by authorities having jurisdiction, rate of heat rise or smoke detecting devices can be furnished. These devices are wired into the control circuit of the motor drives and operate the doors electrically in event of fire, rapid heat rise or unusual smoke concentration.

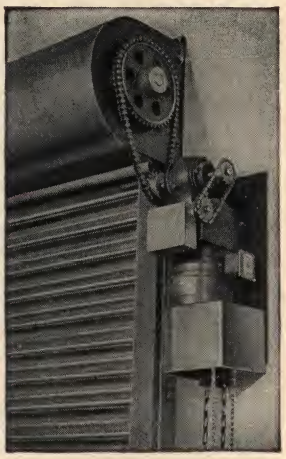
grilles

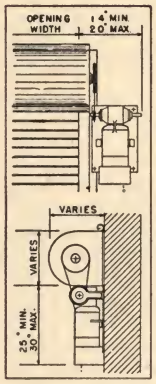
CORNELL Motor Drives described above and on Page 5 can be applied to CORNELL Rolling Grilles as illustrated on Pages 10 and 11.

counter shutters

CORNELL has developed a new Tom Thumb line of inexpensive motor drives for CORNELL 1¼" Flatslat Counter Shutters. See Page 13 of Catalog.

face mounting type MF

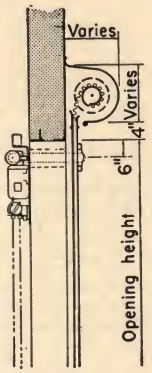




CORNELL Standard Motor Drive on independent mounting bracket includes electric brake, emergency hand chain operator, automatic reversing starter, "UP", "DOWN", "STOP" push button station and limit switch together with step down transformer for lower voltage control circuits when required. Reduction gearing is completely enclosed and runs in an oil bath.

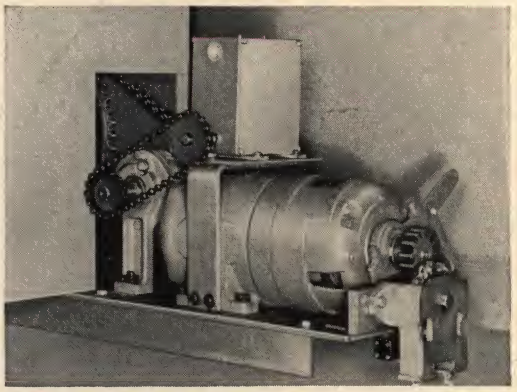
Motor Operator illustrated is right hand and below coil but can be located either side above or below coil. Note emergency hand chain which may be instantly engaged from the floor in the event of power failure.

thru wall type MTF

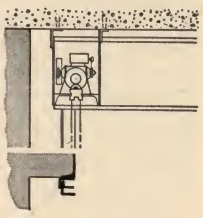


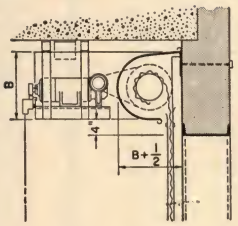
CORNELL Thru-Wall Motor Drive typical for doors mounted on exterior face of outside wall, motor operated from inside. Weatherproof exterior control station can be furnished, key operated for security.

bracket mounting type MB

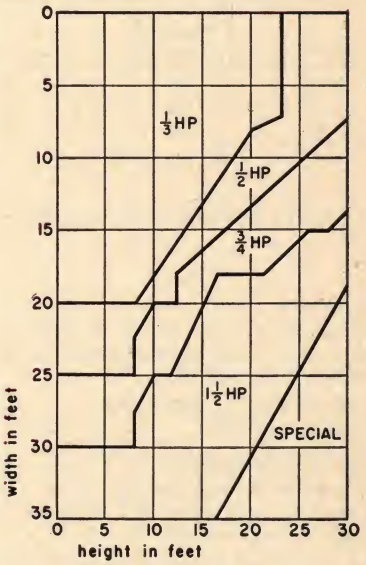


CORNELL Special Motor Drive requires no additional headroom or side clearance. Includes electric brake, emergency hand chain operator, automatic reversing starter, "UP", "DOWN", "STOP" push button station and limit switch together with step down transformer for lower voltage control circuits when required. Reduction gearing is completely enclosed and runs in an oil bath. Motor drive may be Right Hand as shown or Left Hand. Note emergency hand chain which may be instantly engaged from the floor in the event of power failure.





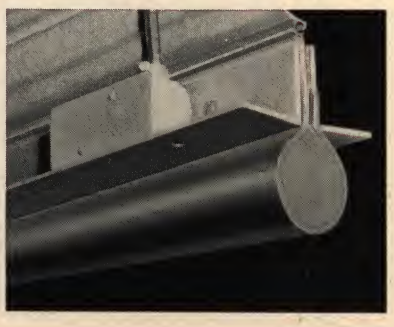
motor size selection



Approximate motor sizes of CORNELL Motor Drives may easily be selected from above chart.

Our motors are high torque elevator type and above chart includes a large minimum safety factor based upon standard gauge curtains. Use this same chart for CORNELL Rolling Grilles.

safety contact bottom bar



CORNELL "Feather-touch" safety contact edge on bottom bar instantly stops downward travel of door upon light contact with any obstruction in opening and may be arranged to reverse door travel if desired. Cable contactor is completely sealed in rubber tube and is effective for full width of opening. A flexible cable connects the safety edge to the door starter. There are no mechanical parts to maintain and complete unit is readily replaceable.

• specification

1 general Rolling doors as shown on drawings or specified shall be the product of Cornell Iron Works, Inc., Long Island City, N. Y., or approved equal.

Rolling doors shall be of manufacturer's standard construction.

2 work excluded Preparation of openings, structural or miscellaneous metal work, metal or wood trim, field painting and electric wiring for motor operators are not included in this specification.

3 curtains Curtains shall be formed of interlocking slats, 7/8" in depth at the crown and approximately 3½" center to center, of gauges in accordance with chart below. Curtains shall be designated to resist a wind pressure of 20 lbs. per sq. ft.

GAUGE CHART (Gauges are US Standard for Steel and Stainless; B & S for other materials)

width	steel and stainless	aluminum
0'-13'	22	18
13'-20'	20	18
over 20'	18	16

a) slat material.

(1) Cold-rolled, copper-bearing steel, with temper, hot galvanized with 1¼ oz. of zinc coating per square foot of flat metal, bonderized for paint adhesion.

(2) Stainless steel, 18/8 chrome nickel.

(3) Aluminum alloy 5052.

b) endlocks (malleable iron)

(1) For standard commercial doors on each end of alternate slats.

(2) Alternate. Special endlocks with compressible neoprene wind baffles at each end of each slat.

(3) Special wind-lock end-locks shall be applied to the curtain at about two feet centers for steel doors wider than 20.5 feet and over 340 sq. ft., and for all doors wider than 24 feet, and all aluminum doors wider than 12 feet or over 120 sq. ft.

c) bottom bars. The bottom edge of the curtain shall be finished with two angles not less than 1/8" or one angle not less than 3/16" thick.

(1) (Alternate) A flexible astragal shall be applied to make tight contact with the floor.

(2) (Alternate) Motor operated doors. The bottom of the curtain shall be provided with a sensitive edge, electrically connected to stop (reverse) the travel of the door on meeting an obstruction.

4 guides Guides shall be formed of not less than 3/16" steel (stainless steel) (aluminum) (bronze) of sufficient depth to retain the curtain under normal wind pressure. Where windlocks are used, suitable strips to engage them shall be provided in the guides. Top of the guides shall be flared for smooth entry of the curtain.

a) Guides for commercial doors shall be attached to jambs by not less than 3/8" bolts spaced not more than 30" on centers.

5 shafts Shafts shall be of steel pipe of sufficient size to carry the curtain load with a maximum deflection of .03" per foot of width, with inner shaft of cold-rolled steel. Counterbalancing springs shall be of oil-tempered wire, sealed in grease, shop tested to overload, and provided with means for adjustment after erection. Grease packed ball bearings or bushings shall be provided.

6 brackets Brackets shall be of steel, unbreakable armor-plate type, attached where possible to the extended section of the guides to form a continuous rigid assembly.

7 hoods Hoods shall be formed of not less than 24 USg galvanized steel (24 USg stainless steel) (#22 B & S bronze) (.04" aluminum), neatly fitted to the brackets and reinforced with stiffening flanges at top and bottom edges. Hoods wider than 14 feet shall be provided with intermediate reinforcement as required.

8 locks Doors shall be secured by

a) Slide bolts and hasps on bottom bar. Cylinder locks operable from one or both sides can be provided at extra cost.

b) Hook for securing hand chain with provision for padlocking.

9 operation Operation shall be by

a) Handles on bottom bar, self-coiling type.

b) Continuous hand chain and gearing on coil side (through wall).

c) Hand crank with extended crank handle (vertical shaft) on coil side (through the wall).

d) Motor operator, on coil side (through the wall). Motors shall be high-torque, crane-and-hoist type, with built-in-worm gear reduction running in oil bath and disc brake and brake release, arranged to drive the door at approximately 0.67 ft. per second.

e) Final drive from motor to door shall be by means of roller chain. Emergency hand operation shall be provided by hand chain and gearing or by means of a suitable disconnecting clutch. Electrical equipment shall include rotary limit switch to control door travel, interlock switch on emergency hand chain, magnetic reversing starter with overload protection and one three-button push button station. Equipment shall have NEMA I enclosures.

10 finish

a) Steel except galvanized curtain and hood painted shop coat metallic paint.

b) Stainless steel 2 B mill finish on curtain and hood. Guides and bottom bars mill finish. Special finishes available at extra cost.

c) Aluminum. Mill finish standard. Alumilited satin or colored finish available at extra cost.

11 erection Doors shall be erected by the manufacturer or authorized representative, and all parts necessary for a complete installation shall be provided.

12 guarantee Installation shall be guaranteed for one year against defects in material and workmanship.

MANUAL

type SCF face mounted

This door is designed for small openings (under 100 square feet in area and less than 8 feet in height). Guides and coil on wall face maintaining clear width and height of opening. Operation by lifting handles conveniently located on bottom bar.

type SCB between jambs

This door is generally used where "face of wall" construction is impractical. Guides mounted between the opening jambs or in recesses provided in the wall construction. The coil is mounted under the lintel. Operation same as face mounted door.

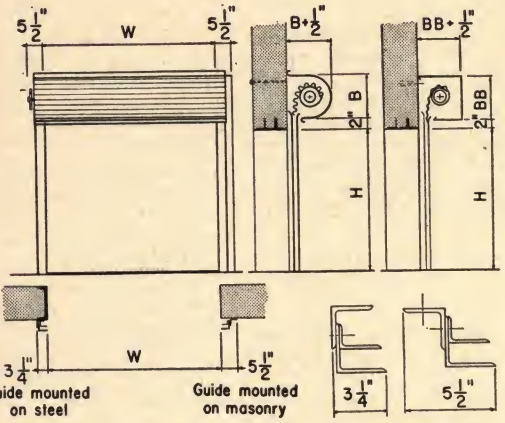
CHAIN/GEAR

type CGF face mounted

This door is designed for larger openings and is the accepted standard for use in industrial buildings of all types. Guides and coil on wall face maintaining clear width and height of opening. Where jamb clearances permit, guides are kept back 1" for protection. Operation by hand chain through reduction gearing.

type CGB between jambs

This door is primarily used where restricted overhead or jamb clearance makes "face of wall" mounting impractical. Guides mounted between the opening jambs or in recesses provided in wall construction. The coil is mounted under the lintel. Operation same as face mounted door.

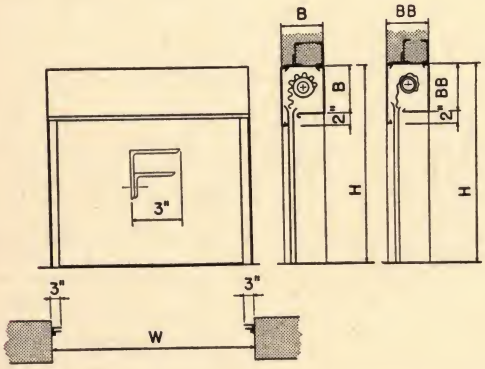


NOTES 1 These are standard dimensions
Consult factory for special conditions

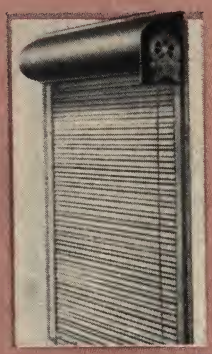
2 Opening dimensions in feet
Detail dimensions in inches

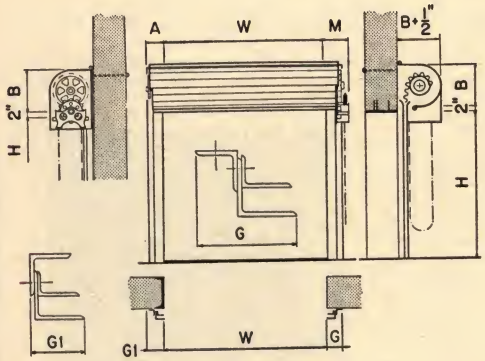
▲ For between jamb doors:
dimension H includes coil height

height H	width W	
	0-8	8-12
	BB	B
0-8	12	15
8-10	—	15

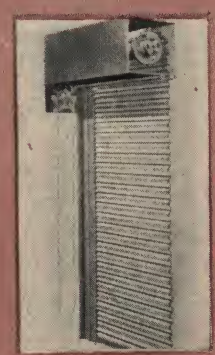


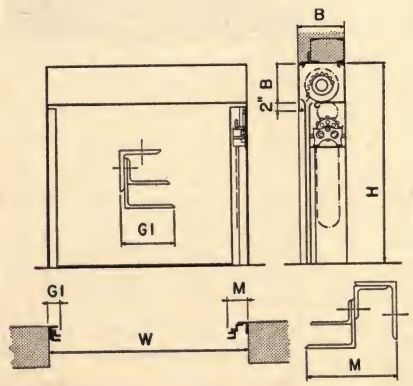
height H▲	width W	
	0-8	8-12
	BB	B
0-9	12	15
9-11	—	15



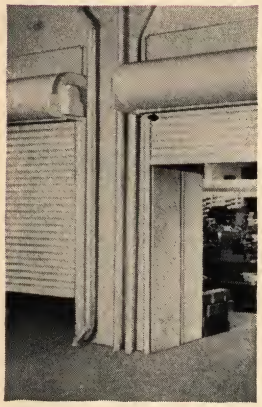


height H	width W														
	0-15					15-20					20-24				
	B	G	G1	M	A	B	G	G1	M	A	B	G	G1	M	A
0-10	15	5½	3¼	7	7	16	6	3¾	7½	7	16	6	3¾	9¼	7
10-14	16	5½	3¼	8¾	7	18	6	3¾	9¼	7	18	6	3¾	9¼	7
14-18	18	5½	3¼	8¾	7	18	6	3¾	9¼	7	20	6	3¾	9¼	9
18-22	20	6	3¾	9¼	7	20	6	3¾	9¼	9	22	6	3¾	9¼	9





height H▲	width W								
	0-15			15-20			20-24		
	B	G1	M	B	G1	M	B	G1	M
0-11	15	3¼	5½	16	3¾	6	16	3¾	6
11-15	16	3¼	5½	18	3¾	6	18	3¾	6
15-20	18	3¾	6	18	3¾	6	20	3¾	6
20-22	20	3¾	6	20	3¾	6	22	3¾	6



• LLENROC

"Llenroc" (Cornell spelled backwards) is the trade name designation for our Rolling Steel Fire Doors. Fire tested and labeled by Underwriters Laboratories, Inc. Approved by Factory Mutual laboratories, carry the 3 hour test label of the N. Y. City Board of Standards & Appeals No. 1428-39SM, and N. Y. State Department of Labor Board of Standards and Appeals No. B.S.A. 2408. Llenroc fire doors give maximum savings in insurance rates. All Fire Doors individually labeled for openings 120 sq. feet with neither width nor height exceeding 12'. Certificates of inspection furnished with oversize doors for openings to 24' x 24'.

Fire Wall Doors	3 Hour Rated	Class "A" Labeled
Vertical Shaft Doors	1½ Hour Rated	Class "B" Labeled
Corridor and Partition Doors	¾ Hour Rated	Class "C" Labeled
Exterior Doors	1½ Hour Rated	Class "D" Labeled

Note: Class "A" doors must be automatic closing. Other classes normally furnished automatic closing may be non-automatic.

Underwriters Labeled Rolling Steel Fire Doors close automatically upon the fusing of an exposed link at 160 degrees F. These doors operate easily for normal service independently of the automatic devices. Handles are provided on the bottom bar for manual operation or the doors can be equipped with Hand Chain Operators for mechanical operation.

In case of fire, the fusible links release the automatic closing mechanism which provides a powerful and positive impulse to start the door down. This is quickly checked, giving a braking action as the door descends. Governors are provided where required to further retard the speed of closing.

A flame stop, also automatically released, closes the space between the hood over the door coil and the counterbalance shaft to prevent the passage of flame over the top of the curtain. Continuous self aligning endlocks bar flame passage around edges of curtain and fusible washers which quickly melt allow free expansion of all parts.

See Page 4 for data on Power Operators for Rolling Steel Fire Doors.

Hand chain operator gears on mechanically operated doors also automatically disengage on fusing of the link.

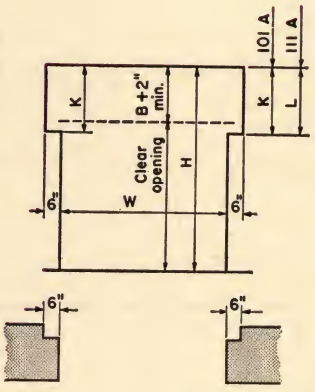
CORNELL Fire Doors are quickly reset after automatic closing, without dismantling the door or removing the covering hood.

• wall pockets

Where it is desirable to preserve the full width of the opening the side guides of a between jambs installation may be located in the 6" recesses shown at right, and on Page 9. It is then necessary to provide wall pockets overhead, as shown, to accommodate the brackets which support the door. If guides may protrude into the opening the overhead cut out pockets are unnecessary.

NOTE: Where overhead pockets are used, lintels must be lengthened to suit.

For B dimension, see page 9



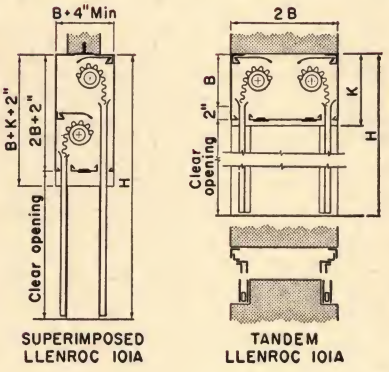
height H	width W					
	0-11		11-12		12-13	
	K	L	K	L	K	L
0-8	23	38	23	38	23	38
8-11	24	39	24	39	24	39
11-13	25	40	25	40	25	40
13-14	25	40	25	40	25	44

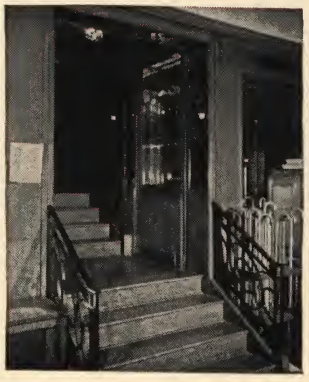
• double doors

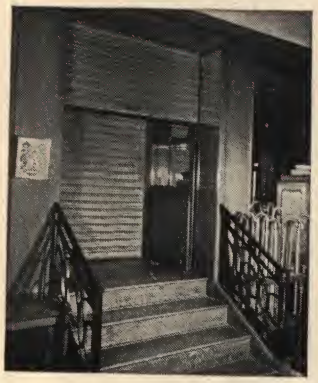
For maximum protection fire doors can be used in pairs. Between jamb installations may be arranged with coils superimposed or in tandem depending on headroom and wall thickness. Both doors controlled by common fusible links.

Guides may be recessed or mounted in opening. See clearance tables this page.

For B dimension, see page 9







• specifications

Automatic fire doors shall bear the label of the Underwriters Laboratories Inc. and shall be manufactured to their specifications in all particulars.

The doors shall be manually operated by handles on the bottom bars either face of wall mounted (Llenroc 1A) or between jambs mounted (Llenroc 101A).

(Where mechanical operation by hand chain and reduction gearing is required specify Llenroc 11A for face of wall or Llenroc 111A for between jambs.)

Upon fusing of a fusible link the automatic closing mechanism shall force the door curtain downward. Governors shall be provided where required to control the closing speed.

Chain operating gears shall automatically disengage when link fuses (where mechanical operation is specified).

Automatic operation shall not affect normal operation of the doors in general service.

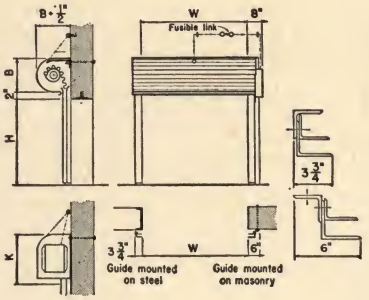
The doors shall be primed one shop coat of rust inhibiting paint and shall be complete with all Underwriters approved hardware and fittings to make a complete installation.

The doors shall be installed by the manufacturer or his authorized representative and shall be guaranteed for (1) year against faulty workmanship or material.

Detail drawings shall be submitted for approval of Architect.

MANUAL
face mounted

Type Llenroc 1A



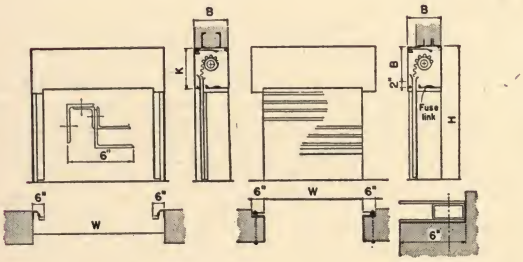
NOTES
1. These are standard dimensions. Consult factory for special conditions
2. Opening dimensions in feet. Detail dimensions in inches
3. Dimension K is clearance required both sides for automatic closing device

▲ For between jamb doors: dimension H includes coil height

H	B	K
0-7	16	23
7-10	18	24
10-12	20	25

between jambs

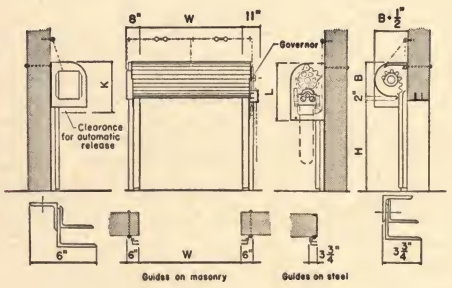
Type Llenroc 101A



H▲	B	K
0-8	16	23
8-11	18	24
11-13	20	25

CHAIN/GEAR
face mounted

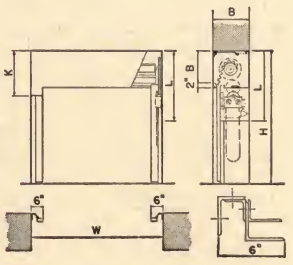
Type Llenroc 11A



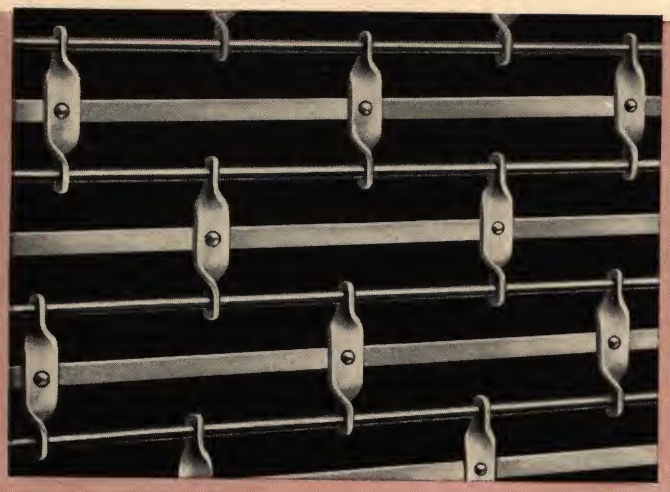
height H	width W								
	0-11			11-12			12-13		
	B	K	L	B	K	L	B	K	L
0-7	16	23	34	16	23	34	16	23	34
7-10	18	24	35	18	24	35	18	24	35
10-11	20	25	36	20	25	36	20	25	36
11-13	20	25	36	20	25	36	20	25	40
13-14	20	25	36	20	25	40	20	25	40

between jambs

Type Llenroc 111A

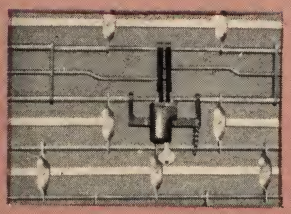


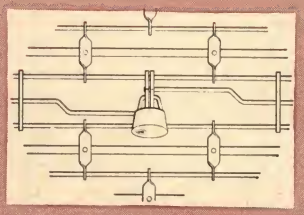
height H▲	width W								
	0-11			11-12			12-13		
	B	K	L	B	K	L	B	K	L
0-8	16	23	38	16	23	38	16	23	38
8-11	18	24	39	18	24	39	18	24	39
11-13	20	25	40	20	25	40	20	25	40
13-14	20	25	40	20	25	40	20	25	44



1931

CORNELL introduced the Rolling Grille to America in 1931. Operating like CORNELL Rolling Doors, they give equal security without blocking light, air, or vision. They present an impassable barrier for store fronts, school corridors, bars and counters, markets, banks, drive-in entrances, etc. Rolling Grilles can be combined with Rolling Steel Doors in the same opening to give maximum year round protection with ventillation. Grille Guides may be completely concealed in walls and overhead coil concealed in ceiling. Available in Galvanized Steel, Aluminum, Stainless Steel and Bronze. Our standard "Butterfly" design curtain is universally accepted for its combination of graceful beauty and great strength.

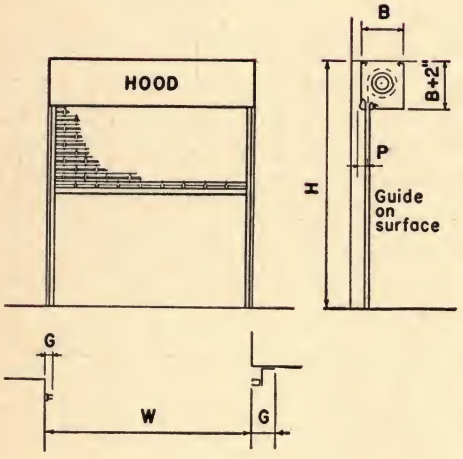




• locking devices

Padlocking device waist high in center of Grille curtain is standard. Spring return locking bars throw to both sides engaging holes in backs of Grille guides. Cylinder locking devices are available at small additional cost, can be master keyed, and are workable from either side of Grille curtain. Locking devices take standard mortise cylinders which can be installed in the field and should be furnished by the hardware contractor if master keyed. A CORNELL patent.

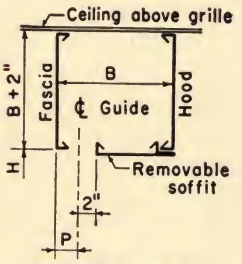
• details



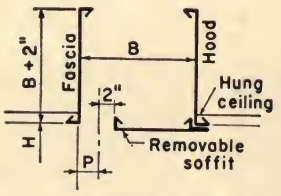
H	B	P
0′ to 6′	14″	2⅜″
7′ to 8′	15″	2⅜″
8′ to 10′	16″	2⅞″
10′ to 14′	18″	3⅛″
14′ to 16′	20″	4¼″

head

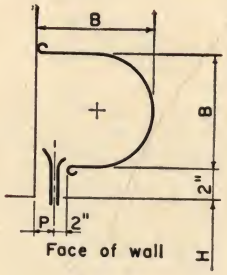
• The overhead coil, or grille box, may be located on the face of a wall; above a hung ceiling; or, if below the ceiling, can be treated to resemble a beam.



BETWEEN JAMBS
COIL BELOW CEILING



BETWEEN JAMBS
COIL ABOVE CEILING

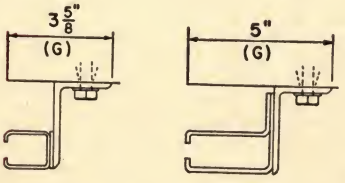


TYPICAL ROLLING GRILLE HOOD & BRACKET

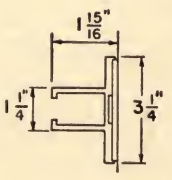
guides

• Grille guide assemblies support coil brackets above. Grille guides may be concealed in corridor walls, or may be set on the surface of the wall.

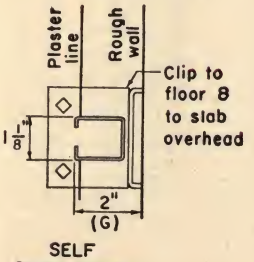
• Guides are backed up with steel supporting members as shown, ready for installation on corridor walls. Where guides are recessed into corridor walls we recommend wood blocking in pockets. Guides and brackets should be installed before tiling or plastering.



FACE OF WALL ON MASONRY



EXTRUDED
ALUMINUM



SELF
SUPPORTING

Top Left
Nickel Bronze Corridor Rolling Grille—New York City High School

Top Center
Stainless Steel Rolling Grille—Cleveland Museum—Architects, Hays & Ruth

Top Right
Motor Operated Rolling Grille—Drive in Bank—Petroleum Club, Denver
Architect, C. D. Strong

Right
Store Front Rolling Grilles—New York City

• specifications

general

grille: Rolling Grilles shall be Butterfly Type. The grille curtains shall be made of 5/16" round hard drawn galvanized steel bars running continuous horizontally from jamb to jamb and locked into rolled steel vertical side guides. The horizontal bars are flexibly connected by vertical links of galvanized steel, riveted to galvanized flat bars, which permit the entire grille to coil overhead. No openings in the grille shall be large enough to pass a 1¼" diameter ball through. The ends of the bars shall be provided with straight continuous malleable, or steel, endlinks of self-aligning construction, each link locking in the lips of the side guide to prevent pulling out of the grille.

shaft: The grilles shall be counterbalanced by fine oil-tempered springs located in the overhead horizontal pipe shaft.

spring adjustment: Provision shall be made on all grilles, including those between jambs, for easy adjustment of spring balance in field.

guides: Side guides shall be special rolled steel sections. Weight of material and depth of the guides to be as required for the size of grille and type of installation. Note: Extruded Aluminum Guides are standard for all galvanized steel corridor grilles. (See Guide details opposite page).

hoods: Hoods over grille coils shall be formed of 24 gauge (.040 Aluminum) galvanized steel. Where coils are above hung ceilings, removable soffits shall be 24 gauge (.040 Aluminum) galvanized steel. (See Hood details opposite page).

operation: Grilles in galvanized steel, stainless or bronze up to approximately 120 sq. ft. can be operated manually, push up, with pole hook engaging slot in bottom bar to start Grille down. If conditions demand push up operation for larger sizes, steel grille curtains lightened with aluminum or all aluminum curtains can be furnished.

Hand chain, hand crank, or motor operation is available for grilles. Select Operator clearances and specifications from Rolling Steel Door data Pages 5-7.

locking devices: Padlocking device waist high in center of Grille shall consist of spring return throw bars engaging holes in back of guides. Padlocks by others.

Optional-Cylinder locking device operable from either side of Grille curtain can be substituted for padlocking device. If master keying required, lock cylinder is to be furnished by hardware contractor.

metals

Rolling Grilles available in Aluminum, Stainless Steel, and Bronze. Substitute the desired metal for "galvanized steel" in above specification.

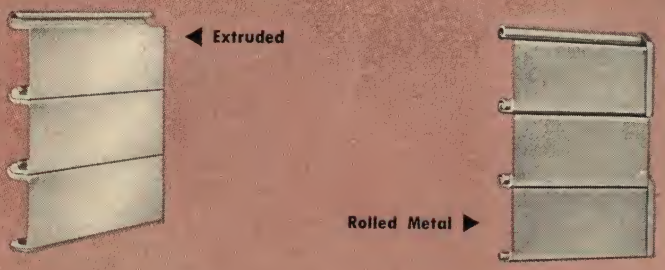
finishes

galvanized grilles must be spray painted because of the nature of their construction. Brush painting or dipping will leave messy paint blobs at the joints. Aluminum or Bronze paint is generally accepted. Specify sprayed paint finish.

aluminum grilles shall be etched to a silvery satin finish followed by Anodizing or Alumiliting. This finish removes tool marks and surface imperfections, and stops oxidation with a hardened surface easily maintained. This finish can also be furnished in color. Where appearance is not a prime consideration a more economical dull mill finish is available. If the material is exposed to weather, or if it is important to preserve the lustre of the finish, anodizing or alumiliting is a necessity. This does not affect the texture of the finish. It is necessary to use compatible alloys to get an even tone.

stainless steel grilles—All installations—All metal shall be mechanicaly ground and polished to a "No. 4" satin finish.

bronze grilles—All metal shall be mechanically buffed to a warm gold finish and lacquered.



CORNELL 1¼" FLATSLAT Rolling Shutters are in wide use for lunch and kitchen counters, coliseums and thruway service centers, concessions of all kinds, ticket and teller's windows, bars, terminal stands, booths, and many other smaller openings not requiring the larger, more rugged slat curtains. The flush surface of the Slat gives a pleasing appearance and takes a fine polish.

The 1¼" centers of the curtain permits coiling in reduced sizes and the side guides take minimum space. Light removable mullions, or pilasters, can be used to divide wider openings. Recommended for widths over 18'.

galvanized steel 22 U. S. Gauge is the standard curtain and can be painted in the field to match surroundings. Aluminum coated (Aluminized) Steel can be had at a small extra charge. Same in appearance as galvanized steel. Also readily available are:

a) **stainless steel** rolled from 302 Alloy and mechanically ground and buffed to a #4 Satin finish.

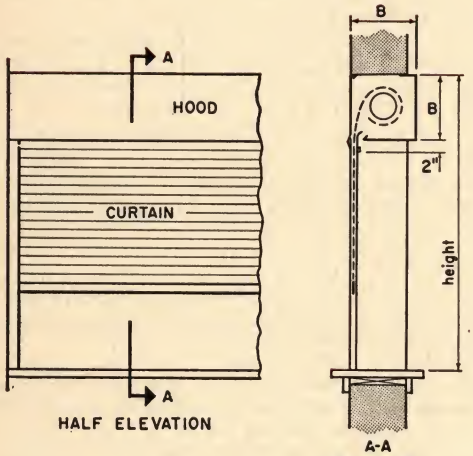
b) **bronze** rolled from architectural bronze alloy 20 B & S and buffed to a warm gold finish then lacquered.

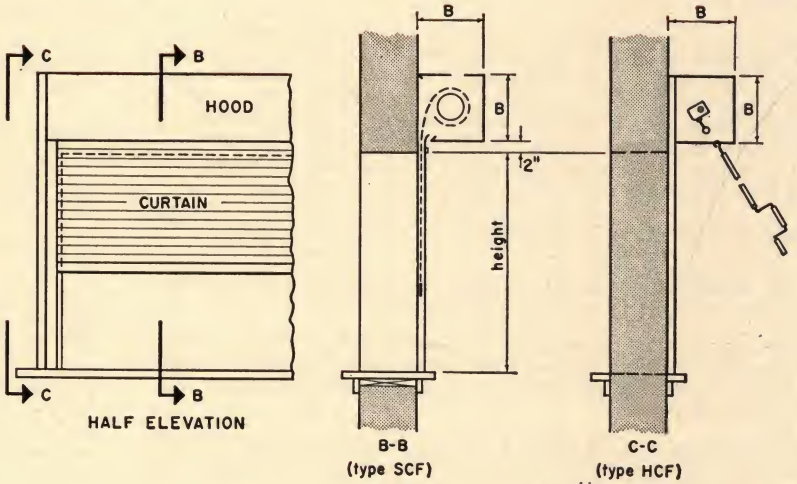
c) **aluminum extruded** .050 thick then etched to a silvery satin finish and alumilited or anodized for permanent protection of lustre. This finish removes tool marks and surface imperfections, and stops oxidation with a hardened surface easily maintained. Colors are also available in the full color range offered by the Aluminum Companies.

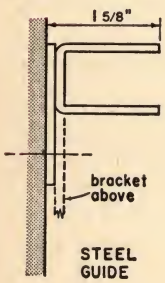
standard operation

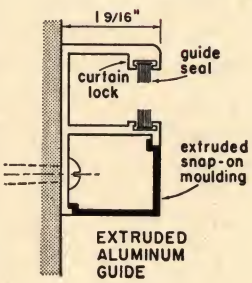
Self coiling (push up) is standard. Removable crank can be furnished for very wide openings or for installations where layouts make self-coiling operation inconvenient. CORNELL Tom Thumb motor drives are also available for maximum convenience. They are inexpensive, neat and compact, ranging from 1/15 to ⅛ H.P. Wiring into 110V house circuit is simple since no special controls are involved.

• clearances

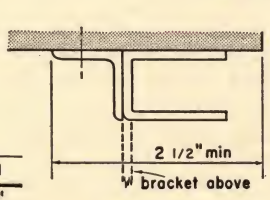


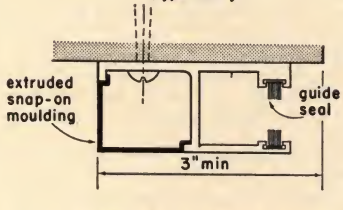


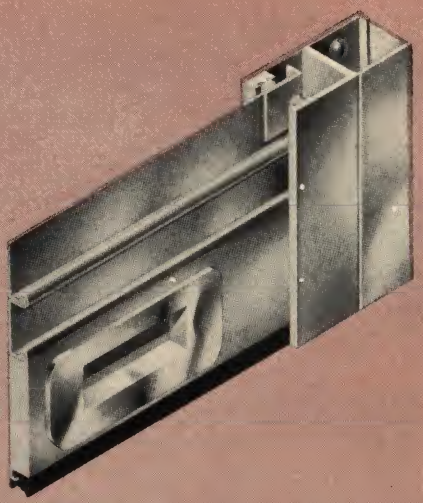




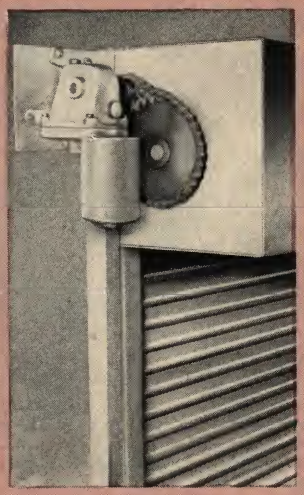
width	height	B	
		min	std
0'-8'	3'-0"	8"	10"
8'-18'	4'-6"	10"	12"
	7'-0"	10"	13"
	8'-10"	12"	13"







New Cornell extruded aluminum guide and bottom bar design
All wall fastenings are concealed in slim, new, rectangular guide. Locking clips secure curtain in guides and deep nap stripping makes installation dust and rattle proof. Curtain bottom bar has flush handles and concealed slide bolts. No hardware or fittings mar flush exterior surface. Extruded rubber astragal securely interlocks with bottom bar sealing against and protecting counter top.



motor operation
CORNELL Tom Thumb motor drives may be bracket or wall mounted to suit available clearances. Adjustable slip clutch eliminates limit switch and permits emergency manual operation in the event of power failure. Designed for operation on lighting current, units are compact, inexpensive, and offer maximum convenience of operation.

crank operation
Removable crank operator recommended for very wide openings or for installations where counter layouts make self coiling operation inconvenient. Eliminates crank box at counter level in working area.

• types

operation	location	Cornell type number
push up	face of wall between jambs	SCF SCB
crank	face of wall between jambs	HCF HCB
motor	face of wall between jambs	MF MB

• specifications

Curtain shall be constructed of 1¼" Flatslat interlocking sections ½ inch deep. Alternate slats shall be provided with end locks to keep the curtain in alignment.

a) Aluminum extruded from alloy 6063, 0.05" thick.

b) Galvanized or aluminized steel rolled from 22 US gauge metal.

c) Stainless Steel rolled from alloy 302, 22 US gauge.

d) Bronze rolled from architectural bronze alloy, 20 B & S gauge.

bottom bars

a) With aluminum curtains, bottom bar shall be a rectangular extrusion with flush aluminum handles, concealed slide bolts, and interlocking extruded rubber astragal. Exterior face of bottom bar to be flush with no exposed hardware or fittings.

b) c) and d) with steel, stainless, or bronze; bottom bar to be formed of a single angle finished to match curtains. Bottom bar of curtain will be fitted with vinyl plastic strip, at extra cost, when needed to protect the counter.

guides shall be at least 1⅜" deep and of 14 US gauge minimum thickness and run continuous to the top of brackets above the lintel to furnish bracket support and fastenings.

a) With aluminum curtains guides shall be rectangular extrusions formed to engage retaining clips on curtain edge, locking curtains securely in guides. All wall fastenings to be concealed. Replaceable heavy nap stripping with aluminum backing shall be locked into guides to dustproof and rattle proof the curtain. Stripping shall be silicone treated for lifetime wear and frictionless operation.

b) With galvanized steel curtains guides shall be steel painted one prime coat.

c) With Stainless Steel curtains guides shall be alloy 302; at least 14 US gauge and finished to match the curtains.

d) With bronze curtains the guides shall be formed from architectural bronze alloy at least 14 US gauge and finished to match the curtain.

operation—Manual—self-coiling (push-up) operation is standard for 1¼" Flatslat Shutters. Operation by removable crank can be furnished for very wide openings or for installations where counter layouts make self-coiling operation inconvenient.

operation—Motor—CORNELL Tom Thumb Motor Drive shall consist of 110 volt single phase motor with built in reduction gearing connected by roller chain to door through friction clutch. Clutch to be adjustable to allow slippage on meeting an obstruction, permit emergency hand operation and avoid necessity for limit switches. Shutter to be controlled by double throw toggle switch with spring return to OFF position. Magnetic starter not required. Wires and wiring by others to CORNELL wiring diagram.

hood—All shutter coils shall be enclosed in sheet metal covers, or hoods, not less than 24 US gauge in thickness, and of the same metal and finish as the Flatslat curtain proper.

shafts—Shall be steel tubes or pipes, with oil tempered springs to counterbalance the curtain weight, and of sufficient stiffness to hold the maximum deflection to 0.03" per foot of width. All shafts shall have provision for adjustment of spring counter balance in the field.

brackets—Shall be steel plate not less than ⅛" thick and secured to the extended guides.

locking—Shall be accomplished by 2 chute bolts on the bottom bar engaging slots in the side guides. Cylinder locks can be provided at additional cost.

finishes

steel shutters, all metal parts, except galvanized or aluminized, curtains and hoods shall be given a sprayed coat of prime metallic paint.

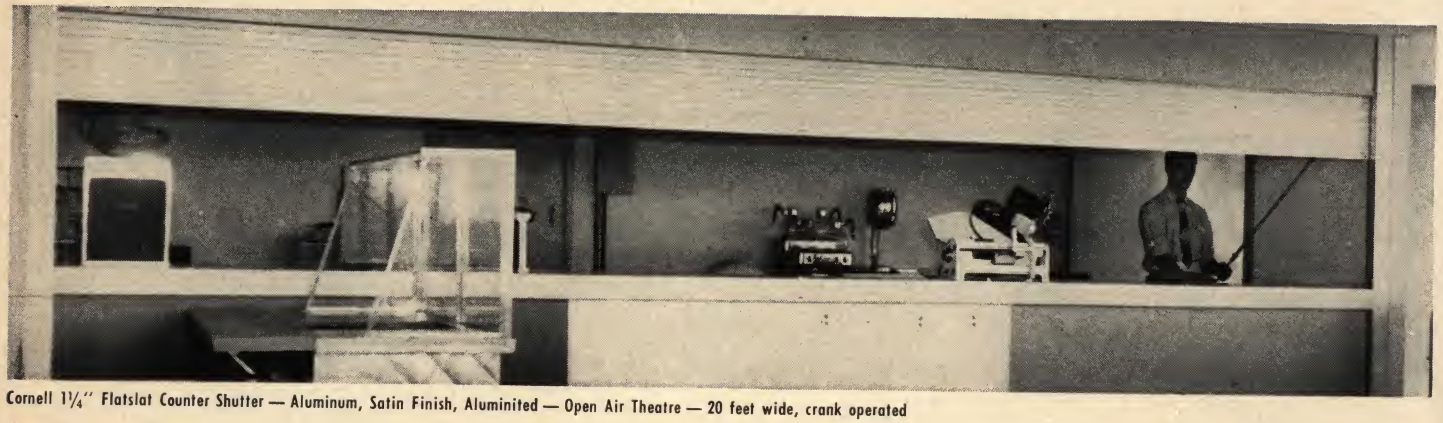
stainless steel—All installations—All metal shall be mechanically ground and polished to a "No. 4" satin finish.

bronze—All metal shall be mechanically buffed to a warm gold finish and lacquered.

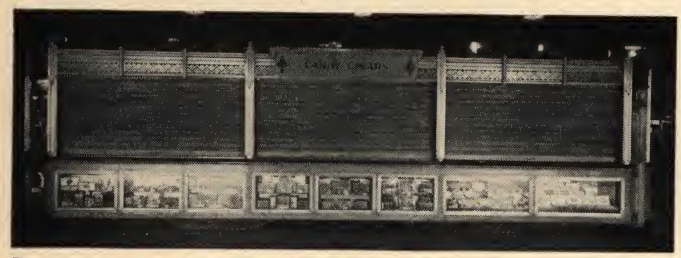
aluminum—Shall be etched to a silvery satin finish followed by Anodizing or Alumiliting.

SHUTTERS concluded

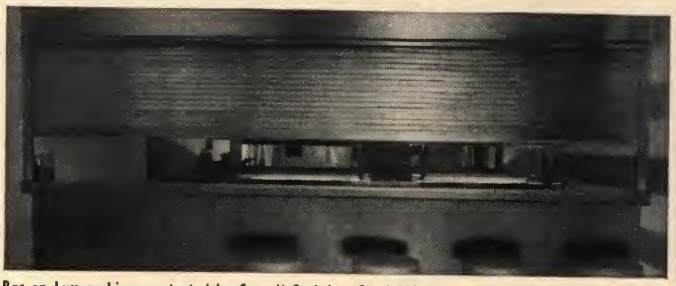
- **crank operation**



Cornell 1¼" Flatslat Counter Shutter — Aluminum, Satin Finish, Aluminited — Open Air Theatre — 20 feet wide, crank operated



Three of 52 Cornell Counter Shutters in R.R. Terminal



Bar on Luxury Liner protected by Cornell Stainless Steel 1¼" Flatslat Counter Shutter

PASS WINDOWS packaged

- **shutter type**

Introducing a new CORNELL product—A Stainless Steel Frame combined with a CORNELL 1¼" Flatslat Aluminum Shutter in a completely assembled, compact, ready to install unit.

The guides are formed in the sides of the frame and the shutter rolls up at the head in a Stainless Steel enclosure.

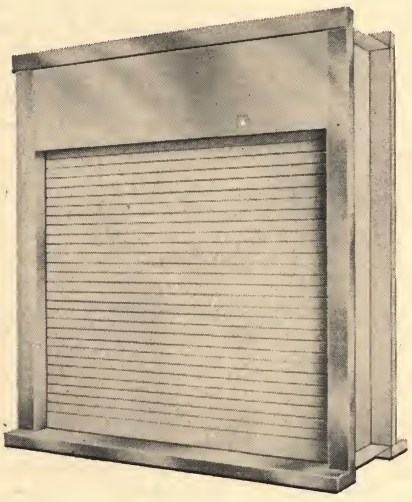
The jambs and head of the frame are 16 gauge Stainless Steel and the sill 14 gauge (Type 302 No. 4 Finish). Frames are fabricated to suit wall thickness and provided with masonry jamb anchors.

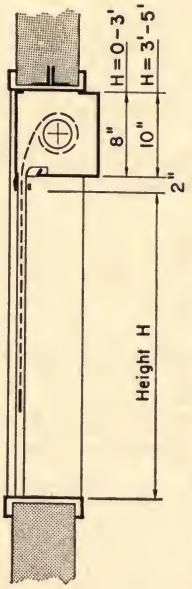
Shutter may coil under the head of the frame as shown or on the inside face of the frame with the coil above head.

Extruded Aluminum Shutter and counterbalance mechanism to CORNELL Specifications on Page 13. Aluminum satin finished and alumilited for permanent protection.

Shutter may be specified in Stainless Steel to match frame.

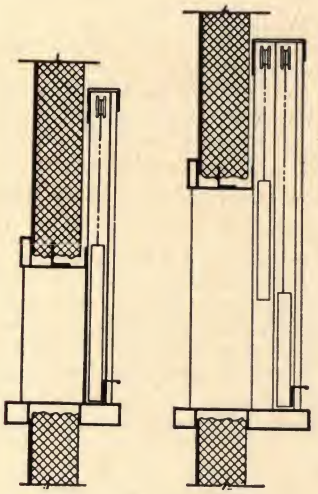
A painted steel frame with Stainless Steel Sill and galvanized steel shutter is also available.



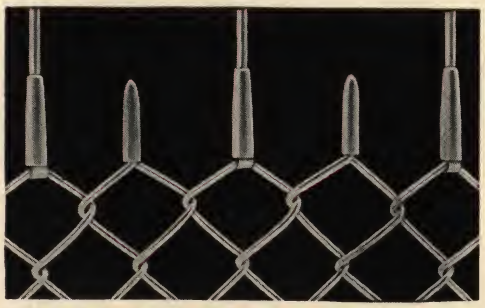


- **rigid type**

Completely assembled unit consists of one or two vertically rising panels designed for quick economical installation.



SLIDING GRILLES



Large Scale Detail of Grille Mesh illustrating Ornamental Caps and Sleeves

The CORNELL Sliding Grille is a patented steel curtain, of the heaviest galvanized chain link factory fence, extended to any height of opening by galvanized rods running to a track above. Aluminum bright dip wire is also available.

The grille can be used anywhere to keep out intruders, allowing free circulation of air in hot weather, and full visibility. Other applications include switchboard fronts, corridors, store fronts, parking lots, markets, storage bins, garages, auditoriums, counters, bars, etc. The construction makes it possible to nest the Sliding Grille at the side of an opening in a space only one-fifth of the opening width. The Sliding Grille will also travel around a curve and lie at a right angle to the opening if there is 10-in. room available from the edge of the jamb.

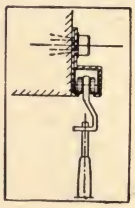
Bottom tracks are not desirable for sliding grilles. Additional security for wide openings can be provided by drop bolts or by chains to flush rings in the floor, spaced as desired.

Sliding grilles will travel around reverse curves and can be used for the protection of projecting or "island" counters and show cases.

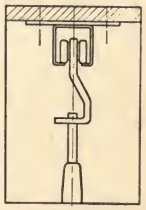
Provision is made for padlocking, from either side, with a stretching latch for wide grilles, if desired. Standard finish: All metal parts of the grille except bright galvanized surfaces shall be sprayed with one coat of alumninum paint.

Send for Bulletin with Standard Details.

Galvanized Steel Sliding Grille, Bi-Parting.



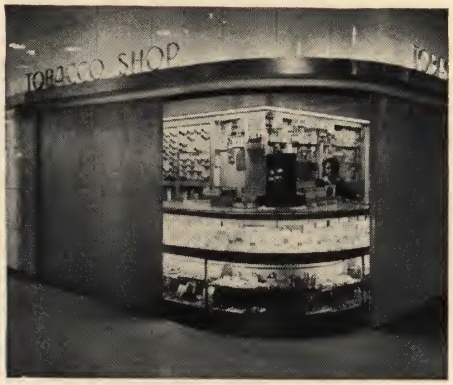
track on face of wall



track shown under ceiling

Bright Aluminum Sliding Grille, Minneapolis Store

ROLLING PARTITIONS



The CORNELL Side Rolling Partition is made of 1¼" flat interlocking metal slats coiling on a vertical pipe shaft. The Partition rolls in top track guided by bottom track, operates easily and travels around curves with radii as small as 6 inches.

These partitions were developed by CORNELL to meet a growing demand for a satisfactory closure, with the protection that only metal can provide for concessions, newsstands and similar openings with curved or otherwise irregular fronts.

Available in galvanized steel, aluminum, stainless steel or bronze.

Send for Bulletin with Standard Details.

ESCALATOR COVERS

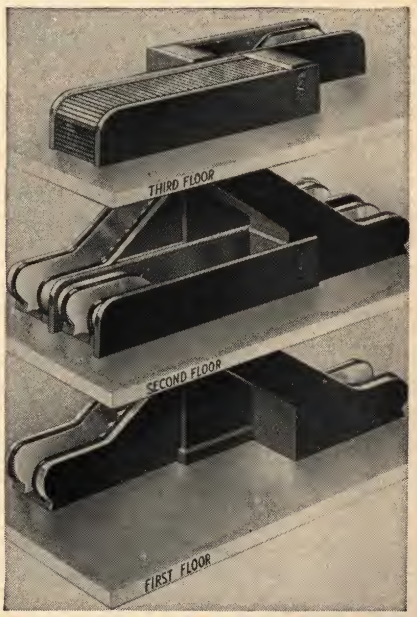
Orignally designed by CORNELL, in collaboration with Elevator companies and architects, for department store installations, these fireproof covers have been improved through the years to their present convenient, compact construction, with patented operating mechanism.

One person can easily open and close the covers with a crank, which folds into a flush pocket. A safety switch prevents operation of the stairway when cover is closed. Self contained, self supporting, and requiring no special provision for installation, they can be conveniently installed over existing stairways.

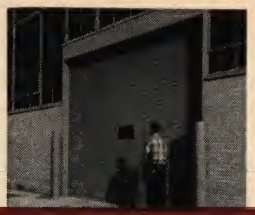
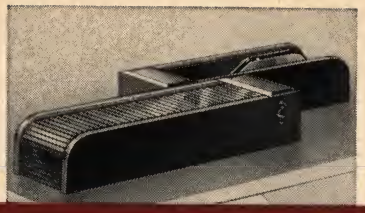
Automatic electric motor operation is readily applied to open and close upon the action of a heat rise device. Smoke detection controls are also available. A safety edge on the bottom bar stops motion in case an obstruction is met. Motion immediately resumes on removal. It will also reverse, if required, and return. Emergency hand operation is always available.

These closures have been approved and installed in many of the largest department stores in New York and other large cities. A complete, full sized enclosure has been successfully fire-tested for 3 hours at 1800 degrees F. An NFPA approved method of protection.

We urge consultation with Cornell engineers in the early stages of design. Send for six-page bulletin.



Perspective view of a bank of moving stairways in "criss-cross" arrangement with Cornell Fireproof Enclosures shown at second and third floor levels.

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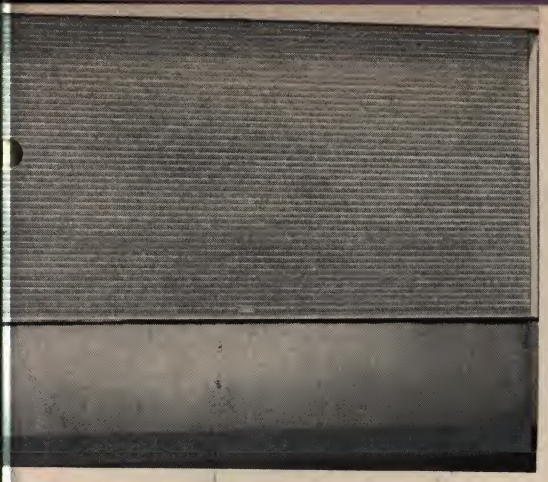
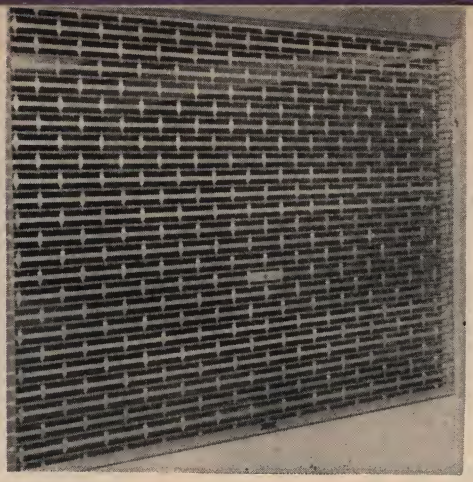


rolling counter shutter



rolling grille

rolling service door

HAZEN

℗ PENDING

steel and aluminum ROLLING DOORS

rolling service doors

rolling counter shutters and grilles

underwriters' labeled rolling steel fire doors

underwriters' labeled rolling steel fire door

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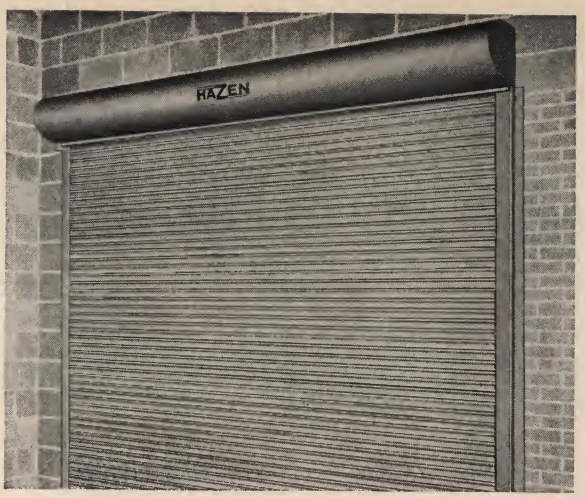
advantages

of HAZEN rolling doors and grilles



- All Hazen rolling doors, counter shutters and grilles are manufactured in Western Europe to our specifications, from highest grade materials, with the finest degree of workmanship.
- Every door, grille, or counter shutter is custom-designed and custom-built to meet the specific requirements of each particular opening.
- Available in heavily galvanized steel, or aluminum alloy, in various shapes and finishes of slats, to satisfy every requirement.
- May be manually operated, chain-geared, crank-geared, or electrically operated.
- Manufactured to fit inside, outside, or between-jamb openings.
- May be fitted singly, or in multiple, with movable mullions.
- Every Hazen door, grille, or counter shutter—regardless of size—is equipped with a spring adjusting device accessible from outside the hood, as standard equipment.
- All motorized doors and grilles are equipped with emergency chain-hoist operation.
- Detailed drawings are supplied for every job, regardless of size. Wiring diagrams are supplied for electrically operated doors and grilles.
- Every Hazen door, grille, and counter shutter is individually tested for perfect balance and operation before shipment.
- All Hazen doors, grilles, and counter shutters are shipped with curtains fully assembled and ready to be erected.
- Parts and replacements for all Hazen doors, grilles, and counter shutters are easily obtainable from our New York warehouse.

guarantee

Every Hazen rolling door, grille, and counter shutter is fully guaranteed for one year after installation against any possible defect of workmanship or material.

distribution

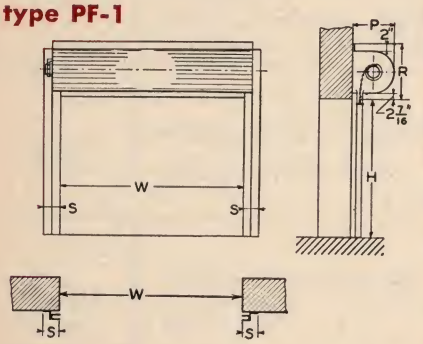
Hazen doors, grilles, and counter shutters are sold by a large network of agents and distributors throughout the United States, who offer the most efficient installation and after-sales services.

■ SPACE REQUIREMENTS

MANUALLY OPERATED *'push-up'* type up to 80 sq. ft. in area

face mounted (*inside or outside*)

type PF-1



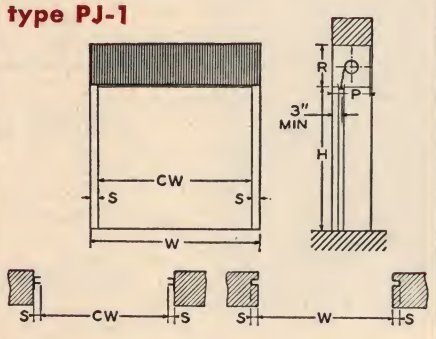
HEIGHT up to		8'0"		10'0"		12'0"		14'0"		16'0"	
WIDTH up to	*S	R	P	R	P	R	P	R	P	R	P
8'0"	4⅜										
11'0"	5½	16¼	11¾	18¼	13¾	20¼	15¾	22¼	17¾	24¼	19¾
18'0"	6⅜										
OVER 18'0"	8¼										

* S (sideroom) sizes are the same for all heights

NOTE: Clearance figures above are in inches.

mounted between jambs

type PJ-1



HEIGHT up to		8'0"		10'0"		12'0"		14'0"		16'0"	
WIDTH up to	*S	R	P	R	P	R	P	R	P	R	P
8'0"	2¼										
11'0"	2¾	13⅜	11¾	15⅜	13¾	17⅜	15¾	19⅜	17¾	21⅜	19¾
18'0"	3¼										
OVER 18'0"	4⅛										

* S (sideroom) sizes are the same for all heights

cw = clear width = opening width less 2S

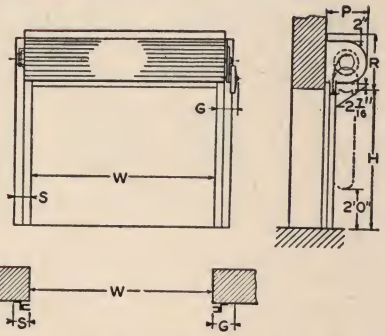
NOTE: Clearance figures above are in inches.

■ SPACE REQUIREMENTS

CHAIN-GEAR OPERATED

face mounted (*inside or outside*)

type CHF-2



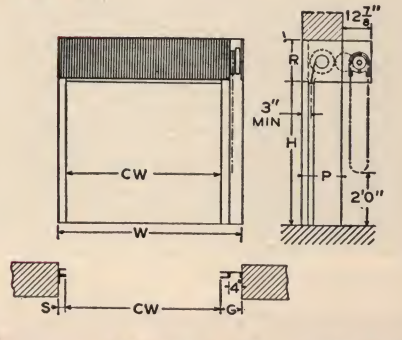
HEIGHT up to			8'0"		10'0"		12'0"		14'0"		16'0"	
WIDTH up to	S*	G*	R	P	R	P	R	P	R	P	R	P
8'0"	4⅜"	8⅜"	16¼"		18¼"		20¼"		22¼"		24¼"	
11'0"	5½"	9"										
18'0"	6⅜"	9½"		11¾"		13¾"		15¾"		17¾"		19¾"
20'0"	8¼"	10½"										

* S and G sizes are the same for all heights

CHAIN-GEAR OPERATED

mounted between jambs

type CHJ-2

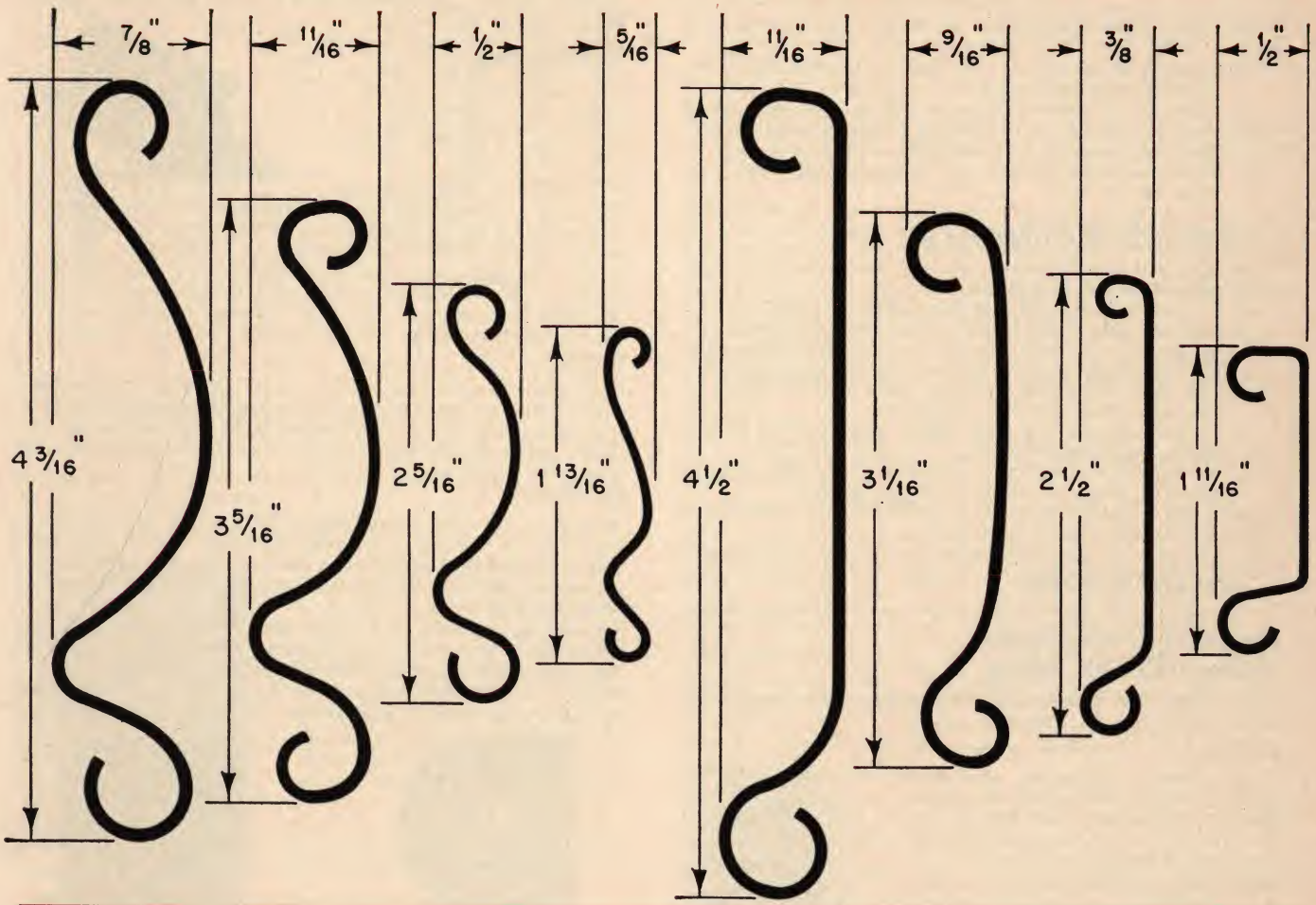


HEIGHT up to				8'0"		10'0"		12'0"		14'0"		16'0"	
WIDTH up to	S*	G*	C*	R	P	R	P	R	P	R	P	R	P
8'0"	2¼"	6¼"	13"										
11'0"	2¾"	6¾"		14"		16"		17⅜"		19¾"		21¾"	
18'0"	3¼"	7¼"			12"		14"		15¾"		17¾"		19¾"
20'0"	4⅛"	8⅛"											

* S, G and C sizes are the same for all heights.

cw = clear width = opening width less S and G

HAZEN slats—zinc-coated steel or aluminum alloy *(full size)*

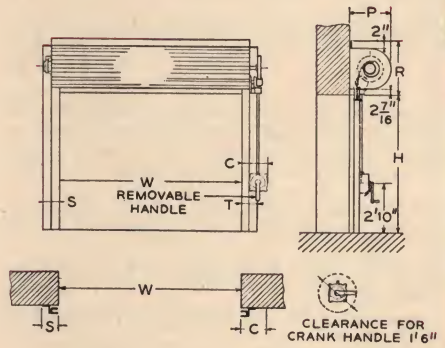


■ *SPACE REQUIREMENTS*

CRANK-GEAR OPERATED

face mounted *(inside or outside)*

type CRF-3

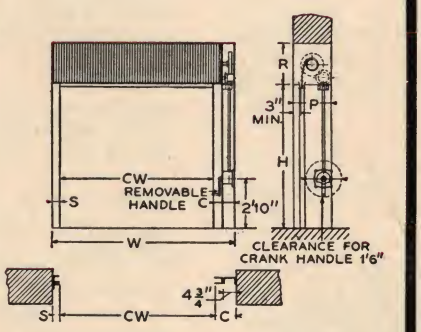


HEIGHT up to				8'0"		10'0"		12'0"		14'0"		16'0"	
WIDTH up to	S*	C*	T*	R	P	R	P	R	P	R	P	R	P
8'0"	4⅜"	9"	5½"	17"		19"		21"		23"		25"	
11'0"	5½"	9⅝"	6⅛"		12"		14"		16"		18"		20"
18'0"	6⅜"	10"	6½"										
20'0"	8¼"	11¼"	7½"										

* S, C & T sizes are the same for all heights

mounted between jambs

type CRJ-3



HEIGHT up to			8'0"		10'0"		12'0"		14'0"		16'0"	
WIDTH up to	S*	C*	R	P	R	P	R	P	R	P	R	P
8'0"	2¼"	7"	14"		16"		18"		20"		22"	
11'0"	2¾"	7½"		12"		14"		16"		18"		20"
18'0"	3¼"	8"										
20'0"	4⅛"	8⅞"										

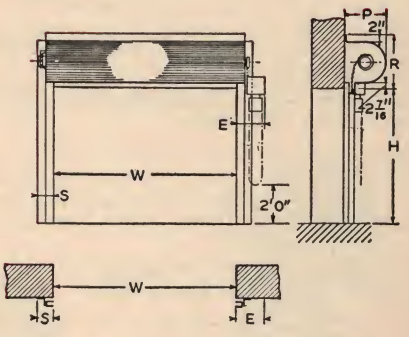
* S and C sizes are the same for all heights

cw = clear width = opening width less S and C

ELECTRICALLY OPERATED

face mounted *(inside or outside)*

type ELF-4



HEIGHT up to			8'0"		10'0"		12'0"		14'0"		16'0"	
WIDTH up to	S*	E*	R	P	R	P	R	P	R	P	R	P
8'0"	4⅜"	19"	16¼"		18¼"		20¼"		22¼"		24¼"	
11'0"	5½"	20"		11¾"		13¾"		15¾"		17¾"		19¾"
18'0"	6⅜"	20½"										
20'0"	8¼"	21"										

* S and E sizes are the same for all heights.

rolling steel or aluminum service doors

METHODS OF DOOR OPERATION

Hazen rolling doors are available in the following four types of operation:

- **a** Manual 'push-up' operation (for doors up to 80 sq. ft. in area; with lift handles on bottom rail).
- **b** Chain-gear operation (for doors over 80 sq. ft. in area. Operated with endless hand chain acting through reduction gearing).
- **c** Crank-gear operation (with detachable crank handle).
- **d** Electric, motorized operation (with emergency chain hoist, push-button controls, etc.).

TYPES OF MOUNTINGS

Hazen rolling doors may be supplied:

- **a** For inside face-of-wall mounting and inside operation, with the hood curved to fit the contour of the rolled-up curtain.
- **b** For outside face-of-wall mounting and outside operation, with the hood curved to fit the contour of the rolled-up curtain.
- **c** For inside face-of-wall mounting and outside operation, or vice-versa. (Through-the-wall operation.)
- **d** For between-jamb mounting, with square hood below the ceiling, and removable panel.
- **e** For between-jamb mounting, with square hood fully or partly concealed above the ceiling, and removable soffit.

For headroom and sideroom clearances required for the above mountings, see details and tables on pages 2 and 3.

SPECIFICATIONS

for steel or aluminum rolling service doors

Hazen rolling door specifications easily meet (and often exceed) the highest standards in the rolling door industry.

CURTAIN

To be formed of interlocking, cold rolled close annealed, heavily galvanized steel (or aluminum alloy) slats. The slats may be curved or flat in shape, as desired. See full-size details of Hazen slats on page 3.

Slats to be especially designed and rolled to resist deflection and to prevent water from entering the interlocks. They are to be made of large and deeply curved sections to normally permit the curtain to safely resist—in the case of steel doors—a wind pressure of at least 20 lb. per square foot.

The ends of each of the alternate slats are to be fitted with malleable iron endlocks which are fastened with two steel rivets for steel doors—or with aluminum-alloy endlocks fastened with aluminum rivets for aluminum rolling doors. These endlocks protect the slats from rubbing against the guides and help to hold the curtain in alignment. Photograph of slats showing endlocks appears above.

HAZEN deeply curved slats and malleable endlocks.

Continuous endlocks, designed to protect both ends of every slat, may be supplied upon request.

sizes of slats

Full-size details on Page 3 show the eight types of curved and flat slats in which Hazen rolling steel and aluminum doors are made. These slats vary in size from 1 11/16" to 4½" in width and 5/16" to 7/8" in depth of crown.

recommended sizes and gauges of steel slats in relation to door surface

surface of door	up to 150 sq. ft.	151 to 250 sq. ft.	over 250 sq. ft.
size of slats	2 5/16" or 3 5/16" (2" or 3" on center)	3 5/16" (3" on center)	4 3/16" (4" on center)
gauge of slats	22 or 20	20 or 18	20, 18 or 16

gauges of slats

These to be as follows:

For **steel** doors: 22, 20, 18 or 16 U.S. gauge steel.

For **aluminum** doors: 20, 18 or 16 U.S. gauge aluminum, "Alloy 52 S½ Hard."

bottom rail

To consist of two angles of 1 9/16"x1 9/16"x3/16" hot dip galvanized steel (or extruded aluminum) plates, fastened back to back and extending along the full width of the curtain.

On very wide doors, the bottom rail to consist of 2½"x 2½"x 3/16" steel (or extruded aluminum) angles. See photograph of standard double-angled bottom rail at right.

HAZEN heavy double-angled bottom rail

COUNTERBALANCE

To consist of oil-tempered helical steel springs of enough strength to counterbalance the full weight of the curtain, with a safety factor in excess of 25% **over** the actual weight of the curtain.

A spring adjusting device shall be applied to every door. It shall be located on the exterior side of the bracket, accessible from outside the hood and will enable the easy adjusting of springs, whenever needed, after installation, without removing the hood.

BARREL

Shall consist of a steel pipe which contains the helical counterbalancing springs. This barrel or pipe to be of sufficient thickness and diameter to insure a deflection not exceeding .03 inch per foot of door width. Each unit to be factory tested for perfect balancing and operation before shipment.

BRACKETS

Shall be of unbreakable steel plate of not less than 3/8" in thickness. They shall be attached to the guides by means of screws and bolts and to the wall by means of expansion bolts. Hood to be fastened to the brackets by means of screws and bolts, and to the wall by means of expansion bolts.

For push-up type doors, the exterior side of one bracket to carry a spring adjusting device. On chain-geared doors, one bracket carries the spring adjusting device, the other the gearing system.

Brackets to be curved for inside or outside face-of-wall mounting, and square when door is mounted between jambs. See photos below.

Curved bracket for face-of-wall mountings

Square bracket for between-jamb mountings

HOOD

Shall be formed of not less than 24 U.S. gauge sheet steel for steel doors—and not less than 22 U.S. gauge aluminum sheeting for aluminum doors.

Hood shall be curved to fit the contour of the door curtain when the door is for inside or outside face-of-wall mounting. It shall be square when the door is mounted between jambs. It shall be fastened to the brackets.

For headroom clearances on all types of mountings, see details on Pages 2 and 3.

GUIDES

Shall be formed of not less than 3/16" cold rolled steel angles for steel doors—and 3/16" extruded aluminum sections for aluminum doors.

Guides to run continuously to top of brackets to furnish them support and fastenings.

Available depths of guides: 2", 2½", 3", and 4".

Guides exceeding 4" and up to 6" in depth may be supplied on very wide doors.

See table below and details on Page 5 for depths and clearances of guides in relation to widths of doors.

For sideroom clearances on all types of mountings, see details on Pages 2 and 3.

DEPTHS AND CLEARANCES IN RELATION TO DOOR WIDTHS

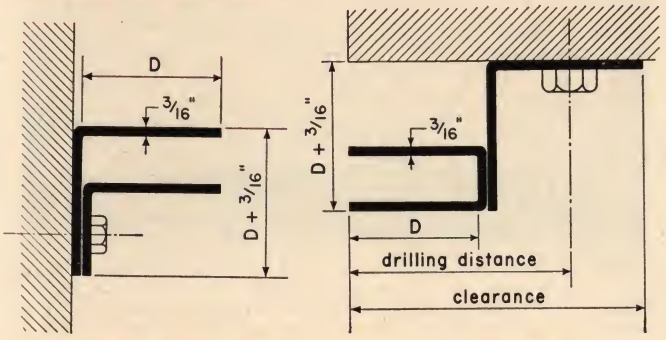
Door width	up to 8'0"	8'1" to 11'0"	11'1" to 18'0"	over 18'0"
Depth-D	2"	2½"	3"	4"
drilling distance	3 3/8"	4 1/8"	4 7/8"	6 3/8"
clearance	4 3/8"	5½"	6 3/8"	8¼"

NOTE: Opening of guide varies with size and shape of slats

(See details top of page 5)

GUIDES (con't.)

DETAILS OF GUIDES



Mounted between jambs Face mounted

GEARS

Shall be of unbreakable malleable iron, with teeth cast from machine cut patterns. The minimum face of any gear to be 1". Gears must withstand a 50% overload without failure or distortion.

Simple gears to be used on most doors. Compound gears to be used on very wide and heavy doors.

SPRING ADJUSTING DEVICE

HAZEN Spring Adjusting device accessible from outside the hood

This device is to be supplied on every door, regardless of size, as follows: For push-up type doors, the exterior side of one bracket to carry this device. On chain-geared doors, one bracket carries it, while the other carries the gearing system.

This device is to be accessible from outside the hood to easily adjust the spring tension whenever needed, after erection, without having to remove the hood.

This spring adjusting device to be supplied as standard equipment, at no extra charge.

See photograph at left.

WINDLOCKS

These are available for wide doors that are exposed to heavy wind pressure, at small additional cost. They prevent the curtain from leaving the guides under unusually heavy winds.

WEATHERSTRIPPING

When additional protection against wind, rain, etc. is desired, weatherstripping may be supplied at small additional cost.

It may consist of phosphor bronze strip, neoprene webbing and continuous endlocks in the guides; tubular rubber astragal along the bottom rail; or a neoprene hood baffle. Any one or all three of these may be supplied, as desired.

MULLIONS

To be used as dividing curtain guides on large doors, when desired. These mullions may be supplied either stationary, removable, or mounted on rails, at a small additional cost.

WICKET OR PASS DOORS

These may be supplied, at additional cost, when access to the building is desired without raising the main door. They are supplied with cylinder locks as standard equipment at no extra charge.

LOCKING DEVICES

The following locking devices are available on all Hazen doors:

for PUSH-UP doors

a sliding bolt at each end of bottom rail. This bolt is supplied with provision for padlocking, at no extra charge. Padlock to be furnished by purchaser.

or **b** chrome-plated cylinder lock, placed at center of curtain, to open from either side. May be supplied at small additional charge.

If the cylinder is to be masterkeyed to the building key system, it must be supplied to us to be installed on doors at the factory.

for CHAIN-GEARED doors

a chain cleat: Also, sliding bolt at each end of bottom rail, as described for Push-up doors, above. Both as standard equipment at no extra charge.

or **b** chrome-plated cylinder lock, opening from either side, as described for Push-up doors, above. Also, chain cleat.

for CRANK-OPERATED doors

sliding lock mounted on crank box, at no extra charge.

for ELECTRICALLY OPERATED doors

push-button station, as standard equipment at no extra charge. May be supplied 'Weatherproof,' or 'Weatherproof and Keyed' at small additional cost.

FINISH

for STEEL doors: The curtain, bottom rail, and hood shall be in heavily hot dip galvanized steel with a MINIMUM (usually exceeded) of 1.25 ozs. of pure zinc coating per sq. ft. of flat metal, as per ASTM Standards. A heavy coat of phosphate bond and a shop coat of metallic paint may be applied over this galvanization, if desired, at no extra cost. All other parts of the door to be given one shop coat of metallic paint before shipment.

for ALUMINUM doors: The curtain, bottom rail, hood, and guides shall be:

a in aluminum, MILL FINISH.

or **b** in aluminum, with ALUMILITED SATIN FINISH.

All others parts of the door to be given one shop coat of aluminum paint before shipment.

ELECTRIC OPERATORS

Shall consist of motor, reduction gears, solenoid brake, limit switches, motor controls, push-button station, and emergency chain-hoist operator. See photographs of operators below.

motor shall be of high torque rating, NEMA type heavy duty, instantly reversible, with sealed ball bearings lubricated for life.

reduction gears The motor shall be directly coupled to gear reduction unit, with motor shaft sleeved to steel worm shaft turning bronze worm gear running in oil. Gears also to act as positive lock, in addition to brake.

electric solenoid brake Includes continuously rated operating coil, and double brake shoes.

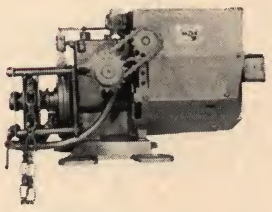
limit switches Shall be a rotary type limit switch with worm and worm gear driven by timing chain. Cams on worm gear operate micro type switches allowing vernier adjustment.

motor controls Shall be heavy duty type reversing contactors with both mechanical and electrical interlock. The motor circuit shall be protected with one thermal overload on single phase and two on three phase current.

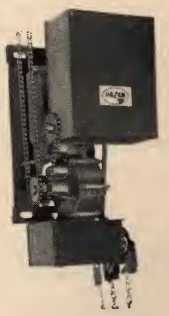
button control One 3-button control station marked 'Open,' 'Close,' and 'Stop' furnished with each operator, as standard equipment. Additional control stations available, either standard or weatherproof, or weatherproof and keyed, at small extra cost.

emergency chain-hoist operator Provided as standard equipment with each operator and allows hand operation of door in event of power failure. When hand hoist is engaged, electric power, as well as solenoid brake, are automatically disconnected from driving mechanism.

automatic safety device This is attached through the rubber astragal along the bottom rail. It is a safety device which will automatically reverse the direction of the door should it meet an obstruction. It is an optional feature, available at small additional cost.



Standard electric operator
⅓ to ¾ Hp. Weight: 90 lbs.
H: 18¼", W: 12¾", D: 10¼"



Heavy-duty electric operator
1 Hp to 4 Hp. Weight: 105 lbs.
H: 28½", W: 15¼", D: 14½"

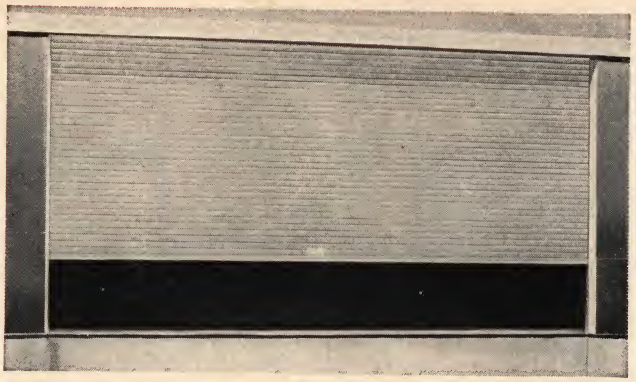
rolling counter shutters—*extruded aluminum or galvanized steel*

ADVANTAGES

Hazen aluminum (or galvanized steel) Rolling Counter Shutters—made of midget flat slats—present a trim and pleasant appearance for small openings requiring good protection with a minimum space for operation.

They are recommended for use in cafeterias, schools, hospitals, libraries, banks, service counters, concession booths of all types, newsstands, ticket windows, bars, etc.

Just as with the Hazen rolling service doors and grilles, Hazen rolling counter shutters are custom-designed and custom-built to specified openings with the highest degree of workmanship and accuracy to assure perfect and easy operation. They are available in extruded aluminum alloy and in heavily galvanized steel.



Typical installation of HAZEN extruded aluminum rolling counter shutter

METHODS OF SHUTTER OPERATION

Hazen extruded aluminum (or galvanized steel) rolling counter shutters are available in the following two types of operation.

- **a** Manual 'push-up' operation (with handles mounted on bottom rail).
- **b** Crank-gear operation (with detachable crank handle).

TYPES OF MOUNTINGS

Hazen aluminum (or steel) rolling counter shutters may be supplied:

- **a** for inside face-of-wall mounting and inside operation, with the hood curved to fit the contour of the rolled-up curtain.
- **b** for outside face-of-wall mounting, and outside operation, with the hood curved to fit the contour of the rolled-up curtain.
- **c** for inside face-of-wall mounting and outside operation, or vice versa.
- **d** for between-jamb mounting, with square hood concealed above the ceiling, and removable soffit.
- **e** for between-jamb mounting, with square hood below the ceiling, and removable panel.

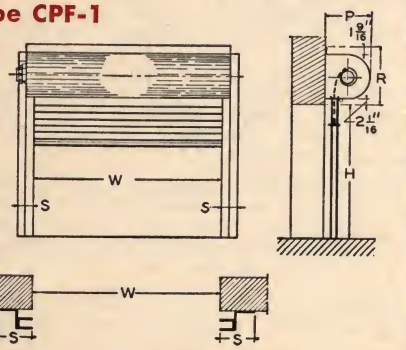
For headroom and sideroom clearances required for the above mountings, see details and tables below and on Page 7.

HAZEN 18 gauge extruded aluminum midget flat slats for rolling counter shutters coupling smart appearance with sturdiness

■ *SPACE REQUIREMENTS*

MANUALLY OPERATED 'push-up' type

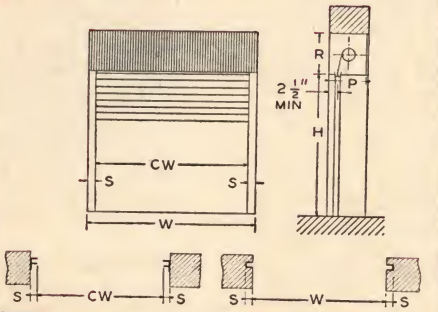
face mounted (*inside or outside*)
type CPF-1



HEIGHT up to		3'0"		4'0"		6'0"		8'0"	
WIDTH up to	S*	R	P	R	P	R	P	R	P
6'0"	2¾"	12½"		12½"		13⅝"		14⅝"	
8'0"	3¼"		8⅞"		8⅞"		10"		11"
12'0"	3¾"								

*S (sideroom) sizes are the same for all heights.

mounted between jambs
type CPJ-1

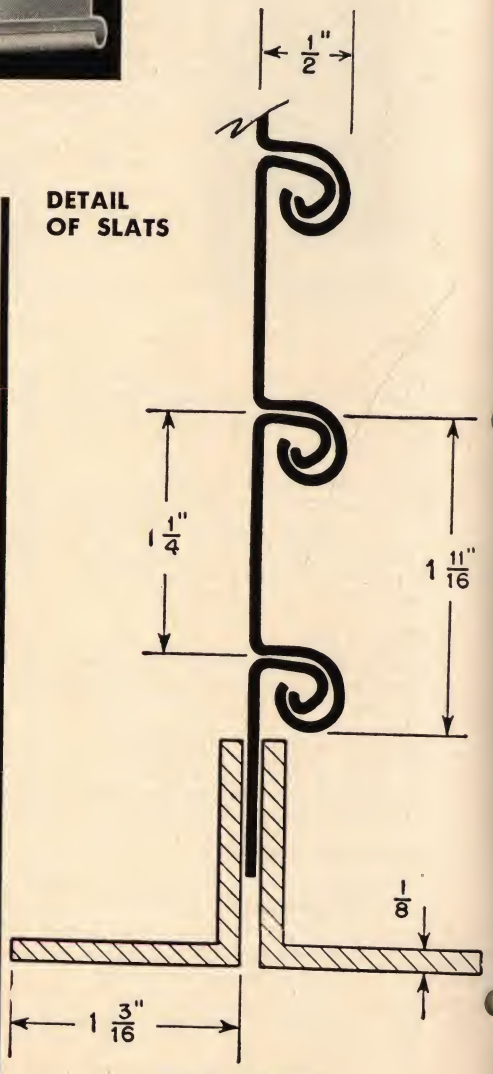


HEIGHT up to		3'0"		4'0"		6'0"		8'0"	
WIDTH up to	S*	R	P	R	P	R	P	R	P
6'0"	1¼"	10⅛"		10⅛"		11¼"		12¼"	
8'0"	1⅝"		8⅞"		8⅞"		10"		11"
12'0"	2⅛"								

*S (sideroom) sizes are the same for all heights.

cw = clear width = opening width less 2 S

DETAIL OF SLATS

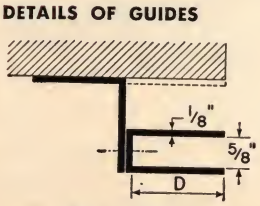


FULL SIZE

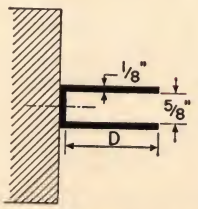
DEPTH OF GUIDE IN RELATION TO WIDTH OF SHUTTER

width of shutter	depth of guide-D
up to 6'0"	1"
6'1" to 8'0"	1½"
8'1" to 12'0"	2"
over 12'0"	2½"

DETAILS OF GUIDES



Face mounted



Mounted between jambs

SPECIFICATIONS

for extruded aluminum or steel rolling counter shutters

CURTAIN

For aluminum rolling counter shutters, the curtain shall be formed of high duty extruded aluminum "Alloy 6063" flat slats $1\frac{11}{16}$" x .05" (equivalent to 18 gauge), with a depth of crown of ½". These flat slats shall be highly resistant to corrosion and shall be extruded under pressure to accurate and identical profile.

For steel rolling counter shutters, the curtain shall be formed of 24 gauge heavily galvanized steel flat slats $1\frac{11}{16}$" wide, with a depth of crown of ½".

These slats shall interlock securely and present a flat surface 1¼" wide, with invisible horizontal shoulders to assist in raising the curtain. See full-size details and photograph of these slats on Page 6.

Alternate slats shall have riveted flat aluminum endlocks fastened with aluminum rivets for aluminum shutters; and riveted, heavily galvanized flat steel endlocks fastened with steel rivets for steel shutters.

These endlocks protect the slats from rubbing against the guides and help to hold the curtain in alignment.

BOTTOM RAIL

To consist of two angles of extruded aluminum "Alloy 6063" (or heavily galvanized steel) $1\frac{3}{16}$" x $1\frac{3}{16}$" x ⅛", fastened back to back and extending the full width of the opening. See full size detail Page 6.

GUIDES

Shall be formed of extruded aluminum "Alloy 6063" (or steel) shapes of not less than ⅛" in thickness and shall run continuously to top of brackets to furnish them support and fastenings.

For depths of guides in relation to widths of openings, and for side-room clearances for all types of mountings and operation, see details on Pages 6 and 7.

HOOD

Shall be formed of not less than 22 gauge aluminum sheeting "Alloy 52 S½ Hard" for aluminum counter shutters, and not less than 24 gauge heavily galvanized steel sheeting for steel shutters.

Hood shall be curved to fit the contour of the curtain coil when the counter shutter is for inside or outside face-of-wall mounting. It shall be square when the counter shutter is mounted between jambs, in which case it can be fastened under or above the ceiling, as required.

For headroom clearances for all types of mountings, see Pages 6 and 7.

BRACKETS

Shall be of unbreakable steel plate of not less than ¼" in thickness. The hood shall be attached to the brackets. They shall be fastened to the guides and to the wall.

COUNTERBALANCE

To consist of oil-tempered helical steel springs of enough strength to counterbalance the full weight of the shutter's curtain, with a safety factor in excess of 25% **over** the actual weight of the curtain.

BARREL

To consist of a steel pipe which contains the helical counterbalancing springs. This steel pipe shall be of sufficient thickness and diameter to insure a deflection not exceeding .03 inch per foot of shutter width.

Each unit shall be factory tested for perfect balancing and operation.

SPRING ADJUSTING DEVICE

Supplied on every counter shutter—regardless of size—as follows: For face mounted shutters, on the exterior side of one bracket. For shutters mounted between jambs, on the interior side of a bracket, accessible through a removable soffit, or removable panel.

WEATHERSTRIPPING

This may consist of phosphor bronze strip, neoprene webbing and continuous endlocks in the guides; tubular rubber astragal along the bottom rail to prevent abrasions on counter or sill; or a neoprene hood baffle. Any one or all three of these may be supplied, at a small additional charge.

WOOL FELT PILE

The inside of each guide may be felted with wool pile, which acts as a shock absorber and noise silencer. This felt may be supplied at a small additional cost.

MULLIONS

Used as dividing curtain guides on wide shutters, when required, at additional cost. Mullions may be either stationary or removable, as desired.

HANDLES

These shall be made of extruded aluminum for aluminum counter shutters, and of chrome-plated steel for steel shutters, mounted on the bottom rail. There shall be at least two such handles per shutter.

LOCKING DEVICES

The following are available on all Hazen rolling counter shutters:

for MANUAL PUSH-UP shutters

a Aluminum sliding bolt on aluminum shutters (or steel sliding bolt on steel shutters) at each end of bottom rail. These bolts are supplied with provision for padlocking as standard equipment.

or **b** chrome-plated cylinder lock, placed at center of curtain, to open from either side. Supplied at small additional charge.

If cylinder to be masterkeyed to building key system, it must be supplied to us to be installed on shutters at factory.

for CRANK-OPERATED shutters

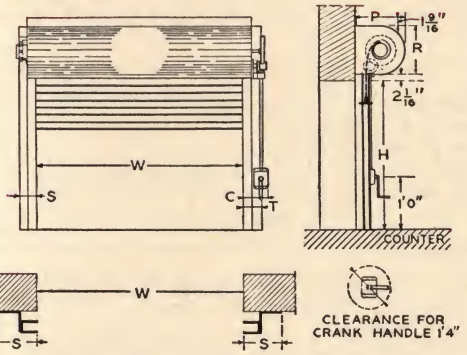
sliding lock mounted on crank box, at no extra charge.

■ *SPACE REQUIREMENTS*

CRANK GEAR OPERATED

face mounted (*inside or outside*)

type CCRF-3

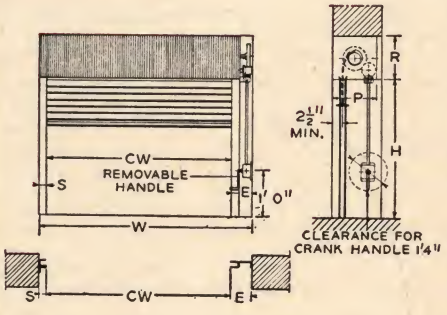


HEIGHT up to			3'0"			4'0"			6'0"			8'0"		
WIDTH up to	S*	C*	T	R	P	T	R	P	T	R	P	T	R	P
6'0"	2¾"	4¼"	2¾"	12½"		2¾"	12½"		2¾"	13⅝"		2¾"	14⅝"	
8'0"	3¼"	4¾"	3¼"		8⅞"	3¼"		8⅞"	3¼"		10"	3¼"		11"
12'0"	3¾"	5¼"	3¾"			3¾"			3¾"			3¾"		

* S and C sizes are the same for all heights.

mounted between jambs

type CCRJ-3



HEIGHTS up to			3'0"		4'0"		6'0"		8'0"	
WIDTH up to	S*	E*	R	P	R	P	R	P	R	P
6'0"	1¼"	4¼"	10⅛"		10⅛"		11¼"		12¼"	
8'0"	1⅝"	4⅝"		8⅛"		8⅞"		10"		11"
12'0"	2⅛"	5⅛"								

* S and E sizes are the same for all heights.

cw = clear width = opening width less S and E

FINISH

for extruded ALUMINUM counter shutters, the curtain, bottom rail, guides, and hood shall be:

a in aluminum, MILL FINISH.

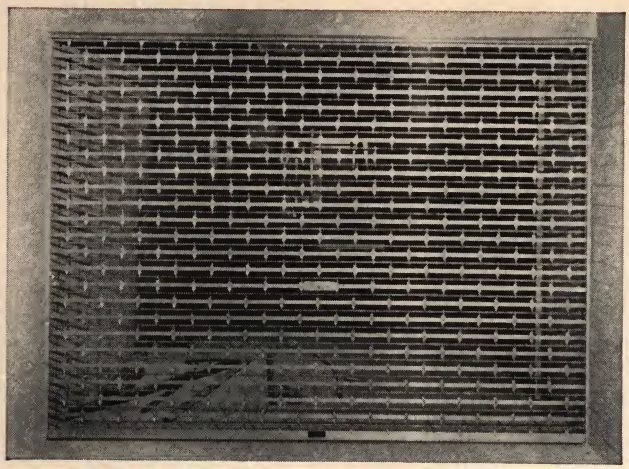
or **b** in aluminum, ALUMILITED SATIN FINISH.

All other parts of the shutter to be given one coat of aluminum paint.

for STEEL counter shutters, curtain, bottom rail, and hood shall be in heavily hot dip galvanized steel with a MINIMUM (usually exceeded) of 1.25 ozs. of pure zinc coating per sq. ft. of flat metal, as per ASTM Standards. A heavy coat of phosphate bond and a shop coat of metallic paint may be applied over this galvanization, if desired, at no extra cost.

All other parts of the shutter to be given one shop coat of aluminum paint.

rolling grilles—*extruded aluminum or galvanized steel*



Typical HAZEN grille installation used in schools, showing cylinder lock in center of grille.

ADVANTAGES

Hazen aluminum or steel rolling grilles, which operate like the Hazen rolling doors, are custom-designed and custom-built with the highest degree of workmanship and accuracy to assure perfect and easy operation. They provide good protection as well as a decorative effect, without interfering with ventilation, light, or vision. They are available both in extruded aluminum "Alloy 6063" and in heavily galvanized steel.

Hazen grilles are used as corridor divisions in schools; as protection with vision for store fronts; as protection with ventilation, light and vision in banks, storerooms, produce markets, bars, etc., as well as in many other cases where these conditions are required.

METHODS OF GRILLE OPERATION

Hazen rolling grilles are available in four types of operation:

- **a** Manual 'push-up' operation (for grilles up to 120 ft. in area).
- **b** Chain-hoist operation (operated with endless hand chain acting through reduction gearing).
- **c** Crank-gear operation (with detachable crank handle).
- **d** Electric, motorized operation (with emergency chain hoist, push-button controls, etc.)

TYPES OF GRILLE MOUNTINGS

Hazen rolling grilles may be supplied:

- **a** for inside face-of-wall mounting and inside operation, with the hood curved to fit the contour of the rolled-up curtain.
- **b** for outside face-of-wall mounting and outside operation, with the hood curved to fit the contour of the rolled-up curtain.
- **c** for inside face-of-wall mounting and outside operation, or vice-versa. (Through-the-wall operation.)
- **d** for between-jamb mounting, with square hood fully or partly concealed above the ceiling, and removable soffit.
- **e** for between-jamb mounting, with square hood below the ceiling, and removable panel.

For headroom and sideroom clearances required for the above mountings, see details and tables on Page 9.

SPECIFICATIONS

for aluminum or steel rolling grilles

CURTAIN

Shall be formed of ⅜" round extruded aluminum "Alloy 6063" (or galvanized steel) bars alternating horizontally through the entire width of the opening with ¾" x ⅛" extruded aluminum (or steel) flat bars. Both the round and flat bars end into the guides and are held together with HAZEN specially designed and unbreakable, self-greasing and noiseless rolling plastic endlinks. The round bars shall pass through the ends of extruded aluminum (or galvanized steel) flat vertical links ¾" x ⅛". These vertical links to be riveted to the flat bars at intervals not exceeding 8" on the same bar, and 4" in projection.

The space between the horizontal round and flat bars shall not exceed 1 3/16", thus making it impossible for any object with 1¼" diameter to go through the grille curtain.

bottom rail Shall consist of two angles 1 9/16" x 1 9/16" x 3/16" extruded aluminum "Alloy 6063" (or heavily galvanized steel), fastened back to back and extending along the full width of the grille curtain. See photograph on Page 4.

COUNTERBALANCE

To consist of oil-tempered helical steel springs of enough strength to counterbalance the full weight of the grille curtain, with a safety factor in excess of 25% **over** the actual weight of the curtain.

BARREL

Shall consist of a steel pipe containing the helical springs. This barrel or pipe to be of sufficient thickness and diameter to insure a deflection not exceeding .03 inch per foot of grille width. Each unit to be factory-tested for perfect balancing and operation before shipment.

BRACKETS

To be of unbreakable steel plate, from ¼" to ⅜" thick, attached to the guides and to the wall. Hood to be fastened to the brackets.

HOOD

Shall be of aluminum sheeting not less than 22 gauge aluminum "Alloy 52 S½ Hard" for aluminum grilles, and not less than 24 gauge galvanized sheeting for steel grilles.

Hood shall be curved to fit the contour of the grille curtain when inside or outside face-mounted. It shall be square when mounted between jambs, placed under or concealed above the ceiling, with a removable soffit, or removable panel.

For headroom clearances, see details and tables on Page 9.

GUIDES

Shall be formed of not less than ⅛" extruded aluminum "Alloy 6063" sections for aluminum grilles, and not less than ⅛" steel angles for steel grilles. Guides to run continuously to top of brackets to furnish them support and fastenings.

The openings of the guides shall be constructed with a safety groove to prevent the endlinks and grille curtain from leaving the guides. See photograph at right.

Safety Groove Guide

Depth of guides: 2" and 3".

For sideroom clearances, see details and tables on Page 9.

SPRING ADJUSTING DEVICE

A spring adjusting device shall be applied on every grille. On face mounted grilles, this device shall be mounted on the exterior side of one bracket. On grilles mounted between jambs, it is to be applied on the interior side of one bracket, accessible through a removable panel or removable soffit.

This device will enable the easy adjusting of springs, whenever needed, after erection, without removing the hood. It shall be supplied as standard equipment.

LOCKING DEVICE

A chrome-plated cylinder lock, opening from either side of the grille, may be provided at small additional cost. It shall be placed at the center of the curtain, at the proper height.

This chrome-plated cylinder lock may be supplied singly, or keyed alike. If cylinder is to be masterkeyed to buiding key system it must be supplied to us to install on grille lock at the factory.

FINISH

for ALUMINUM grilles: The curtain, bottom rail, hood, and guides shall be:

a in ALUMINUM, MILL FINISH.

or **b** in ALUMINUM, with ALUMILITED SATIN FINISH.

All other parts of the grille to be given one coat of aluminum paint.

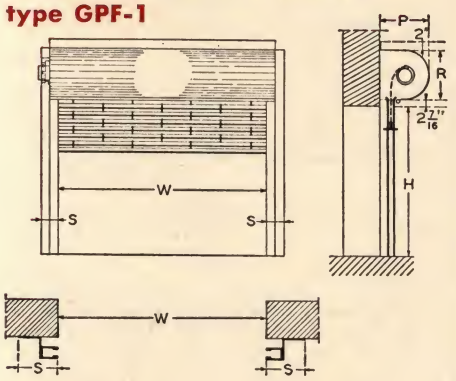
for STEEL grilles: The curtain, bottom rail, and hood shall be in hot dip galvanized steel with a MINIMUM of 1.25 ozs. of pure zinc coating per sq. ft. of flat metal, as per ASTM Standards.

A shop coat of aluminum paint may be applied over this heavy galvanization, if desired, at no extra cost.

All other parts of the grille to be given one coat of aluminum paint.

■ SPACE REQUIREMENTS

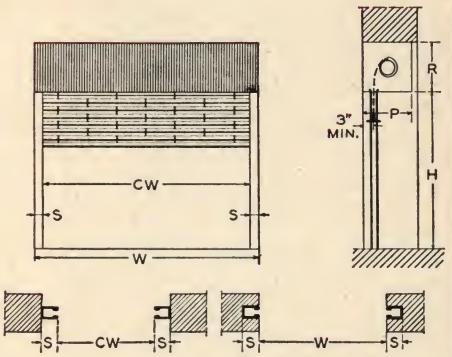
MANUALLY OPERATED
'push-up' type up to 80 sq. ft. in area
face mounted (*inside or outside*)
type GPF-1



HEIGHT up to		5'0"		9'0"		14'0"	
WIDTH up to	S*	R	P	R	P	R	P
8'0"		18 3/16"		20 3/16"		22 3/16"	
11'0"	5 1/8"						
18'0"			13 3/4"		15 3/4"		17 3/4"
20'0"							

*S (sideroom) size is the same for all heights.

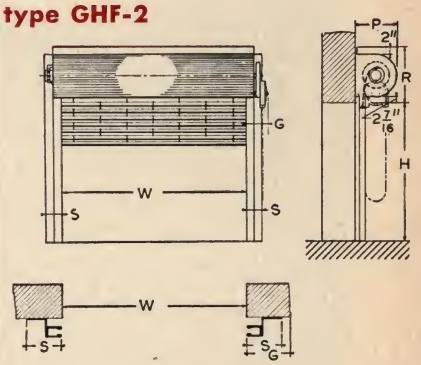
mounted between jambs
type GPJ-1



HEIGHT up to		5'0"		9'0"		14'0"	
WIDTH up to	S*	R	P	R	P	R	P
8'0"		15 5/16"		17 5/16"		19 5/16"	
11'0"	2 3/16"						
18'0"			13 3/4"		15 3/4"		17 3/4"
20'0"							

*S (sideroom) size is the same for all heights.
cw = clear width = opening width less 2 S

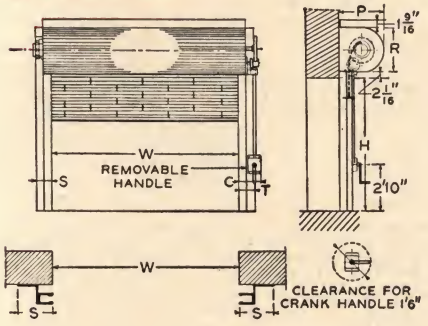
CHAIN-GEAR OPERATED
face mounted (*inside or outside*)
type GHF-2



HEIGHT up to			5'0"		9'0"		14'0"	
WIDTH up to	S*	G*	R	P	R	P	R	P
8'0"	5 1/8"							
11'0"		8 1/2"						
18'0"			18 1/4"		20 1/4"		22 1/4"	
20'0"				13 3/4"		15 3/4"		17 3/4"

* S and G sizes are the same for all heights.

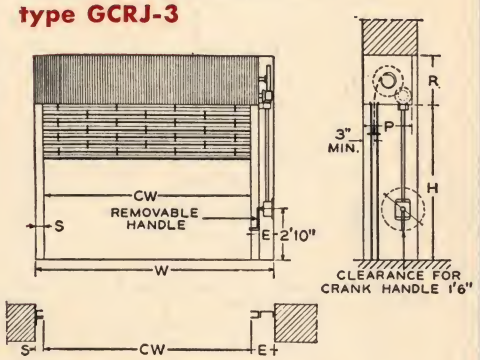
CRANK-GEAR OPERATED
face mounted (*inside or outside*)
type GCRF-3



HEIGHT up to				5'0"		9'0"		14'0"	
WIDTH up to	*S	*C	*T	R	P	R	P	R	P
8'0"	5 1/8"								
11'0"		8 1/8"							
18'0"			6 5/8"	18 1/4"		20 1/4"		22 1/4"	
20'0"					13 3/4"		15 3/4"		17 3/4"

* S, C and T sizes are the same for all heights.

CRANK-GEAR OPERATED
mounted between jambs
type GCRJ-3

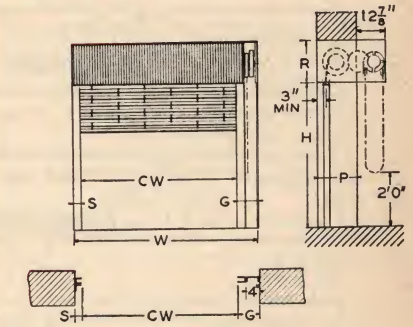


HEIGHT up to			5'0"		9'0"		14'0"	
WIDTH up to	*S	*C	R	P	R	P	R	P
8'0"	2 1/4"							
11'0"		5 1/4"						
18'0"			15 3/8"		17 3/8"		19 3/8"	
20'0"				13 3/4"		15 3/4"		17 3/4"

* S and C sizes are the same for all heights.

cw = clear width = opening width less S and E

CHAIN-GEAR OPERATED
mounted between jambs
type GHJ-2



HEIGHT up to			5'0"		9'0"		14'0"	
WIDTH up to	S*	G*	R	P	R	P	R	P
8'0"	2 1/4"							
11'0"		6 1/4"						
18'0"			15 3/8"		17 3/8"		19 3/8"	
20'0"				13 3/4"		15 3/4"		17 3/4"

* S and G sizes are the same for all heights.

cw = clear width = opening width less S and G

a few users of HAZEN rolling doors, grilles and counter shutters

City of Abilene, Texas
Air Products, Inc.
A & P Super Markets
American Federation of Labor
American Meter Co.
Aruba Caribbean Hotel, Aruba, N. I.
Burlington Industries, Inc.
Burdines, Fort Lauderdale, Fla.
Carborundum Co.
Central National Bank, Jacksonville
Connecticut Turnpike
Ellis Auditorium, Memphis
First National Bank, Miami, Fla.
First National Bank, Frederick, Okla.
Florida Power & Light Co.
General Electrodynamics, Inc.
Gimbels, New York
W. T. Grant Company
Gulf States Paper Corporation
Alexander Hamilton Airport, V. I.
Int. Business Machines
Jackson Memorial Laboratories, Me.
Jacksonville Coliseum, Jacksonville, Fla.
Kraft Foods
Mallinckrodt Chemical Co.
Miami Exhibition Hall, Miami, Fla.
Mobile County Courthouse, Mobile, Ala.
Montego Bay Airport, Kingston, Jamaica
J. C. Murphy Company
National Carbon Co.
National Guard Armories
Northside Shopping Center, Miami, Fla.
Potomac Light & Power Co.
Quakertown Brick & Tile Co.
Raytheon Mfg. Co.
Reynolds Metal Company
Safeway Stores
Sandura Company, Fullertown, Pa.
Sears Roebuck & Co.
St. Paul Municipal Stadium, Minn.
Union Carbide Caribe Inc., P. R.
U. S. Air Force Bases
U. S. Naval Stations
U. S. Marine Corps
Va. Electric & Power Co.
West Hollywood Shopping Center, Fla.
F. W. Woolworth Co.
Y. M. C. A.
and a very large number of other important industrial and commercial firms, colleges, universities, schools, hospitals and churches throughout the U.S.A.

HAZEN underwriters labeled rolling steel fire doors

underwriters' labeled crank-geared rolling steel fire door

For full fire protection and 100% rating, the Underwriters' Laboratories, Inc., apply the following labels on HAZEN rolling steel fire doors not exceeding 120 sq. ft. in area, with the width or height not to exceed 12'-0". For doors exceeding 120 sq. ft. in area see Page 11 on "OVERSIZE" doors.

Underwriters' Laboratories, Inc.
INSPECTED
FIRE DOOR NO. [redacted]
RATING: 3 HR. (A)

3-hour Class "A" label on doors for firewall openings.

Underwriters' Laboratories, Inc.
INSPECTED
FIRE DOOR NO. [redacted]
RATING: 1½ HR. (B)

1½-hour Class "B" label on doors for vertical shaft openings (elevator shafts, etc.)

Underwriters' Laboratories, Inc.
INSPECTED
FIRE DOOR
RATING: ¾ HR. (C) NO. [redacted]

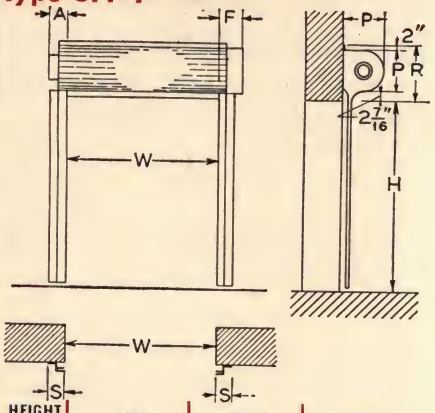
¾-hour Class "C" label on doors for corridors and room partitions.

Underwriters' Laboratories, Inc.
INSPECTED
FIRE DOOR NO. [redacted]
RATING: 1½ HR. (D)

1½-hour Class "D" label on doors for exterior wall openings.

SPACE REQUIREMENTS for

MANUALLY OPERATED
'push-up' type
face mounted (*inside or outside*)
type UPF-1

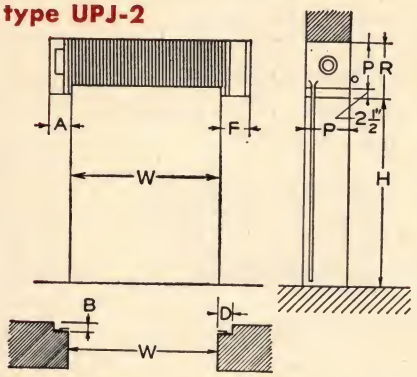


HEIGHT up to	8'0"					10'0"					12'0"				
WIDTH up to	R	P	A	F	S	R	P	A	F	S	R	P	A	F	S
6'0" 7'0" 8'0" 9'0" 10'0"	10	14	6	9	5	19	15	6	9	5	20	16	6	9	5
11'0" 12'0"	18	14	7	9	6	19	15	7	9	6	20	16	7	9	6

NOTE: Clearance figures above are in inches.

SPACE REQUIREMENTS for between jamb mountings

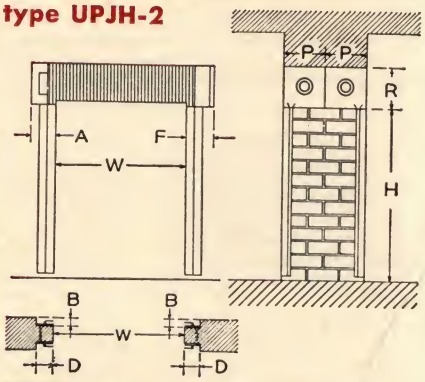
'PUSH-UP' TYPE (self-coiling)
mounted between jambs
type UPJ-2



HEIGHT up to	8'0"						10'0"						12'0"					
WIDTH up to	R	P	A	F	D	B	R	P	A	F	D	B	R	P	A	F	D	B
6'0" 7'0" 8'0" 9'0" 10'0"	16	14	7	10	4	3	17	15	7	10	4	3	18	16	7	10	4	3
11'0" 12'0"	16	14	8	10	5	3	17	15	8	10	5	3	18	16	8	10	5	3

NOTE: Clearance figures above are in inches.

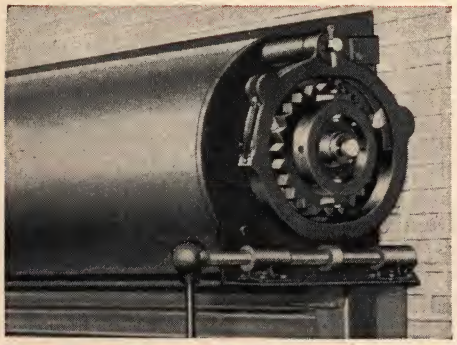
'PUSH-UP' TYPE (self-coiling)
mounted between jambs (*horizontal*)
type UPJH-2



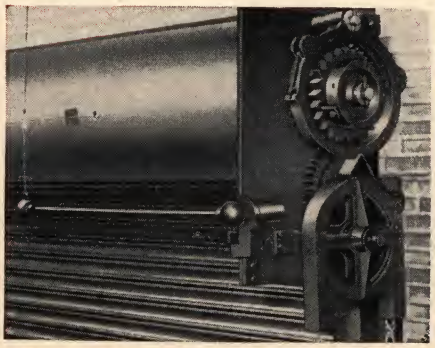
HEIGHT up to	8'0"						10'0"						12'0"					
WIDTH up to	R	P	A	F	D	B	R	P	A	F	D	B	R	P	A	F	D	B
6'0" 7'0" 8'0" 9'0" 10'0"	16	14	7	10	4	3	17	15	7	10	4	3	18	16	7	10	4	3
11'0" 12'0"	16	14	8	10	5	3	17	15	8	10	5	3	18	16	8	10	5	3

NOTE: Clearance figures above are in inches.

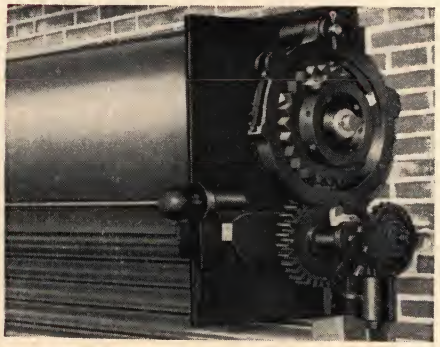
METHODS OF DOOR OPERATION



manual "push-up" operation with release lever down.



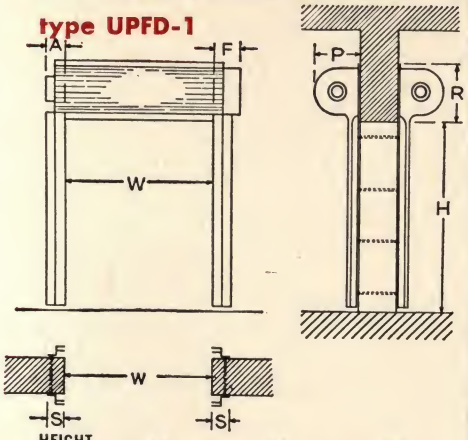
chain-gear operation with galvanized hand chain, showing release lever and fusible link in place.



crank-gear operation with removable crank handle.

MANUALLY OPERATED 'push-up' type
face mounted (*inside or outside*)

type UPFD-1

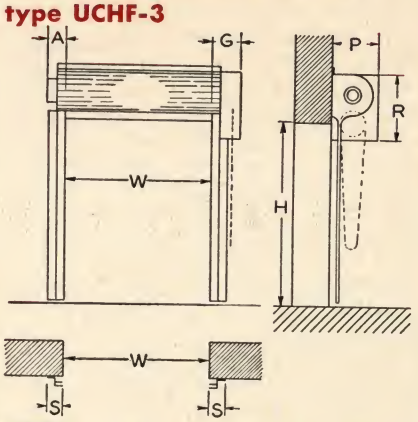


HEIGHT up to	8'0"					10'0"					12'0"				
WIDTH up to	R	P	A	F	S	R	P	A	F	S	R	P	A	F	S
6'0"															
7'0"															
8'0"	18	14	6	9	5	19	15	6	9	5	20	16	6	9	5
9'0"															
10'0"															
11'0"															
12'0"	18	14	7	9	6	19	15	7	9	6	20	16	7	9	6

NOTE: Clearance figures above are in inches.

CHAIN-GEAR OPERATED
face mounted (*inside or outside*)

type UCHF-3

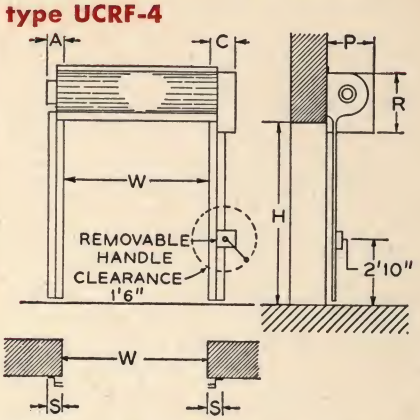


HEIGHT up to	8'0"					10'0"					12'0"				
WIDTH up to	R	P	A	G	S	R	P	A	G	S	R	P	A	G	S
6'0"															
7'0"															
8'0"	18	20	6	10	5	19	20	6	10	5	20	20	6	10	5
9'0"															
10'0"															
11'0"															
12'0"	18	20	7	11	6	19	20	7	11	6	20	20	7	11	6

NOTE: Clearance figures above are in inches.

CRANK-GEAR OPERATED
face mounted (*inside or outside*)

type UCRF-4

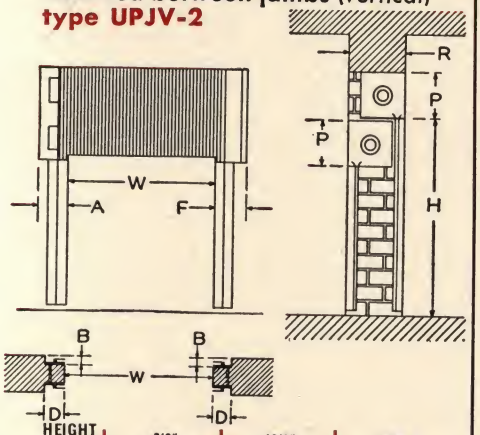


HEIGHT up to	6'0"					10'0"					12'0"				
WIDTH up to	R	P	A	C	S	R	P	A	C	S	R	P	A	C	S
6'0"															
7'0"															
8'0"	18	20	6	10	5	19	20	6	10	5	20	20	6	10	5
9'0"															
10'0"															
11'0"															
12'0"	18	20	7	11	6	19	20	7	11	6	20	20	7	11	6

NOTE: Clearance figures above are in inches.

'PUSH-UP' TYPE (self-coiling)
mounted between jambs (*vertical*)

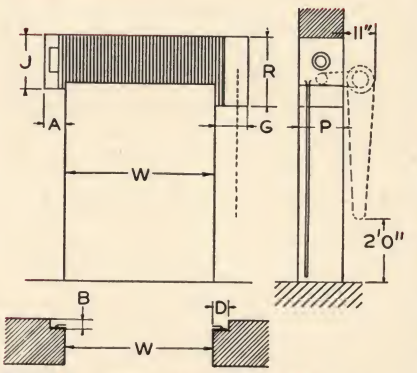
type UPJV-2



HEIGHT up to	8'0"						10'0"						12'0"					
WIDTH up to	R	P	A	F	D	B	R	P	A	F	D	B	R	P	A	F	D	B
6'0"																		
7'0"																		
8'0"	20	17	7	10	4	3	21	18	7	10	4	3	22	19	7	10	4	3
9'0"																		
10'0"																		
11'0"																		
12'0"	20	17	8	10	5	3	21	18	8	10	5	3	22	19	8	10	5	3

NOTE: Clearance figures above are in inches.

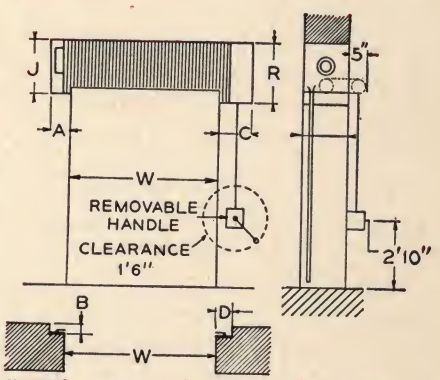
CHAIN-GEAR OPERATED
mounted between jambs
type UCHJ-3



HEIGHT up to	8'0"						10'0"						12'0"					
WIDTH up to	J	P	R	A	G	D	B	J	P	R	A	G	D	B	J	P	R	A	G	D	B
6'0"																					
7'0"																					
8'0"	16	14	22	7	11	4	3	17	15	22	7	11	4	3	18	16	22	7	11	4	3
9'0"																					
10'0"																					
11'0"																					
12'0"	16	14	22	8	12	5	3	17	15	22	8	12	5	3	18	16	22	8	12	5	3

NOTE: Clearance figures above are in inches.

CRANK-GEAR OPERATED
mounted between jambs
type UCRJ-4



HEIGHT up to	8'0"						10'0"						12'0"					
WIDTH up to	J	P	R	A	C	D	B	J	P	R	A	C	D	B	J	P	R	A	C	D	B
6'0"																					
7'0"																					
8'0"	16	14	20	7	11	4	3	17	15	20	7	11	4	3	18	16	20	7	11	4	3
9'0"																					
10'0"																					
11'0"																					
12'0"	16	14	20	8	12	5	3	17	15	20	8	12	5	3	18	16	20	8	12	5	3

NOTE: Clearance figures above are in inches.

ADVANTAGES

The HAZEN rolling steel fire door has been fire tested at the Underwriters' Laboratories in Chicago, Illinois, subjected to THREE hours of fire, reaching over 1800 degress Fahrenheit, followed immediately by five minutes of water testing with high pressure hoses.

Each HAZEN rolling steel fire door is therefore inspected and labeled by the Underwriters' Laboratories, Inc. before shipment, to meet their rigid requirements for 100% fire rating and protection.

Although the HAZEN Underwriters' labeled rolling steel fire door is used mainly for the protection of life and property, the Underwriters' label it bears helps secure substantial reductions in insurance premiums, savings which can easily offset the original cost of the door within a short time.

The HAZEN Underwriters' labeled rolling steel door is used normally as a regular rolling steel service door. However, in the event of fire, the melting of the fusible links releases the automatic closing mechanism, and the door closes tightly; the downward movement is controlled by an oscillating automatic safety governor to prevent possible injury and impact.

"OVERSIZE" DOORS

HAZEN rolling steel fire doors exceeding 120 sq. ft. in area—but not over 576 sq. ft., with neither dimension exceeding 24'-0"—are also manufactured strictly to the Underwriters' Laboratories, Inc., specifications. However, they are supplied with an Underwriters' Laboratories "Certificate of Inspection for Oversize Doors" instead of a label.

METHODS OF DOOR OPERATION

HAZEN Underwriters' Labeled rolling steel fire doors are available in the following three types of operation:

a) Manual "push-up" operation.
b) Chain-gear operation, with galvanized endless hand chain.
c) Crank-gear operation, with removable crank handle.

The Underwriters' Laboratories do not apply any labels on rolling steel fire doors that are electrically operated. However, when electric operation is required on such doors, HAZEN rolling steel fire doors can be manufactured strictly to the Underwriters' Laboratories specifications, but supplied without any labels.

underwriters' labeled rolling steel fire doors

TYPES OF MOUNTINGS

HAZEN Underwriters' labeled rolling steel fire doors are available in all types of mountings detailed in the sketches and clearances shown on Pages 10 and 11.

GUARANTEE

All HAZEN Underwriters' labeled rolling steel fire doors are fully guaranteed for one year after installation.

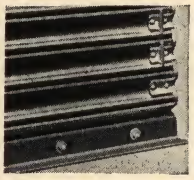
SPECIFICATIONS

CURTAIN To be formed of interlocking, cold rolled close annealed, heavily galvanized curved steel slats of not less than 20 U.S. gauge 2¼" wide, with a depth of crown of ½", for openings up to 120 sq. ft. in area. (On "OVERSIZE" doors, the gauge and sizes of slats may be increased).

Slats to be especially designed and rolled to resist deflection and to prevent water from entering the interlocks.

On Classes "A", "B" and "C" labeled interior doors the end of EACH slat to be fitted with malleable iron endlocks. These CONTINUOUS endlocks act as flame stops, and prevent passage of smoke at the ends of the curtain. They also serve to protect both ends of every slat from rubbing against the guides and help to hold the curtain in alignment.

On Class "D" labeled exterior doors, endlocks are placed on each alternate slat.



continuous endlocks, slotted holes on bottom rail

Each curtain is supplied with two supports or stoplocks to permit the door to retain a normally closed position, even if the counterbalance mechanism is destroyed under fire.

The top slat of the curtain is attached to the barrel by means of malleable iron rings. The bottom slat is attached to a two-angled bottom rail. (See below detailed description of the barrel rings and bottom rail).

BOTTOM RAIL To consist of two heavily hot dip galvanized steel angles of 1 9/16" x 1 9/16" x 3/16" fastened back to back and extending the full width of the door to give strength to the bottom of the curtain.

The two angles to be held together by rivets having both steel and heat destructible fiber washers in slotted holes for heat expansion.

Each bottom rail is provided with hot dip galvanized steel handles to raise the curtain. These are attached to the bottom rail with cadmium plated steel bolts.

HOOD To be made of hot dip galvanized steel sheet of not less than 24 U.S. gauge curved to fit the contour of the curtain coil. It will have an automatic flame stop or baffle made of 24 U. S. gauge hot dip galvanized steel.

The hood will be attached to the brackets on each side and to the wall on top by means of 5/16" expansion bolts equipped with both steel and heat destructible washers spaced not more than 2 feet apart. It will have reinforcing beads and flanges to prevent deflection.

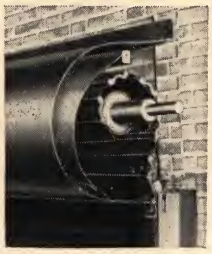
The hood shall be curved on face-of-wall mounted doors; and square on between-jamb mounted doors. For headroom clearances, see details on Pages 10 and 11.

HOOD BAFFLE AND FUSIBLE LINKS Each hood to be equipped with a flame stop or baffle made of hot dip galvanized steel of not less than 24 U.S. gauge.

This baffle is held away from the coil under normal operation of the door by a fusible link. It shall be thermally released by the melting of this fusible link at 160 degrees Fahrenheit in the event of fire, and shall close against the curtain coil to prevent the passage of flame or smoke through the wall opening.

The hood baffle is attached to the inside of the main hood by means of a continuous beaded joint which acts as a hinge that permits it to close against the coil in the event of fire.

fusible link



hood showing galvanized steel hood baffle on inside

SPRING BARREL AND RINGS Shall consist of a steel pipe which contains the helical counterbalancing springs. This barrel or pipe to be of sufficient thickness and diameter to insure a deflection not exceeding .03 inch per foot of door width.

The barrel rings shall be made of malleable iron of involute shape to coil the door curtain in a uniformly increasing diameter. Spacing between barrel rings to be as strictly prescribed by the Underwriters' Laboratories, Inc.

Each unit to be factory tested for perfect balancing and operation before shipment.

STEEL BRACKETS Shall be made of unbreakable steel plate of not less than 3/8" in thickness. They shall be attached to the guides by means of steel bolts and to the wall by means of ½" through-wall steel bolts.

The hood is to be fastened to the brackets by means of screws and bolts. The exterior side of one bracket to carry the automatic closing mechanism, while that of the other bracket carries the spring adjusting device.

Brackets are curved on face-of-wall mounted doors, and square on between-jamb doors. See photographs on page 4.

COUNTERBALANCE To consist of oil-tempered and heat treated helical torsion steel springs anchored to a tension rod. These springs are to have enough strength to counterbalance the full weight of the curtain with a safety factor in excess of 25% OVER the actual weight of the curtain.

Every counterbalancing mechanism is custom-made for each particular job and is thoroughly tested with the assembled door in operation in our testing pit before shipment.

GUIDES Shall be made of not less than 3/16" cold rolled steel angles with slotted holes not less than 2" x 7/16" to allow for heat expansion.

3/8" through-wall bolts to be spaced at not more than 18" on center. Both steel and heat destructible washers must be supplied to provide for expansion under heat.

A minimum clearance of ¾" shall be provided between the bottom of the guides and the sill, again to allow for heat expansion.

The above provisions are to allow sufficient clearance between the guides and all other operating parts of the door to withstand an expansion under fire up to and including 1800 degrees Fahrenheit. See photograph at right.

guide showing slotted hole for heat expansion

SPRING ADJUSTING DEVICE To be supplied on every door, regardless of size or type of operation. It is accesible from outside the hood to easily adjust the spring tension whenever needed, after erection, without having to remove the hood.

This spring adjusting device is attached to the tension rod that carries the counterbalancing springs and on to the outside of the bracket that does not carry the automatic mechanism. It is completely separated from the automatic release and cannot therefore interfere with the automatic closing of the door in the event of fire. See photograph at right.

spring adjusting device accessible from outside the hood

AUTOMATIC CLOSING DEVICE This is done through an auxiliary spring, independent of the counterbalancing spring. This auxiliary spring is anchored to the tension rod inside the barrel and does not work during the normal operation of the door. In the event of fire, the melting of the fusible link at 160 degrees Fahrenheit operates the auxiliary spring which brings the door to a fully closed position.

This auxiliary spring is so designed as to permit the raising of the curtain for emergency exit and will then close it automatically. Yet, all Hazen Underwriters' labeled fire doors can be easily reset, without removing the hood, by resetting the automatic release device, attaching a new fusible link, and rolling up the door curtain fully open.

All contact points are made of special non-corrodible metals to prevent any possible freezing together.

Adjustment of the main counterbalance spring shall not be affected by the automatic closing of the door.

See photographs under "METHODS OF DOOR OPERATION" on Page 10.

SAFETY GOVERNOR Each Hazen Underwriters' labeled fire door to be provided with a safety governor which is held in place by the release lever during the normal operation of the door.

In the event of fire, the melting of the fusible link at 160 degrees Fahrenheit releases the automatic closing mechanism. The downward speed of the curtain is then slowed down and controlled by the safety governor, thus providing a warning and reducing any possible injury to any person who might be standing in the opening.

All contact points are made of special non-corrodible metals to prevent any possible freezing together.

steel box protecting automatic closing mechanism

See photographs under "METHODS OF DOOR OPERATION" on Page 10.

RELEASE LEVER This lever is held up by wire connected to fusible links during the normal operation of the door. In the event of fire, the melting of the fusible links at 160 degrees Fahrenheit drops the lever which immediately releases the automatic closing mechanism.

All contact points are made of special non-corrodible metals to prevent any possible freezing together.

HAZEN METAL PRODUCTS INC.

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TELEPHONE: BRyant 9-0994 -0995 -2972

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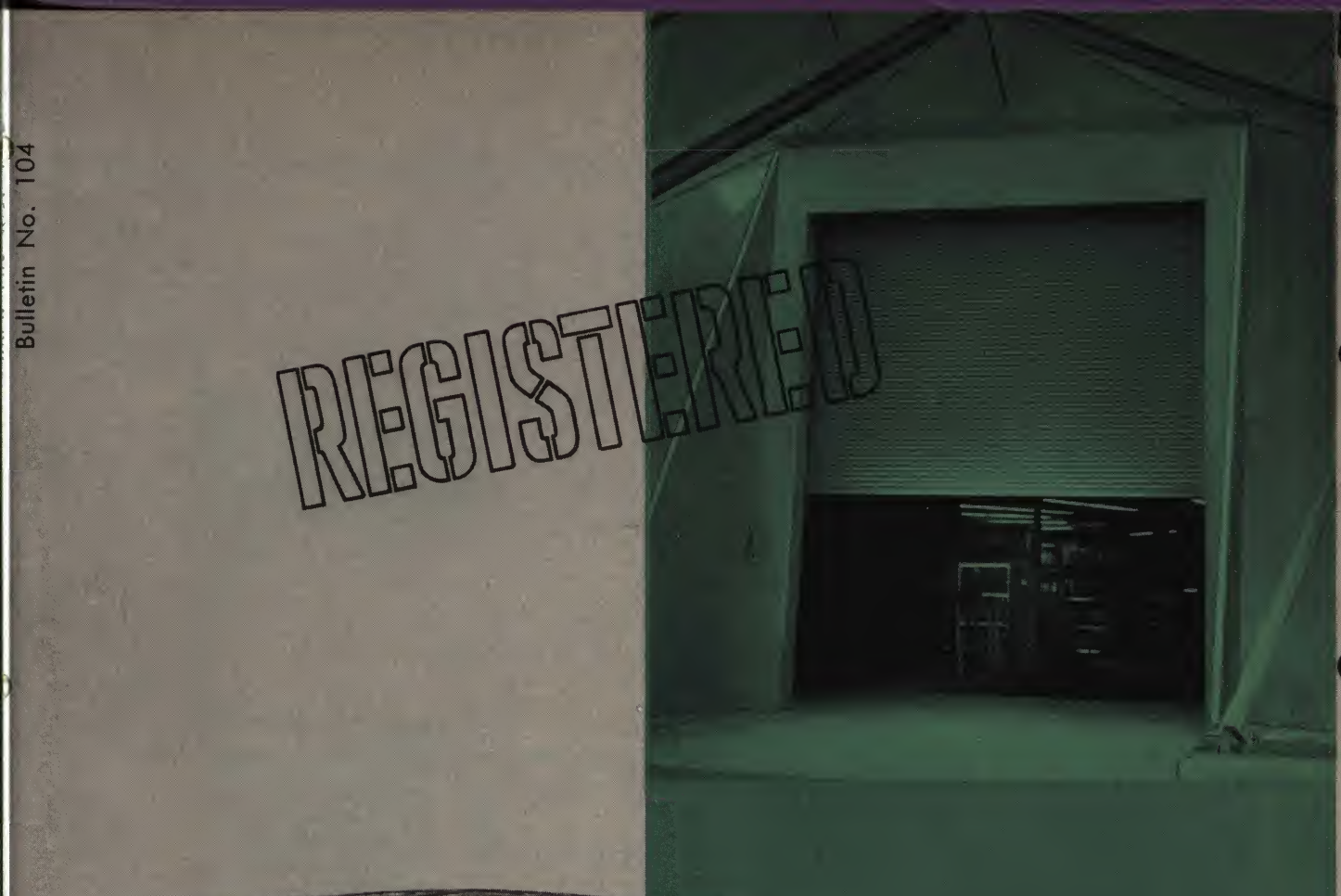


KINNEAR
ROLLING DOORS
STEEL or ALUMINUM

Rolling Service Doors

MOTOR Operation

Steel Rolling Fire Doors

Metal Rolling Grilles

Counter Shutters

Steel & Wood Rol-Top Doors

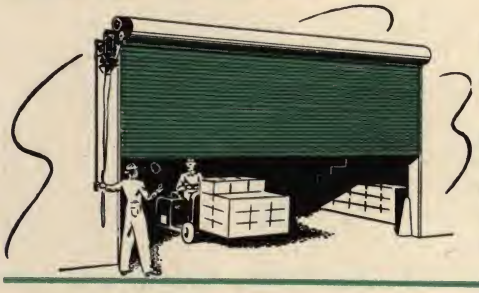
Having originated the interlocking slat curtain better than 58 years ago, the name Kinnear has become synonymous for Rolling Doors the world over. By devoting their entire efforts exclusively to the manufacture of doors, Kinnear has also achieved an enviable reputation for manufacturing facilities, specialized experience and leadership in door design. To specify Kinnear Doors means more than the selection of a superior product; it is the assurance of extra door services. The Kinnear "Complete Door Service" policy, whereby designing skill, competent workmanship, the best of materials, individual fabrication, plant assembly and trained installation crews are combined, make this a proven fact. Kinnear doors insure maximum economy of installation, trouble-free operation, and long service life with a minimum of maintenance cost.

To make this specialized Kinnear Door Service most conveniently available, regardless of your location, Kinnear operates plants in Columbus, Ohio and San Francisco, Calif. and has Offices and Authorized Agents located in all principal cities. Call a Kinnear Engineer, with confidence, whenever you have a door need.

steel or aluminum rolling doors

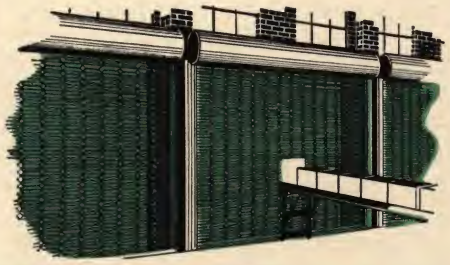
index to door types

■ rolling service doors — steel or aluminum *(non-labeled)*



Pages 4 to 20
specifications — 20
sizes and clearances — 16 to 19
electric operation — 6 to 11

■ rolling grilles — steel or aluminum



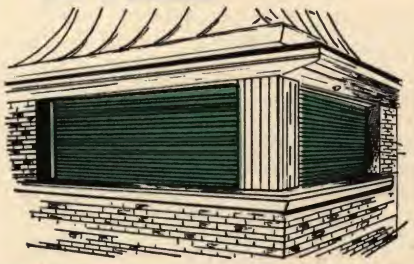
Pages 26 & 27
specifications — 27
sizes and clearances — 27
Also see Service Doors Pages 6 to 20 for additional construction data.

■ "Akbar" fire doors and shutters *(Underwriters' labeled)*

Pages 21 to 24
specifications — 23
sizes and clearances — 24

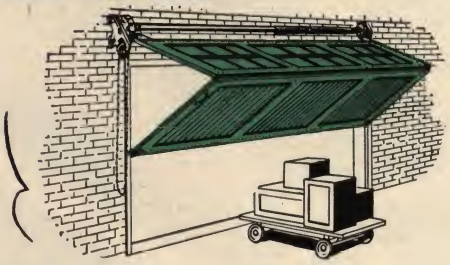
■ counter shutters—other special doors

(steel or aluminum)



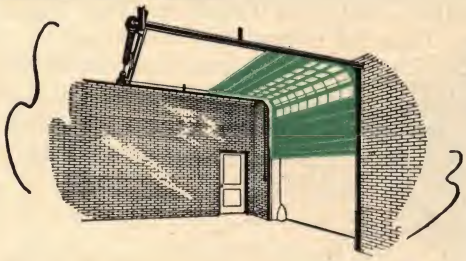
Pages 28 and 29
Kitchen & Storage Compartment Doors
Rolling Partitions
Truck Doors
Rolling Doors with vision-lights.

■ bifold doors *(steel or wood)*



Page 25
For more detailed information and recommendations on this particular type of door consult Kinnear.

■ Rol-TOP sectional overhead doors *(steel or wood)*

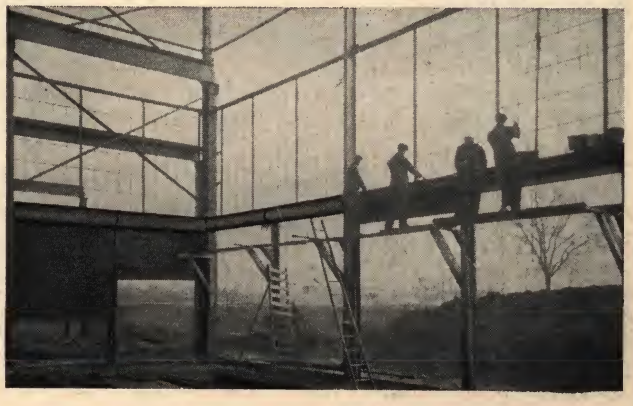


Pages 30 to 35
Steel RoL-TOPS 30 & 31
Wood RoL-TOPS 32 & 33
Other Data 34 & 35

complete door service

specialized door engineering

experienced door installation



curtain features

Interlocking slats were originated by Kinnear over 60 years ago. At one time a corrugated iron sheet coiled up on a pipe was the only rolling curtain known. In the development of the rolling door this original slat design has been modified and improved, but it is noteworthy that the original features have been retained. These features are incorporated in Kinnear Slats Nos. 2 and 4, as follows:

water shedding assembly The section is made with reverse curves, thus providing a good water shed.

reversibility The position shown above sheds water against the convex surface, but if the sections are reversed, top for bottom, the assembly will then shed water against the concave side.

resistance to horizontal forces The curved sections distribute metal on both sides of the vertical or neutral axis so as to provide the same horizontal resistance to forces from either side.

resiliency Slats open up and flatten very slightly when resisting horizontal forces, which allows additional resiliency and provides a strong but flexible curtain with slats that are difficult to cripple.

free-acting joints The interlocking joints are designed to permit easy articulation in coiling.

compressibility A clearance in the interlocking bead allows a slight telescoping in the vertical length of the curtain, affording a cushion effect when the door closes. Thus the bottom bar can adjust to a slight rectilinear slope in the sill from jamb to jamb.

attractive appearance Shadows and highlights caused by the convex and concave surfaces present a pleasing appearance and contribute to the architectural design of the building.

sizes, materials, etc.

No. 2: Made in 22, 20 and 18 U.S. gauge open hearth steel. Depth of crown ½ in., 1¾ in. on centers.

No. 4: For extremely wide doors. 20, 18 and 16 U.S. gauge. Depth of crown ⅞ in., 2⅝ in. on centers.

durability of dual protected steel

*All steel slats are rolled from sheet metal which has been hot dip galvanized and is free from blisters or other imperfections. A high grade zinc coating (1.25 oz. of zinc per sq ft of flat metal, per ASTM standards) is followed by Kinnear Paint Bond (phosphate coating) to insure paint adhesion. Slats when specified can be made of aluminum, bronze, Monel Metal, stainless steel or any of the metal veneered steels, as an extra.

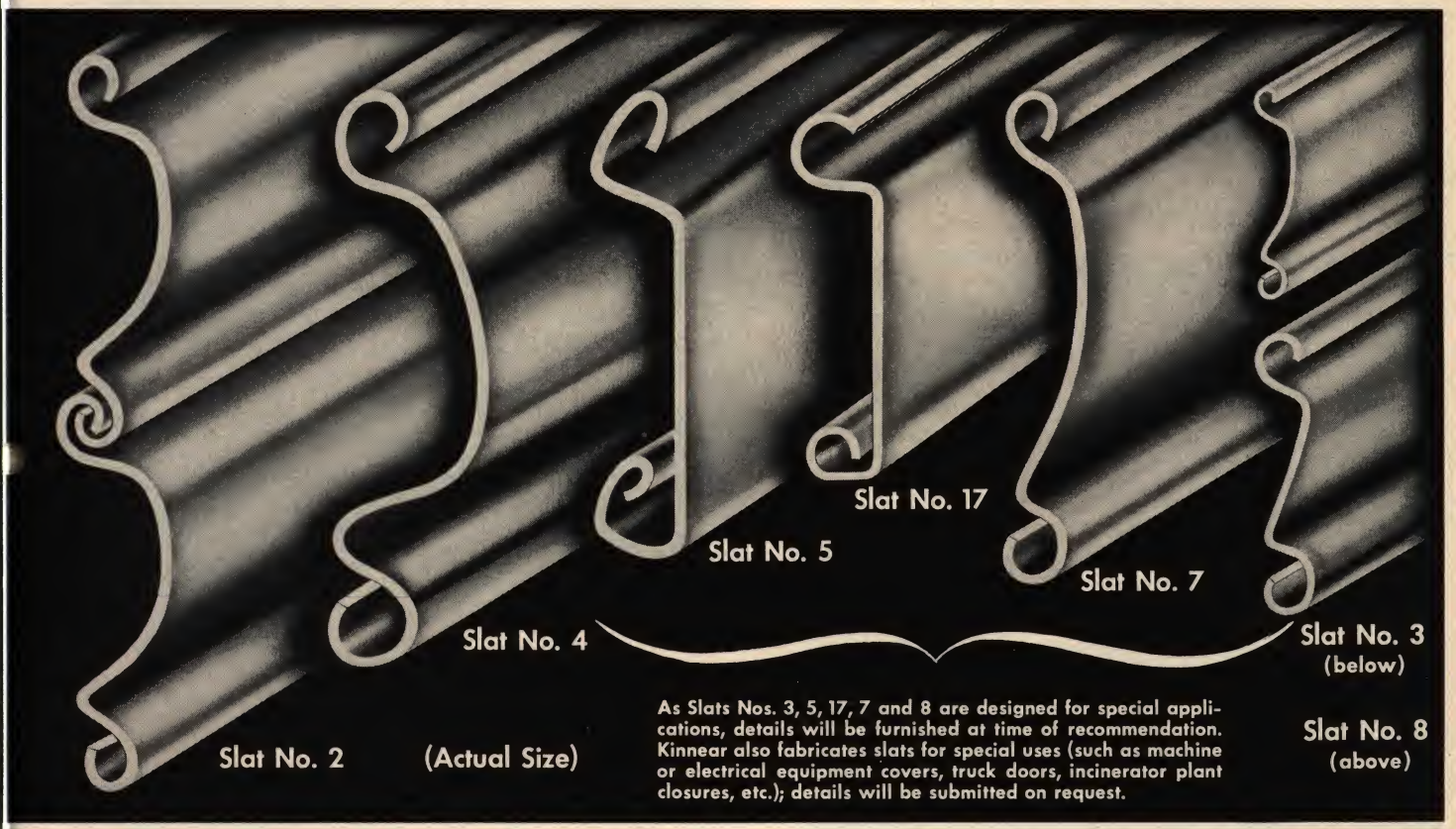
flush surface design of No. 5 and No. 17

A curtain of No. 5 slats provides an even surface without wavy effect. Joints articulate easily in the direction of the coil but lock in the other direction, which eliminates buckling and provides a rigid curtain which can be moved up or down by forces acting through the vertical axis. Made in 22 and 20 U.S. gauge.

Kinnear "Goliath" Slat

The Kinnear "Goliath" Slat (No. 9) has been especially designed to provide an exceptionally strong rolling curtain to accommodate extremely large openings or smaller openings requiring an exceptionally strong barricade. As can be seen by the above full size illustration, and as its name implies, it's a giant in proportions and makes possible the most rugged rolling door ever offered. Practically an impenetrable barrier! It's roll formed of either steel (14 or 16 U. S. Gauge) or aluminum (12 or 10 B & S Gauge) and embodies the same design features that have earned for Kinnear Interlocking Slat Type of Rolling Door world acclaim.

Kinnear slats—steel (zinc-coated*) aluminum and other metals



As Slats Nos. 3, 5, 17, 7 and 8 are designed for special applications, details will be furnished at time of recommendation. Kinnear also fabricates slats for special uses (such as machine or electrical equipment covers, truck doors, incinerator plant closures, etc.); details will be submitted on request.

for extra weathertightness

Where a rolling door of maximum weathertightness is desired one of Kinnear's flat slats (No. 5 or No. 17), illustrated above, has exceptional merit. They form a good-looking curtain that presents a close-fitting, flat-surface exterior, giving exceptional water-shedding qualities and permitting the use of a tighter weather-stripping provisions in the guides (see page 15). Their design results in a curtain strength and coiling action equal to the curved type slat of comparable gauge.

endlocks

Alternate interlocking slats, forming the curtain of a rolling door have malleable iron endlocks dimple — riveted to the ends. When required may be on every slat. They retain slats in place, maintaining curtain alignment, and protect the ends of the slats from rubbing in the guides. See page 14 for windlocks.

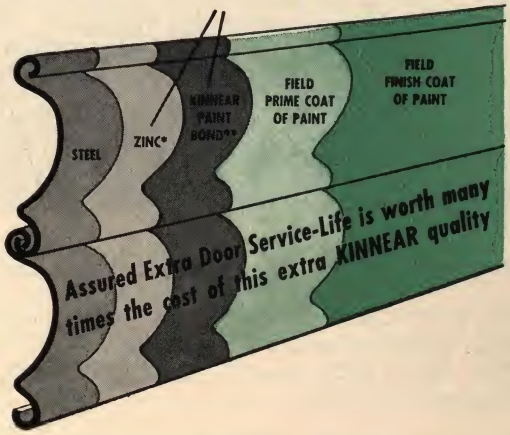
zinc coated dual protected

To just specify "galvanizing" may mean any type or amount, as low as 2/10 to 6/10 of an ounce per sq. ft. (commercial coating). Kinnear high grade zinc base coating applied by the hot dip process fuses into the pores of the steel (1¼ ounces per sq. ft. of flat metal in accordance with ASTM Standards—more than twice as much as some commercial coatings). Kinnear heavy zinc coating is prepared for painting by the application of a phosphate coating (Kinnear Paint Bond) which acts as a bond between the zinc and paint.

Painting can be done at once, using your own paint specification and colors. Paints and enamels deteriorate, chip and wear off; therefore the heavy base zinc coating fused into the steel is vital to long life and resistance to corrosion.

There is no better protection for rolling doors on the market than Kinnear Hot Dip 1¼ oz. per sq. ft. of flat metal zinc coating, plus Kinnear Paint Bond (phosphate coating) for paint adhesion, plus field coats of paint.

Specify KINNEAR Dual-Protected Steel Slats

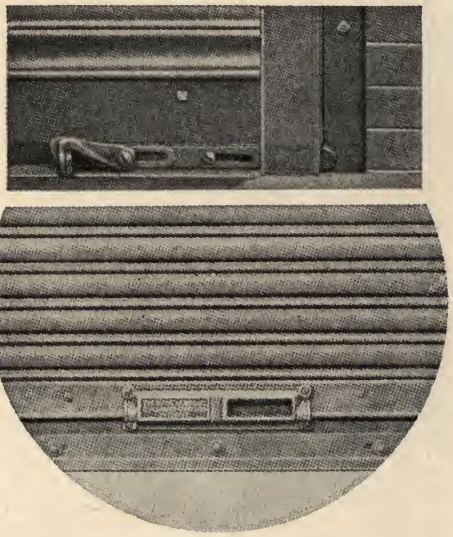

STEEL
ZINC*
KINNEAR PAINT BOND**
FIELD PRIME COAT OF PAINT
FIELD FINISH COAT OF PAINT
Assured Extra Door Service-Life is worth many times the cost of this extra KINNEAR quality

Kinnear Service Doors are what their name implies—doors for every-day general use. They are designed to serve in openings that require a good closure but do not require Underwriters' Labeled fire doors and where fire protection is not a prime consideration. Having a flexible curtain built of metal they provide an unusually rugged barricade, offering extra protection against intruders and weather. While not built to be fire doors, they are generally constructed of incombustible materials and consequently, when doors are closed, prevent spread of small fires and delay spread of large ones.

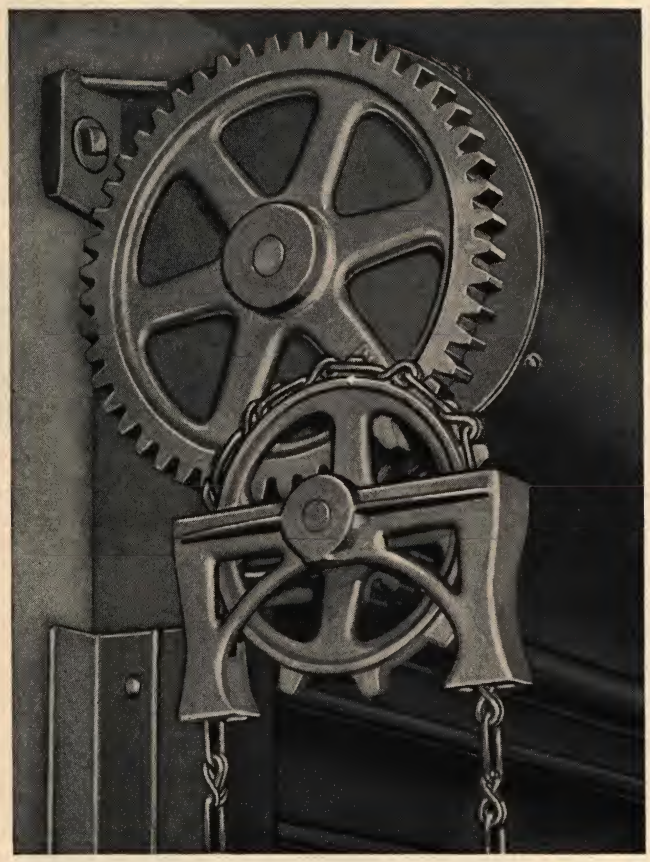
type of operation

manual operation

For small size doors (with a maximum dimension of 12 ft. or a maximum area of 100 sq. ft.), mounted on the face of the wall or in reveals in the jambs, convenient lifting handles are provided on the bottom plate. Counterbalance minimizes raising exertion. Usually mechanical operation is recommended for doors over 80 sq. ft. in area.



Top Right: Locking of the manually operated doors is accomplished by padlocking the slide bolt, which contacts a stop in the guide, to the clip welded on the bottom plate of the door. This can be arranged for locking on either, or both sides of the door.
Right: Showing the convenient lifting handle provided on the bottom plate of all manually operated push-up doors.

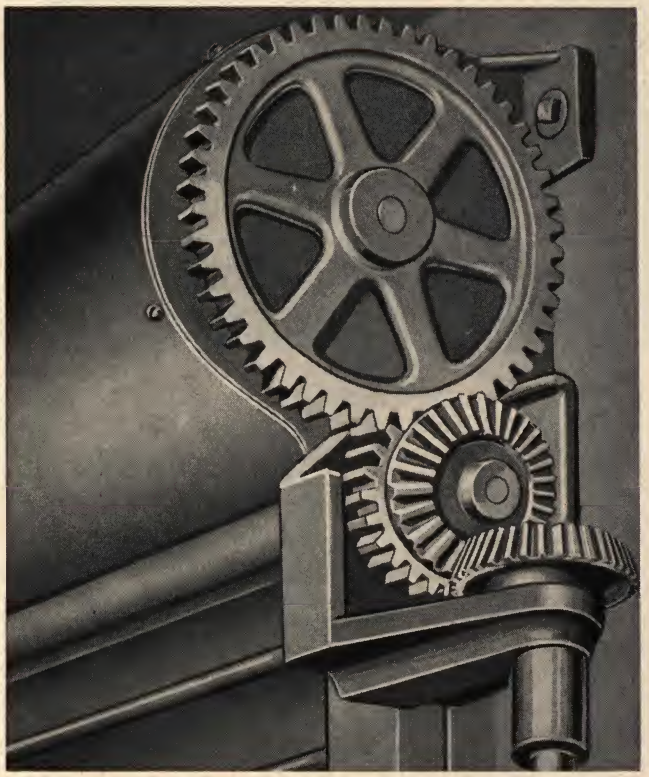


chain hoist (mechanical) operation

For large doors, operation by hand chain, sprocket and reduction gear can be arranged for operation from either side of wall. Estimated maximum pull required is 35 lbs.

crank (mechanical) operation

When preferred, doors can be operated by a hand crank, shafting and reduction gear on door side of wall, both sides of wall, or only on side opposite door. Estimated maximum exertion required on crank is 20 lbs. Detachable crank prevents unauthorized operation.



advantages

saves time	*increases production*
saves labor	*saves building heat*
pays for itself	*allows remote control*

controls

Standard magnetic switch. Standard stations three push buttons labeled "open," "close," "stop." Limit switch automatically stops motor, sets brake. Special switches and key-operated push buttons, where required, can be furnished as an extra.

electric operation

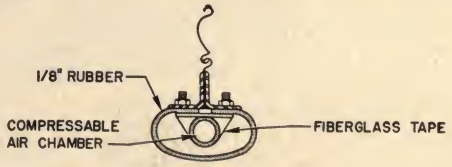
Kinnear Power Units and controls for electric remote operation save man-time and effort, save building heat, decrease open door hazards. Doors controlled by push button stations, or other practical means. Kinnear power equipment can be used to convert existing manually operated doors at moderate expense.

emergency manual operation

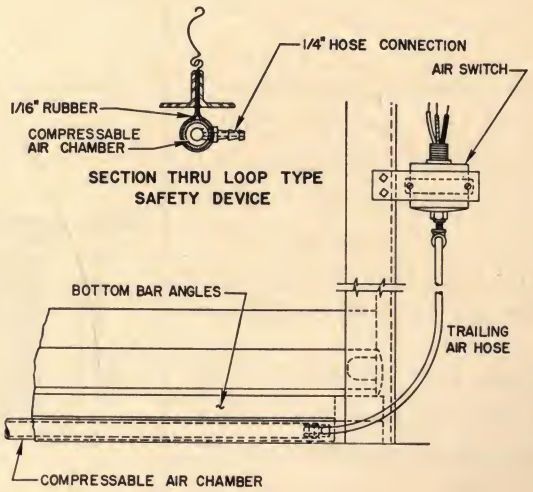
Pulling down on auxiliary chains engages the emergency chain operator, also cuts out electrical operation and automatically releases the brake. The door is then opened or closed by chain control. The power unit is returned to normal electrical operation by simply pulling down conveniently located release chain. This method is both simple and positive. It eliminates inconvenience in case of power failure.

combination safety device and rubber weatherseal

The Kinnear automatic door-reversing safety device combined with rubber weatherseal (available as extra equipment) minimizes the possibility of injury to persons or vehicles, when door is lowered. A weather-strip along the entire length of the bottom edge of door, if compressed by a moderate pressure against any obstruction, causes the door to stop its closing travel . . . and can be arranged so that it will also automatically revert to its fully open position. Device also serves as weatherseal for bottom of door. When desired specify by the statement: "Doors to be equipped with an automatic door-reversing safety device combined with rubber weather seal."



SECTION THRU TUBULAR TYPE SAFETY DEVICE



SECTION THRU LOOP TYPE SAFETY DEVICE

Kinnear meets these 9 major requirements

1. "REGISTERED" life extension

Kinnear Doors and other Kinnear products, after installation, can be kept in regular daily service for the life of the building; need never be discarded for lack of replacement parts.

Complete details and drawings of every order for Kinnear Rolling Door are kept in permanent, fireproof vaults—an added protective service that has proved extremely valuable to many users, throughout the years.

In case of accidental damage or other mishap, Kinnear always has ready reference to all parts of any Kinnear Door ever installed, so that accurate replacements can be made quickly.

New parts for Kinnear Doors installed fifty years ago can be furnished today because of this exclusive Kinnear service. Parts are frequently supplied for Kinnear Rolling Doors in continuous daily use for 30, 40, or 50 years.

This Kinnear service is a form of "life extension" that protects your door investment far into the future.

2. quick, easy operation

3. space saving

4. greater durability

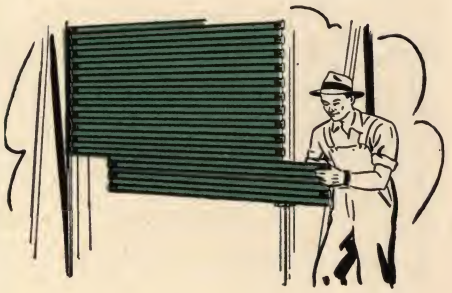
5. fire protection

6. maximum safety

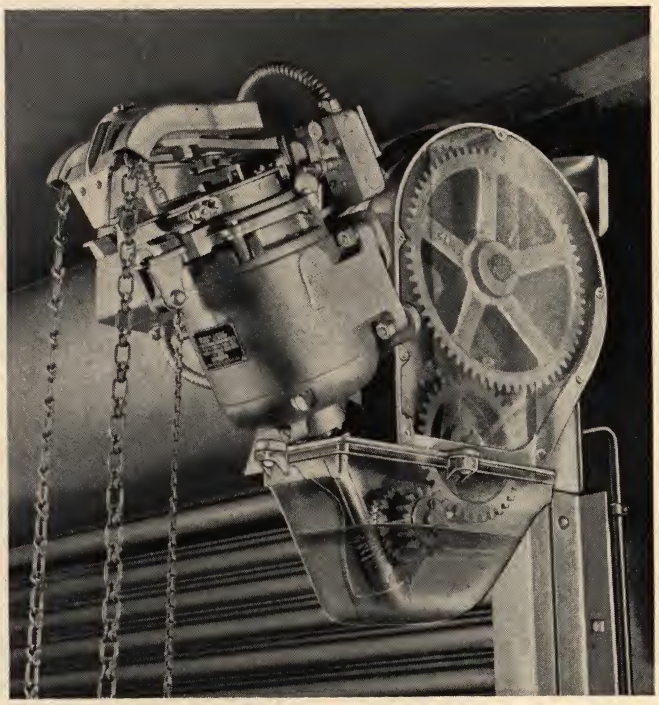
7. general protection

8. neat appearance

9. economical installation



bracket mounted type A



The Kinnear Bracket Mounted Type A Power Operator is a rugged, gear-driven power unit available for any standard type of electric current. It is especially designed (in two different sizes; see next page) for doors with a maximum area of approximately 315 sq. ft. of No. 20 U.S. gauge curtain.

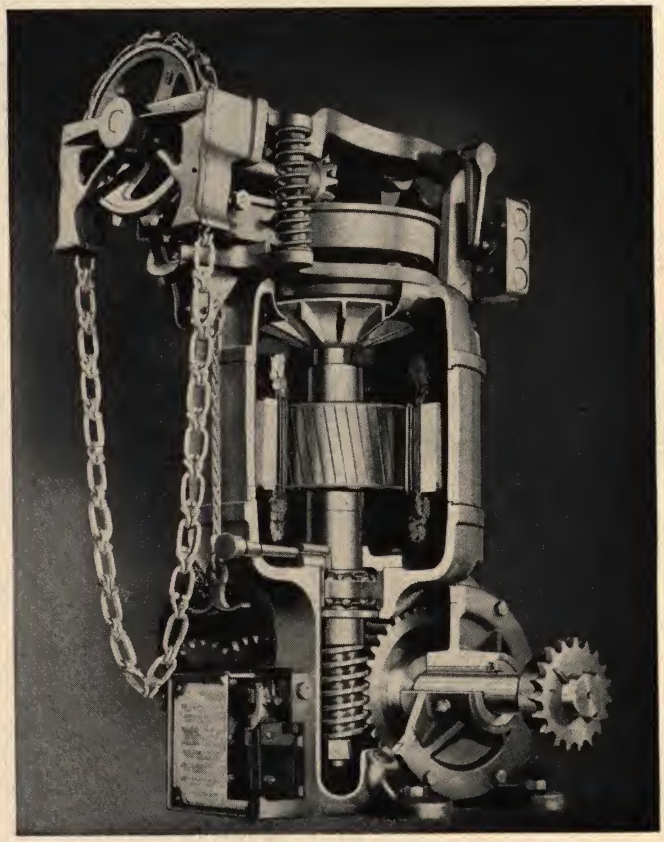
Attached to the bracket in which the curtain coil is journaled, the entire mechanism (motor, reduction gearing, magnetic brake, limit switch and emergency manual operation) requires very little extra room.

The Kinnear Bracket Mounted Type A Power Unit is furnished in two different sizes:

1. Small, with special ½ hp motor. This size is made for doors with a maximum area of approximately 180 sq. ft. of No. 22 U. S. gauge curtain.

2. Large, with 1 hp motor. This size is made for doors with a maximum area of approximately 315 sq. ft. of No. 20 U. S. gauge curtain.

wall mounted type B

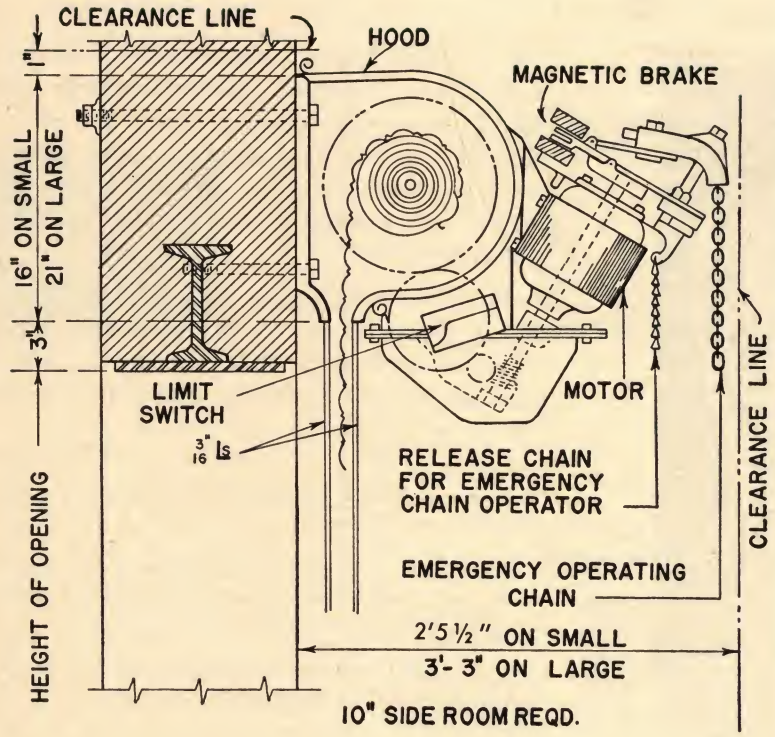


The Kinnear Wall Mounted Type B Power Operator is a remarkably flexible, compact heavy duty power unit for different current characteristics. It can be adapted to a larger motor, consequently will operate doors exceeding the sizes covered by the Bracket Mounted Type A.

It is designed for greater flexibility of mounting, to provide for conditions where obstructions or limited clearances prevent mounting in the more conventional ways. (See variations of mounting shown on the following page.)

Type B is usually furnished with a roller chain and sprocket drive from the motor element to the gearing that actuates the barrel on which the curtain coils. There are so many combinations of drive, power, location of motor, mechanism and control, that a Kinnear power unit can be adapted to a wide variety of doors and opening requirements. Consult Kinnear for specific recommendations.

The Type B electric power operator can be added to existing manually operated Kinnear doors. When installing doors that may later be motorized, however, make certain that sufficient clearances are kept available.



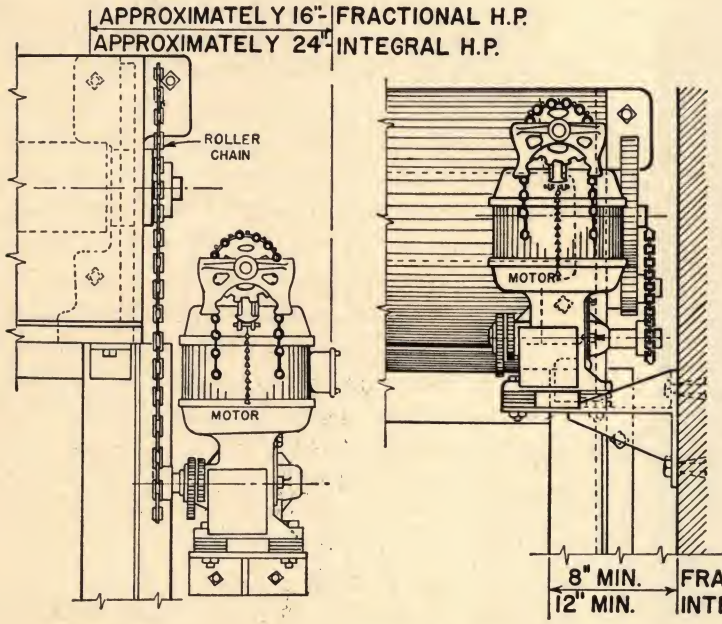
Kinnear Type C Power Operator

The Kinnear Type C Power Operator presents the "last word" in a removable — motor type unit (removal does not disturb the auxiliary hand-chain operator) especially designed for rolling door application. A few of the features of its design that makes it unlike any other unit on the market are:

- Designed for either wall or bracket mounting — in either vertical or horizontal positions.
- Easily installed — with field control wiring to a terminal strip.
- Thermal protection against overload that cuts-out motor before damage. Operates faster than overload relays in starters.
- New, high-efficiency design of worm gearing.
- Centrifugal clutch which transmits motion of the motor to the door without shock — easy starts — prevents stalling the motor or damage to it from overload.
- Offered in two sizes — with motor capacities from ⅓-HP to 3-HP.

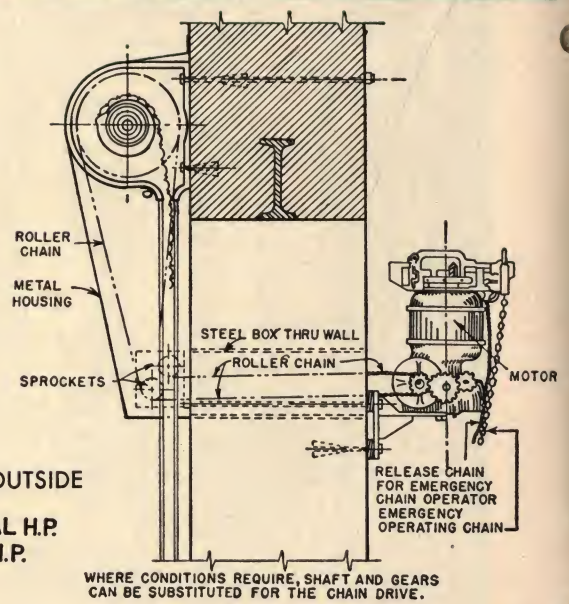
For more complete details and dimensional data write or call your local Kinnear Representative.

Kinnear Wall Mounted Type B Operator

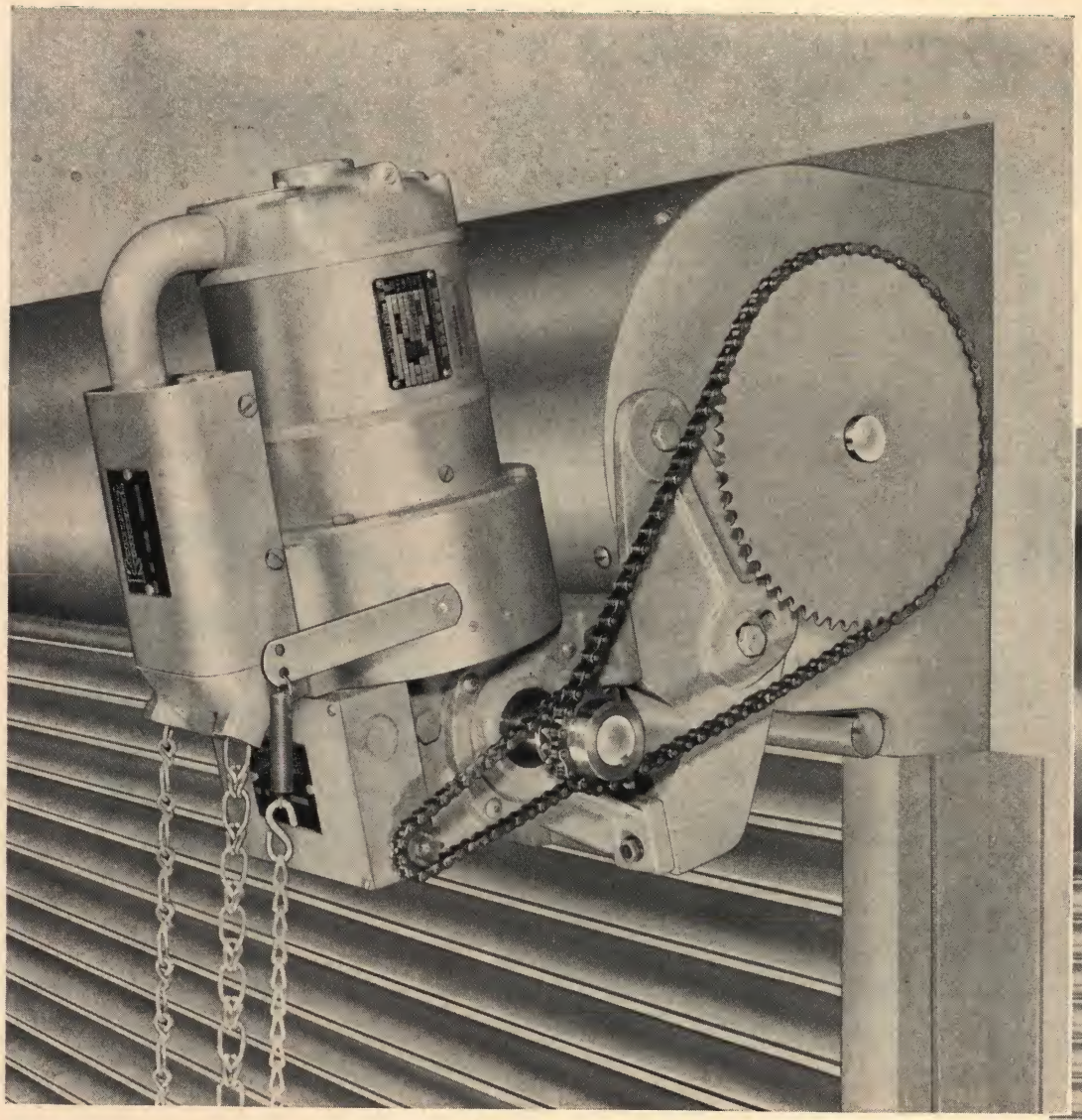


UNIT LOCATED BELOW TOP OF DOOR. USE CLOSE-COUPLED UNIT WHEN REQD. SIDE ROOM IS NOT AVAILABLE.

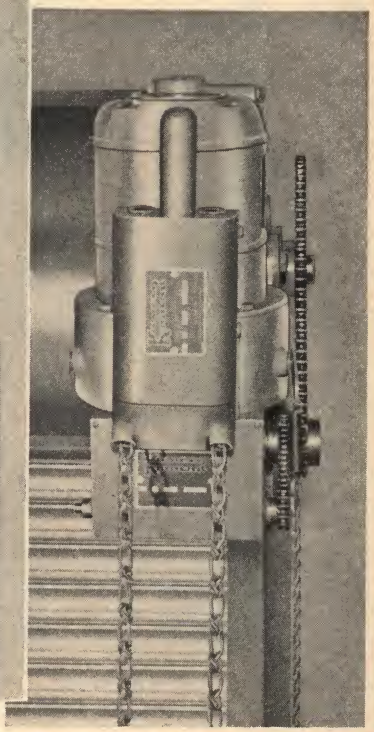
UNIT CLOSE-COUPLED TO DOOR MECHANISM

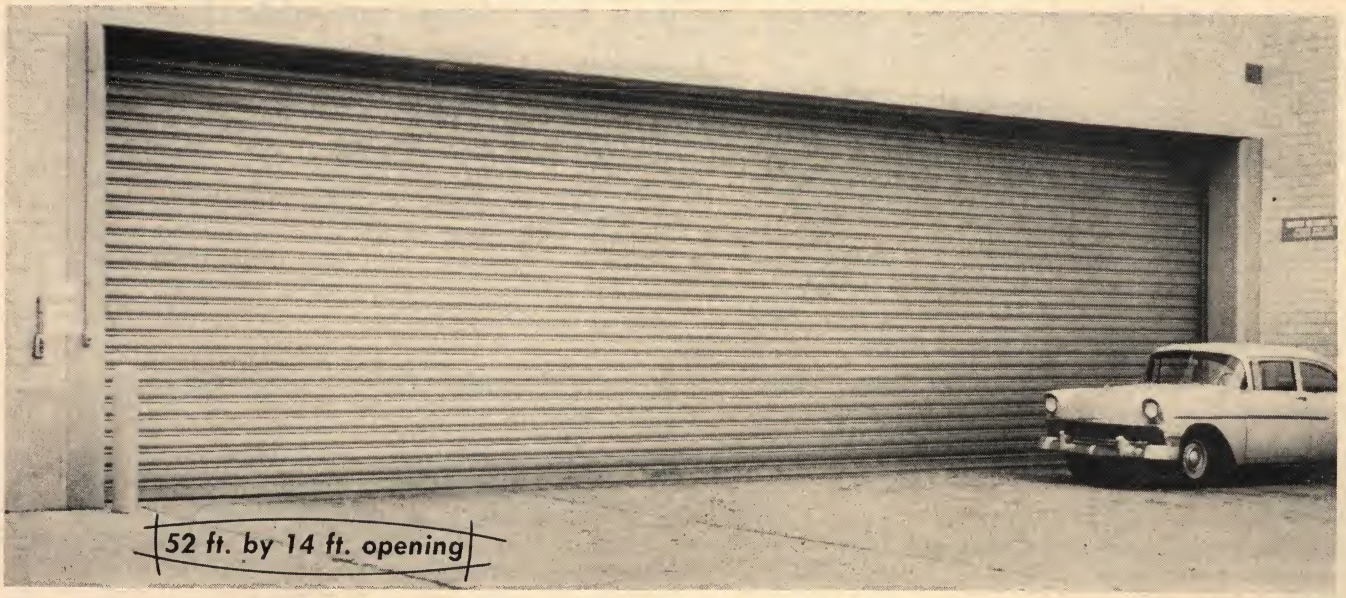


UNIT LOCATED ON WALL OPPOSITE DOOR



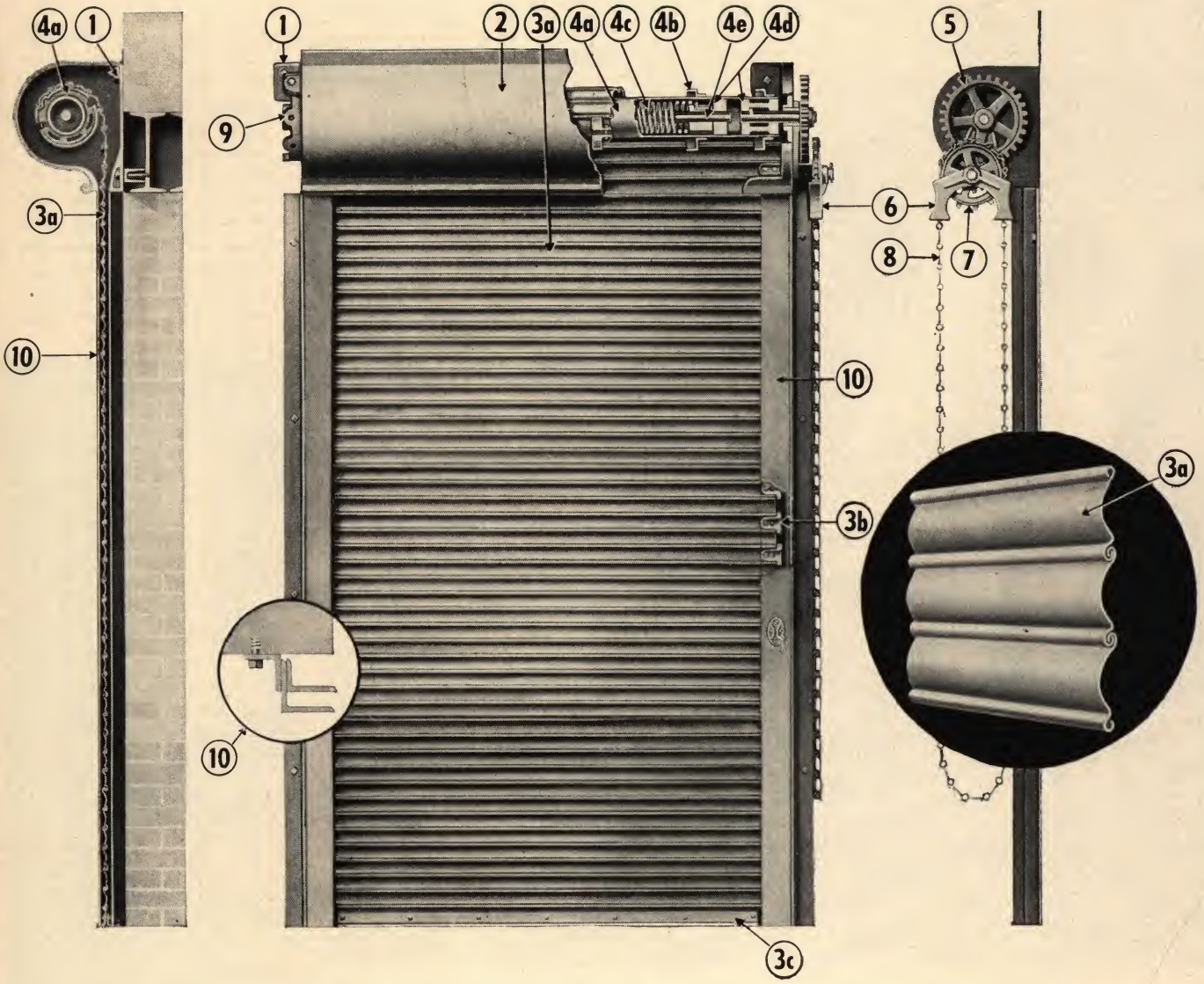
View below of Kinnear Type "C" Operator illustrates the exceptional compactness of the unit and how it can be mounted on a Kinnear Rolling Door in the minimum of side and head clearance. Should removal of the motor be required at any time, the auxiliary hand chain operator is not disturbed, permitting convenient operation of the door by the hand chain after pulling the manual engagement chain.





A Kinnear Steel Rolling Door built of "Goliath" Slat (No. 9) described on page 4.

construction features — steel rolling door



be sure that the door you specify or buy has these valuable features

1 brackets The gray iron castings which support the curtain coil and spring barrel at either end. Proportioned with large factor of safety and cast in special molds to give uniformity. Made of high-test gray iron of uniform texture. All surfaces are smooth and even. Bracket mouth and stops are at an established distance between center and back of bracket, thus providing a throat which permits smooth operation without friction and eliminates the excessive drag of curtain over the stops. Bearings of large proportions are provided for barrel spindles.

2 hood The hot galvanized sheet steel cover which fits contour of brackets and encloses the curtain coil. Neatly formed and suitably reinforced with beads or flanges to prevent deflection.

3 curtain is composed of:

a interlocking galvanized (or aluminum) slats
(See page 4 & 5 for profile of commonly used sizes and advantages of their unique design.)

b endlocks Dimple-riveted to ends of slats. These are called "continuous" when they reinforce both ends of all slats; "alternate" when on every other slat. They are made of malleable iron and retain slats in place. Also protect slats against rubbing in the guides and maintain the curtain in alignment.

c bottom bar Usually formed of two angles and a half slat to reinforce lower edge of curtain against wind pressure. Angles of equal weight balance and hang freely on the curtain to eliminate friction and possible binding in the guides. Provides contact for the curtain against the sill when the door is closed and against both front and back stops on the bracket when the door is open.

4 counterbalance barrel is composed of:

a spring barrel or pipe which:

(1) encases the counterbalance mechanism
(2) serves as the load-carrying beam
(3) provides an axis around which curtain coils
(4) provides the same anchorage simultaneously for the revolving ends of all counterbalance springs

It is of heavy steel of sufficient diameter and thickness to avoid deflection in excess of .03 inches per lineal foot of barrel.

b rings Of malleable iron of involute shape and split design are used where door size requires. They are designed to coil the curtain with a uniformly increasing diameter. Size provides an initial diameter sufficient to insure uniform and constant counterbalance for all points of the door travel.

c counterbalance springs One or more depending on size of door. Oil-tempered helical springs wound from specially heat-treated steel provide a permanent means of counterbalance. Each spring is heat treated after winding and tested for each job. The fixed ends of all springs for each door are anchored to the same tension rod, which enables all springs to be adjusted uniformly and simultaneously.

d barrel plugs For connecting the ends of the springs to pipe and tension rod and of special design for eliminating the usual excessive strain at the spring ends. Of heavy cast iron with end plug machined to fit ends of the barrel. (See Adjusting Wheel Assembly diagram below.)

e shafting Of cold-rolled polished steel to minimize friction in all bearings. The tension rod of ample size to hold the fixed ends of all springs and thus carry the entire torsional load of the spring counterbalance.

5 reduction gearing Suitable reduction gearing cast with teeth machine-molded from machine-finished patterns. These may be spur gears as shown, bevel gears for thru-wall operation, or worm gears used with power operators. Designed with a high factor of safety and a reduction ratio individually suited to the door operated.

6 chain guard Sprocket wheel provided with a guard, especially designed to guide the hand chain and prevent it from jumping the sprocket teeth.

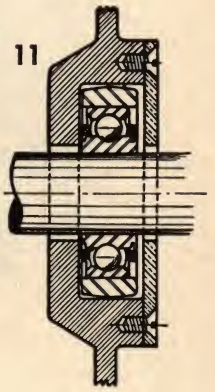
7 sprocket For hand chain and may be cast with or without small spur pinion.

8 operating chain Of design and strength to prevent stretching and to provide a comfortable hand grip. Heavily galvanized.

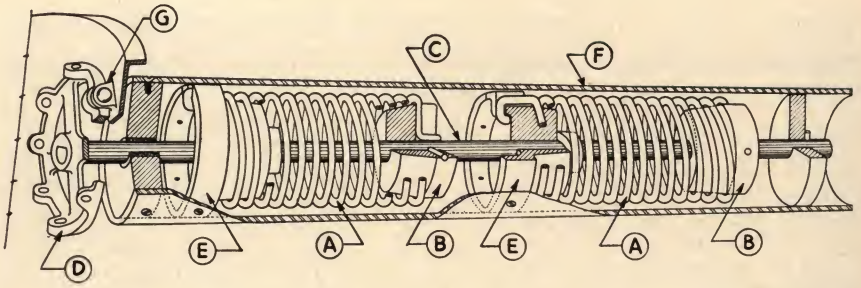
9 adjusting wheel Mounted outside of bracket and on end of tension rod, used to apply and hold tension on every one of the counterbalance springs simultaneously and in same proportion. Note detailed description below.

10 guides Fabricated from structural steel angles. Especially adaptable for doors exposed to heavy wind pressure. Designed with groove depths varying from 2 to 8 in., depending upon the width of the door, and packed out from the face of the wall in order to accommodate the specially designed throat of the bracket.

11 high quality bearings To facilitate long life and smooth, easy operation, the bearings at both ends of the barrel which supports the curtain are self-lubricating graphite bearings or grease-sealed precision ball bearings, depending upon the size of door. This is standard Kinnear equipment and typifies the extra care and quality that are incorporated in a Kinnear Door to assure maximum life and operating economies.



■ Kinnear adjusting wheel and spring assembly

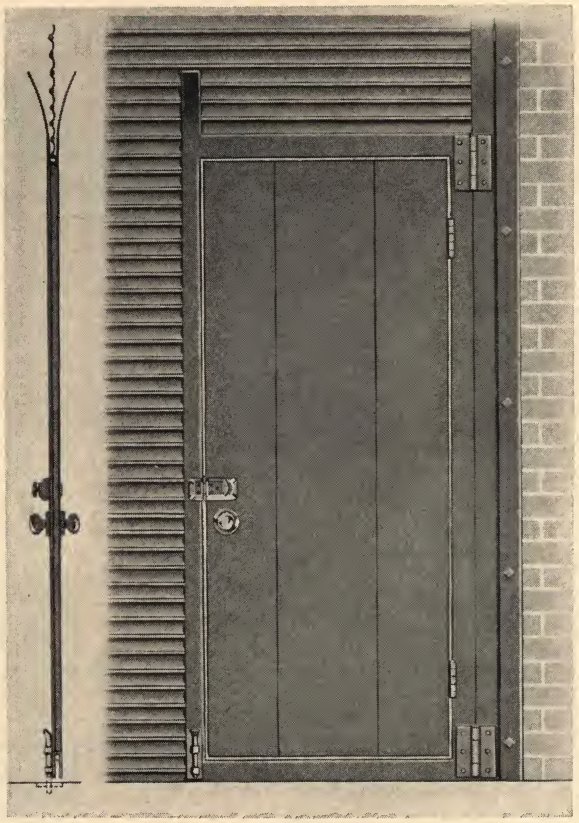


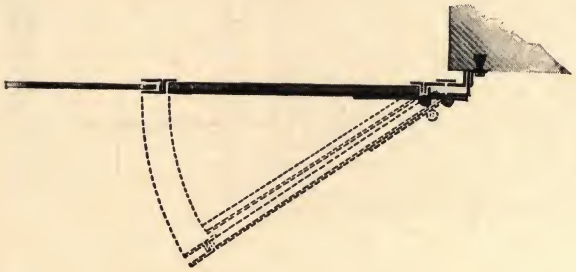
More than fifty years ago Kinnear adopted a unique method of counterbalance spring adjustment that assures maximum efficiency and uniform tension on the doors' counterbalance spring or springs. One end of each counterbalance spring (A) is fitted on with cast plug device (B) and attached directly to a single tension rod (C). The end of this tension rod has an Adjusting Wheel (D) on the exterior of the door bracket. The other end of each of the counterbalance springs is fitted with a cast plug device (E) that is anchored to the spring barrel (F). Thus for each spring one end is attached to the same spring barrel and the other end is attached to the same tension rod.

With the curtain coiled, the required initial tension can be applied by turning the adjusting wheel properly and securing it to the bracket (G). This adjusting wheel is well anchored to the bracket by a rivet pin; Kinnear does not trust a pawl attachment in this important place as the pawl may or may not drop into secure position. When the adjusting wheel is turned it turns one end of each spring in the same direction thus applying the same torque simultaneously and uniformly to all springs.

As soon as the curtain is lowered sufficiently to turn the spring barrel one complete revolution, the ends of all springs being attached to the barrel will operate and make one complete turn. Consequently, when the curtain is completely uncoiled, the barrel has turned the ends of all springs a corresponding amount and stressed all springs in identical proportion.

With this arrangement the total tension of the counterbalance can be increased or decreased, easily and without any disassembly, whenever the need requires. It also insures uniform and most effective counterbalance action of the springs and maximum service life of the doors' complete counterbalance mechanism. The above is true for any number of springs used in the barrel—SIMULTANEOUS and UNIFORM SPRING ADJUSTMENT FOR ALL!





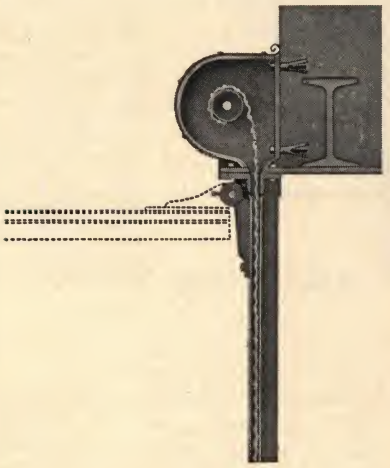
■ auxiliary equipment

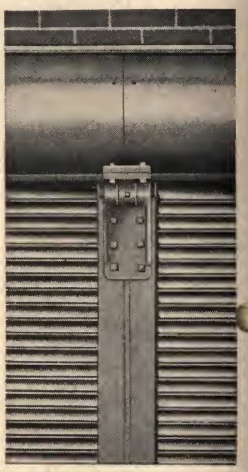
■ wicket or pass door

The wicket or pass door provides an entrance without raising the major door. It is an ideal arrangement where there is no access to the building other than by the main opening. The wicket is built of an angle frame covered with a steelplate and equipped with heavy strap hinges and massive latch and lock. It is hung on a frame hinged to the side guide. The frame is constructed of angles forming grooves in which the rolling door travels. When the rolling door is raised, the wicket door and frame are swung back against the wall.

■ intermediate movable post

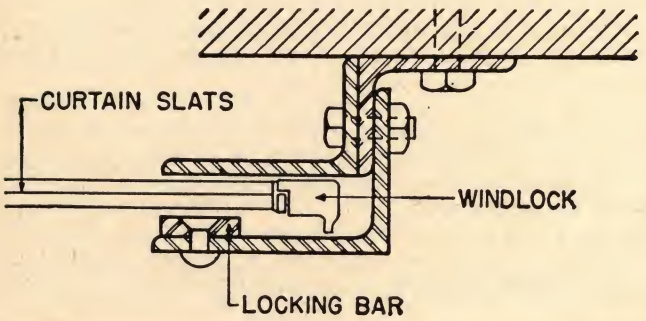
Very wide openings can frequently be more conveniently closed by a number of doors than by a single large one, using between the doors movable posts with the edges constructed to form double grooves. Hinged to the bracket, these posts are swung up out of the way when the doors are open. Ordinarily the posts swing perpendicularly to the plane of the curtain, but can be arranged to swing obliquely; slide to the side of the opening by a trolley on a horizontal overhead track; or other methods suited to the individual needs. Details on special arrangements will be submitted upon request.





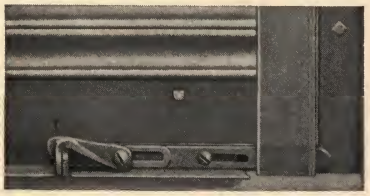
■ windlocks

Illustration shows how endlocks are designed with lug, which engages with a locking bar attached to the guide. This prevents curtain from leaving guide because of deflection from tremendous wind pressure or other forces. Provided wherever door is to be subject to extreme wind pressure. Otherwise type of endlock described on page 5 is used.



■ door locking details

Kinnear Service doors can be locked by padlocking slide bolt (manual operator), chain (chain operator), wheel (crankshaft operator), by key-operated control button, or by breaking switch and padlocking emergency chain (motor operator).

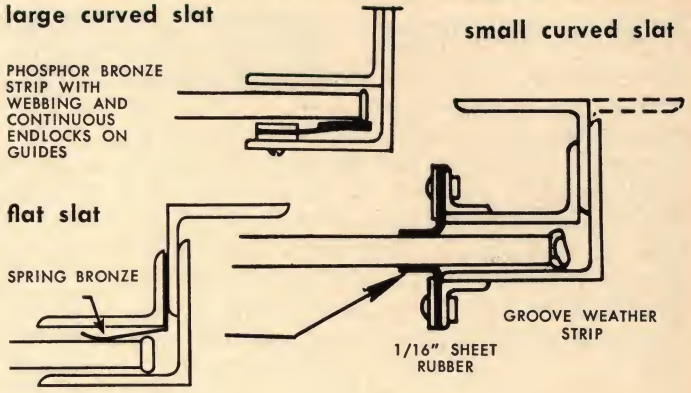


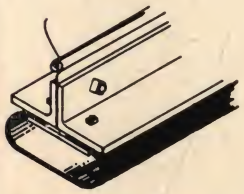
Manual lock

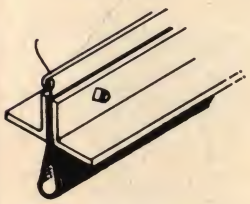
Crank lock

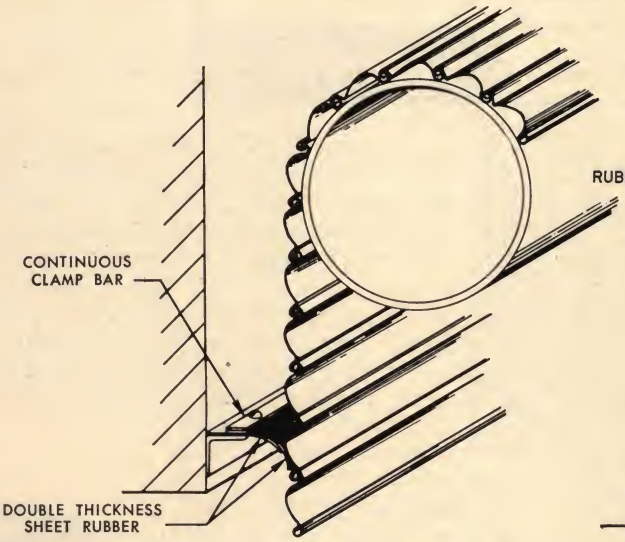
weathering provision

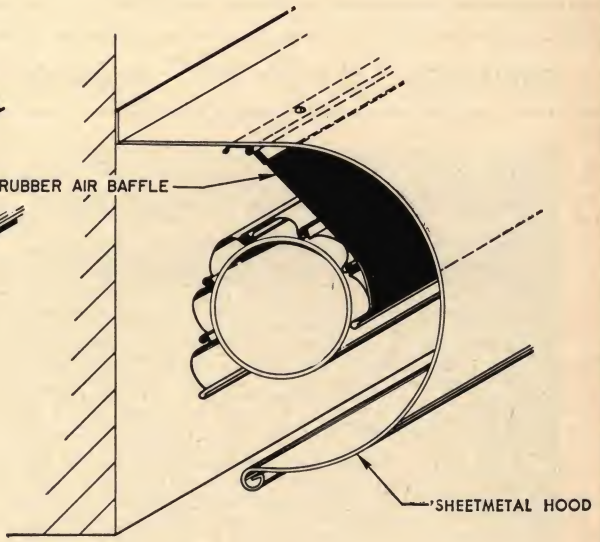
Kinnear service doors are designed for close fit, in keeping with smooth, trouble-free operation. Where additional protection against wind and weather is desirable, weathering provisions are available at extra cost. These Kinnear features minimize water and air infiltration by means of weather stripping that is attached continuously to both sides of the groove angle, to contact both sides of the curtain, or a spring bronze lining mounted inside the groove, as shown at the right. Also to insure close seating at the sill a choice of either loop type or tubular type rubber astragal (see lower left illustrations) is attached to the bottom of the door, between the two bottom angles. To prevent infiltration at the top of the door a continuous weather-strip is clamped along lintel (see illustration below); or space around the barrel can be closed by a rubber air baffle (shown at lower right) that is attached to hood connection and extends the full length of the barrel.




TUBULAR TYPE ASTRAGAL ON BOTTOM BAR


LOOP TYPE ASTRAGAL ON BOTTOM BAR





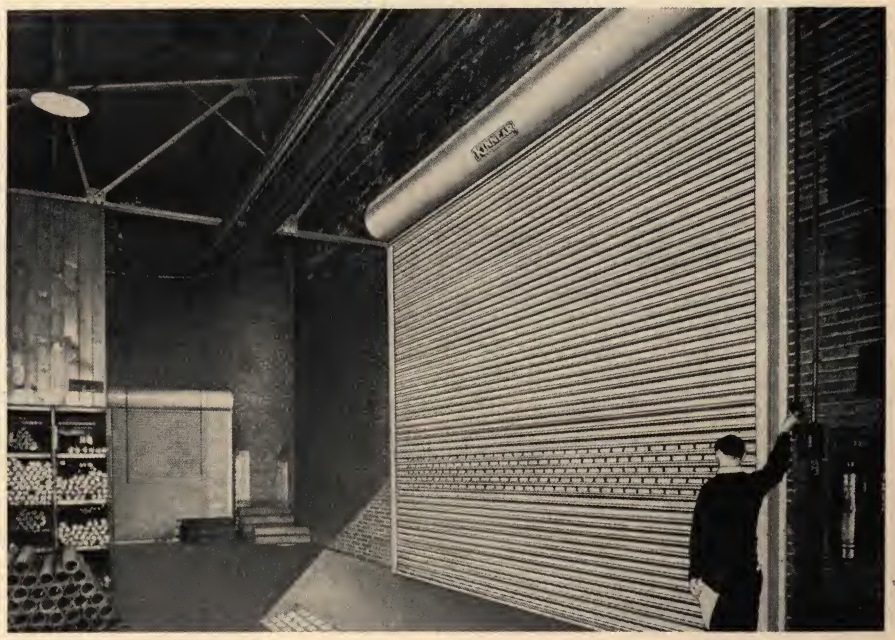
Kinnear rolling doors—with vision-lights

Another Available Feature To The Time-Proved Efficiency Of Kinnear Rolling Door Design—where it's desirable to have light and visibility.

Basic structural design of the standard Kinnear Rolling Door remains unchanged. A rugged and durable barricade that's extra tough to penetrate.

Narrow transparent panes of clear Plexiglas (or similar plastic) can be provided at an extra charge in one or more interlocking steel slats in the curtain of the Kinnear Rolling Door. With the fenestration made possible with these "Window Slats" at or near eye level, anyone inside the building can readily see outside without opening the door. Also the windows admit daylight when the door is closed. The curtain of interlocking steel slats travel in steel jamb guides, coiling above the lintel on a barrel that contains the counterbalance mechanism. The curtain is heavily galvanized and then given a special Kinnear Paint Bond treatment (See pages 4 and 5 for complete details). In every detail it is built to give years of the maximum operating efficiency plus rugged durability and is built in any practical size for old or new buildings, and for motor or manual operation.

Note how the vision area permits the man operating the door to see the approaching vehicle. Daylight is also admitted.



Kinnear door types sizes and clearances

■ basic construction

The curtains of Kinnear Service doors are constructed of interlocking slats, of heavily galvanized open-hearth steel, aluminum, bronze or stainless steel and are equipped with endlocks. Curtain is coiled upon a barrel journaled in brackets of heavy cast iron (or steel plate for very large doors) and travels in steel guides. Counterbalancing is provided by helical springs enclosed in the barrel. A metal hood covers the barrel and coil.

■ mounting methods

Face mounting is usually standard where headroom above lintel is sufficient for mounting encased brackets and coil. Edges of guides are clear of the face of the opening jambs.

Under-lintel mounting is usually standard where headroom above lintel is limited. Mechanism mounted in opening; brackets and coil located on the jambs or in reveals in the jambs.

■ tailored to any size

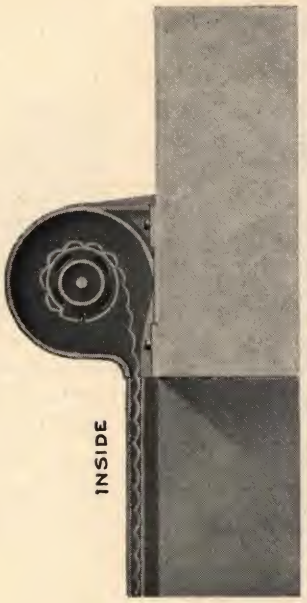
Each Kinnear service door is built for a specific job. Size is limited only by practical engineering and operation standards.

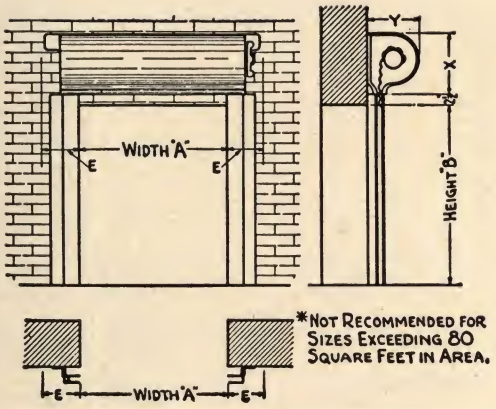
manual "push up" operation — model FM-10 — *face mounting*

- Manually operated by lift handle in bottom rail. Locked by slide bolt.
- Curtain hot-dip galvanized and given Kinnear Paint-Bond treatment.
- Guide channels and mechanism mounted on face of wall.
- Provides clear unobstructed opening—full width and height.
- Easy, accessible adjustment of counterbalance spring.

For doorways or window openings. Counterbalance mechanism and curtain coil, enclosed in hood, is mounted on face-of-wall above lintel. End locks on curtain retain interlocking slats in place and maintain curtain alignment. Curtain is fitted with lifting handles on bottom rail. Guide channels are on wall face, unobstructing the clear opening width. Suitable for openings up to 12'4" x 7'4" in any type building. See pages 16 to 20 for further specifications.

Note: Dimensions on this page and page 13 are for general reference only and not for construction purposes. For special requirements refer to Engineering Dept.





Height B*	6′			7′			8′			9′			10′			11′			12′		
Width A*	X	Y	E	X	Y	E	X	Y	E	X	Y	E	X	Y	E	X	Y	E	X	Y	E
To-4′-0″							14	13	6										17	16	6
To-5′-0″				14	13	6							17	16	6	17	16	6			
To-6′-0″	13	12	6							16	15	6							19	18	6
To-7′-0″							16	15	6							19	18	6			
To-8′-0″													18	17	6						
To-11′-0″				16	15	6				18	17	6									
To-12′-0″										18	17	7									
To-13′-9″	13	12	7	16	15	7	18	17	7												

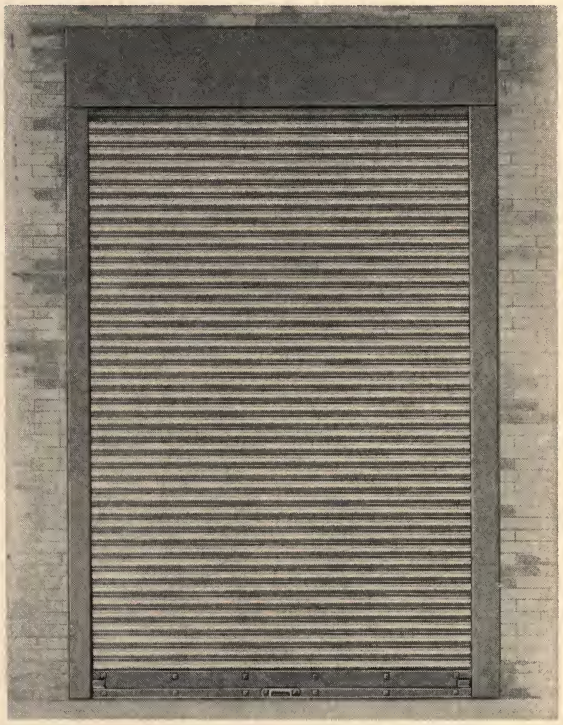
Inches

Note: X dimension is bracket height. Brackets placed 2½″ above lintel. For door mounted outside add 1″ to X dimension.

** Inclusive.*

Note: Where door dimensions are larger than the dimensions given within a single bracket in the above tables use the data given in the bracket for the next larger width or height.

manual "push up" operation — model BM-10 — *under lintel mounting*

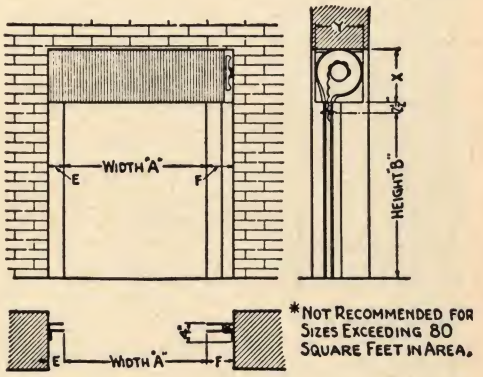


Height B*	6′				7′				8′				9′				10′				11′				12′			
Width A*	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F
To-4′-0″	14	11	3	4	15	13	3	4	15	13	3	4	17	15	3	4	18	16	3	4	18	16	3	4	18	16	3	4
To-5′-0″																												
To-6′-0″									17	14	3	4									20	18	3	4	20	18	3	4
To-7′-0″																	19	17	3	4								
To-8′-0″	14	11	3	5	15	13	3	5	17	14	3	5	19	17	3	5	19	17	3	5	20	18	3	5	20	18	3	5
To-11′-0″					17	14	3	5	18	16	3	5																
To-12′-0″	14	11	4	5	17	14	4	5	18	16	4	5	19	17	4	5	19	17	4	5	20	18	4	5	20	18	4	5

Inches

*Inclusive.

Note: Where door dimensions are larger than the dimensions given within a single bracket in the above tables use the data given in the bracket for the next larger width or height.

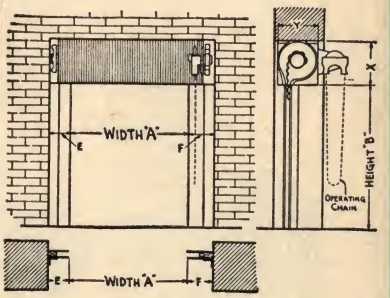


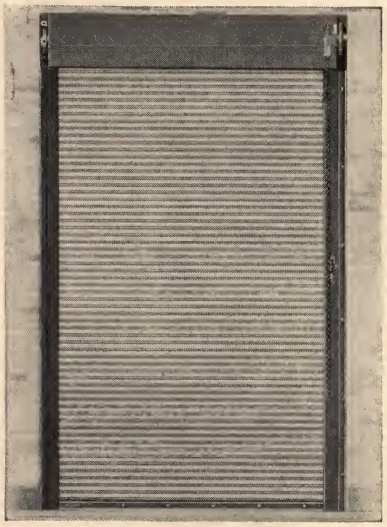
*NOT RECOMMENDED FOR SIZES EXCEEDING 80 SQUARE FEET IN AREA.

For doorways or window openings. Counterbalance mechanism and curtain coil is mounted below lintel in door opening between jambs. Guide channels are either mounted on jambs in the opening or in reveals in the jambs. Mechanism concealed when fascia plates are used. Curtain fitted with lifting handles in bottom bar. Suitable for openings up to 12′4″x8′8″ in any type building.

chain hoist operation (mechanical) — model BH-20 — *under lintel mounting*

For doorways exceeding a height practical for manual push-up operation and where headroom above lintel will not permit a face mounted door. Counterbalance and curtain coil is mounted between jambs under lintel. Guide channels are either mounted on jambs or in reveals in jambs. Hand operating chain and reduction gearing mounted at side of opening on face of wall.





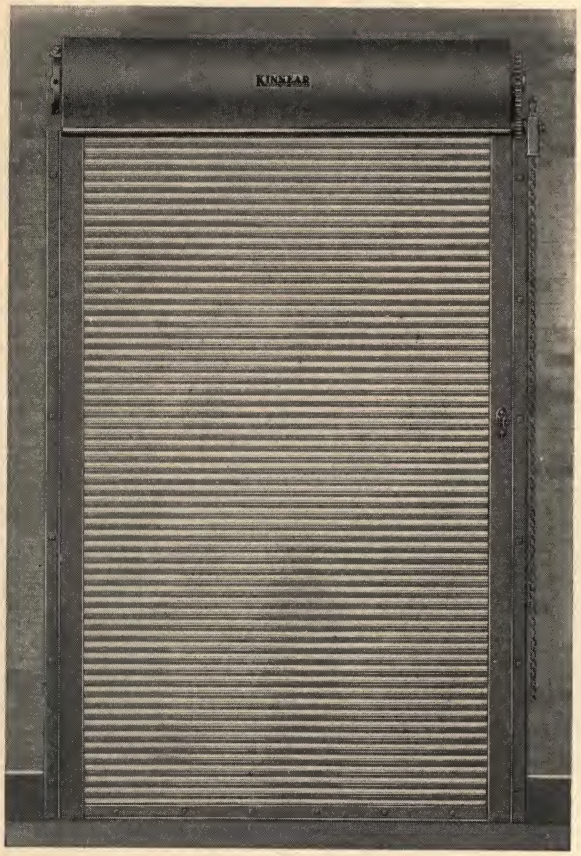
Height B*	To-8′-5″				9′				10′				11′				12′				13′				14′				15′				16′			
Width A*	X	Y	E	E	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F
To-7′-0″	13	10	4	5	14	11	4	5	14	11	4	5	14	12	4	5	16	13	4	5	17	14	4	5	17	14	4	5	17	14	4	5	17	15	4	5
To-11′-0″	13	10	5	6	14	11	5	6	14	11	5	6	16	12	5	6	16	13	5	6	17	14	5	6	17	14	5	6	17	14	5	6	17	15	5	6
To-12′-0″	14	11	5	6																																
To-13′-9″	14	12	5	6	16	12	5	6	16	12	5	6	16	13	5	6					17	14	6	8	17	14	6	8	17	15	6	8	18	15	6	8
To-14′-9″					16	14	5	6	18	15	5	7	19	16	5	7	19	16	5	7	19	16	5	7	19	17	5	7	19	17	5	7	20	18	5	7
To-15′-0″	16	14	5	6	17	14	5	6																									20	18	6	8
To-16′-0″									18	15	6	8	19	16	6	8	19	16	6	8	19	16	6	8	19	17	6	8	19	17	6	8				
To-18′-0″	17	14	6	8																									22	19	6	8	22	19	6	8
To-20′-0″					18	15	6	8													22	19	6	8	22	19	6	8								
To-22′-0″	17	15	6	8									20	18	6	8	22	19	6	8					23	20	6	8								
To-23′-0″	17	15	7	9	18	15	7	9	18	15	7	9	20	18	7	9	22	19	7	9	22	19	7	9	23	20	7	9								

Inches

*Inclusive.

Note: Where door dimensions are larger than the dimensions given within a single bracket in the above tables use the data given in the bracket for the next larger width or height.

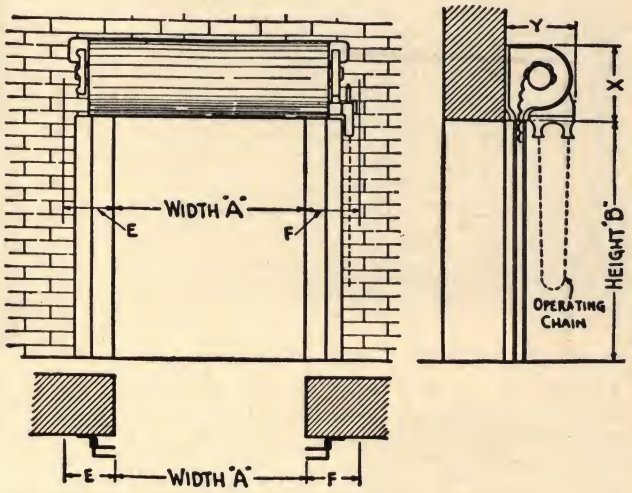
chain hoist operation (mechanical) | model FH-20, FH-61 | face mounting

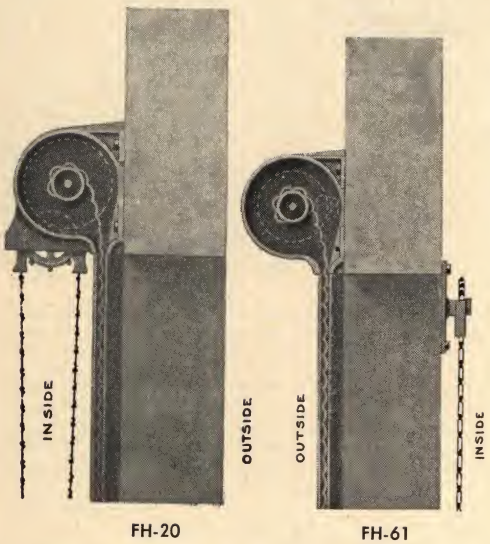


- Operated by hand chain and reduction gearing—locked by locking chain in keeper.
- Curtain hot-dip galvanized and given Kinnear Paint-Bond treatment.
- Guide channels and mechanism mounted on face-of-wall.
- Provides clear unobstructed opening—full width and height.

For doorways exceeding a height practical for manual push-up operation and where headroom above lintel is available. Counterbalance and curtain coil, enclosed in a hood, is mounted on face of wall above lintel. Guide channels are on face-of-wall, unobstructing the clear opening width. Model FH-20 has sprocket and reduction gearing, for hand chain operation, located at end of curtain barrel. See pages 16 to 20 for further specifications.

FH-61 has sprocket and hand operating chain on inside wall when door is mounted on outside wall or vice versa.





FH-20 FH-61

Note: Dimensions are for general reference only and not for construction purpose. For special requirements refer to Engineering Dept.

Height B*	To-8′-5′				To-9′				To-10′				To-11′				To-12′				To-13′				To-16′			
Width A*	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F
To-11′-0″	13	13	6	8	13	13	6	8	13	13	6	8	15	15	6	8	15	15	6	8	15	15	6	8	17	16	6	8
To-12′-0″					13	14	7	8	13	14	7	8									15	15	7	8	17	16	7	8
To-13′-0″	13	14	7	8					15	15	7	8	15	15	7	8	15	15	7	8								
To-13′-9″					15	15	7	8													17	16	7	8	17	17	7	8
To-14′-9″																					19	18	7	8				
To-15′-11″													19	17	7	8	19	17	7	8								
To-17′-0″	16	15	7	8	17	16	7	8	17	16	7	8													21	19	7	8
To-19′-0″																	18	18	7	8	19	19	7	8				
To-20′-0″													18	19	7	8												
To-22′-0″	17	17	7	8	17	17	7	8	18	19	7	8					21	20	8	9	21	20	8	9	21	20	8	9
To-24′-0″	19	19	7	9	21	19	8	9	21	19	8	9	21	19	8	9					21	20	9	10	21	20	9	10

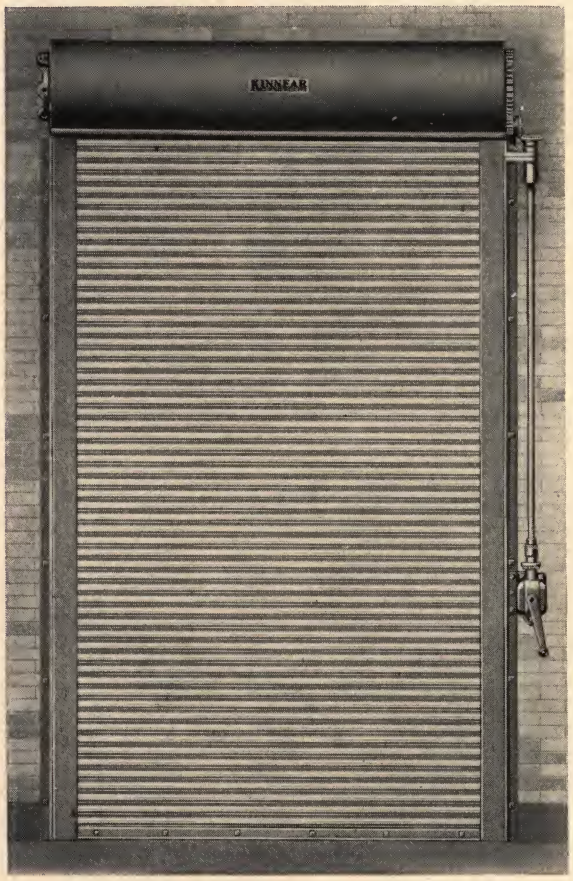
Inches

Height B*	To-18′-11″				To-20′-11″				To-21′-11″				To-22′-11″				To-24′-0″			
Width A*	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F
To-10′-6″	19	18	6	8	19	18	6	8	21	20	7	8	21	20	7	8	21	20	7	8
To-12′-9″	19	18	7	8	19	18	7	8	21	20	8	9	21	20	8	9	21	20	8	9
To-13′-9″	19	19	7	8	24	22	7	8												
To-17′-0″	21	20	8	9					24	22	8	9	24	22	8	9	26	24	8	9
To-20′-0″					24	22	8	9					26	24	8	9				
To-22′-0″	24	22	8	9					26	24	12	9	26	24	12	9	26	24	12	9
To-24′-0″					26	24	12	10	26	24	12	10	26	24	12	10	26	24	12	10

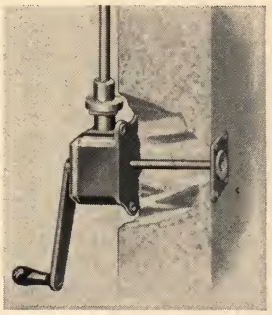
Note: For door mounted outside add 1″ to X dimension.
**For FH-61 add 8″ to F dimension.*

Note: Where door dimensions are larger than the dimensions given within a single bracket in the above tables use the data given in the bracket for the next larger width or height.

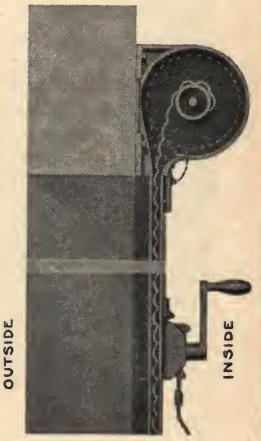
crank operation (mechanical) — model FC-20 — face mounting

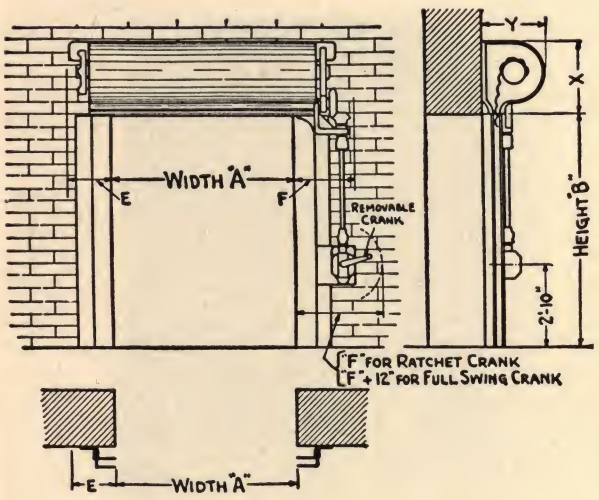


- Operated by hand crank, with shafting and reduction gearing. Locked by crank removal or locking shaft wheel.
- Curtain hot-dip galvanized and given Kinnear Paint-Bond treatment.
- Guide channels and mechanism mounted on face-of-wall.
- Provides clear unobstructed opening—full width and height.



For doorways exceeding the height practical for manual push-up operation and where head room is available; and where frequency of use does not make operating speed essential. Counterbalance and curtain coil, enclosed in a hood, is mounted on the face of wall above lintel. Operated by hand crank, with shafting and reduction gearing. Crank detaches. Can be arranged to operate door from either side (or both sides) of wall. See pages 16 to 20 for further specifications.





Height B*	To-8′-5″				9′				10′				11′				12′				13′				14′				15″				16″			
Width A*	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F
To-9′-0″	12	11	6	11	13	12	6	11	13	12	6	11	14	12	6	11	15	14	6	11	16	14	6	11	16	14	6	11	16	15	6	11	16	15	6	11
To-11′-0″													14	13	6	11																				
To-12′-0″	13	12	7	12	13	12	7	12	13	13	7	12	14	13	7	12	15	14	7	12	16	14	7	12	16	14	7	12	16	15	7	12	16	15	7	12
To-13′-9″	14	12	7	12	14	13	7	12	14	14	7	12	15	14	7	12					16	15	7	12	16	15	7	12								
To-14′-9″					16	14	6	11	17	16	6	11	17	16	6	11	17	16	6	11	19	18	6	11	19	18	6	11	19	18	6	11	19	18	6	11
To-15′-0″	16	14	7	12	16	14	7	12	17	16	7	12	17	16	7	12	17	16	7	12													19	18	7	12
To-16′-0″													18	17	7	12	18	17	7	12	19	18	7	12	19	18	7	12	19	18	7	12				
To-17′-0″	16	15	7	12	17	16	7	12	17	17	7	12																	21	20	7	12	21	20	7	12
To-18′-0″																					19	18	7	13	19	18	7	13								
To-19′-0″	16	15	7	13	17	16	7	13	17	16	7	13	18	17	7	13	18	17	7	13									21	20	7	13	21	20	7	13
To-20′-0″																					21	19	7	13	21	19	7	13								
To-22′-0″													19	18	7	13	21	19	7	13					21	20	7	13	21	20	10	16	21	20	10	16
To-23′-0″	16	15	8	14	17	16	8	14	17	16	8	14	19	18	8	14	21	19	8	14	21	19	8	14	21	20	8	14	21	20	11	16	24	22	11	16

Inches

Height B*	17′				18′				19′				20′				21′				22′				23′				24′			
Width A*	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F
To-11′-0″	17	16	6	11																												
To-13′-9″	17	16	7	12	19	19	7	12	19	19	7	12	21	20	7	12	21	20	8	12	21	20	8	12	21	20	8	12	22	21	8	12
To-14′-9″	21	19	6	11	21	19	7	12	21	20	7	12																	24	22	8	12
To-15′-0″																					24	22	8	12								
To-16′-0″	21	20	7	12	21	20	7	12					24	22	8	12	24	22	8	12									26	24	8	12
To-17′-0″									24	22	8	12									26	24	8	12	26	24	8	12				
To-18′-0″	21	20	7	13	21	20	7	13	24	22	9	13	24	22	9	13	24	22	9	13	26	24	9	13	26	24	9	13	26	24	9	13
To-19′-0″																													27	25	9	13
To-20′0″																																
To-21′-0″	24	22	10	16	24	22	10	16	24	22	10	16	24	22	10	16	24	22	10	16	26	24	10	16	26	24	10	16	27	25	10	16
To-22′-0″																					27	25	10	16	27	25	10	16				
To-23′-0″	24	22	11	16	24	22	11	16	24	22	11	16	24	22	11	16	26	24	11	16	27	25	11	16	27	25	11	16	27	25	11	16

Inches

*Inclusive.

Note: Where door dimensions are larger than the dimensions given within a single bracket in the above tables use the data given in the bracket for the next larger width or height.

Note: Dimensions are for general reference only and not for construction purpose. For special requirements refer to Engineering Dept.

Kinnear Rolling Service Doors

openings Shall be equipped with Kinnear Steel Rolling Doors.

curtain Shall be of interlocking slats, rolled not drawn, formed in easy curves without sharp bends, from open hearth galvanized steel (for gauge see table below). Slats to be of section sufficiently large to give curtain strength to safely resist a wind load of 20 lb per sq ft. For doors 20½ ft or more wide with 340 sq ft area or more, and in all doors 24 ft wide or more, curtain shall be provided with slat lugs as windlocks to engage bars in guides and to lock the curtain against wind pressure. Each alternate slat shall be fitted with malleable endlocks ⅜ in. thick. Bottom bar to be two angles placed back to back.

galvanizing To be hot process, with a high grade pure zinc coating. 1.25 oz. per sq ft of flat metal, per ASTM Standards. Galvanized surfaces to be provided with a phosphate coating for paint adhesion. Manufacturer to provide a warranty of compliance to this coating specification.

counterbalance Curtain to be coiled on a pipe of size sufficient to carry the door load with a deflection not to exceed .03 in. per ft of opening width, and to be evenly balanced by helical springs contained in pipe, and all springs anchored to the same tension rod and held in position by the same adjusting wheel accessible from the outside.

coil brackets To be of high grade iron designed to house ends of the coils.

hood The coil to be housed with a sheet metal hood No. 24 U.S. gauge.

guides Built of structural steel to form a slot of sufficient depth to retain curtain in guides, against heavy wind pressure, and for doors requiring windlocks, guides must be provided with anchors for windlocks.

table of slat gauges

Height	Width	U.S. Gauge
0 to 8′ 4″	0 to 13′ 9″	22
	13′ 10″ to 20′ 4″	20
	20′ 5″ to 30′ 4″	18
	30′ 5″ up	*
8′ 5″ to 12′ 4″	0 to 12′ 9″	22
	12′ 10″ to 20′ 4″	20
	20′ 5″ to 30′ 4″	18
	30′ 5″ up	*
12′ 5″ to 28′ 4″	0 to 12′ 9″	22
	12′ 10″ to 18′ 4″	20
	18′ 5″ to 30′ 4″	18
	30′ 5″ up	*

*Refer to factory

gears To be of best grade gray iron, cast teeth machine-moulded from machine-cut patterns, except machine-cut teeth on motor operated doors.

erection All doors shall be erected by the manufacturer or his authorized representative and shall be guaranteed for a period of one year from the date of completion of erection that any part defective in material or workmanship will be replaced without charge to the customer.

Kinnear Electric Operators

operation Doors to be operated by means of Kinnear Electric Motor Operator. The control circuit shall be closed by means of push buttons and automatic limit switches that will break the circuit at termination of travel. Door to be stopped at intermediate points by stop button from where it can then be operated in either direction.

motor To be high starting torque, raising or lowering curtain at approximately .67 ft per second and provided with thermal protection.

reduction gear Of the power unit shall be machine-cut gear completely housed and running in oil bath.

emergency operation A control for automatically engaging a sprocket and chain and releasing the brake, shall be operable from the floor. A device which shall automatically prevent the motor from operating until emergency sprocket is disengaged shall be provided. Emergency operation shall not affect timing of limit switch.

control switches To consist of push button stations marked Open, Close and Stop, in "Nema" type #1 case.

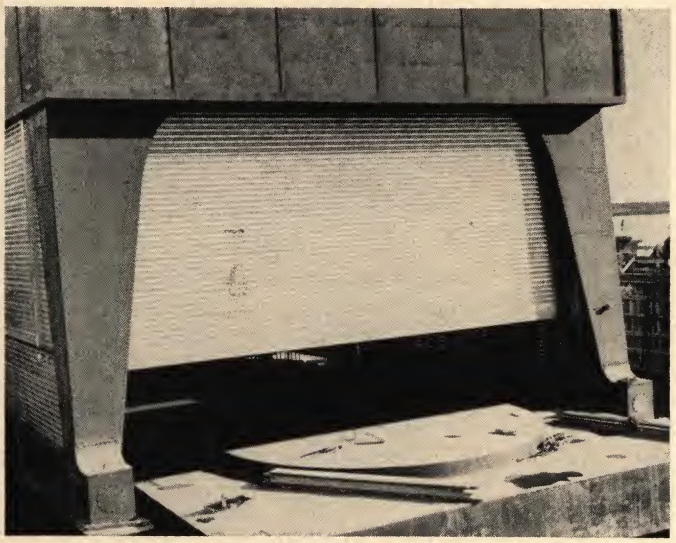
motor starters To be magnetic reversing contactors enclosed in "Nema" type #1 case.

limit switches Door movement to be controlled by a Kinnear limit switch. This limit switch to be easily adjustable to stop the door at terminal positions and shall be enclosed in a cast iron box.

erection All doors shall be erected by the manufacturer or his authorized representative and shall be guaranteed for a period of one year from the date of completion of erection that any part defective in material or workmanship will be replaced without charge to the customer.

General Notes: Complete current characteristics should accompany all requests for quotations. The wire, conduit, service disconnect switch and fuses which the installation of power operation necessitates are not furnished or installed by the Kinnear Manufacturing Company, but are to be provided by others in accordance with wiring diagram supplied by Kinnear.

If aluminum construction is desired, write for suggested specifications.



Reported to be the largest aluminum rolling doors in the world are the two 48′0″ x 39′0″ Kinnear Aluminum Doors over the ends of this 300-ton Traveling Gantry Crane at the St. Lawrence Seaway. The crane works through hatches in the roof of the Generating Station. The electrically operated doors are opened when the crane is moved into position over an open hatch and then closed to permit working inside, regardless of the weather. Among other special provisions, the doors have electrically heated guides to prevent icing.

Kinnear doors over the portal of the eight-mile Cascade Railroad Tunnel, carrying the main line of The Great Northern Railroad. Heavy engines, pulling up grade through the tunnel became over heated, for lack of cooling air. The special large Kinnear Steel Rol-Top Door shown, barricades the portal and prevents the cool air generated by a ventilating system from backing out due to back pressure. Kinnear designed this door to automatically open as a train approached within a certain distance and to operate under all weather conditions.

"Akbar" steel rolling fire doors — superior fire shutters

(Underwriters' Labeled)

"Akbar" Fire Doors are for fire protection purposes for openings that require Underwriters' Labeled equipment, where insurance rates are a consideration, particularly for plants, offices and other buildings housing people. "Akbar" doors can be built for various types and sizes of openings in new or old buildings.

every advantage of Kinnear service doors

Although provided with mechanism for automatic closure, "Akbar" doors can be arranged for manual, chain hoist, or crankshaft operation for service door use. If Kinnear engineers are given the opportunity during the designing of projects, it is generally possible to provide for concealment of all working parts. The Kinnear Manufacturing Company can furnish the doors inspected and labeled as a fire door, but cannot be responsible for proper fire wall construction or proper framing of the required opening.

special "Akbar" features

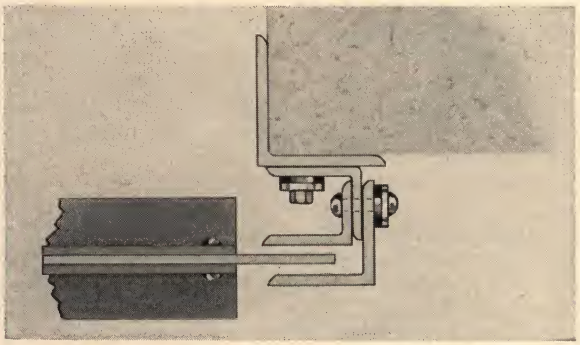
1. Automatic Closure, positive drive from open position, by auxiliary motor spring (independent of counterbalance spring). Improved barrel lock prevents further rotation of barrel, and suspends curtain in proper closed position.

2. Safety Governor controls downward travel, minimizing accident possibilities. Also prevents impact on sills, rebound, and jamming of slats—an Underwriters' requirement for fire doors.

3. Door can be readily opened after automatic closure since tension of counterbalance spring is not released in automatic closure. Allows emergency exit service, after which door will again reclose.

4. Automatic mechanism can be quickly reset and door raised to open position after automatic closure, thus preparing door for either automatic or service operation. Because of easy reset, "Akbar" doors are readily tested.

5. Drop-hood, or baffle, where required operates automatically in case of fire to effectively prevent passage of flames or smoke.



Above: Showing two of the AKBAR provisions for expansion. Also shows the recommended way of mounting curtain guides on a continuous angle. (Supplied by others when preparing opening.)

Showing an Akbar Fire Door that has gone through a fire, having confined a devastating fire to a room on the other side of the fire wall. Note that fire extinguisher is still in place on the wall.

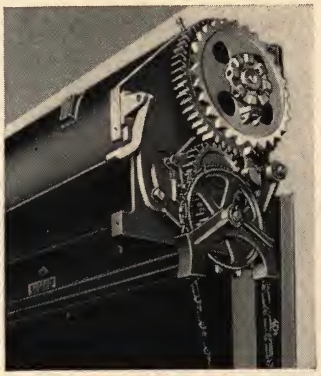
NOTE . . .

3-HOUR CLASS A LABEL of the Underwriters' Laboratories, Inc. is carried on AKBAR Doors for all installations* in INTERIOR fire walls, corridor and room partitions, and vertical shaft openings.

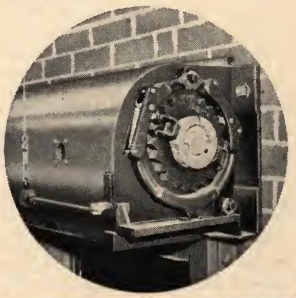
1½-HOUR CLASS D LABEL of the Underwriters' Laboratories, Inc. is carried on AKBAR Doors for all installations* in EXTERIOR wall openings.

*"Akbar Fire Doors" for openings up to 120 square feet, but not exceeding 12 feet in width or height, bear the label of the Underwriters' Laboratories, Inc. Doors for larger openings will be furnished, and when not exceeding 24 feet in either width or height, will be provided with an Underwriters' Laboratories certificate of inspection indicating that the construction of the doors conforms to the specifications of the Laboratories.

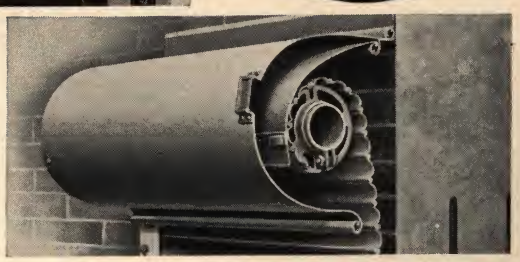
Below: Mechanism of chain hoist AKBAR Fire Door.



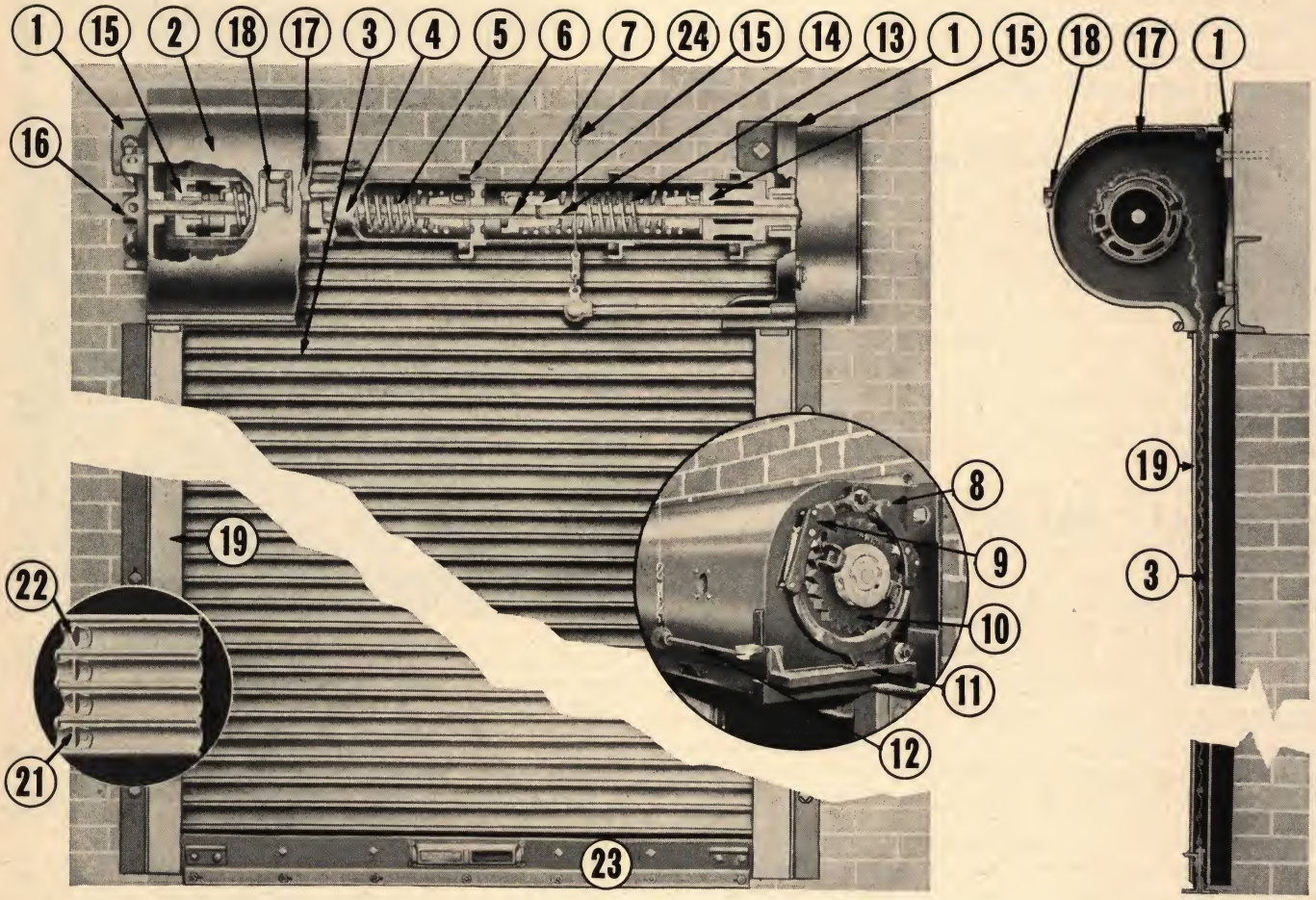
Below: Manual AKBAR operating mechanism.



Right: Drop-hood over main head on curtain coil.



"Akbar" steel rolling fire doors



Kinnear "Akbar" Fire Doors embody numerous construction features—such as the exclusive Safety Governor—which make them a foremost fire protective device.

1 brackets High test gray iron, providing a high safety factor. Integrally cast bracket mouth and stops give smooth operation and eliminate excessive drag of curtain on stops. (One on left of illustration is designated as A. W. bracket in case illustration is referred to when ordering parts.)

2 hoods Neatly formed from hot galvanized sheet metal of No. 24 U.S. gauge, fitted to give tight enclosure to coil. Reinforcing beads or flanges prevent deflection.

3 curtain Composed of interlocking slats of hot dipped galvanized steel and not less than No. 20 U.S. gauge on Class A, B and C doors, and No. 22 U.S. gauge on Class D doors. Slats are designed with a high crown to provide rigidity. Hinging centers are arranged to give free action to the curtain and to nest properly when coiled. See pages 4 and 5 for details of Kinnear slats.

4 spring barrel Encases counterbalance mechanism. Made from heavy steel tubing of thickness and diameter particularly designed to carry the curtain load and minimize deflection. Main bearing in supporting barrel is a roller bearing.

5 counterbalance Composed of helical springs wound from especially heat treated steel and tempered with oil. Individually tailored for each job and all springs anchored to same tension rod, held in position by same adjusting wheel accessibly located on the outside of the bracket.

6 rings Rings of malleable iron of special involute shape and split type are designed to coil the curtain with a uniformly increasing diameter. These can be installed or removed on the door without dismounting spring barrel or brackets. Initial diameter is sufficient to insure uniform and constant counterbalance for all points of the door travel.

7 shafting or tension rod Of cold rolled polished steel to minimize friction in all bearings. Of ample size for the torsional load of counterbalance.

8 and 9 auxiliary retaining wheels Wheels are attached to the tension rod (14) of the auxiliary spring (15). This spring, therefore, can function only when the wheels are free to turn after being released for automatic closure.

10 safety governor An exclusive feature of all "AKBAR" Doors and a feature required by the Underwriters' Laboratory. Governor retains the wheels (8 and 9) and is itself held in place by the release levers (11 and 12). When these levers release the governor, wheels can revolve only at a safe speed. Therefore, the force of the auxiliary spring (13) is controlled, minimizing danger of personal injury and door closing with impact on the floor.

11 and 12 release levers The automatic closing mechanism is retained by these levers. All contact points are either

covered with or made from non-corrodible metals to eliminate any possible freezing together. The lever (12) is held up by fusible links (25) which release at 160° F.

13 and 14 auxiliary spring and tension rod Spring is anchored to the tension rod, which is in turn held in place by the auxiliary wheels (8 and 9). It always carries stored-up energy, sufficient for completely and positively closing the door from any position in the opening when automatically released. Independent of the counterbalance spring, the counterbalance is accordingly undisturbed when door is automatically closed.

15 barrel plugs Heavy cast iron plugs machined where necessary to fit into barrel ends. Specially designed to hold, and eliminate the usual excessive strains at the spring ends.

16 adjustment wheel This is connected to the tension rod (7) carrying the counterbalance spring or springs and attached to the bracket opposite the one carrying the automatic mechanism. The tension of the counterbalance spring is controlled by this wheel, permitting simultaneous and uniform adjustment of all door's operating balance springs.

17 drop-hood or baffle A metal shield of the same gauge as the hood is attached to the main hood by a continuous beaded joint, permitting the shield to hinge over the curtain coil. This shield forms the drophood and is held up out of the way by a fusible link attachment (18). In case of fire, the link melts and the drop-hood drops on the coil and becomes a baffle against passage of hot gases around the bracket.

18 hood fusible links These links hold the drop-hood or baffle out of the way during normal operation, and are distributed to provide necessary alignment. Fusible at 160° F.

19 guides Of structural steel of at least 3/16" thickness. Slotted holes are provided for the rivets holding angles or plates together and for the bolts securing guide to the wall. Heat-destructible washers underneath the heads of the rivets and bolts provide means for expansion and minimizes danger of buckling in case of fire. Depth of grooves is increased to accommodate the increase in width of openings.

20 clearance Sufficient clearance is provided between ends of curtain and back of guides and between all other operating parts, to accommodate expansion for temperatures up to and including 1800° F.

21 endlocks Placed on every slat and made of malleable iron shaped to close the concave ends of slats and to prevent the passage of hot gases and smoke around the edge of curtain. Endlocks retain slats in place, maintain alignment and protect the slats against abrasion in guides.

22 curtain locks The weight of the curtain is balanced by springs, but when the curtain is down in the closed position, it is also supported by a curtain lock which engages in the bracket throat, in order to eliminate danger of the curtain collapsing in case of the temper of the springs is lost from the excessive heat in case of fire.

23 bottom bar Made of two angles and a flat plate, designed to reinforce the bottom of the curtain. Provided with handles for raising the door and with stops for retaining it, when open, in an exact position against the coil bracket, free for a direct start in closing automatically in case of fire. Slide bolt locks, as used on service doors, can be furnished on these bottom bars when specified.

24 automatic fuse unit Fusible link holds the door in readiness in case of fire and disintegrates when exposed to a temperature of 160° F., releasing door closing mechanism.

specifications

"Akbar" Steel Rolling Fire Doors
(Underwriters' labeled)

openings Shall be equipped with Kinnear Steel Rolling Automatic Fire Doors of the "Akbar" Construction.

label All doors, when opening size permits, to bear the required label of the Underwriters' Laboratories.

operation All doors to be automatic closing in the event of fire. Doors not exceeding 8 ft. high or 80 sq. ft. in area can be operated by means of handles on the bottom bar; but larger sizes should be operated through reduction gear by hand chain (or crank).

automatic closing device To be thermally controlled by means of a fusible link. The door shall not depend on gravity for closing but shall be forced to a closed position by an auxiliary spring in spring barrel which is inoperative during normal operation and released by thermal control without affecting the permanent adjustment of the counterbalance spring.

counterbalance Curtain to be balanced by helical springs within spring barrel. All counterbalance springs shall be anchored to same tension rod, held in fixed position by the same adjusting wheel accessibly located on the outside of the bracket. Counterbalance to be permanently maintained, and doors shall operate normally and be readily operable after automatic closure.

safety device To be an automatic governor of escapement type inoperative during normal operation but which shall so control the speed of the curtain during automatic operations as to avoid injury to persons accidentally under the door.

curtain To be of Kinnear interlocking slats rolled from steel with no sharp bends and hot galvanized. The ends of the slats to be fitted with endlocks 3/8 in. thick. Gauge of metal and type of endlocks as established by Underwriters' Laboratories.

brackets To be high grade cast iron with roller or ball bearings in bracket for revolving end of barrel.

guides To be of structural steel $\frac{3}{16}$ in. thick arranged for expansion at all rivet and bolt connections.

hoods The coils to be enclosed with galvanized sheet metal housing of No. 24 U. S. gauge. For doors on interior wall, hoods to be furnished with a drop-hood thermally controlled, closing against the coil when automatically released.

paint All parts of the door except mechanism to be given one shop coat; mechanism dipped in flat black.

erection All doors shall be erected by the manufacturer or his authorized representative and shall be guaranteed for a period of one year from the date of completion of erection, that any part defective in material or workmanship will be replaced without charge.

"Superior" Fire Shutters
(Underwriters' labeled)

"Superior" Fire Shutters, designed especially for window openings, have substantially the same design as "Akbar" Fire Doors, except that they are not constructed for service raising and closing. They incorporate the following features:

1 Positive automatic closure.

2 Safety governor to prevent excessive speed and to limit closing impact.

3 Counterbalance spring which is not affected by door testing or automatic closure and requires no adjustment when once set.

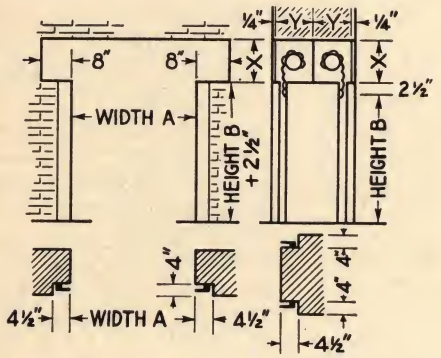
4 Removable crank operates gearless rewind mechanism for raising and resetting curtain.

In addition, shutters can be tested or closed at any time by releasing chain from keeper located on inside of wall.

"Akbar" steel rolling fire doors — (Underwriters' Labeled*) superior fire shutters

manual operation — model BMA

under lintel mounting



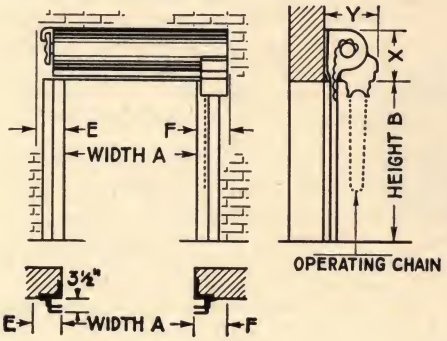
Note: This model is for Class A openings. Similar models available for other class openings. Consult your local inspection bureau for opening class required.

Height B*	6′		7′		8′		9′		10′		11′		12′	
Width A*	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
3′-4′					17	13			18	15	18	15		
5′			17	13			17	14						
6′	17	13			17	14								
7′			17	14					19	16	20	17	20	17
8′-9′					19	16	19	16						
10′			19	16										

inches

chain operation — model FHA

face mounting



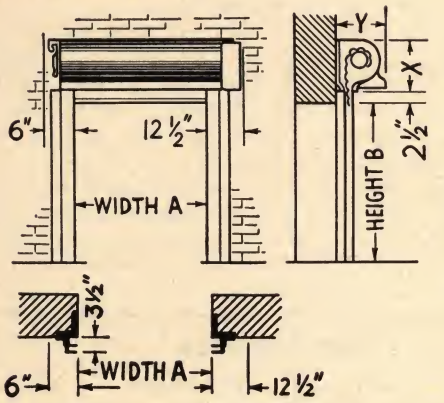
Note: This model is for Class A openings. Similar models available for other class openings. Consult your local inspection bureau for opening class required.

Height B*	6′, 7′, 8′				9′				10′				11′				12′			
Width A*	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F
5′-7′	17	20	9	9	17	20	9	9	17	20	9	9	17	20	9	9	17	20	9	9
8′																				
9′									17	20	9	10	17	20	9	10	17	20	9	10
10′	17	20	9	10	17	20	9	10												
11′									18	21	9	11	18	21	7	11	18	21	7	11
12′	17	20	10	10	17	20	7	10	18	21	7	12	18	21	7	12	18	21	7	12

inches

manual operation — model FMA

face mounting



Note: This model is for Class A openings. Similar models available for other class openings. Consult your local inspection bureau for opening class required.

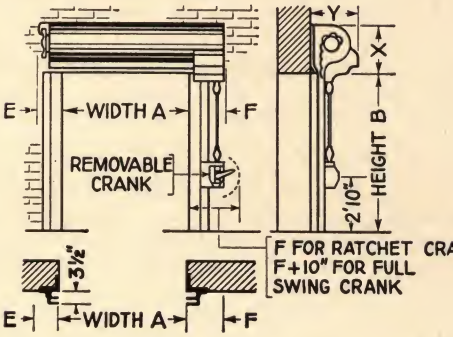
Height B*	6′		7′		8′		9′		10′		11′		12′	
Width A*	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
3′					15	16			17	18	18	18	18	18
4′			15	16			17	18						
5′	15	16			16	16					19	19	19	19
6′			16	16			18	18	19	19				
7′					18	18								
8′-9′			18	18										
10′														

inches

Note: Manual operation not recommended for sizes exceeding 80 sq ft in area.
Note: Dimensions in above tables also apply to fire doors for Class "B," "C" and "D" openings.

crank operation — model FCA

face mounting



Note: This model is for Class A openings. Similar models available for other class openings. Consult your local inspection bureau for opening class required.

Height B*	6′, 7′, 8′				9′				10′				11′				12′			
Width A*	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F	X	Y	E	F
5′-8′																	17	17	9	12
9′	17	17	9	12	17	17	9	12	17	17	9	12	17	17	9	12				
10′																	18	18	7	12
11′									17	17	7	12	18	18	7	12				
12′	17	17	10	13	17	17	7	13	17	17	7	13	18	18	7	13	18	18	7	13

inches

Note: All dimensions given in this catalog are for general reference only and not for construction purposes.
** Inclusive.*

spring counterbalanced

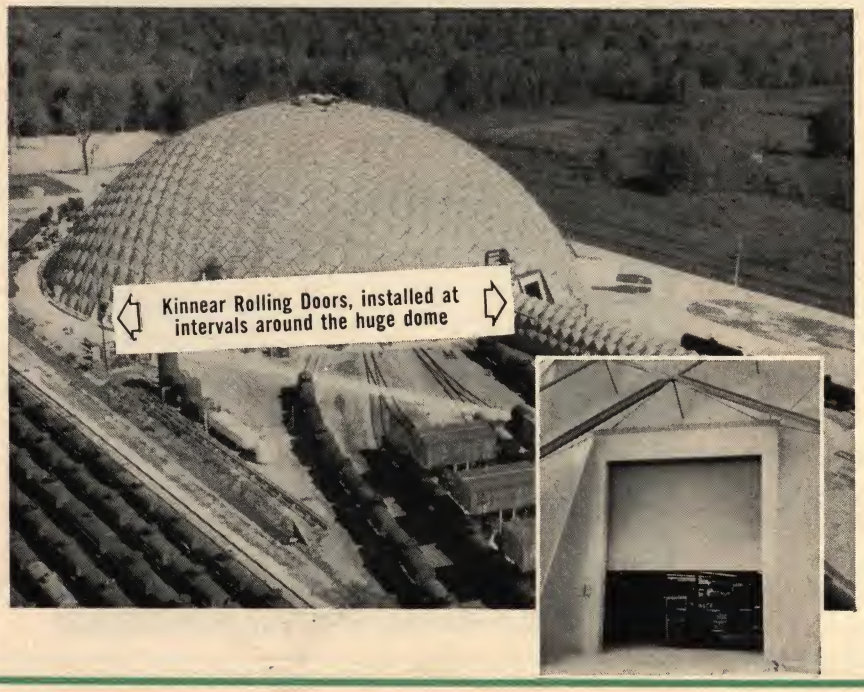
This is one of the most practical bifolding doors for average size openings on the market. It requires less clearance at both head and sides of opening than do most other types. Permitting the use of sash, approximately two-thirds of the upper section of the door can be used for the admittance of light. Constructed of either wood or steel, the Bi-fold No. 5 provides heavy duty service. Also, its simple and sturdy mechanism makes maintenance a negligible factor and renders quick and easy operation. This door is of a jack-knife folding type, constructed of two leaves or sections, hinged at the center and attached to the wall with hinges at the top corners of the top leaf. The lower corners of the bottom section are carried on ball-bearing rollers which travel in guides attached to the wall. Cables are attached to the pins at each of the rollers and are wound on spiral drums. The door is operated up and down by driving the drums with hand chain, through reduction gear, winding or unwinding the cable as required.

The doors are counterbalanced by torsion springs on a steel shaft in the same manner as for steel rolling doors.

. . . .

In order to prevent the drums from being revolved in the wrong direction when the door is down, and thus unwind excess cable, the torsion shaft carrying the spring is provided with special lock set which does not permit the shaft to be revolved only so far as to unwind a required amount of cable. This is a safety feature which insures constant tension on the cable, holding it to the groove and the sheave and eliminating the possibility of slack.

An adjustable cable connection permits the bottom of the door to be leveled and to insure an even pull on both cables.



Here, as in all types of buildings, Kinnear Rolling Doors provide up-to-the-minute door efficiency.

With no internal supports of any kind, yet big enough to enclose a football field, this giant geodesic dome houses a railroad car repair shop of the Union Tank Car Co., in Baton Rouge, Louisiana.

Kinnear Rolling Doors open straight upward and clear the entire doorway, coiling compactly above the opening. Surrounding floor, wall and overhead space, inside and outside the building is always fully usable whether the doors are opened, closed, or in action. This promotes full use of hoist, crane, conveyor, and lift-truck equipment.

Every Kinnear Door is Registered. Full details of all parts are kept permanently in Kinnear's fireproof vaults. Parts are always replaceable. Your Kinnear doors will never be "orphans".

For maximum durability Kinnear's special hot-dip galvanizing coats the entire curtain with a full 1.25 oz. of pure zinc per square foot of metal (ASTM standards).

Kinnear steel rolling grilles

Kinnear Steel Rolling Grilles assure effective protection against burglars, marauders, and trespassers of every type, and are also widely used for closing off corridors and stairways in public buildings, when it is desirable to keep unauthorized persons from entering restricted areas.

Operating on the same principle as Kinnear Steel Rolling Service Doors (fully described on pages 6 through 19), Kinnear Steel Rolling Grilles are permanently installed. They are remarkably strong when closed and locked, and yet, when they are not needed, they can be easily raised to disappear from sight completely out of the way.

Because of the type of operation and protection provided, without sacrificing light, vision or ventilation, Kinnear Steel Rolling Grilles have wide application for interior and exterior use on concessions, store entrances and windows, vaults, stairways, corridors, courtyards, loading platforms and other openings in monumental, industrial and commercial buildings.

Note sturdy construction of this Kinnear Steel Rolling Grille. Also the revolving type cylinder lock that permits locking from both sides. (On manually push-up type doors only).

construction features

Attractively designed, the Kinnear Steel Rolling Grille will harmonize with any style of architecture. It is ruggedly built throughout, of the best materials practicable. Galvanized steel is standard, but grille and guides can be built of aluminum or bronze. Every part is designed to give maximum wear. It is a protective device that will provide long years of service, with a low maintenance cost.

The grille proper is extremely strong and artistically designed of 5/16 in. round steel bars spaced close enough to prevent the admittance of either a man's hand or large missiles. For maximum durability the round steel bars and pressed steel links are galvanized by the hot dip method, giving a pure zinc coating of not less than .65 oz. per sq. ft. of surface, in accordance with ASTM Standards.

It is equipped with a lock that engages in the guides for use when the grille is closed. The lock is of a unique cylinder type (see illustration at right), arranged for locking from both sides.

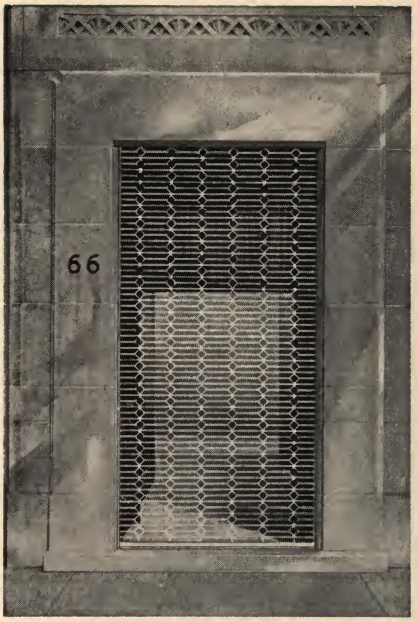
The grille coils on a heavy pipe or barrel above the lintel, and is locked in and travels in heavy steel guides mounted on the side of the opening. Helical springs enclosed in the pipe or barrel provide accurate counterbalance. A neat hood of suitable metal is furnished to house the barrel and the coil.

■ methods of operation

Methods of operation for the Rolling Grilles are also similar to those provided for Kinnear Steel Rolling Service Doors. They can be arranged for manual, mechanical (by chain hoist or crankshaft), or electrical operation. For further details, see pages 6 to 20.

■ suggested specifications (short form)

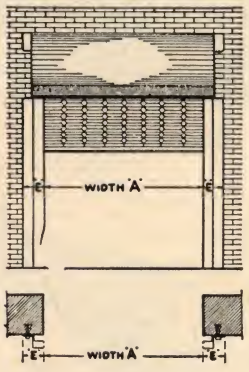
Grille to be of the Kinnear Rolling Type, coiling above the lintel in 24 U. S. Gauge galvanized steel hood, on heavy steel barrel journalled in cast iron brackets and traveling in guides mounted at the sides of the opening. Barrel to encase steel, helical oil tempered counterbalance spring with necessary factor of safety. Grille to be composed of horizontal 5/16" round steel galvanized bars, spaced not to exceed 1⅝" apart, joined by oval shaped pressed galvanized steel links at intervals at approximately 8¼" (omit "galvanized" on Grille sizes exceeding 29'6" in width). Bars and links to be galvanized by the hot dip process, with not less than .65 oz. of zinc per sq. ft. of surface in accordance with ASTM Standards. End links to be engaged in guides fabricated of heavy structural steel members, in manner to prevent Grille from leaving guides under excessive pressure.

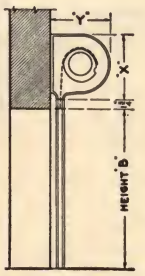


Note: Kinnear Rolling Grilles are frequently installed in conjunction with Kinnear Steel Rolling Doors in the same opening. This provides a closed barricade in cold weather and a ventilating barricade in warm weather. An ideal arrangement.

■ installation types and clearances

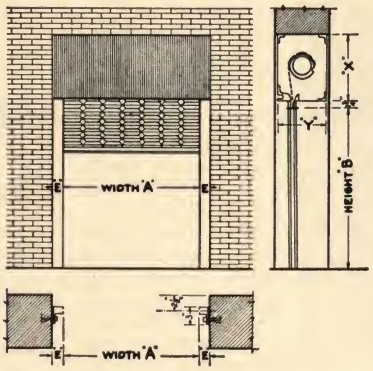
face of wall





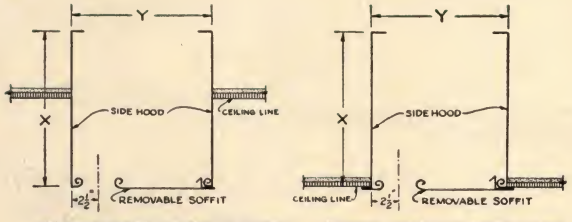
Hand lift type not recommended for sizes exceeding 120 square feet in area. When in need of larger sizes write Kinnear for clearances and details.

between jambs



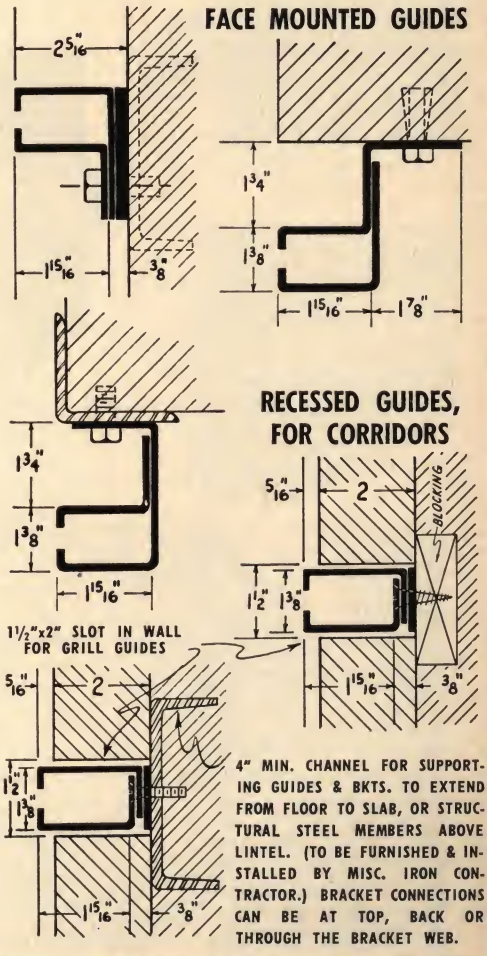
HEIGHT "B"	To 5'-0"			To 7'-0"			To 9'-0"			To 11'-0"		
CODE	X	Y	E	X	Y	E	X	Y	E	X	Y	E
FACE OF WALL	15"	13½"	4"	16"	14½"	4"	18"	16¼"	4"	19"	17¾"	4"
BETWEEN JAMBS				15"	13½"	2 5/16"	17"	15½"	2 5/16"	19"	17½"	2 5/16"

typical rolling grill hoods



*Inclusive.

Note: Dimensions are for general reference only, and not for construction purposes.



4" MIN. CHANNEL FOR SUPPORTING GUIDES & BKTS. TO EXTEND FROM FLOOR TO SLAB, OR STRUCTURAL STEEL MEMBERS ABOVE LINTEL. (TO BE FURNISHED & INSTALLED BY MISC. IRON CONTRACTOR.) BRACKET CONNECTIONS CAN BE AT TOP, BACK OR THROUGH THE BRACKET WEB.

Kinnear Rolling Counter Shutter

As the result of functional building design, with its emphasis on space economy, there has been a rapid increased usage of Kinnear Rolling Shutters as a method of closure for service counters, alcoves or other locations requiring a durable, space-saving, easy operating closure. Operating like a window blind, it provides the utmost in convenience.

To more appropriately meet this need (when width of opening does not exceed 20 feet wide), Kinnear has adapted the time-tested basic design of their Metal Rolling Doors (described on pages 4 to 20), to what has been designated as a counter shutter, employing a curtain composed of a flat "Midget" interlocking slat of steel, aluminum or other metals. As herein illustrated, these slats are extruded when made of aluminum and roll formed when made of steel or other metals.

One of the especially valuable, distinctive features of this counter shutter is a telescoping shaft which permits the installation or removal of the spring barrel without dismantling the brackets. Also, the bottom bar of the curtain is fitted with a vinyl plastic strip to provide a seal and to prevent abrasions on the counter. Each end of bottom bar is also fitted with a concealed slide bolt, operable by single handle, which engages the guides for locking. Where extra quiet operation is desired, guides may be equipped with a heavy nap stripping, which contacts the curtain and serves as a cushion in the curtain travel as well as a dust seal.

These counter shutters are available for a maximum opening width of 20'0" and maximum height of 5'6". For widths up to 14'0" operation is manual pushup by means of a handle in the bottom bar. For widths over 14'0" operation is by hand crank operating through shaft and reduction gearing.

Details on next page show how the Kinnear Counter Shutter may be installed on the face-of-wall or in reveals in the wall. Consult Kinnear Engineers on your specific requirements.

Rolled Slat No. 17
(Full Size)

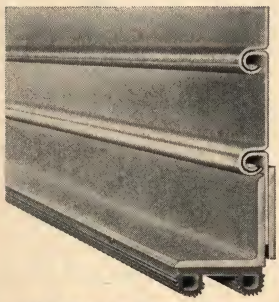
Rolled Slat No. 17

Illustrated at left is a full size section of the Kinnear Slat No. 17, roll formed of either 22 or 24 U.S. Gauge Steel. Note its clean flat appearance. For other advantages of its design see page 4.

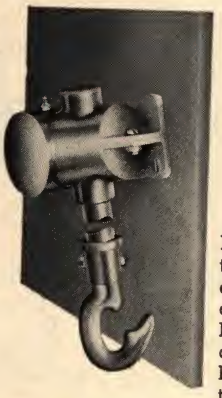
Extruded Slat No. 17E

Illustrated at right is a full size section of Kinnear Slat No. 17E extruded of aluminum to thickness of .050. Note that it is designed with the same interlocking characteristics as those for which Kinnear is well-known.

Extruded Slat No. 17E
(Full Size)

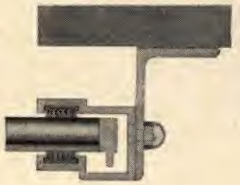


Left: Steel slat curtain has double-contact vinyl plastic strip fitted to bottom bar, prevents abrasion to counter top.

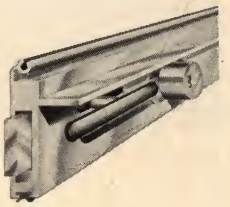


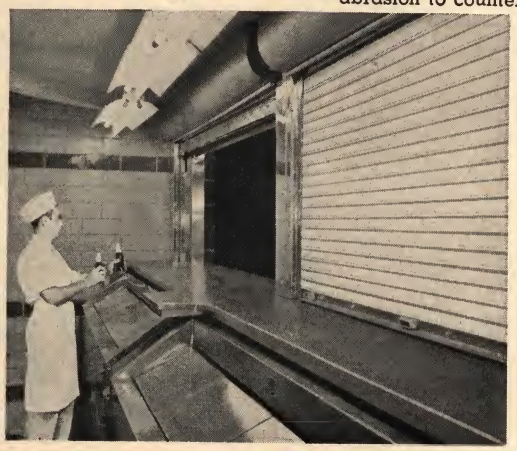
Left: Compact gearing unit, operable with hand crank (for widths over 14'0") with removable operating arm keeps working area free, prevents use by unauthorized persons.

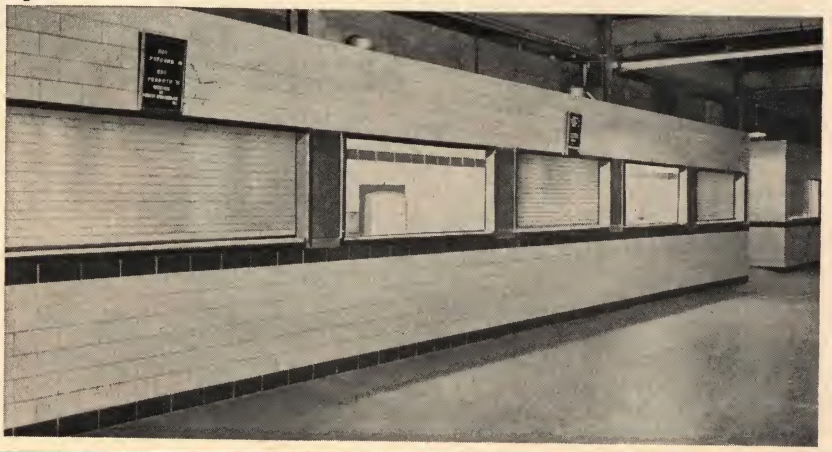
Extreme Right: Extruded aluminum slat curtain is fitted with an extruded bottom bar with vinyl insert and concealed slide bolt which engages the guide for locking.

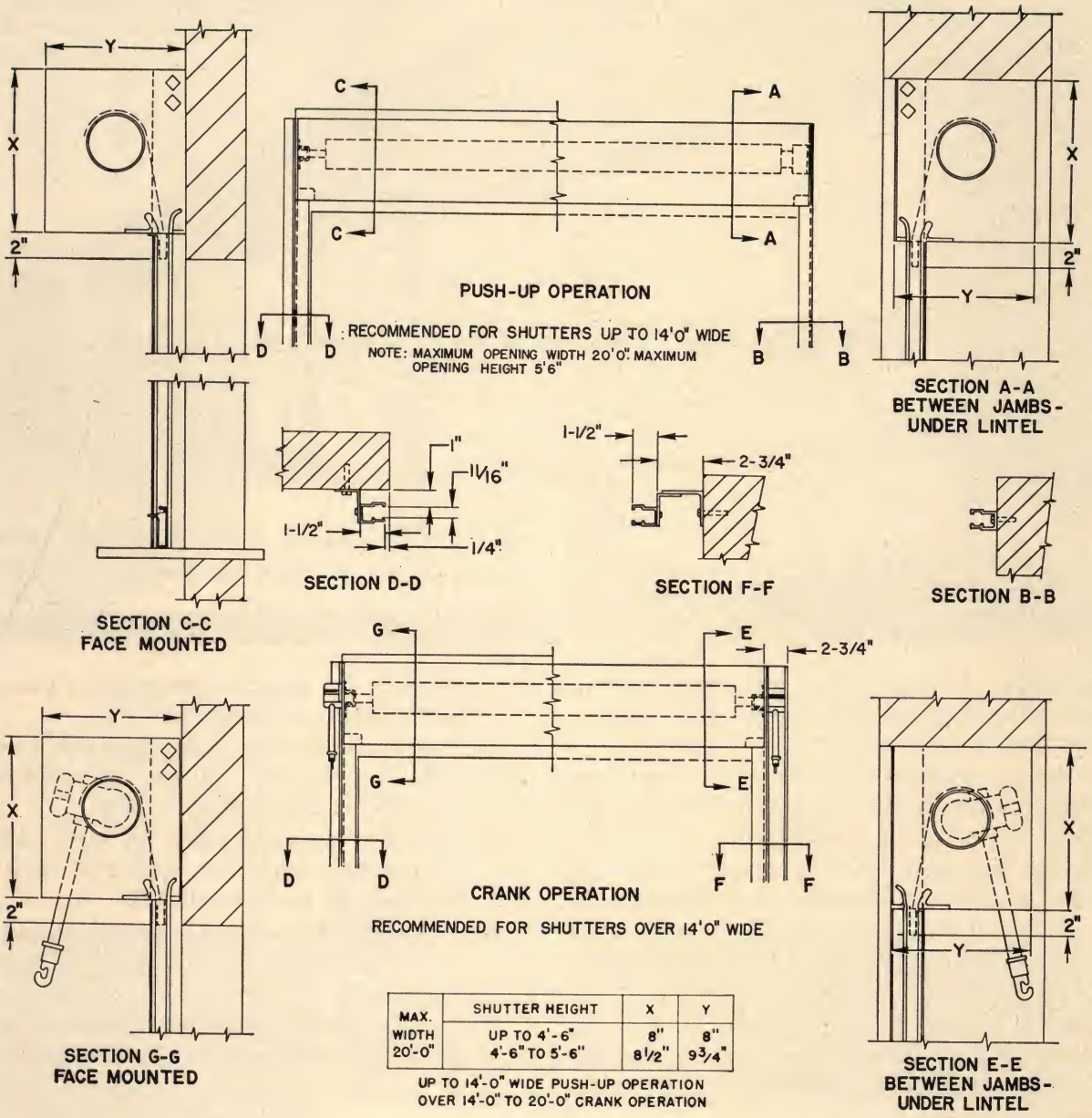


Above: On the extruded aluminum shutter, the aluminum extruded guide is designed for heavy nap inserts to give quiet operation and dust tightness. Also engages safety end-locks to prevent curtain from being sprung out of guide.









MAX. WIDTH 20'-0"	SHUTTER HEIGHT	X	Y
	UP TO 4'-6"	8"	8"
	4'-6" TO 5'-6"	8 1/2"	9 3/4"

UP TO 14'-0" WIDE PUSH-UP OPERATION
OVER 14'-0" TO 20'-0" CRANK OPERATION

suggested specifications

Rolling Counter Shutters as shown, to be as manufactured by The Kinnear Manufacturing Company of Columbus, Ohio.

curtain Curtain shall be composed of interlocking flat faced midget type slats. Slats to be extruded aluminum 6063 alloy not less than .050" thick. Alternate slats to be fitted with endlocks to hold curtain in alignment. Safety endlocks shall be installed for extra protection on all curtains over 8'0" wide. Bottom of curtain to be finished with an extruded bottom bar fitted with a continuous vinyl astragal to seal against, and protect, counter top.

barrel Curtain to be coiled around a steel pipe fitted when required with involute shaped rings for ease of operation. Barrel to be supported by steel plate brackets and so designed that it can be removed without disturbing supporting brackets. Helical, oil tempered springs shall be installed inside the steel pipe, which shall rotate on grease sealed ball bearings. Spring tension shall be adjusted in field by means of an adjusting wheel concealed inside the aluminum coil housing.

guides To be formed from extruded aluminum shapes of 6063 alloy and shall extend above lintel so as to furnish support for brackets. Guides to contain retaining groove to engage safety endlocks and prevent curtain leaving guides. Continuous strips of heavy nap stripping shall be locked into guides to give rattle-free operation and to provide dust-seal around curtain.

operation Shutters under 14'0" wide shall be operated by means of handles mounted on bottom bar. Shutters 14'0" and wider shall be operated by removable hand crank with crank box mounted on end of spring barrel.

locking device Curtain shall be locked by concealed slide bolts at each end of bottom bar which shall engage slots in each guide. Slide bolts to be so connected as to operate simultaneously by means of single handle. (Cylinder lock can be provided at extra cost which will prevent operation of both slide bolts.)

finish Curtain, bottom bar, guides and hood shall be anodized thirty minutes for a satin finish after all fabrication is completed. All other parts to be given a shop coat of aluminum paint.

NOTE: Kinnear Rolling Counter Shutters can also be furnished with formed steel slats, steel angle guides and steel hood and brackets. Clearance dimensions are similar to the aluminum shutter detailed above.

steel RōL-TOP doors

STEEL SECTIONS *with 1.75 oz. zinc coating—plus* KINNEAR PAINT BOND

- Attractive, straight-line outward appearance that harmonizes with buildings of either modern or traditional design.
- Durability combined with space-economy and fast operation of upward action *plus* provision for glass openings.
- All-steel construction—stronger, more impenetrable to vandalism and marauding.
- 16 gauge steel given a 1.75 oz. per sq. ft. coating of pure zinc by the hot galvanizing process. (As per ASTM Standards—recognized for preserving the base metal.)
- Kinnear Paint Bond Treatment after galvanizing—a finely crystalline phosphate coating by special process to insure immediate paint adhesion.
- Single-shaft, torsion spring counterbalance insures uniform pull on both sides of door and extra operating safety.
- Built to various sizes to suit old or new buildings—with or without any desired number of sash sections.
- Arranged for either manual (hand push up or chain and reduction gearing) or motor operation.
- Available with modifications for specialized uses or building conditions.

Kinnear steel RōL-TOP door specifications

SCOPE: All steel overhead type doors shown on plans shall be Kinnear RoL-TOP or equal.

DOORS: This door shall be a standard product of a manufacturer regularly engaged in the production of steel overhead type doors.

DOOR SECTIONS: Sections shall be approximately 18″ wide, rolled from 16 gauge galvanized and bonderized steel, the edges of the steel sections to be rolled to form a continuous interlocking hinge. Galvanized coating shall be 1.75 oz. per square foot of flat metal per ASTM standards. Glazed sections to be provided as indicated on plans, type of glass as required.

Doors shall be designed to withstand a wind pressure of 20 pounds per square foot of door area.

TRACKS: All tracks to be formed of galvanized steel and mounted on continuous angles designed for bolting to building jambs. Doors of 110 square feet or under may use 2″ track; doors over 110 square feet shall use 3″ track.

COUNTERBALANCE: All doors shall be counterbalanced by means of oil tempered torsional springs mounted on a continuous steel shaft. Springs to be adjustable for proper operation.

HARDWARE: Ball bearing rollers to be carried on heavy duty malleable iron supports.

Push-up doors to have cremone type cylinder lock.

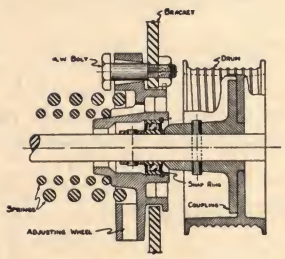
Bottom of door to be provided with rubber weather seal, top and sides of door to be provided with adjustable metal weather seal.

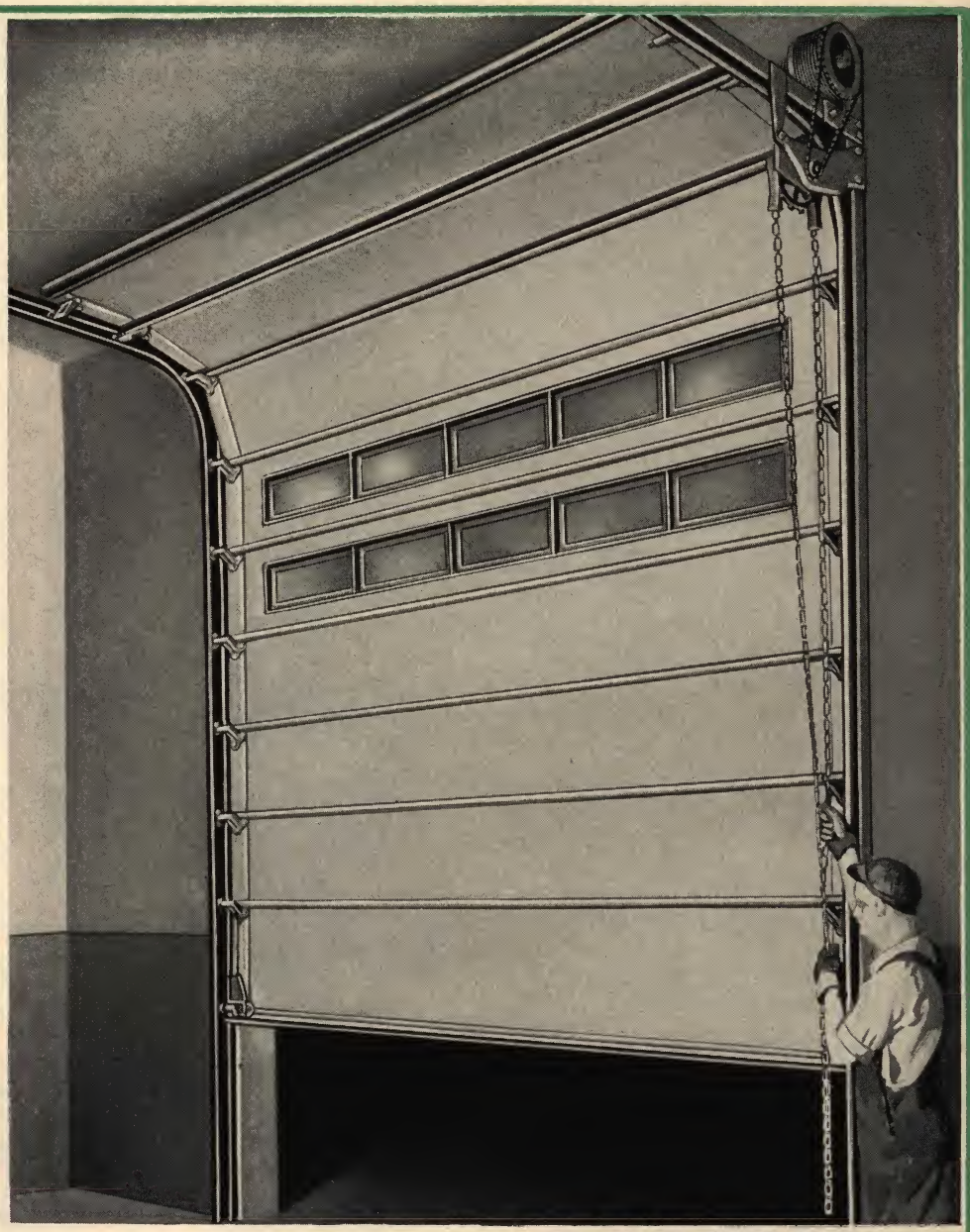
OPERATION: Doors to be push-up, chain hoist or motor operated as the size and/or type of operator requiries.

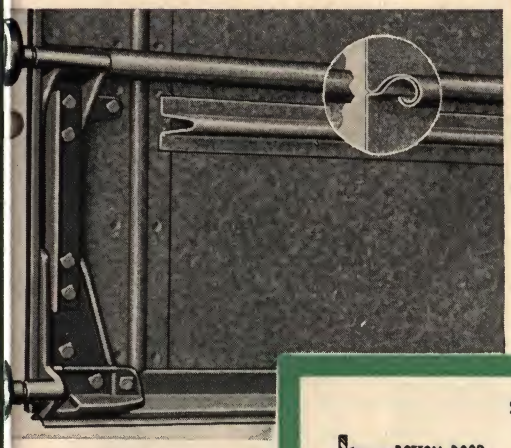
WORK WILL NOT INCLUDE:
(a) Electrical wiring, conduit or fuses
(b) Structural steel sills and jambs
(c) Glass and glazing
(d) Painting

The enlarged illustration shows a chain hoist operated door—shows what Kinnear experience has found most satisfactory . . . simple, durable construction that insures easy operation and trouble-free service. Recommended on all doors over 10 ft. high or 100 sq. ft. in area.

Ball type shaft bearing at right has been incorporated to reduce friction and wear to a minimum.



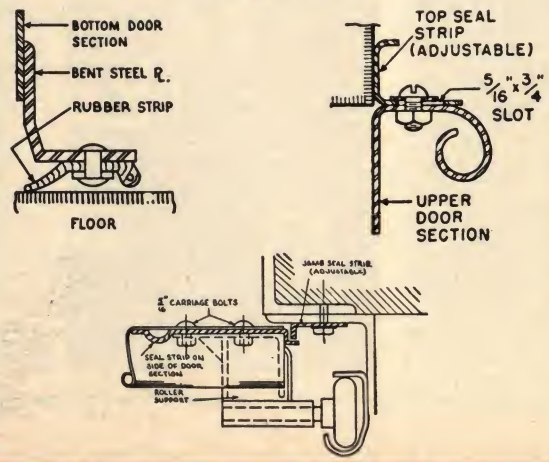


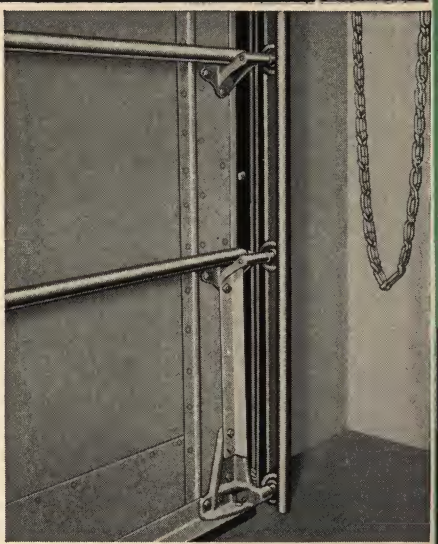


To prevent intrusions of wind, weather and water, the jambs and head of door have an adjustable seal-strip; the bottom has a rubber astragal.

Sections, are approximately 18" wide, rolled from 16 gauge galvanized steel, with rolled, reinforcing edges that form a continuous interlocking hinge. The section is designed to withstand 20 lb. per sq. ft. wind pressure and is given a coating of 1.75 oz. per sq. ft. of flat metal (per ASTM standards) of pure zinc by the hot galvanizing process.

sealing method

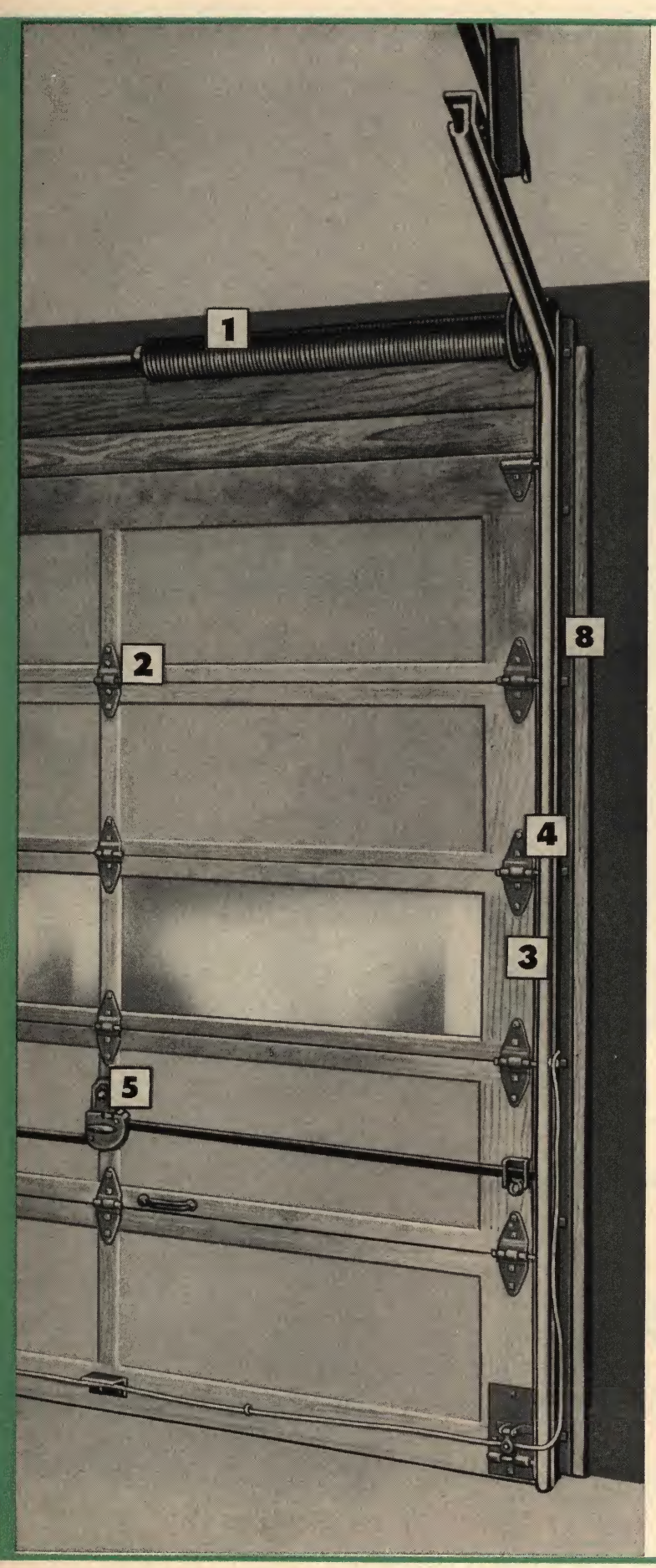




Rugged malleable hardware is used for roller supports bolted securely to the sections.

wood RōL-TOP doors Torsion Spring (TF) Type

The DOOR WITH KEYSTONE SEALING



See illustrations on this page and opposite page for Rol-Top design features listed below.

1 Kinnear single-shaft torsion spring counterbalance. Matched to the door. Assures synchronized, uniform lifting action.

2 Rugged malleable hardware for 3" track, and malleable or galvanized steel for 2" tracks, applied with through carriage bolts.

3 "Keystone" weather-protecting seal. An exclusive RoL-TOP feature. Ends of door sections have a downward tapering or graduated rabbet. Galvanized metal seal strips are mounted to the jamb in a sloped position to correspond to the tapered rabbet on the door. As the door closes it seals and wedges itself tightly between the seal strips in exactly the same manner that a keystone seats in an arch. Thus a triple-contact seal is achieved without hampering free and smooth operation of the door.

4 Kinnear specially designed ball-bearing rollers. Free acting and secure door in track.

5 Cylinder type, center-located lock. Securely locks both sides of door. Supplied only on doors of manual push-up operation unless otherwise specified as an extra.

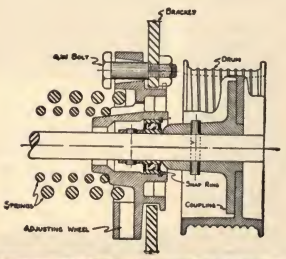
6 Ball type shaft bearing for reducing friction and wear to a minimum.

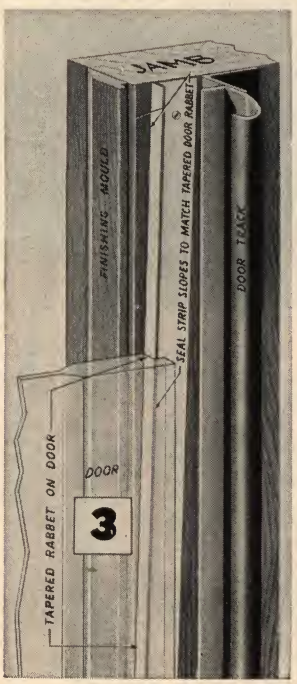
7 Lifting cable (illustrated opposite page) of preformed type, with breaking strength to be 10 times lifted load of each cable.

8 Heavy-duty, solidly mounted tracks.

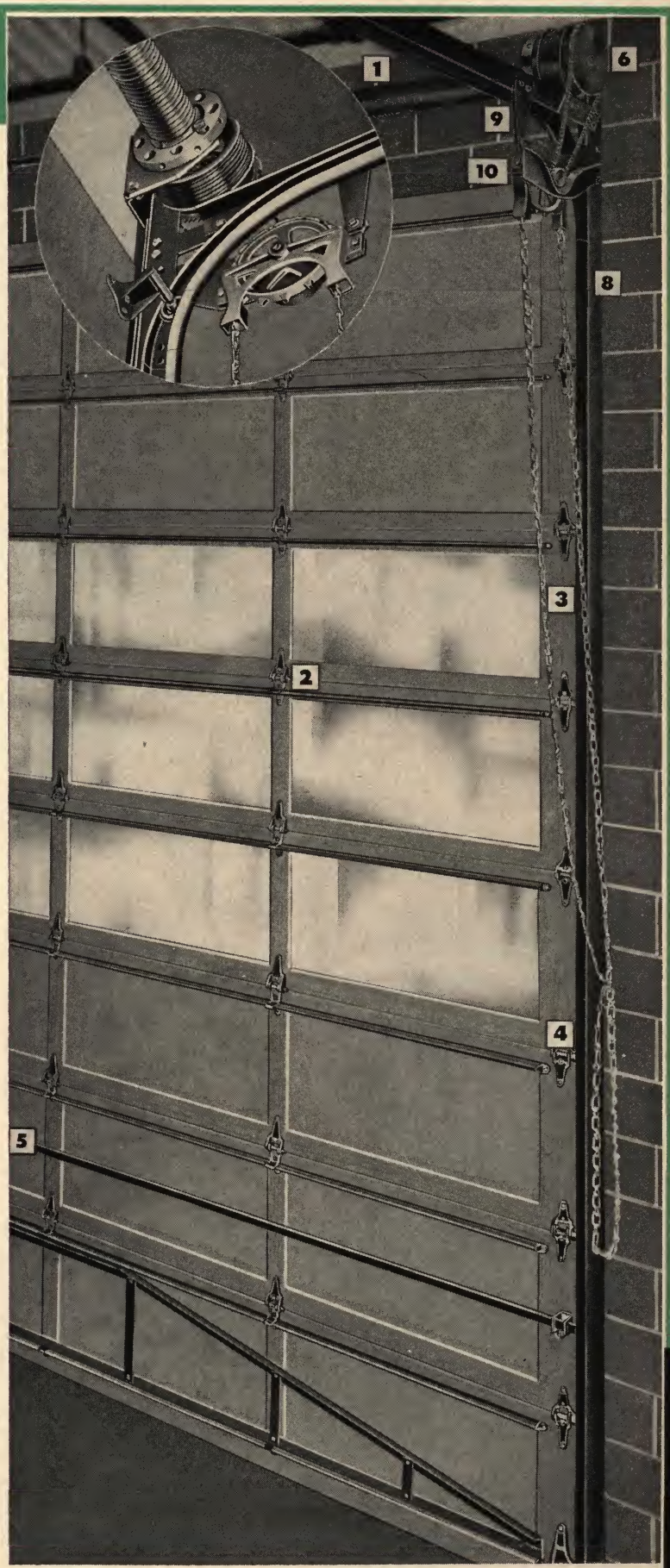
9 Track curve integral with horizontal member and of proper radius to insure smooth door operation.

10 Sprocket and reduction gearing for raising or lowering door easily and at convenient height by means of hand chains. See cut on page 31 for inside view.





steel truss reinforcing and chain hoist for large size doors



Kinnear wood RōL-TOP door

KINNEAR (with over fifty (50) years experience) RECOGNIZES THAT QUALITY must be maintained in design and construction of every detail of a door if the door is to give satisfactory service. We therefore suggest the following Kinnear specification for heavy duty Doors.

specifications

scope All wood overhead doors shown on plans shall be as manufactured by The Kinnear Manufacturing Co.

door sections Sections of the doors shall be constructed of hinge sections with the face of intermediate stiles and rails not less than 2¾". The face of bottom, top and end rails not less than 7" in width and all full 1¾" thick, made from Spruce. The panels shall be ¼" Hardboard. Stiles and rails to be connected by blind mortise and tenon glued and steel doweled. All wood shall be smoothly dressed, sanded after assembly and given an immersion in woodlife or equal.

All sections shall be scribed along the edges to form a keystone wedge and galvanized metal seal strips to be furnished to form tight closure of the door sections when completely closed. Provide a cushion type rubber weatherstrip secured to the wood by using a continuous metal plate.

hardware Hinges and roller supports to be of malleable iron or stamped steel galvanized of not less than 3/16" in thickness. Rollers to be heavy duty ball bearing 3" size. Bottom roller support and cable support to be of malleable iron or of steel not less than 5/16" thickness. Cables to be preformed, galvanized, having a safety factor of at least 10-1.

A safety cable device shall be provided to prevent the door from falling more than 3" in case of cable failure.

reinforcing All door sections shall be designed to withstand a minimum of 20 lbs. per sq. ft. of wind pressure.

All reinforcing members shall be made from not less than 18 gauge galvanized and bonderized steel and shall be bolted to the door sections at the ends with through bolts. Intermediate hinges shall go over the reinforcing and hold the reinforcing members to the section at each hinge joint and shall be bolted to the sections with cadmium plated through bolts.

All doors 20' and wider shall be furnished with a truss on the bottom section in addition to the reinforcing member to prevent sagging of the sections when in a vertical position.

tracks Tracks to be formed from not less than ⅛" galvanized steel stock of a normal 3" size. Track shall be secured to a continuous angle and entire assembly given a shop coat of paint prior to shipment.

counterbalance Door shall be counterbalanced by means of tempered tested torsional springs mounted on a continuous steel shaft with suitable arrangements for proper adjustment. Maximum stress in any spring shall not be over 70% of its ultimate tensional strength.

operation Doors up to 180 sq. ft. may be push up construction. Doors over 180 sq. ft. will be chain operated or motor operated as called for in the door schedule.

Kinnear recommends the MS-type drawbar operator whenever clearances are available

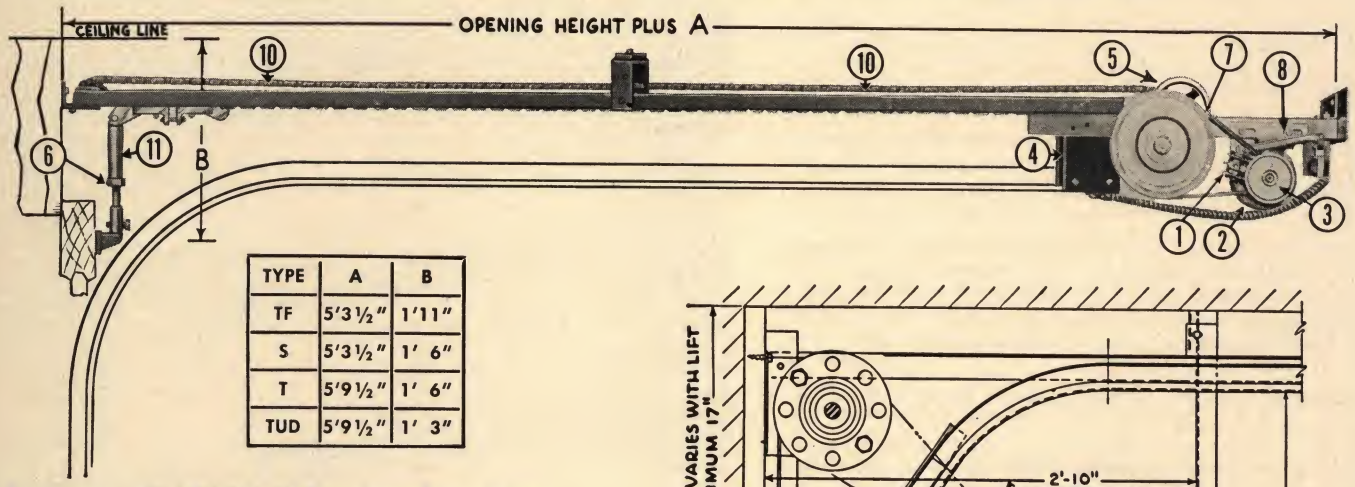
The above recommendation is made because in the Kinnear drawbar type operator the drawbar is at all times connected directly to the door sections. This gives the electric operator a positive connection with the door sections and controls the raising and lowering of the door at all times. This operator should be used wherever clearances permit.

Any other type of operator that drives the shaft of an "overhead type of door" has only control over the shaft. Since the only connection between the shaft and the door sections is the flexible cable it is possible to revolve the shaft—unwind the cable and not lower the sections. Any binding of the sections could cause an unwinding of the cable, causing damage to the door.

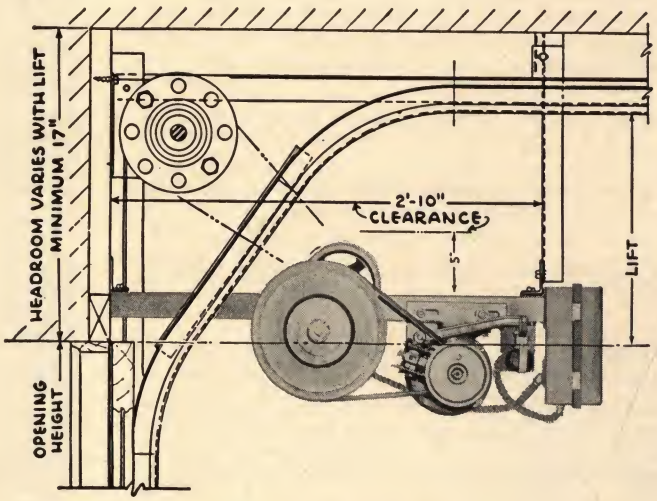
The drawbar type operator is fully automatic and will stop the door at any position by pushing the "stop" button. Also the direction of the door can be continued or reversed by pushing the "down" or "up" button.

All "Kinnear drawbar type operators" are equipped with an adjustable centrifical clutch. This is used to prevent injury to the door or overloading of the operator.

When specified and at an extra cost an automatic safety device, (see page 7), can be furnished. It consists of an air chamber on the bottom of the door which functions with the operator and which causes the door to automatically stop and reverse its direction of travel upon contact with any obstruction. See our specification below for this operator or write us if more complete details are required.



TYPE	A	B
TF	5'3½"	1'11"
S	5'3½"	1' 6"
T	5'9½"	1' 6"
TUD	5'9½"	1' 3"



features of Model MS—drawbar type

① Spring-set brake for stopping door without shock.
② Standard reversible motor.
③ Adjustable centrifical clutch.
④ Remote control magnetic reversing switch.
⑤ Cut gears square jaw clutch.
⑥ Drawbar locks door in place. Screw-type adjustment.
⑦ Adjustable screw-type limit switch.
⑧ Adjustment for tightening tension on V-type driving belt.
⑨ Three-button, wall-mounted operating station.
⑩ Steel driving chain.
⑪ Special detachable drawbar (at extra charge) for quick disconnection in case of power failure.
⑫ May be furnished with emergency chain hoist at extra charge.

specifications for Kinnear RōL-TOP Door motor operators

MS-type drawbar The electrical power unit shall be designed to allow manual operation of the door in event of power or motor failure and shall consist of an electrically reversible motor of sufficient power to operate the door at an approximate speed of 12 inches per second. The unit shall be equipped with a spring set solenoid actuated brake, suitable speed reducer, adjustable centrifical clutch, magnetic reversing starter shall be push-button operated from full voltage type in our standard design with "open", "close" and "stop" push-button station.

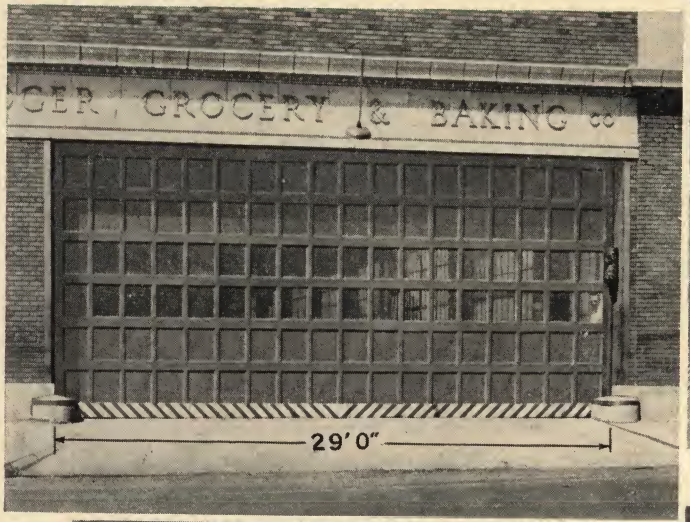
MS-W type wall-mounted Same specifications apply for the MSW-TYPE wall mounted operator that apply for the MS-TYPE drawbar operator. This unit is recommended where side operation is desired or building conditions do not permit the installation of the MS-TYPE drawbar operator.

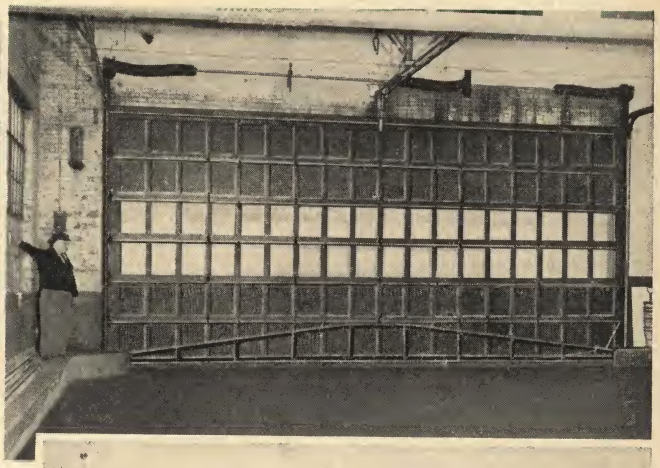
emergency chain hoist operation Any door that is furnished by Kinnear Mfg. Co. is properly counterbalanced and can be operated manually in case of emergency. When specified and at extra cost emergency chain hoist operation can be furnished when desired on the MS-TYPE drawbar and MS-W TYPE wall mounted operators. Emergency hoist equipment consists of a control for automatically engaging the hoist mechanism and disengaging the motor operator. Control to operate from the floor level and shall automatically prevent electric motor operation until operating device is disengaged. Use of emergency manual or chain hoist operation shall in no way affect the adjustment of limit switches and emergency operation may be accomplished with door in any position.

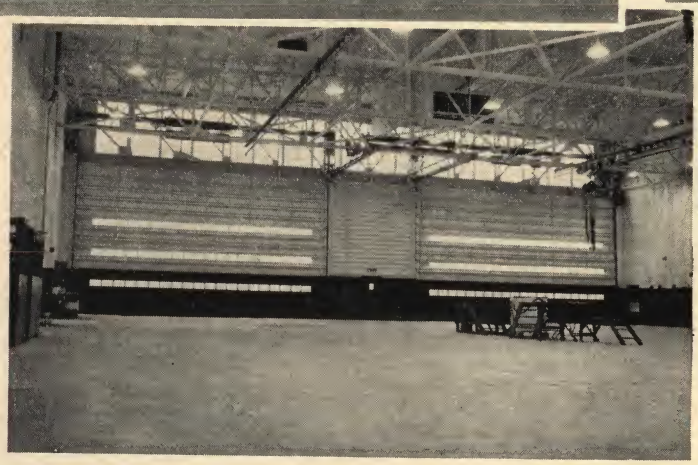
power unit "52" wall mounted Any Kinnear door may be furnished with a rolling door type power unit when this type of unit is preferred—See pages 7 to 11 for details and specifications.

air-tube safety devise When specified and at extra cost an automatic safety device can be furnished. It consists of an air chamber on the bottom of the door, which function with the operator and causes the door to automatically stop and reverse its direction of travel upon contact with any obstruction.

RōL-TOP doors in any size







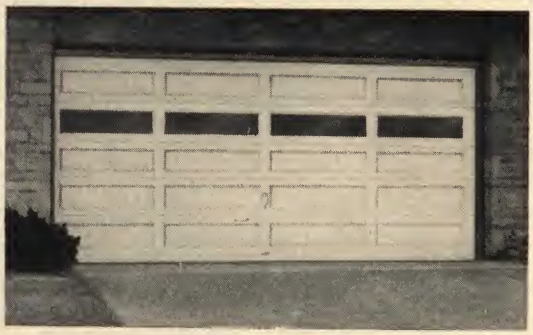
Top Left: Outside of large Rol-Top Door equipped with MS Motor operator.

Top Right: Inside of door pictured at right, showing the steel reinforcing trusses.

Left: Large steel Rol-Top Doors in an airplane factory hanger.

Above: Battery of steel RoL-TOP doors on same installation as shown at left.

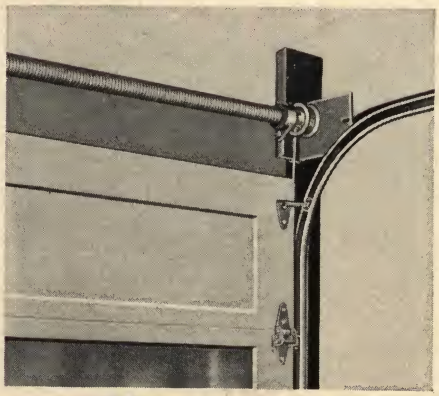
residential RoL-TOP doors in stock sizes



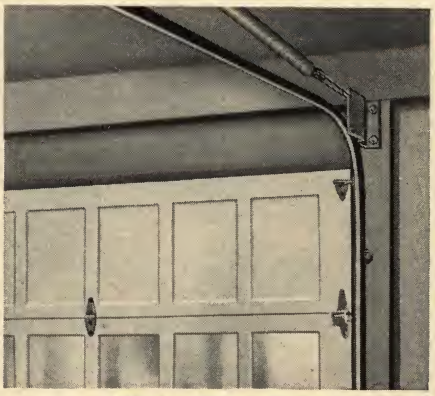
JT54R Model

Stock size RoL-TOP doors (for either one or two car openings) are designed especially for residence garage use and are built to Kinnear's recognized quality standards. They are offered in two types of counterbalance and two styles of paneling. Finest kiln-dried lumber, with Coos Bay Hardwood panels, is used. Hardware is rust protected. Tracks galvanized. Offset roller attachments provide "Keystone" weathering seal. Constructed throughout to give years of low cost, carefree service.

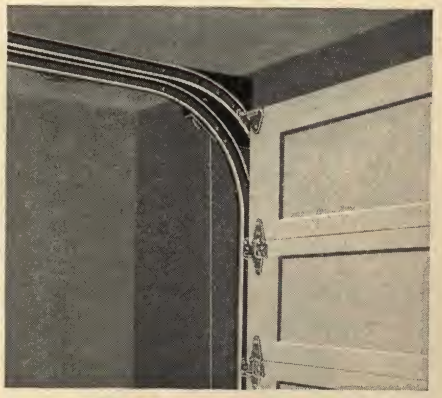
J46 Model



JT Model—Torsion Spring



J Model—Stretch Spring

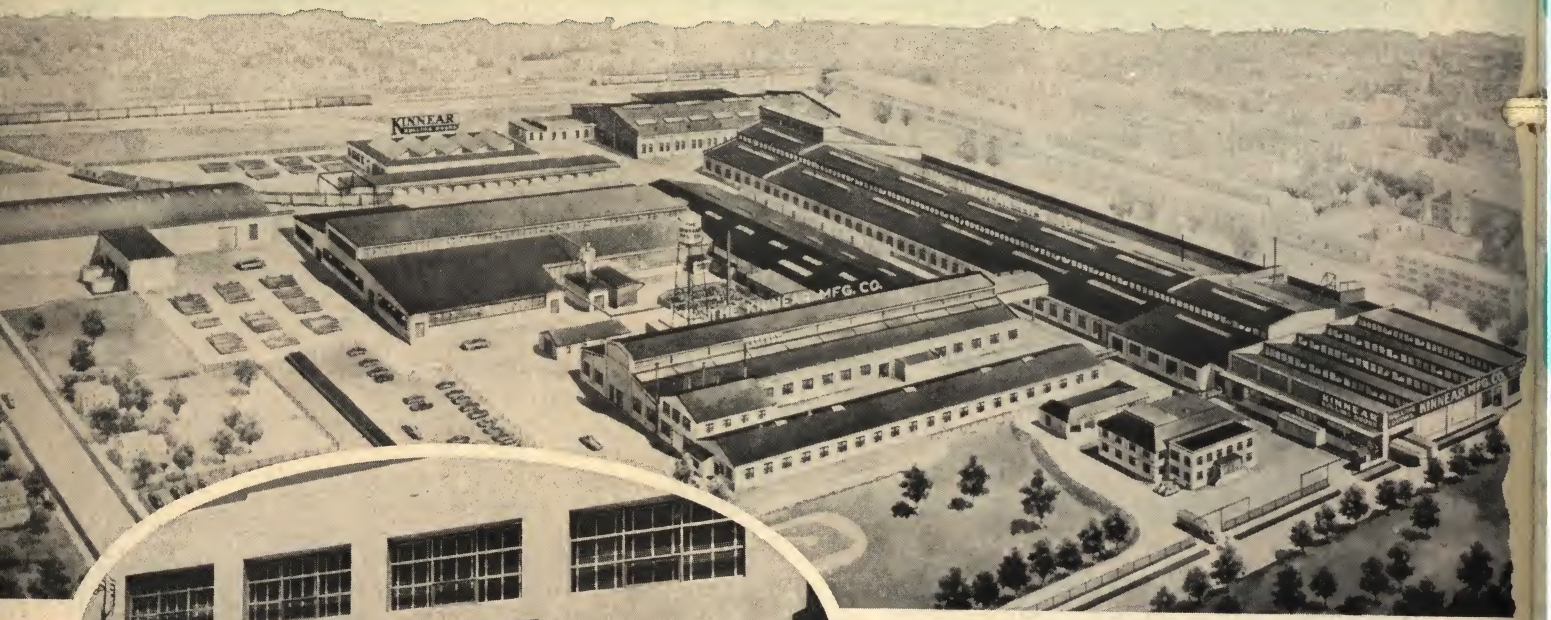


JU Model—Low Headroom

More than a half century ago The Kinnear Manufacturing Company was founded for the sole purpose of manufacturing upward opening doors and equipment of superior value. Today Kinnear is recognized as the pioneer in this field — and the originator of the interlocking slat type rolling door — with an unequalled accumulation of experience backed by integrity.

Constant development by skilled engineers has brought improved designs of doors, slats, operators, and accessories. Research has found better materials of less weight and greater strength, durability and resistance to the elements.

Kinnear's two plants contain the most up-to-date manufacturing facilities for fabricating, installing and servicing all types of doors. In conjunction with a nationwide organization of sales engineers, they afford buyers from coast to coast the type of prompt and experienced service that has made the name "Kinnear" synonymous with "Superior Doors" the world over.



Kinnear Columbus, Ohio, plant *(above)*

Kinnear San Francisco, Calif., plant *(left)*

THE KINNEAR MANUFACTURING COMPAN

COLUMBUS, OHIO

FACTORIES

COLUMBUS 16, OHIO, 820-870 Fields Ave.
SAN FRANCISCO 24, CALIF., 1742 Yosemite Ave.

BRANCH OFFICES

BALTIMORE 1, MD., 10 W. 23rd St.
BOSTON 18, MASS., 110 Worcester St.
CHICAGO 6, ILL., 150 N. Wacker Dr.
CINCINNATI 1, OHIO, 527 E. 5th St.
CLEVELAND 10, OHIO, 1217 Hayden Ave.
DETROIT 3, MICH., 12330 Hamilton Ave.
NEW ORLEANS 12, LA., 629 Hibernia Bank Bldg.
NEW YORK 17, N. Y., Room 3949, Grand Central Terminal
PHILADELPHIA 22, PA., 1934 N. Front St.
PITTSBURGH 22, PA., 2301 First National Bank Bldg.
DISTRICT OF COLUMBIA, 504 Radio Bldg., 2030 N. 16th St., Arlington 1, Va.

Offices and agents in all principal cities

16g
La

LAWRENCE

STEEL AND ALUMINUM ROLLING DOORS

SERVICE DOORS

OPERATED: push-up, chain, crank, or electrically

SHUTTERS

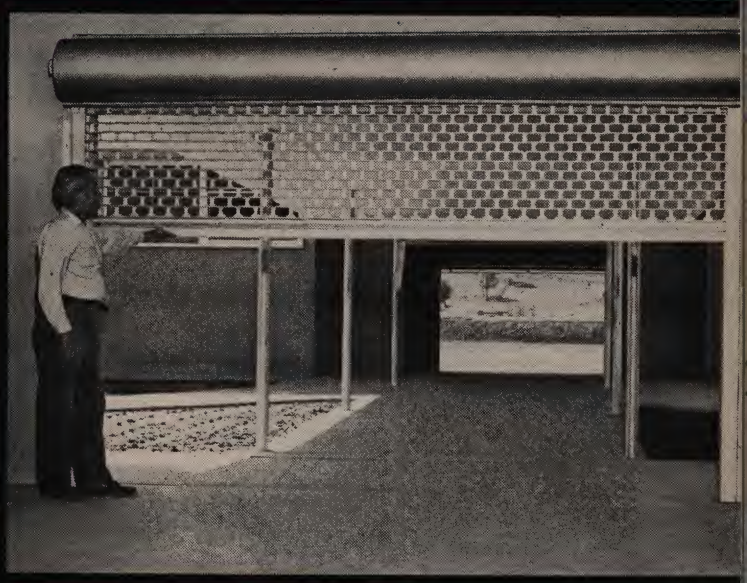
OPERATED: push-up, chain or crank

FIRE DOORS

(UL labeled) auto and non-auto manual, chain and crank operated

GRILLES

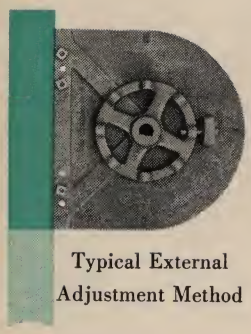
all operations, many designs



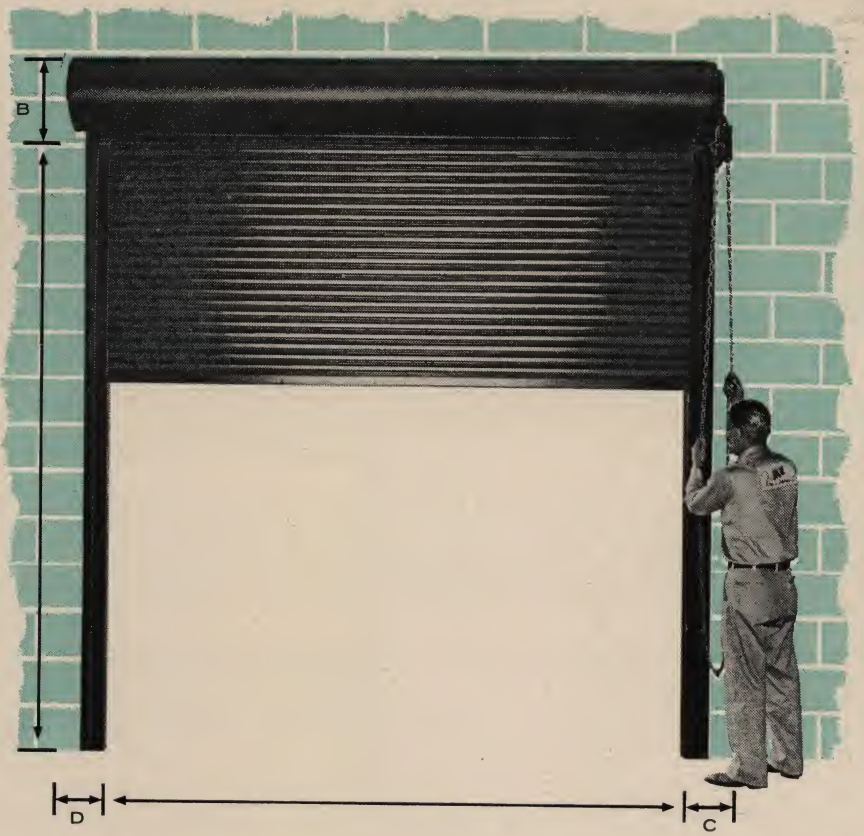
"Founded In 1925"

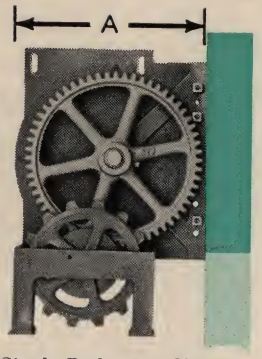
THE **LAWRENCE STEEL COMPANY**

5746-58 VENICE BLVD., LOS ANGELES 19, CALIF.
CABLE ADDRESS: **LAWRENCE, LOS ANGELES**

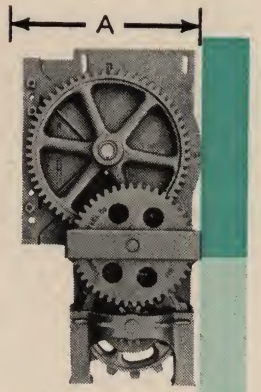


Typical External
Adjustment Method





Single Reduction Chain



Multiple Reduction Chain

Service Door Specifications

#1. CURTAIN: The door curtain shall consist of rolled, (not drawn) continuous interlocking slats of hot dipped galvanized and mill bonderized (for paint adherence) open hearth copper bearing steel. Sharp curves, crimps, galvanize blisters shall not be acceptable. Slats available for use shall be the "B" section with ½ inch crown and available in 22 and 20 gauges and the large "A" slat, a ⅞ inch crown available in 22, 20, and 18 gauges. Standard galvanizing coating is 1.25 ounces per square foot.

#2. ENDLOCKS: Alternate slats shall be secured at each end with heavy duty malleable endlocks of not less than ⅜ inches in thickness held in place with not less than two steel rivets.

#3. BOTTOM RAIL: The bottom rail shall be composed of not less than two angles with minimum legs of 1½ inches bolted back to back with not less than ¼ inch screws, bolts or rivets.

#4. BARREL: The barrel (roller) shall be of prime steel pipe and shall carry the door load with a deflection of not more than .03 inches per foot of width. The barrel shall revolve on pre-lubricated ball bearings.

#5. COUNTERBALANCE: The counterbalancing of the door weight shall be by means of an helical coil spring of oil tempered wire and shall have an external adjustment for proper counterbalancing of the door weight to give an operating pull of 25# maximum.

#6. BRACKETS: End brackets shall be of high tensile grey iron free from flaws and at least ⅜ inches in thickness secured to the guide structure with ½ inch bolts.

#7. GEARING: All gearing used on these doors shall be of high tensile grey iron made from machine cut patterns and mounted to give easy adjustability to take up future wear or meshing of replacements and modifier elements.

#8. HOOD: A neatly formed hood of not less than 24 gauge (.025) metal of equal specifications as curtain slats shall house the door roll being attached at not less than 3 points on each end bracket. The hood shall be further supported at points 8 feet on center on 5/16 x 2 mild steel or grey iron interim supports when units are in excess of 15 feet in width.

#9. GUIDES: Door guides shall be fabricated of not less than 3/16 inch thick material carefully formed into channel and mounted on heavy structural angles. Guides shall be secured to the wall by either well set fittings or deep cast bolts. Depth of guide channel shall be sufficient for 20# wind pressure or as ordered by customer.

#10. PAINTING: Each door shall receive one coat of rust inhibitive primer especially ground to afford best paint adherence characteristics. (Special type of primers available upon request).

#11. Operation shall be by means of continuous galvanized hand chain on all units over 8′-0″ x 8′-0″ and available on smaller units.

Service Door Clearance Tables

MANUAL
(No Gears)

Opening Height → Width ↓	To 6'-0"				To 7'-0"				To 8'-0"				To 9'-0"			
Dimensions in Inches	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
To 6'-0"	13	14	5		13	15	5		14	17	5		14	17	5	
To 7'-0"	13	15	5		13	16	5		14	17	5		14	17	5	
To 8'-0"	13	15	5		14	16	5		14	17	5		14	17	5	
To 9'-0"	14	17	5		14	17	5		14	17	5		Not Recommended			

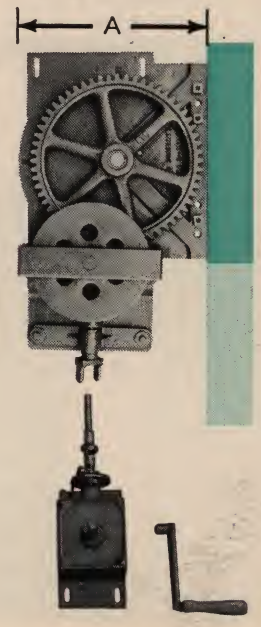
Single and
Multiple Reduction
Chain

Opening Height → Width ↓	To 8'-0"				To 10'-0"				To 13'-0"				To 16'-0"				To 24'-0"			
Dimensions in Inches	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
To 8'-0"	14	17	7½	5	14	17	7½	5	17	19½	8	6	17	21	8	6	.....			
To 12'-0"	14	17	7½	5	17	19½	7½	5	17	19½	8	6	17	21	8	6	17	21	8	6
To 16'-0"	14	17	8	6	17	19½	8	6	17	21	8	6	17	21	8	6	22	25	9	7
To 20'-0"	17	21	8	6	17	21	8	6	17	21	8	6	17	21	8	6	22	25	9	7
To 28'-0"	17	21	9	7	17	22	9	7	22	25	9	7	22	25	9	7	.....			

Single and Multiple
Crank or Thru the Wall
Operation (#1180)
See Below

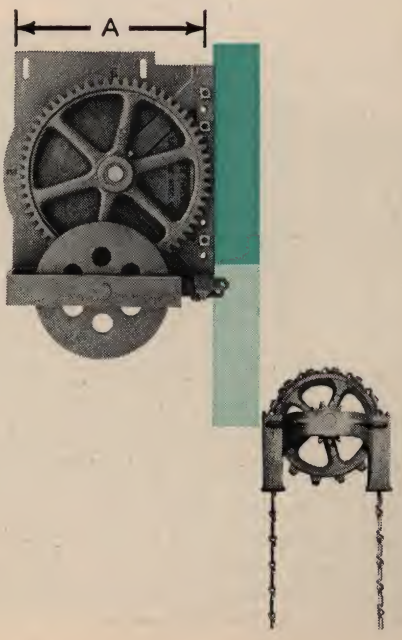
Opening Height → Width ↓	To 8'-0"				To 10'-0"				To 13'-0"				To 16'-0"				To 24'-0"			
Dimensions in Inches	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
To 8'-0"	14	17	10½	5	14	17	10½	5	17	19½	11	6	17	21	11	6	.....			
To 12'-0"	14	17	10½	5	17	19½	10½	5	17	19½	11	6	17	21	11	6	17	21	11	6
To 16'-0"	14	17	11	6	17	19½	11	6	17	21	11	6	17	21	11	6	22	25	12	7
To 20'-0"	17	21	11	6	17	21	11	6	17	21	11	6	17	21	11	6	22	25	12	7
To 28'-0"	17	21	12	7	17	22	12	7	22	25	12	7	22	25	12	7	.....			

Blanks (———) please refer to factory.
*Reverse C&D if chain operation desired at left jamb



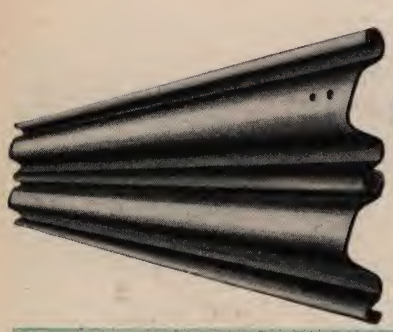
Crank

Thru the Wall



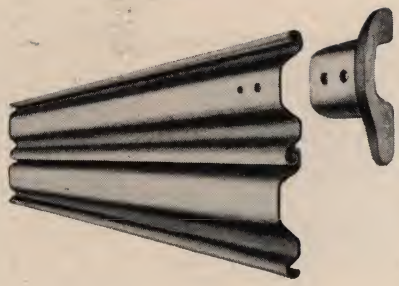
Service "Duty" Slats

A for "Able"



Lawrence "Able" slats (left) have a 7/8" crown at 2 5/8" centers in 22, 20, and 18 gauge hot dipped galvanized steel for doors over 13' wide. "Baby" slats (right) have a 1/2" crown at 2 1/8" centers in 22 and 20 gauge steel and aluminum. Additional slats are described concerning shutters on page 11.

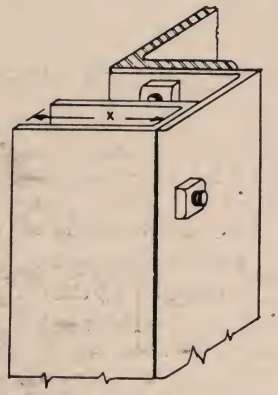
B for "Baby"



Bottom Rail and Guide Data

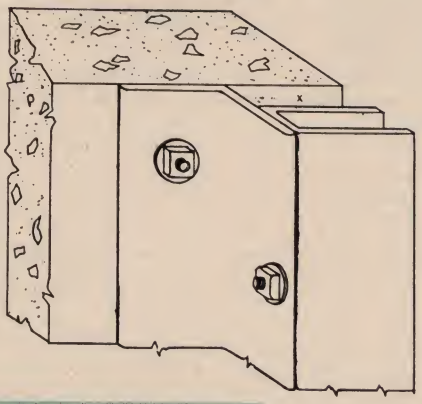
On the right is the standard bottom rail used in Lawrence service doors. A neat meeting with the sill makes these units effective protection in fire and weather trials. Offset or sloping construction and sponge rubber cored neoprene weatherstripping meet special conditions.

Left below is the guide structure as installed on steel buildings. Right below is the same equipment as installed on masonry construction. The table in the center gives the recommended standard channel depths (X) for various opening widths based upon 20# wind pressures.



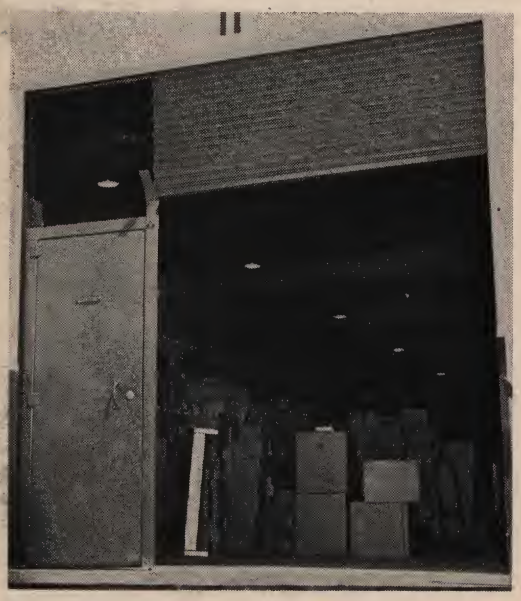
Opening Width	Channel Depth	Distance to Bolts
0-11 feet	2 1/2"	4 1/4"
11-20	3"	4 1/2"
20-26	3 1/2"*	5 1/2"
26-30	4"*	6"

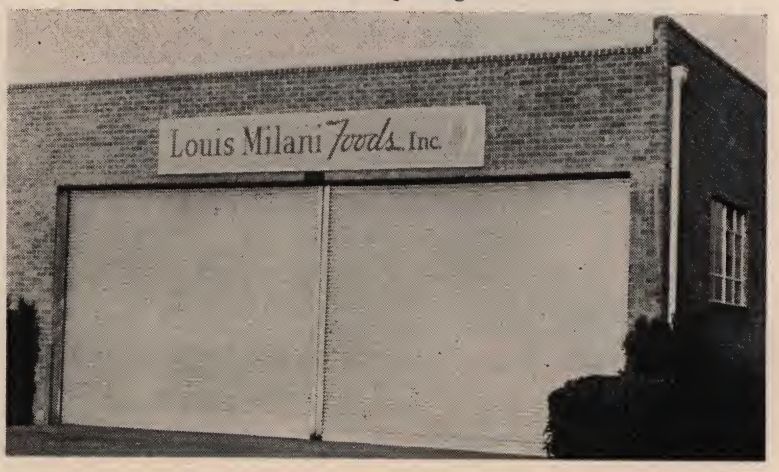
*Windlock channel of one size smaller may be used in close places.



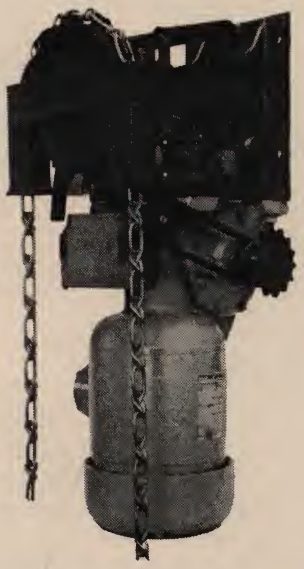
Alternates

Two types of alternate construction are pictured below. Left is a photo of a 2'6" x 6'8" hollow metal pilot door. 3'0" x 6'8" units, are available together with windows, mail slots and louvres. Right is the exterior view of disappearing mullion installation. This feature is valuable in reducing wide opening door costs and permitting increased traffic control through wide (over 35') openings.





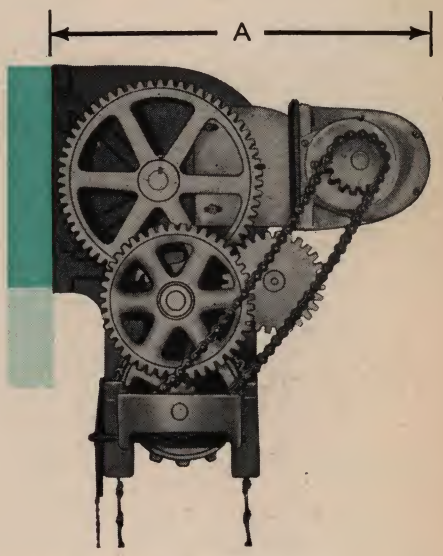
Electric Operators



"DIPLOMAT" — Further information upon request

Electric Motor Sizes

Door Size	Model	Motor Size
10'-0" x 10'-0"	110SE	⅓ HP.
12'-0" x 12'-0"	150SE	½ HP.
16'-0" x 16'-0"	150ME	¾ HP.
20'-0" x 18'-0"	210ME	1 HP.



"AMBASSADOR" (#538 as shown on multiple reduction assembly)

Electric Operator Specifications

GENERAL: The rolling doors noted in the schedule or on the plans as electrically operated shall be subject to the following additional specifications:

ELECTRICAL EQUIPMENT

1. Motor: The motor shall be a N.E.M.A. standard gear head motor of recognized motor manufacture equipped with an enclosed continuous duty solenoid disc brake. The motor shall be of sufficient horsepower and torque output to operate the door easily at 40 feet per minute.
2. Starter: Starter equipment shall be a N.E.M.A. standard reversing magnetic motor starter of proper size and rating for the motor. It shall further be equipped with reset overload protection.
3. Limit switch: The limit switch as well as the motor starter and push button shall be the product of a recognized electrical equipment manufacturer. It shall be gear driven and adjustable from outside the case to stop the door at the full open and full closed positions automatically.
4. Push button: The push button shall be the three button type enclosed within its own case and shall be marked open, close and stop, for opening, closing and/or stopping the door at any point of its travel.

MECHANICAL: The mechanical features of the electric operator shall provide that the hand operation is entirely separate from the electrical equipment. There shall be a clutch assembly, operatable within easy reach of the floor, from the hand to the electric operation with a safety neutral between mechanically preventing the electric operation of the hand chain. The continuous galvanized hand chain auxiliary shall by pass the high speed reduction gearing in the motor for greater hand chain speed of operation and shall require not more than 35# pull. The timing of the limit switch shall not be affected during hand operation nor shall the removal of any or all of the electrical equipment affect the hand operation of the door.

Clearance Table for Ambassador

Opening Height → Width ↓	To 8'-0"				To 10'-0"				To 13'-0"				To 16'-0"				To 24'-0"			
Dimensions in Inches	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
To 8'-0"	25	17	10½	5	25	17	10½	5	28	19½	11	6	28	21	11	6	.....			
To 12'-0"	25	17	10½	5	28	19½	10½	5	28	19½	11	6	28	21	11	6	28	21	11	6
To 16'-0"	25	17	11	6	28	19½	11	6	28	21	11	6	29	21	11	6	35	25	12	7
To 20'0"	28	21	11	6	28	21	11	6	28	21	11	6	29	21	11	6	35	25	12	7
To 28'-0"	28	21	12	7	29	22	12	7	35	25	12	7	35	25	12	7	.....			

Angle Sizes

Doors to 14′ wide
1½″x1½″x3/16″
Door to 20′ wide
2″x1½″x3/16″
Doors to 24′ wide
2½″x1½″x3/16″

Balanced Bottom Rails

The table to the left indicates the angles used in the assembly of the balanced bottom rail which in meeting the floor seals off fire effectively. These angles are so assembled that one side may expand without the other.

Automatic Closing Fire Door Specifications

GENERAL:

A. All automatic closing fire doors shown on the plans shall be as manufactured by the Lawrence Steel Company of Los Angeles.

B. The fire doors shall be equipped with a positive governor to arrest the speed and weight of the automatic closing doors. This governor, inactive during the service use of the door, shall further act as a warning device of the doors' automatic closure.

C. The construction of the door shall include mechanisms to force the initial downward travel of the curtain preventing failures due to lack of use. This mechanism shall retain sufficient counterbalance to permit the opening of the door (on units up to 8′0″ x 8′0″) for purposes of escapement, reclosing automatically after use.

D. All doors shall be labeled or certified by *Underwriters* in accordance with the exposure involved.

CURTAIN: The curtain shall consist of rolled continuous interlocking slats of hot dipped galvanized and mill bonderized (for paint adherence) open hearth copper bearing cold rolled steel. The gauge and crown of the slats shall be according to *Underwriters*' tables for the size of door involved. Each slat will have a flame baffled malleable endlock at each end.

BARREL: The helical coil spring of oil tempered wire which will counterbalance the door weight to easy operation shall be housed with a barrel of prime steel pipe having a maximum deflection of .03 inches per foot. Barrel plug and spring mounting fittings shall be best grade cast iron.

BRACKETS: All brackets shall be of high tensile grey iron free from flaws and neatly machined. Similarly important castings throughout the door construction shall be of grey iron or brass as needed for maximum efficiency of operation and life. Gear patterns shall be of machine cut type

BEARINGS: The door shall be equipped with lifetime lubricated ball bearing and shall be of sufficient size and strength to carry the door load without distortion or locking.

GUIDES: The entire guide structure shall be composed of materials 3/16 inches in thickness or greater. The neatly formed channel shall be bolted to the guide angle at points not greater than 12 inches on center. The guides shall have provision for mounting to the wall at 18 inch centers, with ⅜ inch bolts or better.

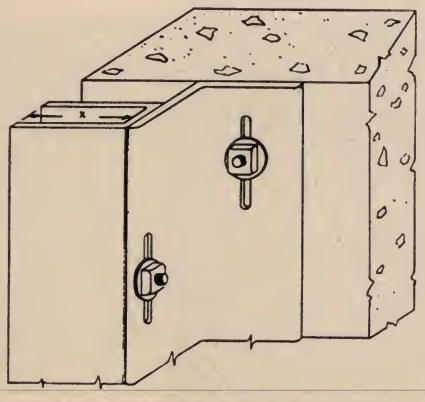
HOOD: The hood shall compose the main cover of the roll having further a secondary flame stop inside held open and release by its own independent fusible linkage. Both the hood and flame stop shall be of 24 gauge or better material similar to the curtain specifications. The hood shall be attached to the wall apart from the 3 normal attachments to each bracket.

PAINT: The entire door and its mechanism shall receive a shop coat of rust inhibitive paint. Fusible linkage is never painted.

GUARANTEE: All Lawrence rolling doors are guaranteed for a period of one year against defective workmanship or materials.

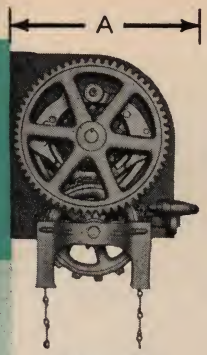
Precision Guides

Pictured at the right is a section of the guide structure as produced by Lawrence. The table at right gives the inside depth of the guide channel and the distance to the wall bolt.



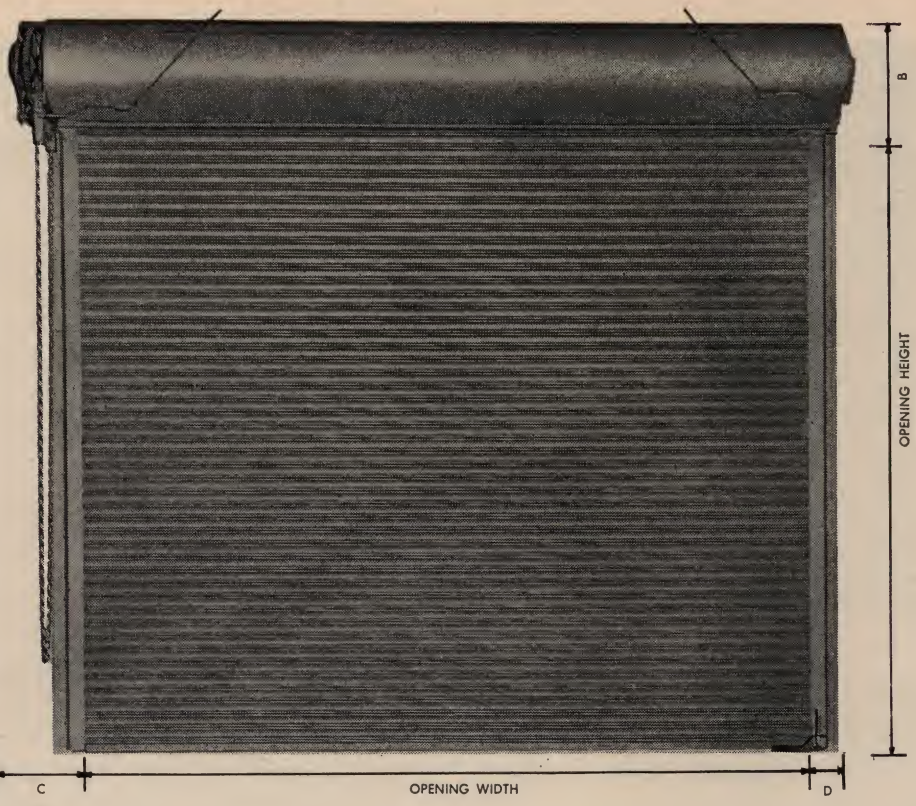
Guide Table

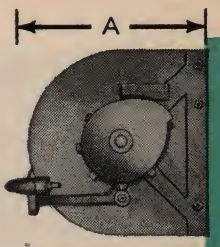
Width	Depth	Bolt
0′-4′	2″	3½″
4′-8′	2½″	4″
8′-12′	3″	4½″
12′-16′	3½″	5¼″
16′-20′	4″	6″
20′-24′	4½″	7″



Model 711
Single Chain

Model 723
Multiple Reduction
Chain

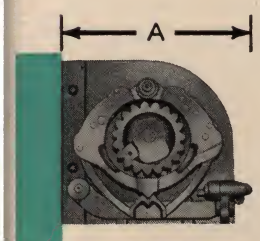




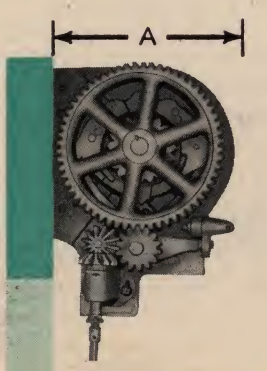
Single Eccentric

Opening Height → Width ↓	To 6′-0″				To 8′-0″				To 10′-0″				To 12′-0″				To 14′-0″			
Dimensions in Inches	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
To 4′-0″	15	16		7	15	17		7	NOT RECOMMENDED OVER 8′-0″ HIGH											
To 8′-0″	15	17		7½	15	17		7½	18	18	8	7	18	19	8	7	18	19	8	7
To 10′-0″	18	17½	8	7	18	18	8	7	18	19	9	7	18	20	9	8	18	20	9	8
To 12′-0″	18	18	9	7	18	19	9	7	18	20	9	8	18	20	9	8	18	20	9	8
To 14′-0″					18	20	9	8	19	20	10	8½	19	22	10	8½	19	22	10	8½
To 16′-0″					19	21	11	9	19	21	11	9	20	22	11	9	20	22	11	9
To 18′-0″					20	22	11	10	20	22	11	10	20	23	11	10	20	23	11	10

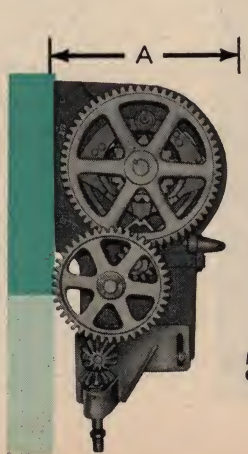
*Reverse C & D If Chain Operation Desired at Right Jamb



MANUAL

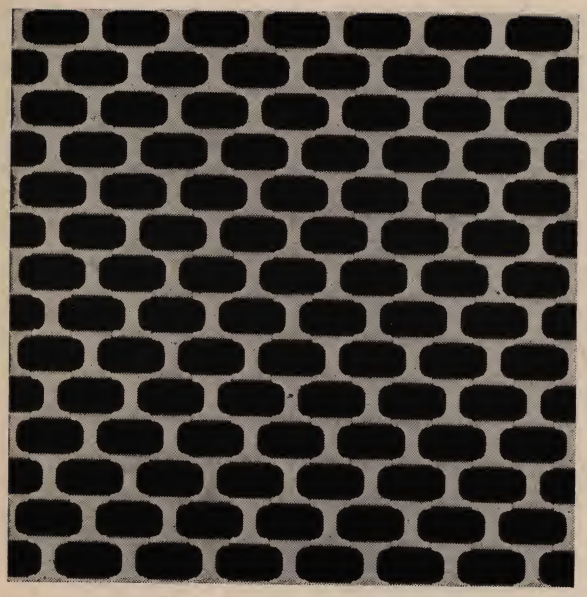


SINGLE CRANK



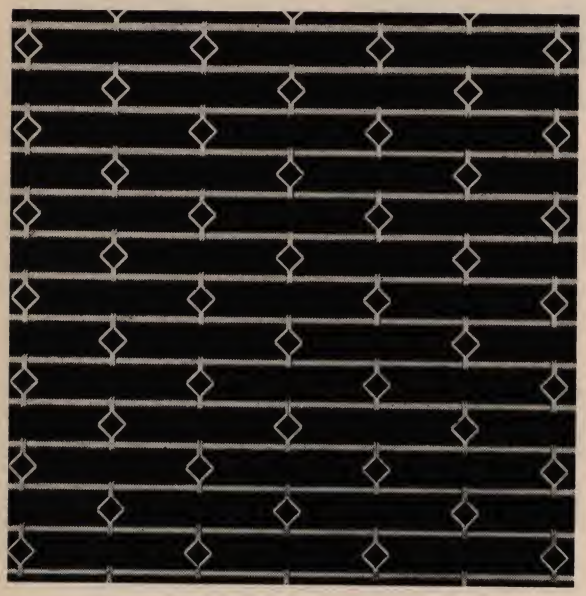
MULTIPLE
CRANK

Crank operated fire doors (as pictured to the left) are not specifically covered in the table above. To adjust table, add 6″ to "C" for crank mechanism clearance.



The "Customized" Consul Grille

Pictured to the left is the 1/1 pattern of our now famous Consul Grille. The usual material is 20 gauge hot dipped galvanized and mill bonderized copper bearing cold rolled strip steel such as in our line of service and fire doors. Also available in aluminum (mill, alumilited, and color alumilited finishes), brass and bronze. The self spacing links are set on 5/16″ cadmium plated cold finished rods with the links themselves being 2″ wide. Rod center is 2″ but vertical opening height is reduced to 1⅝″ thanks to the link design.



The Revised Offset Diamond Grille

Here is one of our older patterns but with a new look. The links are now made up of 2 pieces of formed aluminum or steel spaced out with 4″ long tubes, all on the usual cadmium plated 5/16″ rods. This grille as revised is now within the usual competitive pricing. This revision makes quality control far better than is found with the casting system as well as increasing the versatility of the types of materials used. A variation of this grille known as the Offset Diamond Bar Grille is shown in our master M 60 Catalog. See post card enclosure for same.

THE ROYAL GRILLE

Here is the latest of our grille designs available at this writing. The Photo at the top of the opposite page shows this grille used in fixed and sliding entrance installations. This unit is also a self spacing type grille design based on ⅜″ rods spaced at 2½″ O.C. The links are held from spreading with the overlay clip which increases the beauty of the design itself. Aluminum is standard on this design; however, steel, brass, etc., are also available on reasonable delivery.

Other Patterns and Designs

We have also the Offset Diamond Bar, Offset Bar and Double Offset Bar patterns which might interest the reader. The post card enclosed will bring our latest Master Catalog wherein these are pictured and described fully.

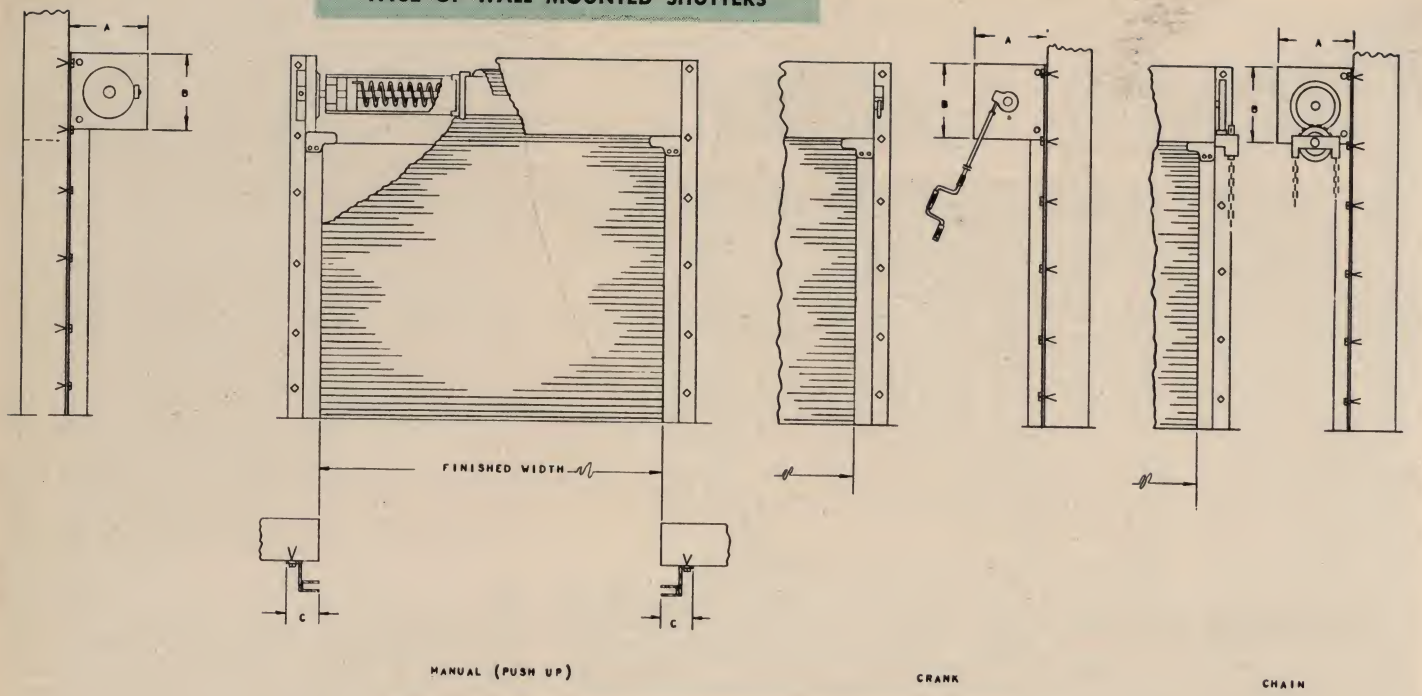
Introducing
The Lawrence Royal Grille

Pictured above is part of an installation of our newest design. This pictured installation is entirely in alumilited aluminum. This grille was used as the entire entrance face of the school with rolling grilles, fixed grille panels and a sliding grille panel, the latter of which are shown here.

This Royal Grille design features 3/8" rods vertically spaced at 2½" with the grille links with the overlay clip occurring at approx. 3½" O.C. This grille design can be seen with two others on the page opposite and we have others. For those customers with our older and discontinued patterns, please be advised that spare parts are maintained for the old units.

The Lawrence grilles can be supplied with cremone type locking for use with cylinders from your regular suppliers (this type is built into the bottom rail assembly rather than the grille pattern being interrupted) or a dead bolt unit mounted on the guide channel (suitable for face of wall type installations only) which can be operated from either side. Complete information on these extras will be found in our Master Catalog.

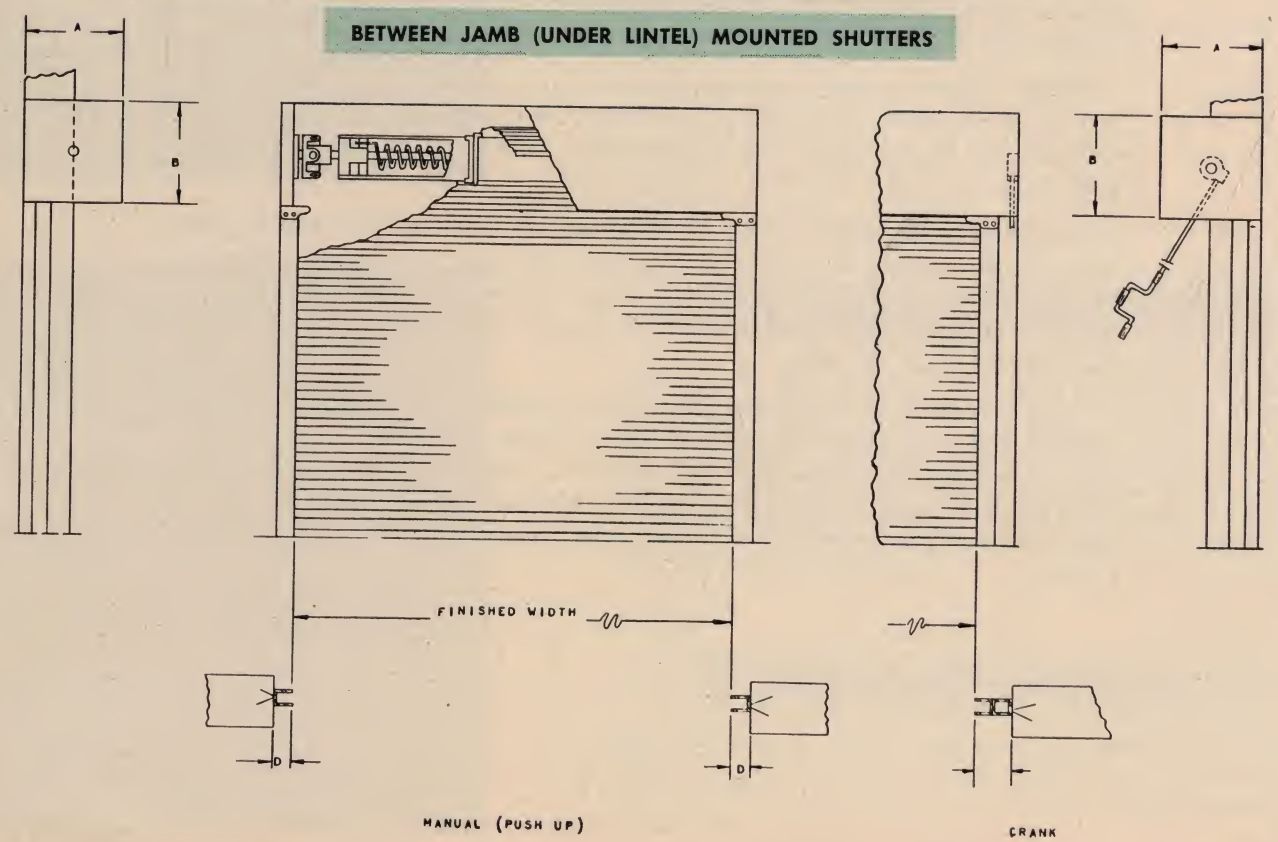
FACE OF WALL MOUNTED SHUTTERS



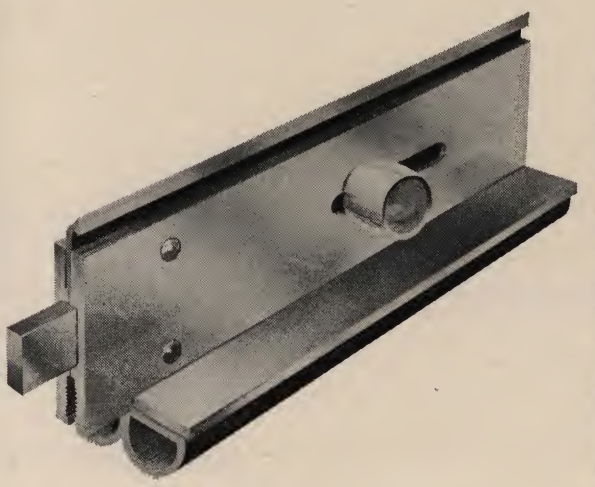
Clearance Schedule on Shutters

Opening Height → / ↓ Width	To 3'0"				To 4'6"				To 7'0"			
	A	B	C	D	A	B	C	D	A	B	C	D
To 3'0"	8¼"	10"	3¾"	3¾"	8¼"	10"	3¾"	3¾"	10¼"	12"	5¼"	5¼"
To 8'0"	8¼"	10"	4¼"	4¼"	8¼"	10"	4¼"	4¼"	10¼"	12"	5¼"	5¼"
To 11'0"	10¼"	12"	4½"	4½"	10¼"	12"	4½"	4½"	10¼"	12"	5¼"	5¼"
To 15'0"	10¼"	12"	5¼"	5¼"	10¼"	12"	5¼"	5¼"	See Page 2 for Service Doors			

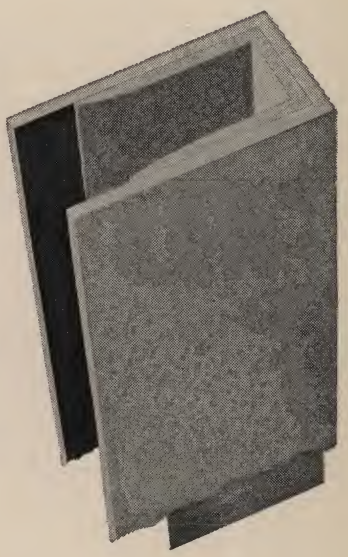
BETWEEN JAMB (UNDER LINTEL) MOUNTED SHUTTERS



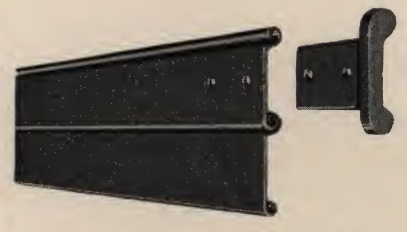
The smiling lady above is banked by 8 Lawrence Steel Rolling Shutters which protect the ticket counters of the Westgate Ball Park, San Diego, California. This installation features the 1¼" flattie slat in aluminized steel which requires no finish painting. These units are also equipped with our new extruded bottom rail described below.



To the left is a section of our new shutter bottom rail assembly used on aluminized steel, rolled and extruded aluminum shutters. The concealed slide lock mechanism and the blending grey neoprene weatherstripping are only two of the fine features of Lawrence Shutters. Another feature is shown to the right consisting of our new "Marr guide cushion" which is a replaceable light grey neoprene liner for the guide channels to eliminate most of the operational noise of the shutter during opening and closing and to reduce to nil the rattle sometimes experienced when the shutter is buffeted by wind gusts. Similar materials are being developed for service doors and grilles.

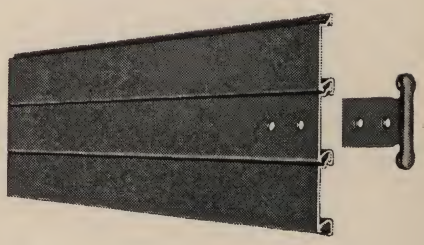


Shutter Slats



"F" FLATTIE

Here are two of the most widely used shutter slats. The service door "B" slat is also used. Both the B and the Flattie (1¼" centers) slats are available in galvanized or aluminized steel and the regular aluminum. The Mary slat is the latest addition with its pleasant 1¼" flat faced centers. The Mary slat is available in extruded aluminum only. Aluminum slats, either rolled or extruded, are available in mill finish, or buffed and alumilted, or in color alumilite finishes.



"M" MARY

LAWRENCE

STEEL AND ALUMINUM

ROLLING SHUTTERS

SERVICE DOORS

OPERATED: push-up, chain crank, or electrically

SHUTTERS

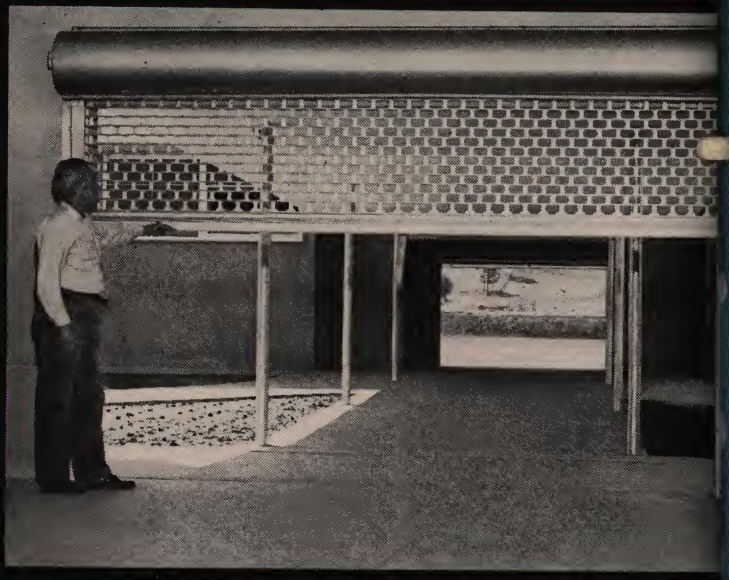
OPERATED: push-up, chain or crank

FIRE DOORS

(UL labeled) auto and non-auto manual, chain and crank operated

GRILLES

all operations, many designs



"Founded In 1925"

THE **LAWRENCE**
STEEL COMPANY

5746-58 VENICE BLVD., LOS ANGELES 19, CALIF.
CABLE ADDRESS: LAWRENCE, LOS ANGELES

Catalogue No. G-60—A.I.A. File No. 16-D

MAHON

Rolling STEEL DOORS

grilles and shutters

Hand Operated • Mechanically Operated • Power Operated Underwriters' Labeled and Non-Labeled Types to Meet Every Door Requirement

•

THE R. C. MAHON COMPANY • Detroit 34, Michigan
PLANTS in DETROIT and LOS ANGELES • SALES OFFICES or REPRESENTATIVES in ALL PRINCIPAL CITIES

There's a Mahon Rolling Steel Door to Meet Every Requirement

Mahon Rolling Steel Doors, Grilles and Shutters are manufactured from high grade materials by master craftsmen whose fine workmanship is clearly evidenced in the appearance of the finished product. They are produced in every Standard and Underwriters' Labeled type to meet every requirement of industrial or commercial use.

Standard Doors

Mahon Standard (nonlabeled) Rolling Steel Doors are made with interlocking slats rolled from cold rolled, hot-dipped Galvanized Steel (1.25 Ounces of Zinc per Sq. Ft., A.S.T.M. Std.), Stainless Steel, Aluminum or Bronze. These interlocking slats are designed to provide maximum rigidity and are fitted with malleable iron endlocks to provide a wearing surface and insure free, easy operation. The tubular roller shaft, to which the door curtain is attached, is exceptionally rigid and operates in appropriate bearings fitted into the supporting end brackets.

The weight of the door curtain is counterbalanced by means of oil-tempered, helical, steel springs located inside the roller shaft. The torque-tension of these springs is readily adjustable to provide perfect balance. This feature, particularly important in all types of manually operated doors, safely maintains the position of the door curtain at all times, and, in the case of electrically operated doors, relieves the load on the operating mechanism.

Wicket or Service Door

Mahon Standard Rolling Steel Doors can be furnished with a small wicket or service door in the lower corner of the door opening. These small wicket or service doors and their frames are hinged to the regular guides and may be swung clear of the opening when the Rolling Door is opened.

Intermediate Hinged, Sliding, or Removable Posts

For detailed information and design data, see Page 13.

Windlocks

All Mahon Standard Rolling Steel Doors can be equipped with Windlocks to prevent the door curtain from pulling out of the guides due to excessive wind pressure. In certain localities, and under certain conditions of exposure to wind, Heavier Gauge Curtain Slats in addition to the Windlocks will be required. They should be specified when deemed necessary by architects or purchasing agencies. Normally, Mahon Doors under 16'-0" in width do not require Windlocks. Special end brackets and guide channels are provided to accommodate the Windlock Lugs which are an integral part of an endlock attached to the interlocking curtain slats at suitable intervals between the regular malleable iron endlocks. See cuts on Page 3.

Mahon Special Weathering

Mahon engineers have developed special weathering features for Mahon Standard Rolling Steel Doors which provide a more effective seal at jambs, sill and lintel.

Doors equipped with Special Weathering are fitted with Continuous, Flat Endlocks which operate between two closely fitting metal slide bars on the inside of the guide channels. This forms a double barrier against wind passage; thereby providing effective weathering at the jambs. Mahon Special Weathering Endlocks can also be furnished with Windlock Lugs—see Cut, Page 3. These can be installed on every Curtain Slat, or as alternates at intervals specified.

Two types of bottom bar seals are available for weathering at the sill: one is all metal, and consists of two angles back to back with a ½ in. step-down over the sill on the weather side. The other, is a compressible rubber seal attached to the standard double-angle bottom bar—See cuts under Mahon Special Weathering on Page 3.

Installation

Mounting on the face of the wall with guide channels clear of the door jambs is general practice. This method allows 100% clear opening and provides protection for the guides. However, in many instances where head room above the lintel is limited, or other conditions prohibit "face of wall" mounting, Mahon Rolling Steel Doors can be furnished for installation in the door opening between jambs. In installations of this type the height of the door opening is decreased, due to the insertion of the roller shaft housing below the lintel—the amount depending upon the height of the door opening—and the opening width is also decreased due to the location of the guide channels on the jambs. These objections may be eliminated in new construction, where "between jambs" installations are desired, by providing recesses for guides and space for the roller shaft housing and operating mechanism in the original plans.

Operation

Manual and Mechanical Operation

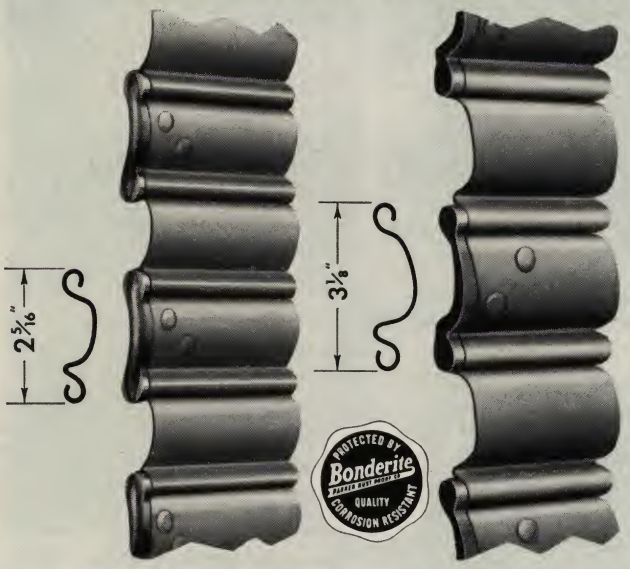
Mahon Rolling Steel Doors can be furnished equipped with handles on the bottom rail, for manual operation, or Chain-Gear or Crank-Gear Operators for mechanical operation. These Mechanical Operators are available in either Right or Left Hand.

All Mahon Rolling Steel Doors are perfectly balanced by means of an adjustable counterbalancing mechanism.

MAHON TRANSPARENT WINDOWS

Mahon Standard Rolling Steel Doors can be furnished with one or more Transparent Windows at eye level in the rolling curtain.

MAHON STANDARD INTERLOCKING SLATS

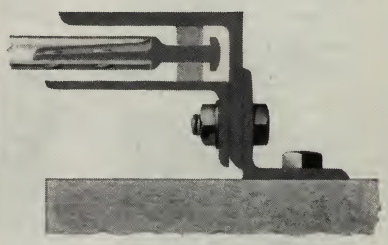


Slat No. 2—6.21 Slats Per Ft. Slat No. 3—4.41 Slats Per Ft.

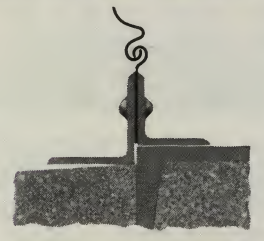
Note arrangement of Malleable Iron Endlocks installed on Curtains of Mahon Standard Rolling Steel Doors

MAHON SPECIAL WEATHERING

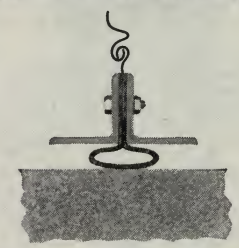
Mahon Interlocking Slat No. 3 Fitted with Continuous Flat Endlocks for Special Weathering



Cross Section of Guide Channel Showing Continuous Flat Endlocks operating between Weathering Bars

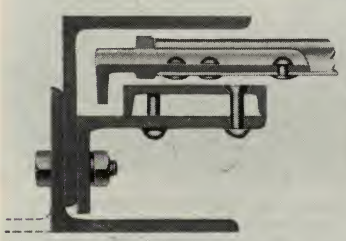


Cross Section of Bottom Bar and Sill Showing Special Weathering Arrangement



Bottom Bar Showing Compressible Rubber Seal Weathering at the Sill

MAHON WINDLOCKS



Cross Section of Special Guides Furnished with all Mahon Doors Equipped with Windlocks

Mahon No. 3 Interlocking Slats Showing Application of Combination Endlock and Windlock

Manually operated doors, equipped with handles on the bottom rail, can be easily opened or closed by one person without effort. For installation details see Pages 8, 9, 10 and 11.

The Chain-Gear Operator consists of an endless chain, sprocket, and a series of gears on the roller shaft bracket. When installed on Mahon Underwriters' Labeled Rolling Steel Doors, the Chain-Gear Operator is equipped with an automatic release (See Page 5) which disengages it simultaneously with the release of the automatic closing mechanism in case of fire. For typical installations of each see Pages 11, 12 and 13.

The Crank-Gear Operator consists of a hand crank, gear box and a series of gears on the roller shaft bracket. The crank can be located on either side of the wall, or, the operator can be furnished for operation of the door from both sides of the wall if desired. This operator, when furnished with Underwriters' Labeled Doors, is also equipped with an automatic release (See Page 5) which disengages it simultaneously with the release of the automatic closing mechanism in case of fire. For typical installations see Page 14.

Power Operation

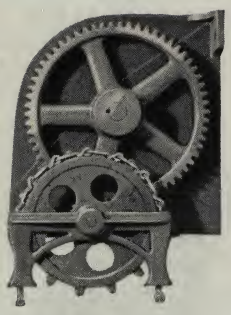
Mahon Power Operators are available in three types: Standard Type 920-P, Special Type 930-P, and Special Type 910-P. The Mahon Standard Power Operator, Type 920-P, is mounted on an independent bracket and can be located so as to meet virtually any requirement or condition imposed by physical obstructions adjacent to the door opening.

Special Power Operator, Type 930-P, is essentially the same as Type 920-P except that it conforms to JIC Standards, and is, consequently, more expensive than the Mahon Standard Operator.

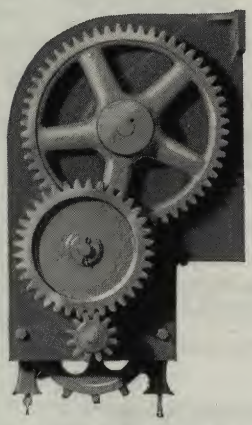
Mahon Special Power Operator 910-P is a more expensive unit built right into the roller shaft end bracket and em-

MAHON ROLLING STEEL DOORS

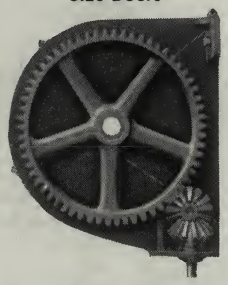
UNDERWRITERS' LABELED OR NON-LABELED TO MEET EVERY REQUIREMENT



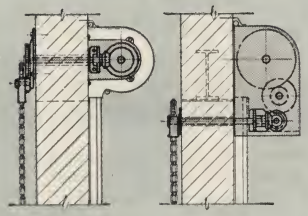
Mahon Simple Chain-Gear Operator for Small Doors

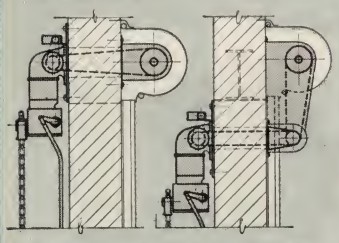


Mahon Compound Chain-Gear Operator for Larger Size Doors

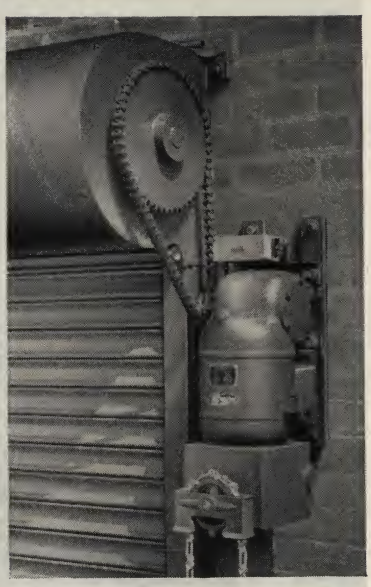


Mahon Simple Crank-Gear Operator for Small Doors

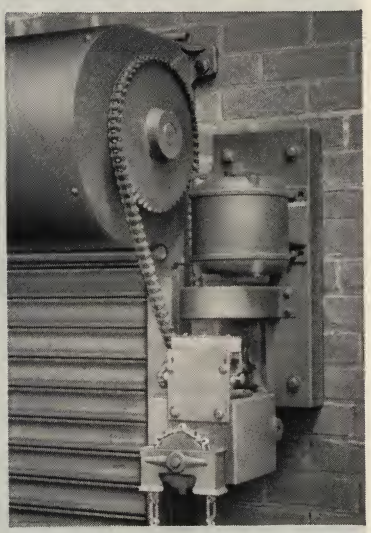




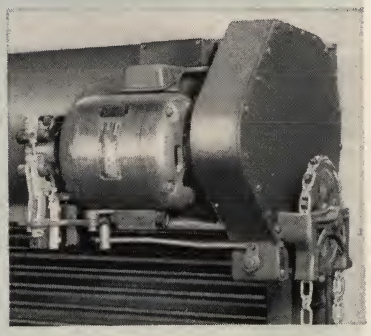
Typical Through-the-Wall Operating Devices Available with Mahon Mechanically and Power Operated Rolling Steel Doors Mounted on the Outside Face of Exterior Walls.



Mahon Standard Power Operator 920-P. Mounting on an Independent Bracket Allows Flexibility in its Location in Relation to the Door. Available in Right or Left Hand.



Mahon Special Power Operator 930-P is essentially the same as 920-P except that it conforms to JIC Standards. Available in Right or Left Hand.



Mahon Special Power Operator 910-P. This Integral Bracket Operator, with its exclusive operating features, can be substituted for Mahon Standard Power Operator 920-P at EXTRA COST. Available in Right or Left Hand.

bodying some very desirable features not common to other types of power operators.

The Standard Power Operator, Type 920-P, consists of a mounting bracket, a single reduction worm gear-head motor providing an additional safety locking feature, an interlock, an automatic reversing switch, a limit switch, a solenoid brake, control switches, and an auxiliary chain-gear operator built as an integral part of the power operator. In case of failure in the electrical system, the auxiliary chain-gear operator can be instantly engaged by a simple movement of an engaging lever by means of a handle located within easy reach from the floor.

The Special Power Operator, Type 930-P, is essentially the same as the Standard Power Operator, Type 920-P, except that the motor and worm reducer are separate units to conform to JIC Standards, and the fact that the motor can be removed without interfering with the operation of the door by means of the auxiliary chain-gear operator. All other functional elements are identical.

Mahon Special Power Operator, Type 910-P, is a very compact operator and is so designed as to require no additional head room and a minimum of side clearance. It is an integral part of the roller shaft end bracket, and consists of an electric motor, a series of cut steel spur gears—***which are enclosed in an oil-tight gear housing and run in a bath of oil***—an interlock, a limit switch, a brake, and an auxiliary chain-gear operator built as an integral part of the power operator. In case of failure in the electrical system, the power unit can be instantly disengaged, and the auxiliary chain-gear operator engaged, by simple movement of a throw-out lever located within easy reach from the floor. ***The electric motor can be completely removed from this operator without interfering with the operation of the door by means of the auxiliary chain-gear operating mechanism.***

All Mahon Standard and Special Power Operators are available in right and left hand. They are controlled by push button switches, including "Open" and "Close" buttons, and an emergency "Stop" button. Doors are set in motion by pushing either the "Open" or "Close" button, and are automatically stopped in the open or closed position by means of a limit switch and solenoid brake. The door curtain may be stopped in any position, however, by pushing the emergency "Stop" button. For installation details see page 15.

Safety Bottom Bars, which stop the downward movement of the door curtain instantly upon contact with any obstruction, can be furnished with Mahon Power Operated doors.

NOTE: In the installation of Mahon Power Operated Doors, all wiring and conduit will be furnished by others, but must be installed in accordance with the wiring diagram furnished by The R. C. Mahon Company.

Specifications

Complete Specifications covering Mahon Rolling Steel Doors, Grilles and Fire Shutters appear on page 6 for the convenience of architects and other specifying agencies.

NOTE: The R. C. Mahon Company reserves the right to make changes in specifications without notice.

Mahon Underwriters' Labeled Rolling Steel Doors

Mahon Underwriters' Labeled Doors are approved by the Underwriters' Laboratories, Inc., within certain limitations in total areas as specified by the Underwriters for various opening classifications. These limitations are based on requirements of the Underwriters' Laboratories, Inc., and apply to all fire doors of this type.

FIRE WALL DOORS, CLASS "A" – Approved for Fire Wall Openings not exceeding 120 sq. ft. in area.

VERTICAL SHAFT DOORS, CLASS "B" – Approved for Vertical Shaft Openings not exceeding 120 sq. ft. in area.

CORRIDOR AND ROOM PARTITION DOORS, CLASS "C" – Approved for Corridor or Room Partition Openings not exceeding 120 sq. ft. in area.

EXTERIOR DOORS, CLASS "D" – Approved for Exterior Wall Openings not exceeding 120 sq. ft. in area.

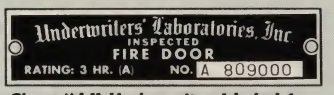
NOTE: Underwriters' Certificate – For 100% rating, neither dimension of the above listed openings may exceed 12′0″. Mahon Rolling Steel Fire Doors, however, can be manufactured in strict accordance with the Underwriters' specifications and furnished with an "Underwriters' Certificate" for larger openings up to 24′0″ x 24′0″ where fire protection is desirable, or where insurance ratings are involved.

Underwriters' Labeled Rolling Steel Doors normally remain open. They are equipped with an automatic closing mechanism and a release device which is actuated by fusible links in case of fire. These doors, however, can be operated in general service, being fitted with handles on the bottom rail for manual operation, or equipped with Chain-Gear or Crank-Gear Operators for mechanical operation. In the event of fire, the automatic closing mechanism is released by means of fusible links and the door closes—the closing speed being controlled by an oscillating governor. A flame stop, also released automatically, closes the space between the hood and the roller shaft preventing the passage of flames through the hood. In the case of mechanically operated Labeled Doors, the Chain-Gear or Crank-Gear Operator is automatically disengaged simultaneously with the release of the automatic closing mechanism.

Mahon Underwriters' Labeled Doors can be quickly reset, after automatic closing, by simply resetting the automatic release device, replacing the fusible link, and rolling the door curtain up to the full-open position.

Power Operators for Automatic Fire Doors

Mahon Automatic Closing Fire Doors can be manufactured in strict accordance with Underwriters' Specifications and furnished equipped with power operators for use in openings where the combined features of an automatic closing fire door and a power operated general service door are required. Mahon Automatic Fire Doors so equipped are fully as effective as Labeled Fire Doors, but do not carry the Label of the Underwriters' Laboratories, Inc.



Class "A" Underwriters' Label for Doors in Dividing Fire Walls

Class "C" Underwriters' Label for Partition and Corridor Doors

Class "B" Underwriters' Label for Doors in Vertical Shafts

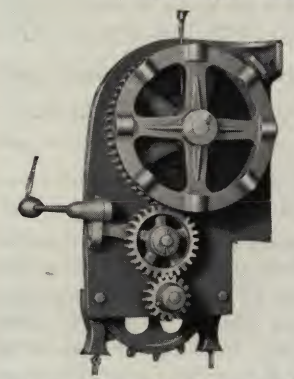
Class "D" Underwriters' Label for Doors in Exterior Walls

Mahon Interlocking Slat No. 2

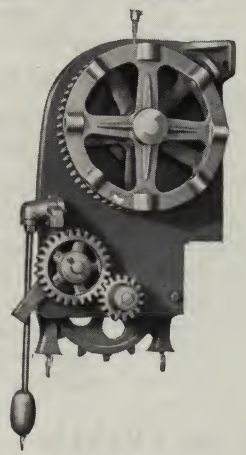
Mahon Interlocking Slat No. 3

Showing Installation of Continuous Malleable Iron Endlocks as required by Specifications of the Underwriters' Laboratories, Inc.

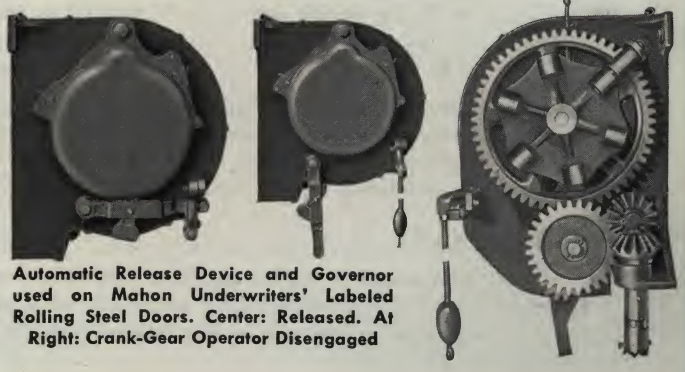
Fusible Link used to release the Automatic Closing Mechanism in case of Fire



Mahon Chain-Gear Operator for Underwriters' Labeled Doors. This Operator is automatically disengaged simultaneously with the release of the Automatic Closing Mechanism



Chain-Gear Operator Disengaged



Automatic Release Device and Governor used on Mahon Underwriters' Labeled Rolling Steel Doors. Center: Released. At Right: Crank-Gear Operator Disengaged

MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NON-LABELED TO MEET EVERY REQUIREMENT

SPECIFICATIONS

(A GUIDE FOR SPECIFICATION WRITERS)

NOTE: This Specification may be used as is or modified to meet requirements. However, it is important that the Specification Writer *READ* the Specifications and select the appropriate Sub-Paragraph under (3a), (9a) and (9b), and that he include only those items appearing in *ITALIC TYPE* that meet his requirements, or that he wishes to include as additional equipment. Typical items in this category are: Wind Locks, Safety Bottom Bars, Removable Cranks, Transformer for Power Operator Controls, Etc.

ROLLING STEEL (DOORS) (GRILLES) (SHUTTERS)

(1) WORK INCLUDED:

(1a) Furnish and install *(Underwriters' Labeled)* Rolling Steel *(Doors) (Grilles) (Shutters)* as manufactured by The R. C. Mahon Company, Detroit 34, Michigan, or equivalent product meeting fully this manufacturer's specifications, complete with guides, hoods and operating mechanism as hereinafter specified in openings *(No.) (or)* where *(otherwise)* indicated on drawings.

(1b) All Rolling Steel *(Doors) (Grilles) (Shutters)* shall be *(manufacturer's standard construction) (constructed in accordance with Underwriters' Specifications and furnished with Underwriters' Label attached) (constructed in accordance with Underwriters' Specifications and furnished with "Underwriters' Certificate") (constructed in accordance with Underwriters' Specifications and furnished WITHOUT Underwriters' Label or Certificate.)*

(2) WORK NOT INCLUDED:

Field Painting after erection. Preparation of openings to receive Rolling Steel *(Doors) (Grilles) (Shutters)*. Structural or miscellaneous iron work. Electric wiring and conduit required for power operators.

(3) (CURTAINS) (GRILLES):

(3a) Curtains shall be constructed of interlocking roll-formed *(galvanized steel) (stainless steel) (aluminum) (bronze)* slats, formed in easy curves and deeply corrugated to provide a curtain stiffness to withstand wind pressure of 20 lbs. per square foot. Galvanized steel slats shall be tight coat galvanized with a coating of zinc not less than 1.25 ounces per square foot of flat metal, A.S.T.M. Std., free from flaking or peeling. Curtains shall be equipped with a *(rolled steel) (stainless steel) (aluminum) (bronze)* bottom bar consisting of two angles of equal weight, one on each side, securely fastened to the bottom of curtains for reinforcement and to provide contact against the sill when closed. *(Door curtains shall be equipped with Windlocks.)* Note: Doors under 16 Ft. in width do not require windlocks.

Note: *Insert the paragraph below that is applicable.*

(3a1) *(For Standard Doors and Class "D" Labeled Doors)*—The ends of alternate interlocking slats shall be fitted with malleable iron Endlocks which shall act as a wearing surface in the guides and prevent lateral movement of individual curtain slats.

(3a1) *(For Class "A", "B", "C" Labeled Doors)*—The ends of each interlocking slat shall be fitted with malleable iron Endlocks which shall act as a wearing surface in the guides and prevent lateral movement of individual curtain slats.

(3b) Grilles shall be constructed of continuous (5/16" round *(black steel painted) (galvanized steel) (stainless steel) (bronze) (aluminum)* rods arranged horizontally at 2" centers and interlaced with links of the same material die-formed from not less than .078 strip 3/4" wide. Grille shall be equipped with a bottom bar consisting of two equal leg angles, rolled from the same material as the grille proper, placed back to back and securely fastened to the bottom of the grille for reinforcement and to provide continuous contact at the sill. *(Guides and hood shall be of the same material as the grille.)* The unexposed portion of the grille, that remains inside the hood when the grille is resting on the sill, shall be made up of standard rolling steel door slats to provide for replacement of the grille with a rolling steel curtain with a minimum of labor.

(4) GUIDES:

Guides shall be formed of standard rolled *(steel) (stainless steel) (aluminum) (bronze)* angles not lighter than 3/16" thick and of sufficient depth to retain curtains in place under normal wind pressure. They shall be attached to jambs, plumb and true, by bolts of not less than 3/8" diameter, spaced not more than 2' 6" on centers for standard doors, and not more than 1' 6" on centers for Underwriters' Labeled doors. Guides shall be fitted at top into slots cast in the mouth of the roller shaft brackets.

(5) ROLLER SHAFT:

Roller shaft shall be steel pipe of sufficient diameter to reduce deflection to not to exceed .03 inch per foot of span. Ends of roller shaft shall be completely closed by cast iron plugs machined to fit I.D. of pipe and secured by Cap Screws—NOT welded. The Roller shaft shall house all counterbalancing mechanism including an oil-tempered helical steel spring capable of producing sufficient torque to assure easy operation of the door curtain from any position. Spring tension shall be adjustable by means of an adjusting wheel on the outside of the end bracket.

(6) BRACKETS:

Brackets shall be of heavy cast iron or steel, designed to form an end closure support for the hood. Ends of roller shaft shall be journalled into bracket hubs of sufficient thickness to provide ample bearing surface for load of roller shaft and curtain. Operator bracket hub and plug in spring end of shaft shall be fitted with self lubricating bronze bearings or permanently lubricated, sealed ball bearings.

(7) HOODS:

Hoods shall be of not less than #24 gauge *(Armco Paint Grip—hot galvanized steel BONDERIZED) (stainless steel) (aluminum) (bronze)* formed to fit contour of end brackets in a neat manner and reinforced with stiffening rolls at top and bottom edges.

(8) PAINT:

Galvanized steel for curtain slats shall have 1.25 ounces of Zinc per Sq. Ft., A.S.T.M. Std., and shall be chemically cleaned and BONDERIZED for paint bond, and shall be given one dip coat of rust-inhibiting Synthetic Enamel which shall be baked on at 350° F. prior to roll forming. All other surfaces of *(door) (grille) (shutter)* parts shall be given one shop coat of rust-inhibiting paint.

(9) OPERATION:

(9a) Note: *For Standard Doors and Grilles—Insert one of the following:*

(9a1) Doors shall be operated manually by means of Handles on Bottom Bar.

(9a1) Doors shall be operated mechanically by means of a Chain-Gear Operator—hand chain to be galvanized. Gears shall be of high grade gray iron cast from machine cut patterns. Gear reduction shall be calculated to reduce pull on hand chain to not over 35 lbs.

(9a1) Doors shall be operated mechanically by means of a Crank-Gear Operator—Crank to be *(removable and)* located approximately 2' 10" from floor. Gears shall be of high grade gray iron cast from machine cut patterns. Gear reduction shall be calculated to reduce pressure exerted on crank to not over 35 lbs.

(9a1) Doors shall be electrically operated by means of *(Mahon Power Operator 920-P. Electric Motor shall be equipped with single reduction worm gear completely housed and running in a bath of oil.) (Mahon Power Operator 930-P. Electric Motor and Worm Reduction Gears shall be separate units to conform to JIC Standards.)* Power operator shall be mounted on an independent bracket and so designed and constructed that in case of failure in the electrical system the door can be operated by means of an auxiliary chain-gear operating mechanism. A control lever shall be located within easy reach from the floor which will instantly engage the auxiliary chain-gear operating mechanism. Power unit shall be self-locking and capable of holding the door curtain in any position in case of failure of the counterbalancing spring. Electric Motor shall be Hoist Type, Open, fitted with Ball Bearings and of sufficient capacity to move the door curtain in either direction from any position. Electrical controls shall include the following: Reversing, across-the-line-type automatic starter with overload relays, solenoid brake, interlock switch, limit switch, and three button "Open," "Close," and "Stop" push button control switch. *(Transformer shall be furnished to reduce voltage at push button switch to 110 volts.) (A safety bottom bar shall be provided on the door curtain which shall be capable of stopping the downward movement of the curtain instantly upon contact with any obstruction in the door opening.)* NOTE: In employing the above Specification, Power Operator 920-P should always be specified except where conformance with JIC Standards is mandatory. NOTE: When specifying Mahon Power Operator 930-P, omit "Hoist Type, Open", line seven.

(9a1) Doors shall be electrically operated by means of Mahon Power Operator 910-P. Operator shall consist of an electric motor and a series of cut steel spur gears completely housed and running in a bath of oil. The entire operator shall be an integral part of the roller shaft end bracket. Provision shall be made so that in case of failure in the electrical system, the door can be operated mechanically by means of an auxiliary Chain-Gear Operating Mechanism. Operator shall be so designed that the electric motor may be removed without disturbing limit switch timing, and without affecting operation of the door by means of the auxiliary chain-gear operator. A control lever shall be located within easy reach from the floor which will instantly disengage the power operator and engage the auxiliary chain-gear mechanism for mechanical operation. Electric motor shall be Squirrel Cage, Open, Ball Bearing, Standard NEMA Frame, of sufficient capacity to produce curtain travel of not less than one foot per second. Motor shall be protected from overload by means of overload relays in reversing switch. Electrical controls shall include the following: Reversing, across-the-line-type automatic starter with overload relays, solenoid brake, interlock switch, limit switch, and three button "Open," "Close" and "Stop" push button control switch. *(Transformer shall be furnished to reduce voltage at push button switch to 110 volts.) (A safety bottom bar shall be provided on the door curtain which shall be capable of stopping the downward movement of the curtain instantly upon contact with any obstruction in the door opening.)*

(9b) Note: *For Underwriters' Labeled Doors—Insert one of the following:*

(9b1) Doors shall be operated manually in general service by means of handles on the bottom bar.

(9b1) Doors shall be operated mechanically in general service by means of a Chain-Gear Operator—hand chain to be galvanized. All gears shall be of high grade gray iron cast from machine cut patterns. Gear reduction shall be calculated to reduce pull exerted on hand-chain to not over 35 lbs.

(9b1) Doors shall be operated mechanically in general service by means of a Crank-Gear Operator—Crank to be *(removable and)* located approximately 2' 10" from floor. Gears shall be high grade gray iron cast from machine cut patterns. Gear reduction shall be calculated to reduce pressure exerted on crank to not over 35 lbs.

Note: *Insert following for all Underwriters' Labeled Doors.*

Upon fusing of a fusible link, the door curtain shall be started downward by shock torque-action of a helical steel spring released in the automatic closing mechanism. Downward descent of door curtain shall be controlled by an oscillating safety governor so that it will come to rest on the sill without impact. Spring shall exert continuous down pressure on the door curtain until door is reset. Automatic Closing Mechanism shall not in any way affect operation of the door in general service.

MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NON-LABELED TO MEET EVERY REQUIREMENT

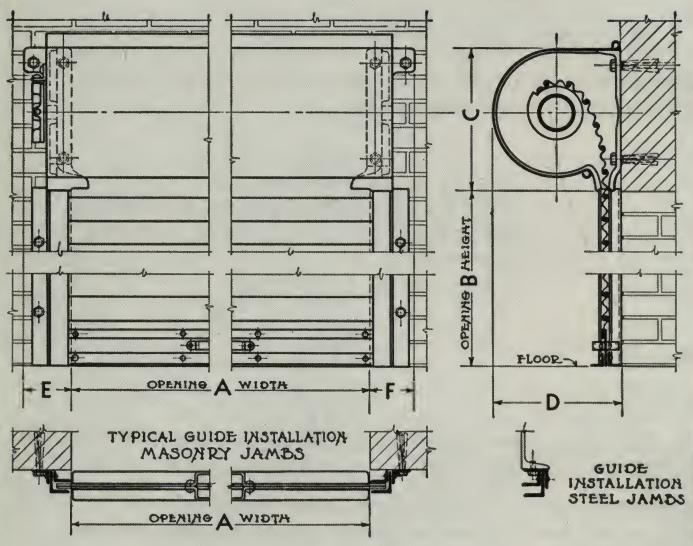


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 12											
DIMENSIONS IN.	C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT. TO 8	16	15	5	5								
OPENING WIDTH A FT. 8 TO 12	16	15	6	6								

TYPE 100-M

Standard Push-up Type

This door is designed for manual operation and is fitted with handles on the bottom rail. It is mounted on the face of the wall with guide channels clear of the opening and is suitable for openings up to 12′4″ x 7′4″ in any type of building. The weight of the shutter curtain is counterbalanced perfectly by means of an adjustable counterbalancing mechanism. This feature, together with the extra deep steel plate at the bottom rail, to which the handles are attached, insures free, easy operation at all times. Hot dipped galvanized steel is used in the manufacture of the door curtain and hood. The cast iron end brackets, which support the roller shaft and housing, are fitted with appropriate bearings to provide long life with minimum maintenance.

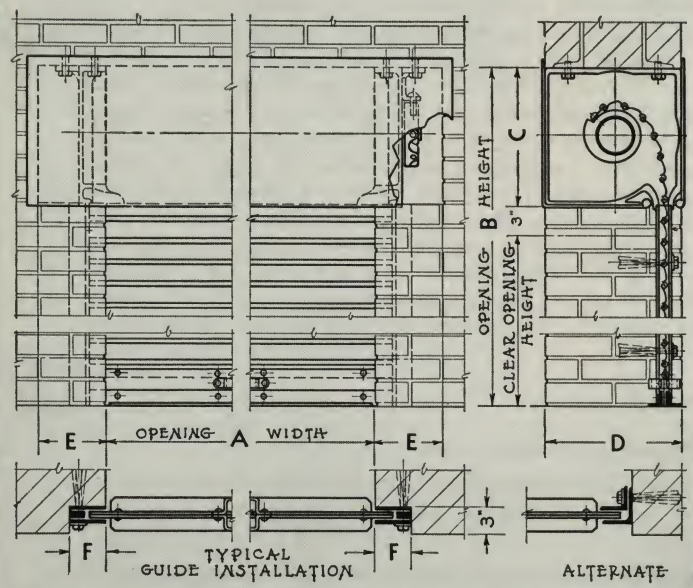


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.	TO 14											
DIMENSIONS IN.	C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT. TO 8	16	15	5	4								
OPENING WIDTH A FT. 8 TO 12	16	15	6	5								

TYPE 150-MB

Between Jambs Push-up Type

This door is designed for manual operation in general service. It is mounted below the lintel in the door opening between jambs and is suitable for openings up to 12′4″ x 8′8″ in any type of building. This type of door is generally used where "face of wall" mounting is impracticable. In new construction, door openings can be designed with guide channels recessed in and flush with the jambs. This makes a very neat appearing installation and provides protection for the guide channels. The weight of the door curtain is counterbalanced perfectly by means of an adjustable counterbalancing mechanism. This feature, together with the extra deep steel plate at the bottom rail, to which the handles are attached, insures free, easy operation at all times.

TYPE 200-ML

See NOTE, Page 5, "Underwriters' Certificate"

Push-up Type—Underwriters' Labeled

This door, mounted on the face of the wall, is primarily a fire door and normally remains open. It can, however, be operated in general service, if desired, by means of handles fitted to the bottom bar. It is equipped with an automatic closing mechanism which is released by a fusible link in case of fire. Mahon Fire Doors of this type can be quickly reset, after automatic closing, by simply resetting the automatic closing release device, replacing the fusible link, and rolling the door curtain up to the full open position. Mahon Type 200-ML is approved by the Underwriters' Laboratories, Inc., for Class A, B, C, and D openings, not exceeding 120 sq. ft., in exterior Walls, Fire Walls, Vertical Shafts, and Corridor and Room Partitions—neither dimension of the openings may exceed 12′ 0″.

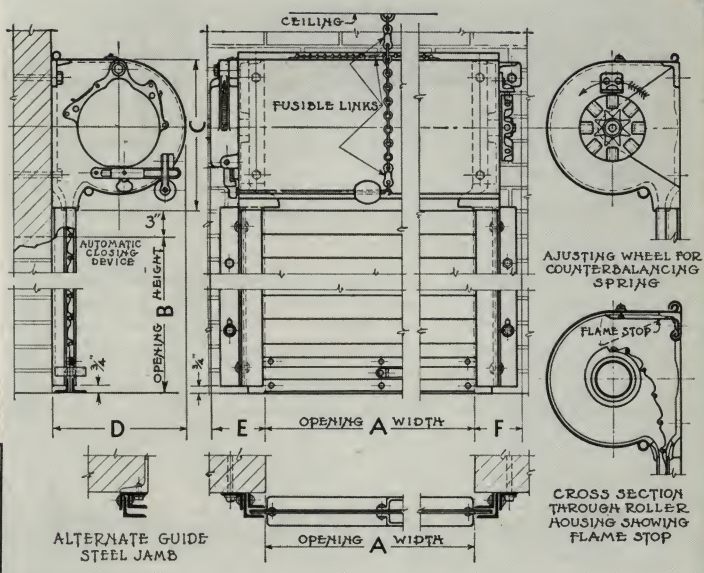


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		TO 12			
DIMENSIONS IN.		C D E F	C D E F	C D E F	C D E F
OPENING WIDTH A FT.	TO 4	16 15 9 6			
	4 TO 12	16 15 10 7			

TYPE 250-CRL

Window Shutter—Underwriters' Labeled

This Automatic Window Fire Shutter is typical of a complete line of Mahon Underwriters' Labeled Fire Shutters designed to meet any requirement. It is manufactured in strict compliance with the requirements of the Underwriters' Laboratories, Inc., and is furnished with the Underwriters' Label attached for Class "D" openings. These Window Fire Shutters can be furnished for mounting on the inside or outside face of the wall, or in the opening below the lintel with the shutter curtain operating between jambs. All window shutters are equipped with the same automatic release and closing mechanism, and a similar rewinding device. A test release chain is provided. Resetting after test closing is simple—pull and lock the test release chain to re-engage the automatic release device, and crank shutter curtain to full open position.

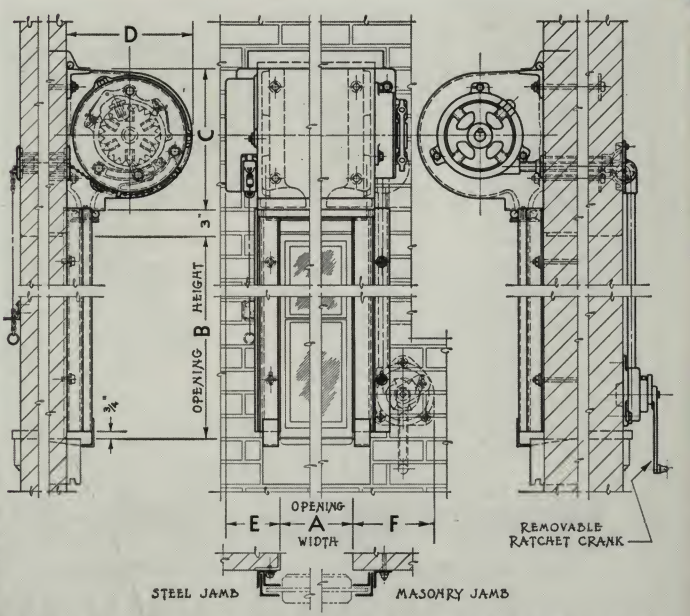
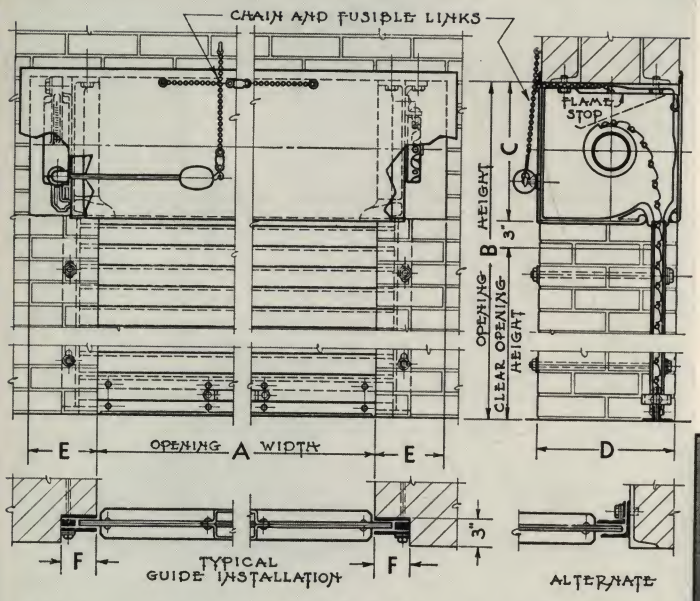


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		TO 12			
DIMENSIONS IN.		C D E F	C D E F	C D E F	C D E F
OPENING WIDTH A FT.	TO 9	16 15 9 10			
	9 TO 12	16 15 10 11			

MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NON-LABELED TO MEET EVERY REQUIREMENT



TYPE 300-MBL

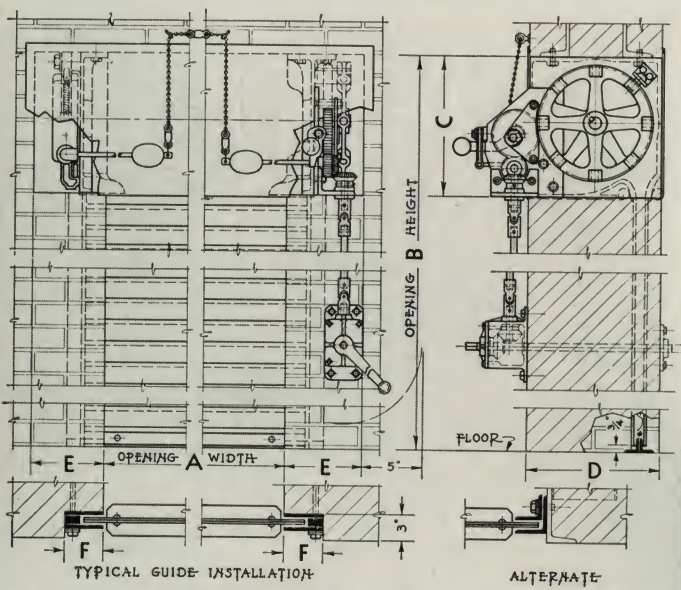
See NOTE, Page 5, "Underwriters' Certificate"

Push-up Type—Underwriters' Labeled

This door, mounted between jambs, is primarily a fire door and normally remains open. It is fitted with handles on the bottom bar, for manual operation in general service, and is equipped with an automatic closing mechanism which closes the door in case of fire. It is generally used where existing conditions prohibit "face of wall" mounting. The automatic closing mechanism can be quickly reset, after automatic closing, by simply resetting the automatic closing release device, replacing the fusible link, and pushing the door curtain up to the full open position. Mahon Type 300-MBL is approved by the Underwriters' Laboratories, Inc., and carries the regular Label for Class A, B, C, and D openings, not exceeding 120 sq. ft., in Exterior Walls, Fire Walls, Vertical Shafts, and Corridor and Room Partitions—neither dimension of openings may exceed 12′ 0″.

TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		7 TO 13			
DIMENSIONS IN.		C D E F	C D E F	C D E F	C D E F
OPENING WIDTH A FT.	TO 4	16 15 10 4			
	4 TO 12	16 15 10 5			



TYPE 375-CRBL

See NOTE, Page 5, "Underwriters' Certificate"

Crank Operated—Underwriters' Labeled

Type 375-CRBL is a crank operated fire door for installation in fire walls or corridors. It is equipped with an automatic closing mechanism released by fusible links in case of fire. The fusible links and release devices are so arranged as to instantly disengage the crank-gear operator simultaneously with the release of the automatic closing mechanism. Doors of this type can be quickly reset, after automatic closing, by simply resetting the automatic release devices, replacing the fusible links and cranking the door curtain up to the full open position. Mahon Type 375-CRBL is approved by the Underwriters' Laboratories, Inc., for Class A, B, C, and D openings not exceeding 120 sq. ft. in Exterior Walls, Fire Walls, Vertical Shafts, and Corridor and Room Partitions—neither dimension of the openings may exceed 12′ 0″.

TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		7 TO 13			
DIMENSIONS IN.		C D E F	C D E F	C D E F	C D E F
OPENING WIDTH A FT.	TO 4	16 15 10 4			
	4 TO 12	16 15 10 5			

TYPE 400-MBL

See NOTE, Page 5, "Underwriters' Certificate"

Push-up Type—Underwriters' Labeled

Type 400-MBL is a double fire door for installation in fire walls with roller housings placed one above the other between jambs. It is equipped with handles on the bottom bar and an automatic closing mechanism which is released by fusible links in case of fire. The ingenious arrangement of fusible links insure instant release of the automatic closing mechanism which operates both fire doors simultaneously. These doors normally remain open, but may be operated manually in general service. They can be quickly reset after automatic closing by simply resetting the automatic closing release devices, replacing the fusible links, and pushing the door curtains up to full open position. This double type fire door is approved for Class A openings in fire walls not exceeding 120 sq. ft. Neither dimension of the openings may exceed 12′ 0″.

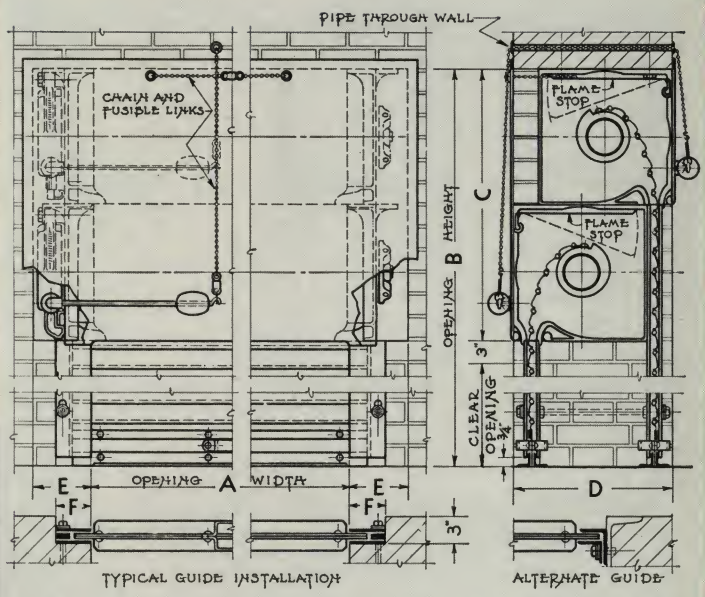


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		9 TO 14											
DIMENSIONS IN.		C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT.	TO 4	31	18	10	4								
	4 TO 12	31	18	10	5								

TYPE 600-CHL

See NOTE, Page 5, "Underwriters' Certificate"

Chain Operated—Underwriters' Labeled

This door is mechanically operated in general service by means of an endless chain-gear operator. It is equipped with an automatic closing mechanism released by fusible links in case of fire. The fusible links and release devices are so arranged as to instantly disengage the chain-gear operator simultaneously with the release of the automatic closing mechanism. Doors of this type can be quickly reset, after automatic closing, by simply resetting the automatic release devices, replacing the fusible links, and rolling the door curtain up to the full open position. Mahon Type 600-CHL is approved by the Underwriters' Laboratories, Inc., for Class A, B, C, and D openings, not exceeding 120 sq. ft., in Exterior Walls, Fire Walls, Vertical Shafts, and Corridor and Room Partitions—neither dimension of the openings may exceed 12′ 0″.

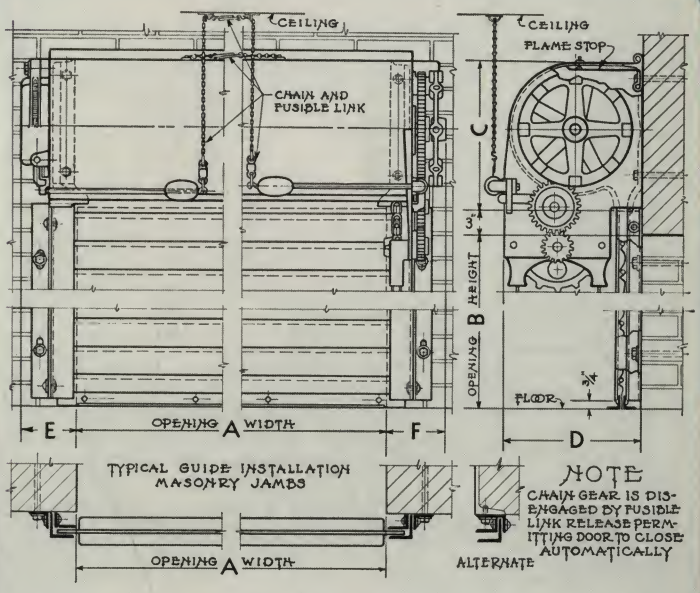


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		TO 12				12 TO 14				14 TO 16				16 TO 18			
DIMENSIONS IN.		C	D	E	F	C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT.	TO 12	16	15	10	9	18	17	10	10	20	19	11	11	22	21	13	13
	12 TO 16	18	17	10	10	18	17	10	10	20	19	11	11	22	21	13	13
	16 TO 18	20	19	11	11	20	19	11	11	20	19	11	11	22	21	13	13

MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NON-LABELED TO MEET EVERY REQUIREMENT

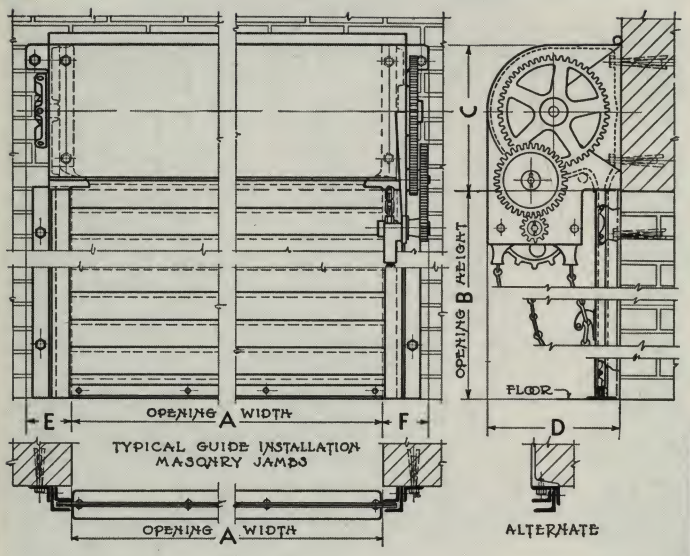


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		TO 12				12 TO 14				14 TO 16				16 TO 22			
DIMENSIONS IN.		C	D	E	F	C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT.	TO 12	16	15	6	8	18	17	7	7	20	19	8	9	22	21	9	10
	12 TO 16	18	17	7	7	18	17	7	7	20	19	8	9	22	21	9	10
	16 TO 20	20	19	8	9	20	19	8	9	20	19	8	9	22	21	9	10
	20 TO 24	22	21	9	10	22	21	9	10	22	21	9	10	22	21	9	10

TYPE 700-CH

Standard Chain-Gear Operated Door

Mahon Type 700-CH is a standard mechanically operated door mounted on the face of the wall. It is a very popular type and is generally used in factories, shipping docks, warehouses, etc., where doors of medium size are required. Doors of this type are operated by means of an endless chain, sprocket, and either a simple or compound gear arrangement, depending upon the size of the door. They can be quickly opened or closed with ease, being perfectly counterbalanced by means of an adjustable counterbalancing mechanism. When furnished for large exterior openings, where conditions are such that they will be subjected to excessive wind pressures, Mahon doors of this type are equipped with Windlocks to prevent the door curtain from pulling out of the guide channels under abnormal conditions. See pages 2 and 3.

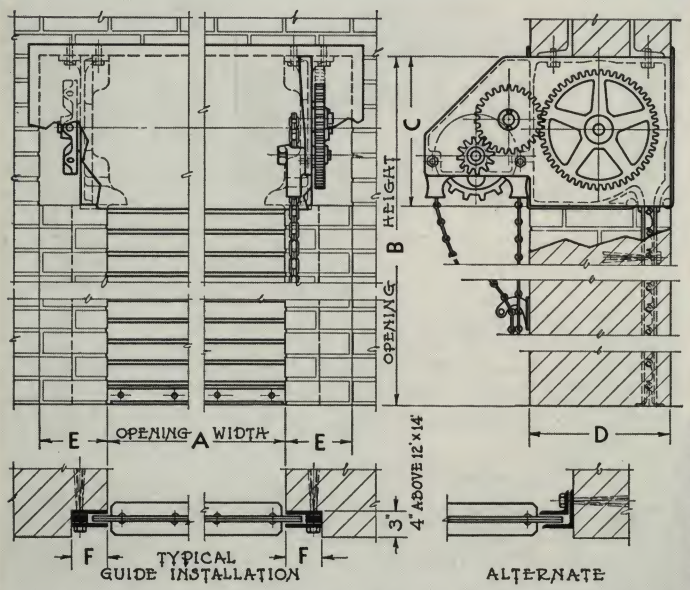


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		TO 14				14 TO 15							
DIMENSIONS IN.		C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT.	TO 9	16	15	7	4	18	17	9	5				
	9 TO 12	16	15	8	5	18	17	9	5				
	12 TO 14	18	17	9	5	18	17	9	5				

TYPE 700-CHB

Standard Chain-Gear Operated Door

Mahon Type 700-CHB is a standard mechanically operated door mounted in the opening between jambs. It meets every industrial or commercial requirement for openings of medium size where face of wall mounting is undesirable. This door, like Type 700-CH, is operated by means of an endless chain, sprocket, and a compound gear arrangement which is calculated with respect to the door size. It can be quickly opened, or closed with ease, being perfectly counterbalanced by means of an adjustable counterbalancing mechanism. When furnished for large openings in exterior walls, where conditions are such that they will be subjected to excessive wind pressures, Mahon doors of this type are equipped with Windlocks to prevent the door curtain from pulling out of the guide channels under abnormal conditions. See pages 2 and 3.

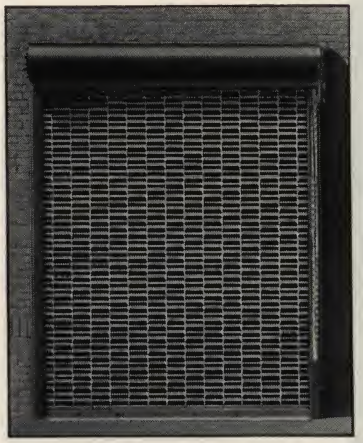
MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NON-LABELED TO MEET EVERY REQUIREMENT

TYPE 700-CHG

Standard Grille—Chain-Gear Operated

Mahon Rolling Steel Grille TYPE 700-CHG is mounted on the face of the wall—others, available, may be mounted in corridors or door openings with guides set flush with walls or jambs. Grilles up to 90 sq. ft. may be manually operated, however, any standard Mahon operating device can be furnished with Mahon Grilles for mechanical or power operation. These grilles can also be furnished in galvanized steel, stainless steel, bronze or aluminum . . . they embody the same basic operating principle and the same high quality workmanship as are found in Mahon Rolling Steel Doors. Mahon Grilles provide positive protection against intrusion and burglary without sacrificing daylight or ventilation. The grille proper, can be readily replaced with a standard steel slat curtain at any time to suit climatic conditions.



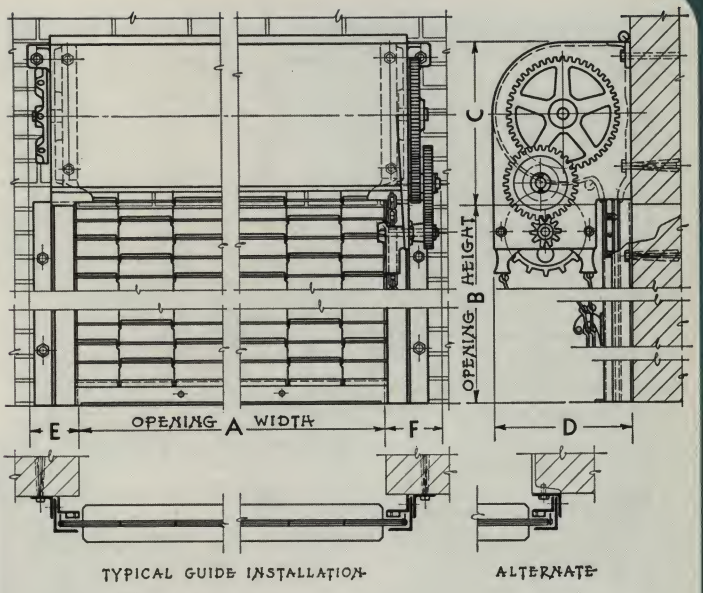


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		TO 10				10 TO 12				12 TO 16				
DIMENSIONS IN.		C	D	E	F	C	D	E	F	C	D	E	F	C D E F
OPENING WIDTH A FT.	TO 16	18	17	7	7	20	19	8	9	22	21	9	10	
	16 TO 20	20	19	8	9	20	19	8	9	22	21	9	10	

TYPE 750

Multiple Doors with Intermediate Posts

Type 750 is two or more Mahon Standard Rolling Steel Doors with special arrangement of end brackets and equipped with intermediate hinged, sliding, or removable posts which form the guide channels between doors. Doors of this type are ideally suitable for dividing walls in gymnasiums, armories, etc., or are adaptable to unusually wide openings where it is necessary to use the entire opening only occasionally. When doors are opened, the intermediate posts can be moved or swung up clear, making the entire opening available for use. These rolling steel doors can be furnished with Chain-Gear Operators, or either of Mahon Power Operators 920-P or 930-P. If power operators are installed, controls can be arranged to permit operation of the doors simultaneously or individually as desired.

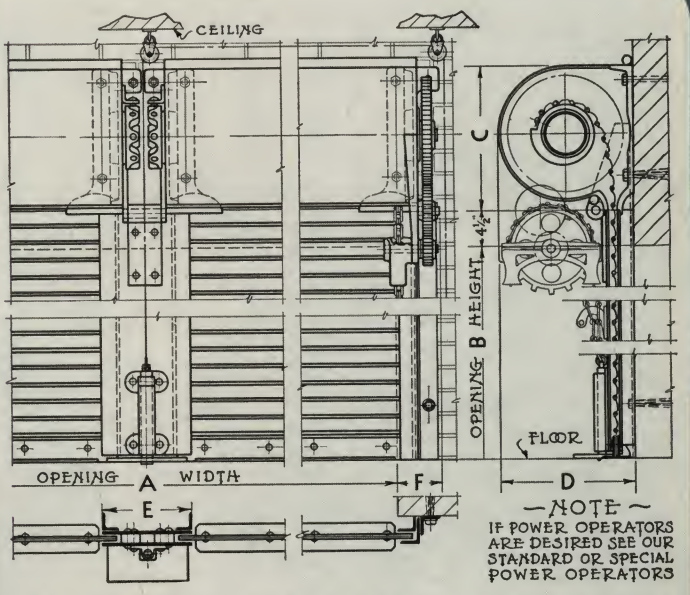


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		TO 12				12 TO 14				14 TO 16				16 TO 22			
DIMENSIONS IN.		C	D	E	F	C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT.	TO 24	16	15	12	8	18	17	14	7	20	19	16	9	22	21	18	10
	24 TO 32	18	17	14	7	18	17	14	7	20	19	16	9	22	21	18	10
	32 TO 40	20	19	16	9	20	19	16	9	20	19	16	9	22	21	18	10
	40 TO 48	22	21	18	10	22	21	18	10	22	21	18	10	22	21	18	10

MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NON-LABELED TO MEET EVERY REQUIREMENT

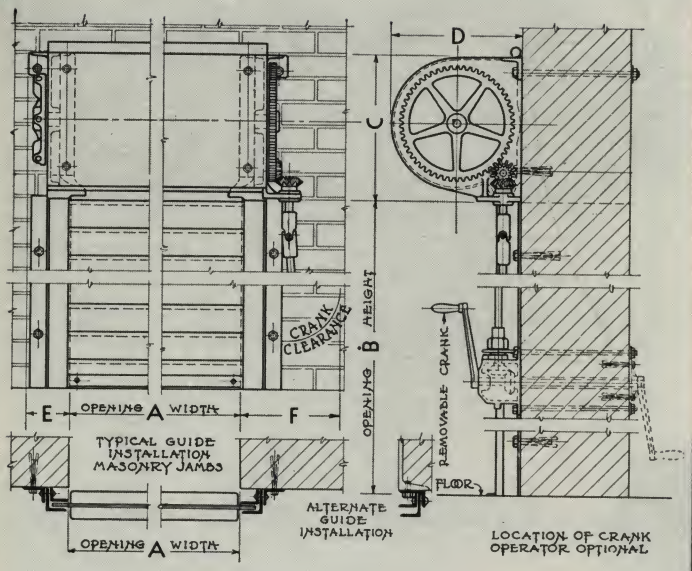


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		TO 12				12 TO 14				14 TO 16				16 TO 22			
DIMENSIONS IN.		C	D	E	F	C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT.	TO 12	16	15	6	22	18	17	7	22	20	19	8	23	22	21	9	24
	12 TO 16	18	17	7	22	18	17	7	22	20	19	8	23	22	21	9	24
	16 TO 20	20	19	8	23	20	19	8	23	20	19	8	23	22	21	9	24
	20 TO 24	22	21	9	24	22	21	9	24	22	21	9	24	22	21	9	24

TYPE 800-CR

Standard Crank Operated Door

Mahon Rolling Steel Door, Type 800-CR, mounted on the face of the wall, is suitable for use in any kind of building where doors of medium size are required. It is operated mechanically by means of a crank-gear operator. The crank can be located either on the inside or outside of the building, or, the door can be furnished with a removable crank arrangement for operation from both sides of the wall if desired. Location of crank should be specified in requests for estimates or bids on this type of door. When furnished for openings in exterior walls, where conditions are such that they will be subjected to excessive wind pressures, Mahon doors of this type are equipped with Windlocks to prevent the possibility of the door curtain pulling out of the guide channels under abnormal conditions.

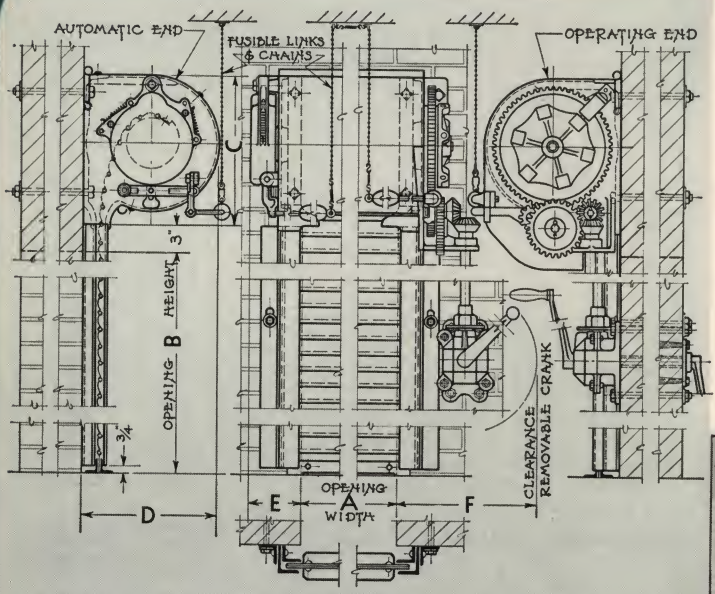


TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		TO 12				12 TO 14				14 TO 16				16 TO 18			
DIMENSIONS IN.		C	D	E	F	C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT.	TO 12	16	15	10	22	18	17	10	23	20	19	11	24	22	21	13	25
	12 TO 16	18	17	10	23	18	17	10	23	20	19	11	24	22	21	13	25
	16 TO 18	20	19	11	24	20	19	11	24	20	19	11	24	22	21	13	25

TYPE 850-CRL

See NOTE, Page 5, "Underwriters' Certificate"

Crank Operated—Underwriters' Labeled

This door is mechanically operated in general service by means of a crank-gear operator, and is equipped with an automatic closing mechanism released by fusible links in case of fire. The fusible links and release devices are so arranged as to instantly disengage the operator simultaneously with the release of the automatic closing mechanism. The automatic closing mechanism can be quickly reset, after automatic closing, by simply resetting the automatic release devices, replacing the fusible links, and rolling the door curtain up to the full open position. Mahon Type 850-CRL is approved by the Underwriters' Laboratories, Inc., and carries the regular Label for Class A, B, C, and D openings, not exceeding 120 sq. ft., in Exterior Walls, Fire Walls, Vertical Shafts, and Corridor and Room Partitions—neither dimension of openings may exceed 12′ 0″.

MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NON-LABELED TO MEET EVERY REQUIREMENT

TYPE 920-P

Standard Power Operated Door

This door is operated by means of a power unit mounted on an independent bracket. The operator consists of an electric motor with single reduction worm gear completely housed and running in a bath of oil, sprockets and roller chain drive, and an auxiliary chain-gear operating mechanism. See description on Page 4 and Specifications for details. Operation is controlled by push button switches, located on either or both sides of the wall, with "Open" and "Close" buttons and an emergency "Stop" button. In case of failure in the electrical system, this operator is equipped with an engaging lever, located within easy reach from the floor, which immediately engages the auxiliary chain-gear operating mechanism. The flexibility of this operator, as regards location, meets virtually all conditions.

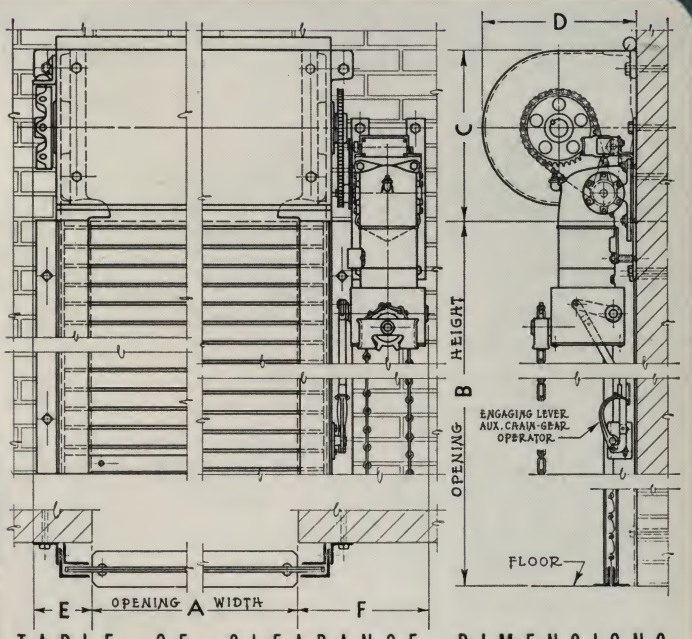


TABLE OF CLEARANCE DIMENSIONS

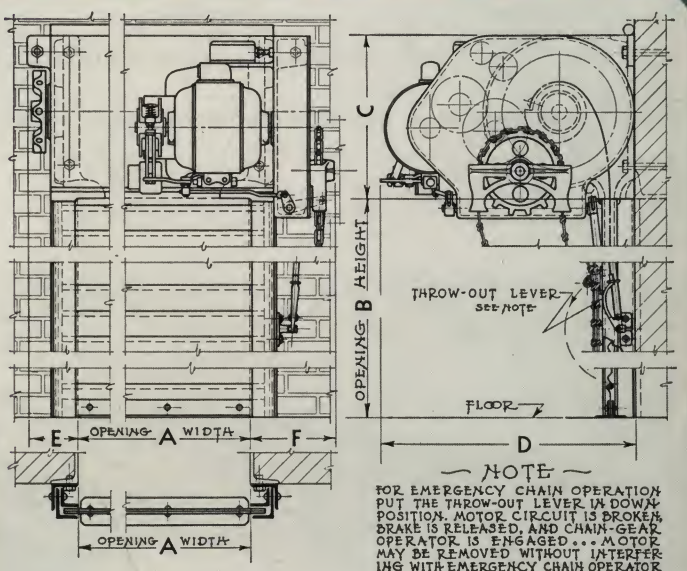
OPENING HEIGHT B FT.		TO 12				12 TO 14				14 TO 16				16 TO 22			
DIMENSIONS IN.		C	D	E	F	C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT.	TO 12	16	15	6	15	18	17	7	15	20	19	8	16	22	21	9	18
	12 TO 16	18	17	7	16	18	17	7	16	20	19	8	18	22	21	9	19
	16 TO 20	20	19	8	18	20	19	8	18	20	19	8	19	22	21	9	21

CLEARANCE DIMENSIONS FOR LARGER OPENINGS ON REQUEST

TYPE 910-P

Special Power Operated Door

This door is operated by means of a power unit which is an integral part of the roller shaft end bracket. It consists of an electric motor and reduction gears which are enclosed in an oil tight housing and run in a bath of oil. Electrical controls are similar to Type 920-P. See description on Page 4 and Specifications for complete details. This operator is also equipped with an auxiliary chain-gear operating mechanism. In case of failure in the electrical system, operation of a throw-out lever, located within easy reach from the floor, will immediately disengage the power unit and engage the auxiliary chain-gear operating mechanism. The electric motor can be completely removed without interfering with the operation of the door by means of the auxiliary chain-gear operator.



NOTE

FOR EMERGENCY CHAIN OPERATION PUT THE THROW-OUT LEVER IN DOWN POSITION. MOTOR CIRCUIT IS BROKEN, BRAKE IS RELEASED, AND CHAIN-GEAR OPERATOR IS ENGAGED . . . MOTOR MAY BE REMOVED WITHOUT INTERFERING WITH EMERGENCY CHAIN OPERATOR

TABLE OF CLEARANCE DIMENSIONS

OPENING HEIGHT B FT.		TO 14				14 TO 22											
DIMENSIONS IN.		C	D	E	F	C	D	E	F	C	D	E	F	C	D	E	F
OPENING WIDTH A FT.	TO 16	18	31	7	12	22	36	9	14								
	16 TO 20	22	36	9	14	22	36	9	14								

CLEARANCE DIMENSIONS FOR LARGER OPENINGS ON REQUEST

MAHON ROLLING STEEL DOORS

UNDERWRITERS' LABELED OR NON-LABELED TO MEET EVERY REQUIREMENT

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CONNECTICUT
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- Chattanooga
- Knoxville
- Memphis
- Nashville

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*REGIONAL SALES-ENGINEERING OFFICES of THE R. C. MAHON COMPANY

General Offices and Plant of The R C. Mahon Company
East Eight Mile Road at Sherwood, Detroit 34, Michigan

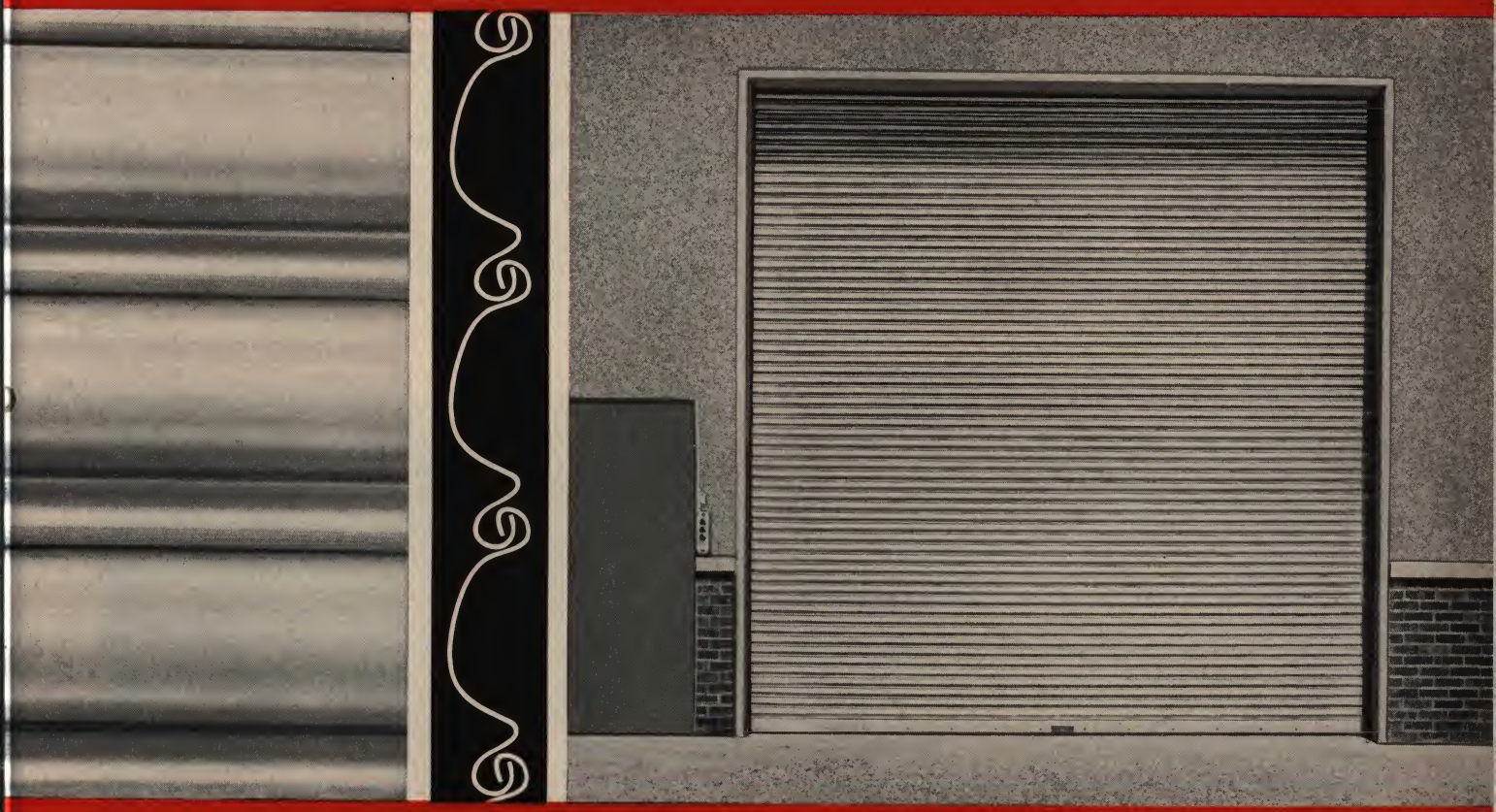
THE R. C. MAHON COMPANY • Detroit 34, Michigan

PLANTS in DETROIT and LOS ANGELES • SALES-ENGINEERING OFFICES or REPRESENTATIVES in ALL PRINCIPAL CITIES

MAHON

16g
Mo

"MECCO" rolling doors



rolling commercial doors
rolling labeled doors
rolling grilles
flat slats

The Moeschl-Edwards Corrugating Co., Inc.

Cincinnati 1, Ohio
Covington, Kentucky

MECCO rolling doors

commercial doors (non-labeled) (See pages 4 & 5)

Service or Commercial Doors are designed primarily for the closure of openings. This type of door can be installed on almost any opening. Because of the various types of operation, these doors are adaptable for openings in every conceivable kind of a building, public, private, commercial or institutional.

underwriters' labeled doors (fire doors) (See pages 6 & 7)

Doors bearing the National Board of Underwriters' labels are manufactured and installed primarily for fire protection. However, they have all of the desirable features of the Service or Non-Labeled types, serving as a closure for openings. Automatic doors are operated independent of the automatic closing devices that are thermally controlled.

design

Mecco rolling doors and shutters are the product of many years of practical experience manufacturing doors of various types. Incorporated in the design of Mecco doors are several exclusive features and ingenious designs that result in operating economy, reliability and extremely low cost of maintenance.

manufacture

Mecco rolling steel doors are manufactured in a modern factory, equipped with the most modern machinery, which assures uniformity of the manufactured product. Rolling doors are supplied of Steel, Bronze, Aluminum or Stainless Steel. Large or small orders receive the same careful attention to detail required to produce a product of the best quality and workmanship.

installation

Mecco rolling steel doors may be installed using such local labor as is available. In the design several features have been included which makes the installation of these doors not only relatively simple, but in fact makes it difficult to get the curtains out of alignment, a most common fault found in rolling steel doors.

maintenance

The upkeep on Mecco rolling steel doors is extremely low. This is primarily due to the superior quality of material, and the care exercised in the assembly of various units. Each door is built to meet individual requirements, and many are still in excellent operating condition after twenty to twenty-five years. In case of accidental damage, replacement parts are available.

engineering assistance

When special designs or details are wanted, our engineering department is at the command of architects and engineers to assist with drawings and specifications.

permanent door registry

A complete file of every door specified and manufactured by Mecco is maintained in fireproof vaults. This results in prompt and accurate service for replacement of damaged parts.

rolling steel fire doors

The two illustrations at the right are photos taken at each side of an interior fire wall after a recent destructive fire in a large manufacturing plant.*

These photos are conclusive evidence that Mecco Automatic Closing Fire Doors are for fire protection as well as for normal use of opening. The door can be maintained in a normally open position and in case of fire will automatically close. The descent of the curtain is controlled by an oscillating governor.

Mecco Automatic Closing Fire Doors are approved by the Underwriters' Laboratories, Inc., and Factory Mutual Laboratories within limitations in total areas as specified by them for various opening classifications. These limitations apply to all fire doors.

power operators for automatic fire door

Mecco Automatic Closing Fire Doors can be manufactured in strict accordance with underwriters' specifications and equipped with power operators. Mecco Fire Doors so equipped do not carry the label of the Underwriters' Laboratories, Inc.

*Name and location of plant on request.

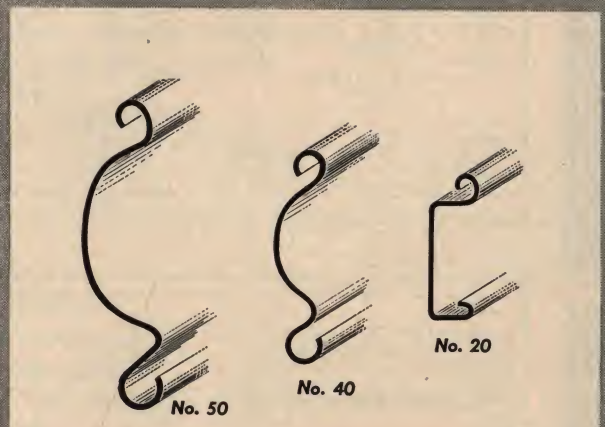
Fire broke out on this side of fire door. Note roof destroyed completely.

MECCO fire door prevented spread of fire on this side of wall.

MECCO features

Mecco features are incorporated in design to satisfy job requirements, resulting in dependability and years of trouble-free service.

slats and curtains



Slat No. 40 is 1⅞ in. center to center, 9/16 in. deep crown, and is standard for doors to 12 ft. 6 in. width. Slat No. 50 of similar profile is 2¾ in. center to center with ⅞ in. deep crown. No. 20 Flat Slat 1¼ in. center to center with ½ in. deep crown.

Curtains of all "Mecco" rolling doors are made of interlocking slats of galvanized 1.25 oz. sq. ft. of flat metal hot-dipped in accordance with ASTM standards copper bearing open-hearth steel, aluminum or ARMCO aluminized steel Type 2. Slats are formed by modern rolling machinery in easy curves and bends that assure utmost strength and rigidity. The upper edge of the curtain is attached to spiral rings on the shaft by stove bolts, and the lower edge is attached to an angle bottom bar by machine bolts.

locking devices

slide bolt

chain and padlock

slide bolts

Slide bolts as illustrated are used for locking manual or chain-operated doors from interior. Similar slide bolts with cylinder lock or padlock and operated from exterior can be furnished.

chain hook

Chain-operated doors are provided with chain hook as illustrated for locking from interior. Chain doors on exterior may be locked by a similar hook and padlock. (Padlock by owner.)

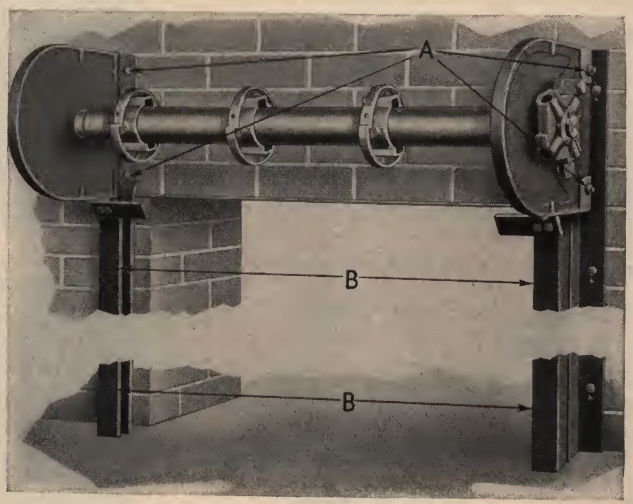
charging disc

Curtain of rolling door is counterbalanced by oil-tempered helical springs, adjusted through a charging disc.

The charging disc on "Mecco" doors is placed in the most accessible place, outside the bracket.

Curtains are hung on shafts provided with roller or ball bearings, thus reducing friction to a minimum. "Mecco" doors have earned an enviable reputation by their ease of erection and operation. Endlocks on curtains prevent lateral movement of slats, passage of flame at the ends, and provide a wearing surface in the guides.

bracket mounting



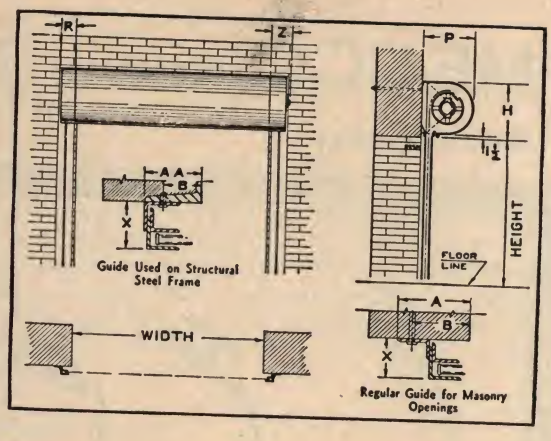
Brackets supporting the shaft are attached direct to the door guides at points "A". This exclusive "Mecco" feature insures perfect alignment of the shaft and curtain by the simple process of spacing the guides equidistant top and bottom as indicated at points "B".

MECCO | commercial (non-labeled) doors types, mounting and operation

manual face mounting "Mecco" type 2

Doors may be mounted direct on masonry walls or on steel framing. Brackets are attached to guides, assuring proper alignment, and facilitating erection. Manually operated by handle on bottom bar.

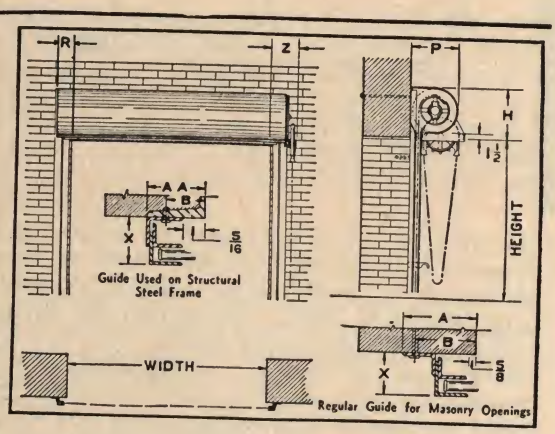
guides						hood		
opening width ft.	A in.	AA in.	R in.	Z in.	X in.	opening height ft.	H in.	P in.
4	5⅛	2½	4	5⅝	3¼	6	12½	11¾
6	5⅛	2½	4	5⅝	3¼	7	12½	11¾
8	5⅛	2½	4	5⅝	3¼	8	13½	12¾
10	5⅛	2½	4	5⅝	3¼	9	14½	13¾



chain and gear face mounting "Mecco" types 6 and 14

Used where the height and area make a mechanically operated door desirable. All parts requiring lubrication are easily accessible. No. 14 chain-operated with compound gears for opening over 200 sq. ft.

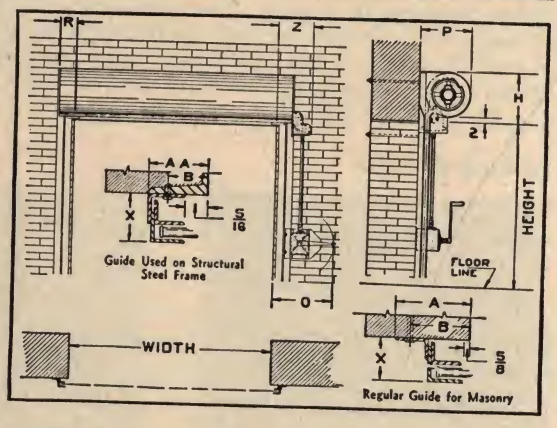
guides						hood		
opening width ft.	A in.	AA in.	R in.	Z in.	X in.	opening height ft.	H in.	P in.
. .–10	5⅛	2½	5⅝	7	3¼	. .–7	12½	12
10–12	5⅜	3	5⅞	7¼	3⅜	7–10	13½	13
12–15	6⅛	3½	6⅝	8	3⅝	10–14	15½	15
15–20	6⅝	4	7⅛	8½	4	14–18	22	20½
						18–22	24	22½



crank and gear face mounting "Mecco" type 10

Used on doors of any dimensions. Crank and gear operated. Crank operation may be arranged for operation from either or both sides of opening. Brackets are attached to guides.

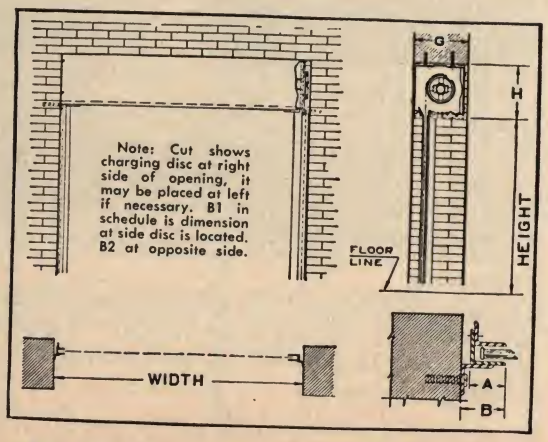
guides							hood		
opening width ft.	A in.	AA in.	R in.	Z in.	O in.	X in.	opening height ft.	H in.	P in.
. .–10	5⅛	2½	5⅝	11	19¼	3¼	. .–14	18	14½
10–12	5⅜	3	5⅞	11¼	19½	3⅜	14–18	20	16½
12–15	6⅛	3½	6⅝	12	20¼	3⅝	18–22	24	20½
15–20	6⅝	4	7⅛	12½	20¾	4			



manual under lintel mounting "Mecco" type 4

Manually operated by handle on bottom bar. Mounted under lintel. Hood may be concealed by plaster or ornamental cover. Should not be used on openings over 10 ft. x 10 ft.

guides				hood		
opening width ft.	A in.	B_1 disc side	B_2 plain side	opening height ft.	H in.	G in.
4	2½	3½	2¾	8	14	12
6	2½	3½	2¾	9	15	13
9	2½	3½	2¾	10	15	13
10	2½	3½	2¾	12	16	14


Note: Cut shows charging disc at right side of opening, it may be placed at left if necessary. B1 in schedule is dimension at side disc is located. B2 at opposite side.
G
H
FLOOR LINE
HEIGHT
WIDTH
A
B

specifications

commercial (non-labeled) doors

Openings shall be equipped with steel rolling doors of interlocking slat type as manufactured by **The Moeschl-Edwards Corrugating Co., Inc.**, of Cincinnati, Ohio. Doors to be constructed in accordance with the following specifications:

types no. 2 and 4

curtain

To be formed of interlocking slats of No. 22 or 20 U.S. Gauge Steel, galvanized 1.25 oz. per sq. ft. of flat metal hot-dipped in accordance with ASTM standards, approximately 1⅞ in. center to center with 9/16-in. depth of crown. The ends of each alternate slat to be fitted with steel or malleable reinforcement to prevent lateral movement and to serve as wearing surfaces in the guides. The upper edge of curtain to be attached to the spiral rings on shaft by bolts and the lower edge to bottom bar by machine bolts.

operation

By handle on bottom bar.

bottom bar

To consist of one steel angle 2 x 2 x 3/16 in.

barrel

Steel pipe or tube with ends enclosed by cast iron collars with ball bearings and journaled on steel spindles of suitable diameter. Barrel shall be equipped with cast iron wheels of proper diameter to maintain a correct counterbalance.

types no. 6, 7, 8, 10, 14

curtain

To be formed of interlocking slats of No. 22 or 20 U.S. Gauge Steel, galvanized 1.25 oz. per sq. ft. of flat metal hot-dipped in accordance with ASTM standards, approximately 1⅞ in. center to center with 9/16-in. depth of crown, for doors not wider than 12 ft. 6 in.—with slats of No. 20, 18 or 16-gauge steel, approximately 2¾ in. center to center with ⅞-in. depth of crown for doors wider than 12 ft. 6 in. The ends of each alternate slat to be fitted with steel or malleable reinforcement to prevent lateral movement and to serve as wearing surface in the guides. The upper edge of curtain to be attached to the spiral rings on shaft by bolts and the lower edge to bottom bar by machine bolts.

operation

By endless galvanized chain, sprocket and gear, or crank and gear.

bottom bar

To consist of one steel angle 2 x 2 x 3/16 in. On openings wider than 15 ft. 0 in., two angles 2 x 1½ x 3/16 in.

barrel

Steel pipe or tube with ends enclosed by cast iron collars with Hyatt roller or ball bearings journaled on steel spindles at each end and supported by bosses cast on brackets. Barrel shall be equipped with cast iron wheels of proper diameter to maintain a correct counterbalance.

specifications applying to all types

counterbalance

To consist of helical oil-tempered steel springs, enclosed within a barrel and anchored to spindle. A charging ratchet for adjusting spring shall be attached to spindle and located on exterior side of bracket.

brackets

High grade gray iron, web not less than ⅜ in. and attached direct to guides.

guides

To be composed of three angles of 3/16-in. steel securely riveted together to form a channel groove not less than 1½ in. deep.

painting

All parts not protected by galvanizing to receive one shop coat gray metallic primer.

"Mecco" commercial doors

type no.	operated by	location
2	Handle	Face of wall
4	Handle	In opening*
6	Chain	Face of wall
7	Thru wall chain operation**	Face of wall
8	Chain	In opening*
10	Crank—inside, outside, or both	Face of wall
14	Chain with compound gears for openings over 200 sq. ft.	Face of wall

All types of commercial or non-labeled doors as listed can be motor-operated.

***IN OPENING refers to doors between jambs under lintel.**

****THRU WALL CHAIN refers to door one side—operator other side.**

type no. 2

Doors to be hung on face of wall operated by handle on bottom bar; brackets and guides so planned that clear height and width of openings will be maintained, except where structural conditions of building prevent.

type no. 4

Doors to be hung under lintel or above false ceiling operated by handles on bottom bar. Guides to be attached to face of wall or on jambs.

type no. 6

Doors to be mounted on face of wall operated by endless galvanized chain and gear; brackets and guides so placed as to provide a clear, unobstructed opening.

type no. 7

Doors to be mounted on face of wall operated by endless galvanized chain and gear; brackets and guides so placed as to provide a clear, unobstructed opening operation from opposite side of wall.

type no. 8

Doors to be hung under lintel operated by endless galvanized chain and gear. Guides to be attached to face of wall or on jambs.

type no. 10

Doors to be hung on face of wall operated by crank and gear from inside or outside or both sides of opening; brackets and guides so placed that clear height and width will be maintained.

type no. 14

Same as No. 6 door in mounting and operation. Used where opening sizes require compound gearing for ease of operation.

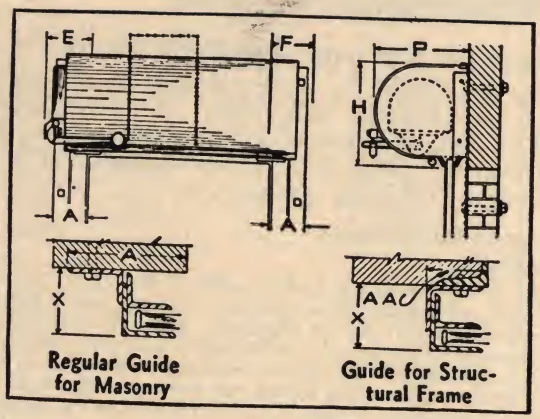
MECCO labeled rolling doors

manual
by handle on bottom bar

face mounting
for operation on both sides of opening

automatic
label A: type 100
label B, C: type 200
label D: type 300

non-automatic
label B, C: type 202
label D: type 302



guides

opening width ft.	A in.	AA in.	E in.	F in.	X in.
..- 4	5⅜	3	8⅛	6¼	3¼
4- 8	6⅛	3½	8⅞	7	3¾
8-12	6⅝	4	9⅜	7½	3¾
12-18	7⅛	4½	9⅞	8	4¼

hood

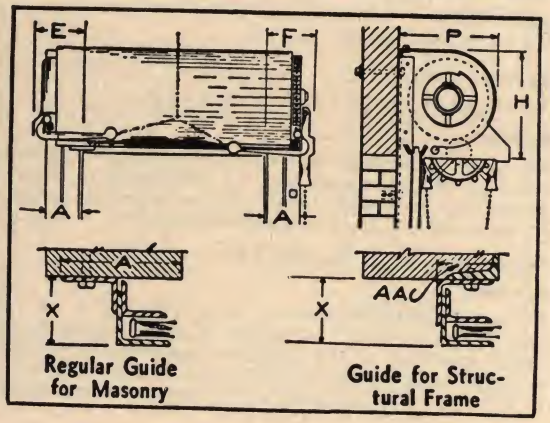
opening height ft.	H in.	P in.
...- 6½	12½	12
6½- 8	13½	13
8 - 9½	14½	14
9½-12	15½	15

chain and gear
for high or wide openings

face mounting
operated from chain side only

automatic
label A: type 103
label B, C: type 205
label D: type 305

non-automatic
label B, C: type 204
label D: type 304



guides

opening width ft.	A in.	AA in.	E in.	F in.	X in.
..- 4	5⅜	3	8⅛	10⅛	3¼
4- 8	6⅛	3½	8⅞	10⅞	3¾
8-12	6⅝	4	9⅜	11⅜	3¾
12-18	7⅛	4½	9⅞	11⅞	4¼

hood

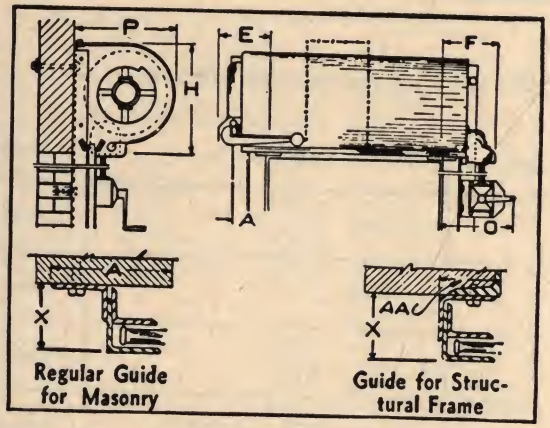
opening height ft.	H in.	P in.
.....- 6½	12½	12
6½- 8	13½	13
8 - 9½	14½	14
9½-13½	15½	15
13½-16	16½	16

crank and gear
on openings of any dimensions

face mounting
operated from one or both sides

automatic
label A: type 102
label B, C: type 206
label D: type 306

non-automatic
label B, C: type 208
label D: type 308



guides

opening width ft.	A in.	AA in.	E in.	F in.	O in.	X in.
..-4	5⅜	3	8⅛	11¼	19½	3¼
4- 8	6⅛	3½	8⅞	12	20¼	3¾
8-12	6⅝	4	9⅜	12½	20¾	3¾
12-18	7⅛	4½	9⅞	13	21¼	4¼

hood

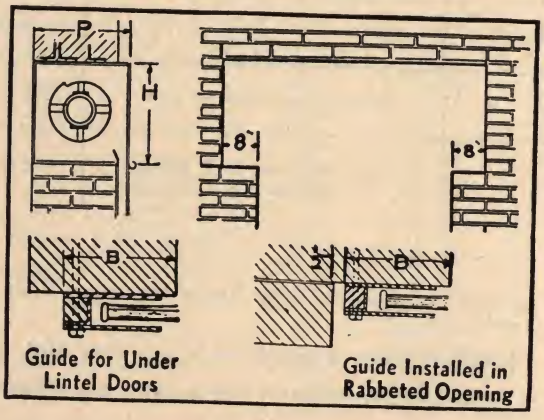
opening height ft.	H in.	P in.
....- 6½	12½	12
6½- 8	13½	13
8 - 9½	14½	14
9½-13½	15½	15
13½-16	16½	16

manual
by handle on bottom bar

under lintel mounting
for operation on both sides of wall

automatic
label A: type 104
label B, C: type 210
label D: type 310

non-automatic
label B, C: type 212
label D: type 312



guides

opening width ft.	B in.	Reveal in.
..- 4	4	8
4- 8	4½	8
8-12	4½	8

hood

opening height ft.	H in.	P in.
...-6½	13	11
6½-8	14	12
8 -9½	15	13

Underwriters' labeled doors

Made under supervision of Underwriters' Laboratories, Inc., and inspected and labeled at maker's factory by their representative.

They are made primarily for protection against fire. They also have all the advantages and desirable features of non-labeled service-type doors and may be used as such; curtains may be raised and lowered independently of automatic release (on doors so equipped) which is controlled thermally and functions when link fuses.

Underwriters' classification

class A—fire wall—openings in interior walls

For full protection openings should have curtains both sides of wall. Underwriters will give limited credit for one door. They may be hung on the face of the wall or in opening. All Class A doors are automatic closing. Operation may be either manual or mechanical. See list for numbers to specify.

class B and C—doors for vertical shafts, corridors and room partitions

They may be hung on the face of the wall or in opening. Operation may be either manual or mechanical. Doors are made automatic closing when required. See list for numbers to specify.

class D—doors and shutters for openings in exterior walls

Operation may be either manual or mechanical. Doors may be mounted on face of wall or in opening. Doors are supplied with automatic closing devices when required. See list for numbers to specify.

The following "Mecco" doors are approved and labeled by the National Board of Underwriters and Factory Mutual Laboratories for openings, methods of operation and mounting, as listed:

"Mecco" doors

	type no.	operation	location	operated by
	100	Automatic	Face of wall	Handles
	102	Automatic	Face of wall	Crank
A	103	Automatic	Face of wall	Chain
	104	Automatic	In opening*	Handles
	106	Automatic	In opening*	Crank
	107	Automatic	In opening*	Chain
	200	Automatic	Face of wall	Handles
	202	Non-automatic	Face of wall	Handles
B	204	Non-automatic	Face of wall	Chain
	205	Automatic	Face of wall	Chain
	206	Automatic	Face of wall	Crank
&	208	Non-automatic	Face of wall	Crank
	210	Automatic	In opening*	Handles
	212	Non-automatic	In opening*	Handles
C	214	Non-automatic	In opening*	Chain
	215	Automatic	In opening*	Chain
	216	Automatic	In opening*	Crank
	218	Non-automatic	In opening*	Crank
	300	Automatic	Face of wall	Handles
	302	Non-automatic	Face of wall	Handles
	304	Non-automatic	Face of wall	Chain
	305	Automatic	Face of wall	Chain
	306	Automatic	Face of wall	Crank
D	308	Non-automatic	Face of wall	Crank
	310	Automatic	In opening*	Handles
	312	Non-automatic	In opening*	Handles
	314	Non-automatic	In opening*	Chain
	315	Automatic	In opening*	Chain
	316	Automatic	In opening*	Crank
	318	Non-automatic	In opening*	Crank

*"In opening" refers to doors with coil under lintel.

specifications

Openings shall be equipped with steel rolling doors of interlocking slat type as manufactured by THE MOESCHL-EDWARDS CORRUGATING CO., INC., of Cincinnati, Ohio. Doors to be constructed in accordance with the following specifications:

curtain To be formed of interlocking slats of galvanized 1.25 oz. per sq. ft. of flat metal hot-dipped in accordance with ASTM standards copper bearing steel of gauge required by Underwriters' Laboratories, Inc., the ends of each slat to be fitted with a steel or malleable reinforcement to prevent lateral movement and to serve as wearing surfaces in the guides. The upper edge of curtain to be attached to the spiral rings on shaft by stove bolts and the lower edge to bottom bar by machine bolts.

hood To be formed from 24-gauge hot galvanized sheet steel, with automatic flame stop attached when required.

counterbalance To consist of helical oil tempered steel spring enclosed within a barrel and anchored to spindle.

operation Handles on bottom bar by chain and gear or crank and shaft.

brackets High grade gray iron, web not less than ⅜ in. and attached direct to guides.

bottom bar To consist of steel angle of proper dimensions for reinforcing bottom of curtain.

barrel Steel tube with ends enclosed by cast collars fitted with ball or roller bearings, and journaled on steel shafting of suitable diameter and supported by flanges cast on or applied to brackets. Barrel shall be equipped with cast iron rings of proper diameter to maintain a correct counterbalance.

guides To be composed of three angles or two 3/16-in. steel plates securely riveted together to form a channel groove not less than 2 in. deep, proper depth to be determined by width of opening, arranged for expansion at all rivet and bolt connections.

painting All parts to receive one shop coat of gray metallic primer.

To the specifications add the following paragraphs to cover type required:

type no. 100

location—Doors to be hung on face of wall; brackets and guides so placed that clear height and width of openings will be maintained, except where structural conditions of the building prevent. **operation**—By handle on bottom bar. **label**—For fire wall opening.

types nos. 200 and 202

location—Same as No. 100. **operation**—Same as No. 100. **label**—For vertical shaft, corridor or room partition as required.

types nos. 300 and 302

location—Same as No. 100. **operation**—Same as No. 100. **label**—For exterior opening.

type no. 103

location—Doors to be mounted face of wall; brackets and guides so placed as to provide a clear, unobstructed opening. **operation**—Chain and gear. **label**—For fire wall opening.

types nos. 204 and 205

location—Same as No. 103. **operation**—Same as No. 103. **label**—For vertical shaft, corridor or room partition.

types nos. 304 and 305

location—Same as No. 103. **operation**—Same as No. 103. **label**—For exterior opening.

type no. 102

location—Doors to be hung on face of wall; brackets and guides so placed that clear height and width of openings will be maintained, except where structural conditions of the buildings prevent. **operation**—By crank and gear. **label**—For fire wall opening.

types nos. 206 and 208

location—Same as No. 102. **operation**—Same as No. 102. **label**—For vertical shaft, corridor or room partition as required.

types nos. 306 and 308

location—Same as No. 102. **operation**—Same as No. 102. **label**—For exterior opening.

type no. 104

location—Doors to be hung under lintel, brackets also to be placed under lintel. Guides to be attached to the face of the wall. All as indicated by detail. **operation**—To be by handle on bottom bar. **label**—For fire wall opening.

types nos. 210 and 212

location—Same as No. 104. **operation**—Same as No. 104. **label**—For vertical shaft, corridor or room partition as required.

types nos. 310 and 312

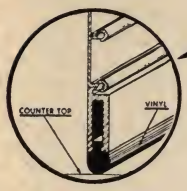
location—Same as No. 104. **operation**—Same as No. 104. **label**—For exterior opening.

size limit—Regular labels will be used on sizes within limit of 120 sq. ft. with 12 ft. 0 in. maximum in either dimension for both interior and exterior openings. A certificate will be issued upon request for doors of larger size of label construction—(Underwriters Laboratory label procedure for label doors).

MECCO

flat slat rolling doors—
steel or aluminum

ALUMINUM SECTION



a typical installation
working drawings furnished on request
(trim and counter top furnished by others)

The flat slat is neat in appearance. Resistant to damage.

Ball Bearings and spring balance for ease of operation.

Less headroom required for coiling of curtain in space normally not used.

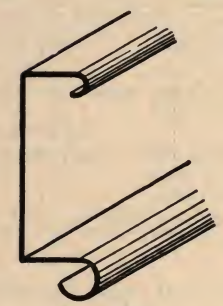
Easily installed, instructions supplied with each order.

Precision designed for use in schools, hospitals, newsstands, restaurants, cafeterias, or similar smaller sized openings. Rolled Flat Slats (see illustration) are available in No. 24-gauge galvanized steel that can be painted on the job, aluminized steel and No. 22 B & S gauge aluminum, also in extruded 16-gauge aluminum. Minimum headroom is required for the average opening. (See schedule.) Balance of specification same as commercial (non-labeled) doors.

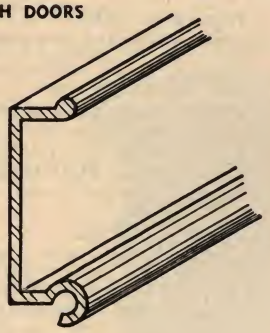
Opening Width	Opening Height	Headroom Required
Widths to 16′-0″	0′ – 3′-6″	8″
	3′-6″ – 4′-0″	10″
	4′-0″ – 7′-0″	11″

A mullion is recommended for openings wider than 16′–0″.

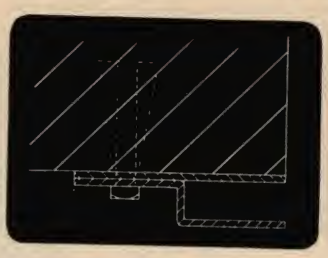
1¼″ SLAT FOR FLUSH DOORS



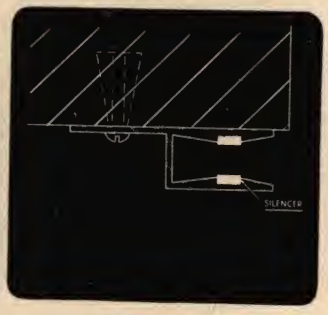
Rolled Steel
Aluminum or
Aluminized Steel



Extruded Aluminum



STEEL



ALUMINUM

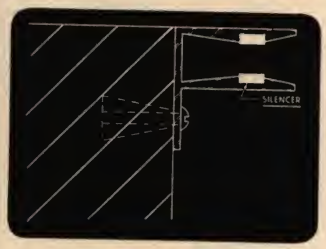
guides designed for face of wall installations—for close clearance

Doors of flat or midget slat design can be operated by handle, chain or crank and can be mounted on face of wall or in opening to suit job conditions. Brackets and guides can be recessed if desired. Special features include a cushioned bottom bar, drop handle. Locking arrangement is by slide bolts arranged for padlocking or cylinder locking on bottom bar.

Contact Moeschl-Edwards for special finishes and oversizes.

Mecco Flat Slat Rolling Doors are custom built to requirements of each individual job.

STEEL



ALUMINUM

guides designed for between the jamb installations

The Moeschl-Edwards Corrugating Co., Inc.
P. O. Box 1115, Cincinnati 1, O.

MECCO

rolling grilles—steel or aluminum

Mecco rolling grilles operate like Mecco rolling doors. They give security without blocking light, air or vision.

Mecco rolling grilles are used in school corridors, bars and counters, markets, store fronts, parking lot gates, etc.

features

Mecco rolling grilles can be installed in any type of architecture. The grille is sturdily constructed of rods and flats that are full width of opening and secured in guides.

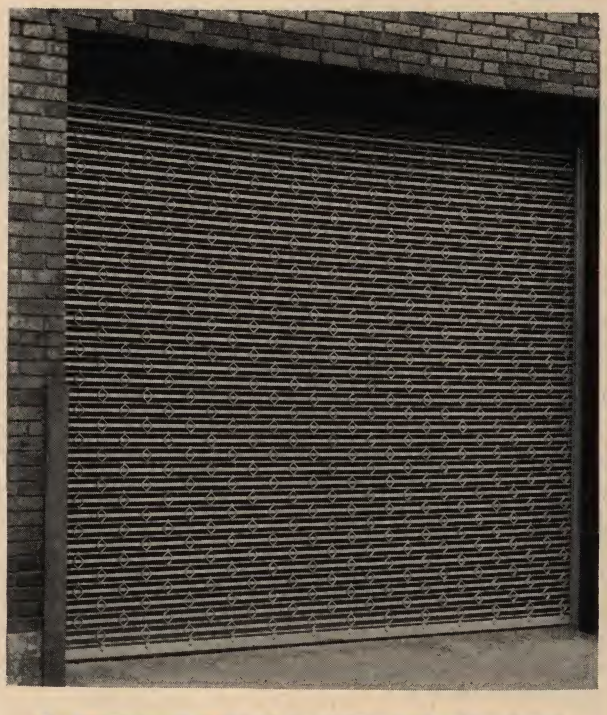
Working drawings furnished on request.

operation

Mecco rolling grilles are operated similar to Mecco Rolling Steel Service Doors; manual, chain or motor operation.

installation

Mecco rolling grilles can be installed in same conditions as service doors.



An opening protected by Mecco rolling grille. Attractive design providing light, air and security.

specifications

Rolling grilles shall be as manufactured by the Moeschl-Edwards Corrugating Company of Cincinnati, Ohio.

grille curtain Mecco rolling grilles shall be made of 5/16 round hard drawn galvanized steel bars, alternating with 3/32 x 5/8 galvanized flat bar continuous horizontally from jamb to jamb and locked into rolled steel vertical side guides. The horizontal round and flat bars are flexibly connected by vertical links of galvanized steel. No opening in the grille shall be large enough to permit passage of a 1¼-in. diameter object. The ends of the bars and flats shall be provided with straight continuous galvanized steel end links of self-aligning construction, each link locking in the side guide to prevent pulling out of the grille.

shaft, counterbalance and adjustment The grilles shall be counterbalanced by helical-wound oil-tempered springs enclosed in a steel tube shaft. Provision shall be made on all grilles, including those between jambs, for easy adjustment of spring balance on the job.

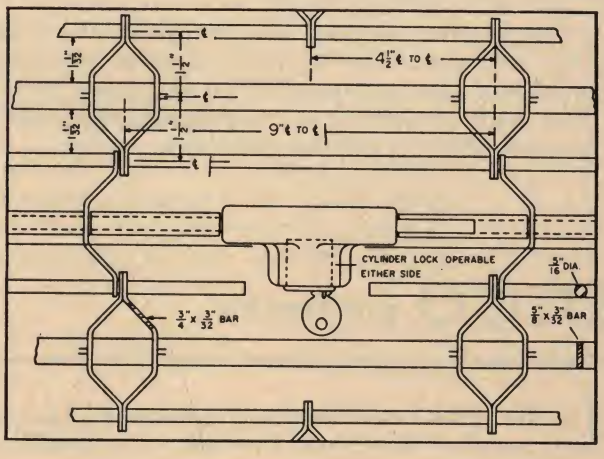
guides Side guides shall be formed steel sections designed in keeping with grille size and architectural conditions surrounding the opening.

hood Covering over grille coils shall be formed of No. 24-gauge galvanized steel. A removable soffit cover is to be provided when grille is recessed above ceiling.

operation Grilles up to approximately 120 sq. ft. can be manually operated by handles on bottom bar. Grilles of larger size shall be provided with hand chain, hand crank or motor operator.

locking devices Grilles shall be locked by means of slide bolt and padlock arrangement, suitable for padlocking, and mounted on bottom bar of the grille.

Cylinder locking device can be furnished in center of grille accessible from either side as illustrated.



Rolling grilles take approximately the same bracket, hood and overhead clearances as rolling doors. See details for commercial (non-labeled) doors.

Rolling grilles can also be made of aluminum and other metals.

MECCO electric operators

Mecco Rolling Doors are designed for motor operation to be incorporated at time of original installation or at a later date if so desired.

The Mecco Standard Power Unit is known for its compactness and silent operation. The gearhead motor, solenoid brake and automatic rotary limit switch are designed as one unit mounted directly to the door bracket, resulting in an ease of erection, more dependable operation and assurance of long life. In case of electric power failure, the unit is provided with either emergency chain or crank easily accessible from the floor for door operation.

The Mecco Special Power Unit differs from the standard unit in that the motor, reducer, and brake are separate units and has the additional advantage of removing the motor without interfering with the auxiliary chain or crank operation. This unit conforms to J.I.C. Standards.

equipment includes

Motor of sufficient capacity to move curtain in either direction at a speed of about 1 ft. per second; especially designed to meet requirements of high starting torque and intermittent operation, 3-phase, 60-cycle, 220-440 volts standard. Worm reduction gear with hardened steel cut worms and phosphor bronze gear. Solenoid brake. Magnetic starting switches. Automatic limit switch arranged for universal adjustment to provide accurate control.

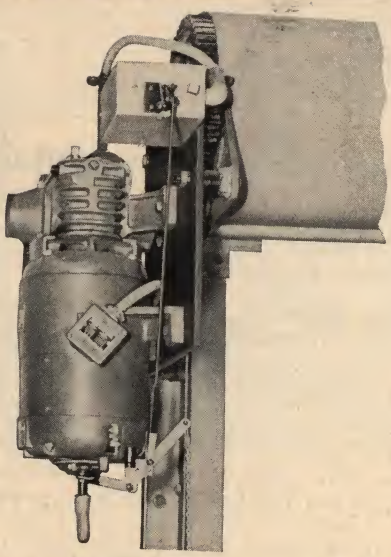
Emergency extension crank or chain operated from floor, automatically cutting out current and releasing brake.

Single enclosed push-button control station with up, down and stop control. One-station control is standard; additional stations may be added when required. By a momentary push on the proper button the curtain may be manipulated as desired, opened or closed; and the travel of the curtain is stopped, however, by automatic limit switches at the limit of curtain travel up or down. The travel of the curtain may also be stopped in any position by pressure on the STOP button, and travel of the curtain may be continued in the same direction or may be reversed, as desired. Also constant pressure-type push-button control can be supplied.

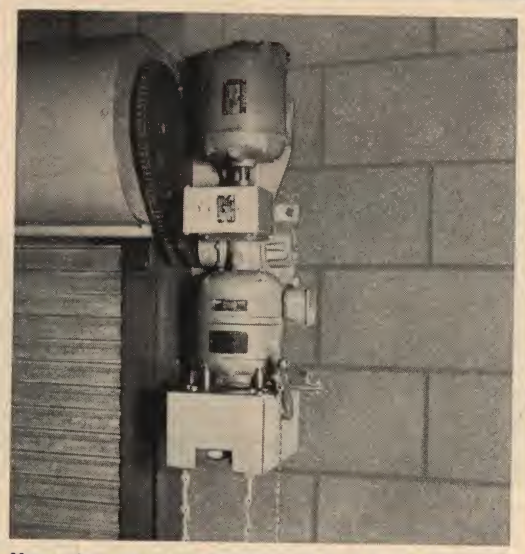
equipment does not include

Wires, conduit, service switches, or fuses which are to be installed by others according to wiring diagram furnished.

When job conditions demand special motor adaptation, Mecco Power Units can be designed so as to be installed right or left hand, thru wall, above or in front of the door housing.



Standard Motor illustrating compactness of the unit with emergency crank operator.



Motor Arrangement conforming to J. I. C. Standards.

MECCO guarantee

The Moeschl-Edwards Corrugating Co., Inc., hereby guarantees the rolling doors and operating units for a period of one (1) year from date of installation against defective materials, designs and workmanship.

Upon receipt of notice from the owner of failure of any part of the guaranteed equipment during the warranty period, the affected part or parts shall be replaced promptly with new parts by and at the expense of The Moeschl-Edwards Corrugating Co., Inc.

_____

President

optional extras

pass or wicket doors

Used where it is desirable to provide a small entrance door in a less frequently used large rolling steel curtain.

Pass doors are hinged to a rigid frame and are furnished with locks. They are operated without disturbing the curtain in any way. When the entire opening is to be made available, the pass door frame is released and swung out of the way.

weatherstripping

Where effective seal is required at sill, jambs or both, Mecco incorporates a weatherstripping to satisfy conditions. Hood baffles can also be furnished to minimize air leakage around the curtain coil.

windlocks

Windlocks are applied to all Mecco doors exceeding 16 ft. in width to prevent curtain from leaving guides under excessive wind pressure. Windlocks can be furnished with doors of any size if desired where design conditions warrant.

safety bottom bar

This fixture is incorporated to motor operated doors as a means to eliminate damage if door is lowered upon any obstruction in the opening. Mecco Safety bottom bars will stop or reverse travel instantly upon contact with any obstruction.

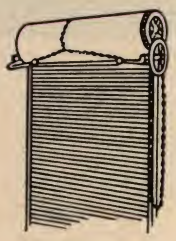
mullions — removable or stationary

Mullions whether removable or permanent are used where an opening is to be divided into two or more doors where the usage of the entire opening is not always necessary. These Mullions carry the guides of the adjacent doors and are light in weight for easy removal. Hinged Mullions can also be furnished.

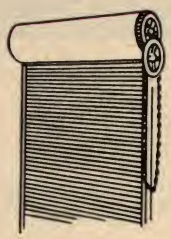
vision panels

Vision panels will be furnished with doors when specified.

Quality products have been manufactured over fifty years in same location

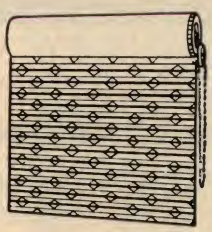


MECCO labeled rolling doors

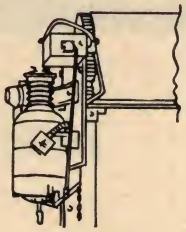


MECCO commercial rolling doors

MECCO flat slat rolling doors



MECCO rolling grilles



MECCO motor rolling doors

Manufactured in steel, aluminum, aluminized steel, stainless steel, bronze or other special finishes.

MECCO representatives

Address "Moeschl-Edwards Rolling Steel Doors" as listed in telephone directories in the following cities:

Akron, Ohio
Albany, Georgia
Albuquerque, New Mexico
Alexandria, Louisiana
Appleton, Wisconsin
Arcadia, Wisconsin
Asheville, North Carolina
Ashland, Wisconsin
Atlanta, Georgia
Attalla, Alabama
Augusta, Georgia
Austin, Texas
Baltimore, Maryland
Beaumont, Texas
Binghamton, New York
Birmingham, Alabama
Bluefield, West Virginia
Boston, Massachusetts
Bristol, Tennessee
Buffalo, New York
Butte, Montana
Cedar Rapids, Iowa
Charleston, South Carolina
Charleston, West Virginia
Charlotte, North Carolina
Chattanooga, Tennessee
Cheyenne, Wyoming
Chicago, Illinois
Cincinnati, Ohio
Cleveland, Ohio
Columbia, South Carolina
Columbus, Ohio
Corpus Christi, Texas
Dallas, Texas
Davenport, Iowa
Dayton, Ohio
Decatur, Alabama
Decatur, Illinois
Denver, Colorado
Des Moines, Iowa
Detroit, Michigan
Durham, North Carolina
El Paso, Texas
Erie, Pennsylvania
Evansville, Indiana
Fayetteville, North Carolina
Flint, Michigan
Fort Wayne, Indiana
Fort Worth, Texas
Fremont, Ohio
Grand Rapids, Michigan
Green Bay, Wisconsin
Greensboro, North Carolina
Greenville, South Carolina
Hamilton, Ohio
Harrisburg, Pennsylvania
Houston, Texas
Huntington, West Virginia
Indianapolis, Indiana
Jackson, Mississippi
Jacksonville, Florida
Kalamazoo, Michigan
Kansas City, Missouri
Knoxville, Tennessee
Lancaster, Pennsylvania
Lansing, Michigan
Lexington, Kentucky
Lima, Ohio
Lincoln, Nebraska
Little Rock, Arkansas
Louisville, Kentucky
Lubbock, Texas
Lynchburg, Virginia
Macon, Georgia
Madison, Wisconsin
Marquette, Michigan
Memphis, Tennessee
Miami, Florida
Milwaukee, Wisconsin
Minneapolis, Minnesota
Mobile, Alabama
Nashville, Tennessee
New Orleans, Louisiana
New York, New York
Oklahoma City, Oklahoma
Omaha, Nebraska
Orange, Texas
Orlando, Florida
Parkersburg, West Virginia
Peoria, Illinois
Philadelphia, Pennsylvania
Phoenix, Arizona
Pittsburgh, Pennsylvania
Portland, Oregon
Portsmouth, Ohio
Rapid City, South Carolina
Reading, Pennsylvania
Richmond, Virginia
Roanoke, Virginia
Rochester, New York
Rockford, Illinois
Roswell, New Mexico
Saginaw, Michigan
Salt Lake City, Utah
San Angelo, Texas
San Antonio, Texas
Sandusky, Ohio
Santa Fe, New Mexico
Savannah, Georgia
Scottsbluff, Nebraska
Shreveport, Louisiana
Sikeston, Missouri
Sioux Falls, South Dakota
South Bend, Indiana
Spartanburg, South Carolina
Springfield, Illinois
Springfield, Missouri
Springfield, Ohio
St. Louis, Missouri
Syracuse, New York
Tampa, Florida
Terre Haute, Indiana
Toledo, Ohio
Topeka, Kansas
Tucson, Arizona
Tulsa, Oklahoma
Utica, New York
Waco, Texas
Washington, D. C.
Waterloo, Iowa
West Palm Beach, Florida
Wheeling, West Virginia
Wilkes-Barre, Pennsylvania
Wilmington, Delaware
Worcester, Massachusetts
York, Pennsylvania
Youngstown, Ohio
San Juan, Puerto Rico

The Moeschl-Edwards Corrugating Co., Inc.
P. O. Box 1115 • Cincinnati 1, Ohio

Printed in U.S.A.

PACIFIC

steel and aluminum

ROLLING DOORS

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A.I.A. File No. 16-D13

PACIFIC ROLLING DOOR COMPANY

400 Derby Avenue Oakland 1, California Telephone KE 3-1767

DISTRIBUTORS IN PRINCIPAL CITIES

PACIFIC
ROLLING DOORS

Advantages

Custom Design

All "Pacific" doors are custom engineered to meet the specific requirements of the user. As door specialists, "Pacific" engineers assist Architects, Engineers, Contractors and Consumers in every conceivable door problem.

Flexibility of Application

"Pacific" rolling doors have been successfully applied to almost any type of installation. While primarily used in factories, warehouses, commercial buildings and schools, "Pacific" doors have been used with outstanding success on such installations as residences, truck bodies, ships and other various applications.

Practically No Size Limitations

Due to the basic design principles, "Pacific" rolling doors may be built to almost any size requirement. In industrial plants extremely wide doors have become increasingly popular due to the ease in handling a large number of vehicles in a restricted turning area.

Ease of Operation

All "Pacific" doors are designed with oversize friction-free bearings specifically designed for the size and weight of each door. The torsion spring counterbalance unit is also specifically designed for each individual application in order to insure the maximum in effortless operation.

Space Saving

The upward coiling action of "Pacific" rolling doors minimizes operating room. When fully open

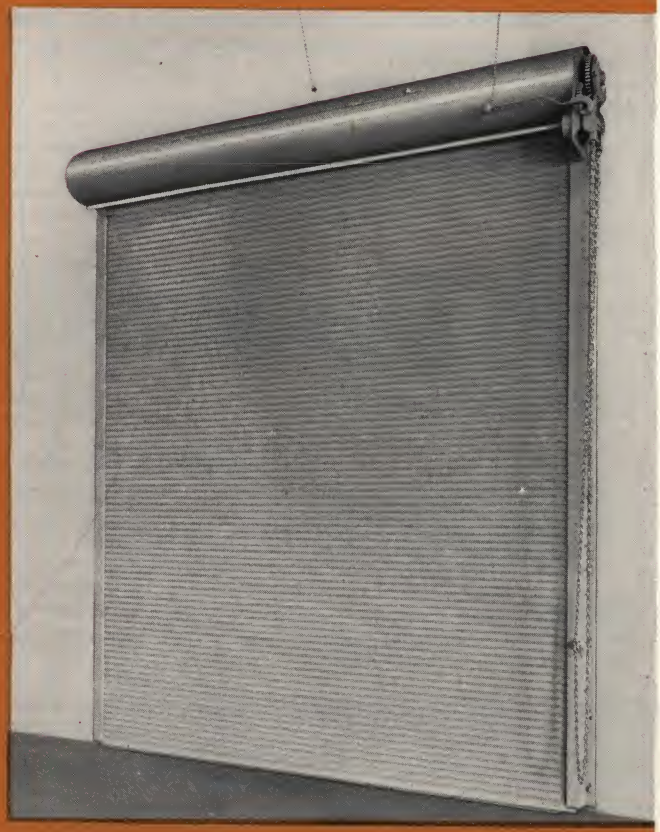
TYPES OF

Service Doors

Grilles

DOORS

Labelled Fire Doors



Counter Doors

the doors do not cover valuable wall space nor do they project up or into the building or in any other way interfere with usable interior space.

Appearance

The trim horizontal lines of "Pacific" rolling doors are completely modern in appearance and at the same time blend pleasingly with any type of existing architecture.

Durability

"Pacific" doors are built to last. Steel rolling door curtains are fabricated from heavily galvanized steel and further provided with a phosphate coating to insure adhesion of the factory applied prime coat of paint. Aluminum door curtains are fabricated from highly corrosion-resistant aluminum alloys. Steel plate brackets, continuous wall angle construction and heavy duty construction throughout are only some of the features which contribute to the overall durability of "Pacific" doors.

Protection

The rugged construction of "Pacific" doors not only provide superior protection against intruders and severe weather conditions but acts as an excellent fire retarder due to the strict use of non-combustible materials. Where maximum fire protection is required, Pacific manufactures automatic fire doors, tested and approved by the Underwriter's Laboratories.

Guarantee

Every "Pacific" door is guaranteed against all defects in material or workmanship for a period of one year from date of installation.

Specifications

OPERATION

(a) **Manual** — Manually operated by means of handles on footpiece (not recommended for openings over 80 sq. ft. in area).

(b) **Chain** — Mechanically operated through endless hand chain, sprocket, and reduction gears.

(c) **Crank** — Mechanically operated through hand crank box and reduction gears.

(d) **Motor** — Power operated by means of a heavy duty, hoist type, electric gear motor. The gear head of the motor shall consist of precision machine cut gears, completely housed, and running in an oil bath. For use in case of power failure, a control operable from the floor level shall be provided which shall automatically disengage the power unit from the door gear train and engage an emergency hand chain operator. The mechanism shall be so designed that the motor unit may be removed without affecting operation by means of the hand chain operator. Power unit shall include a magnetic reversing starter with overload protection, one three-button pushbutton, and a geared type limit switch directly connected to the main drive gear.

MATERIALS

Curtain

(1) **SLATS** — Curtain shall be composed of interlocking slats rolled from hot galvanized strip steel bearing a zinc coating of 1.25 oz. per square foot of flat metal, per A.S.T.M. standards. Galvanized slats shall be provided with a phosphate coating for paint adhesion. Slats shall have sufficient strength to withstand a wind load of 20 lbs. per square foot. For aluminum doors slats shall be rolled from type 5052-H34 aluminum with a tensile strength of not less than 37,000 p.s.i.

(2) **ENDLOCKS** — Both ends of alternate slats shall be fitted with malleable iron endlocks which shall maintain curtain alignment and protect slats against wear in guides.

(3) **BOTTOM BAR** — Shall be made of two steel angles placed back to back, which shall serve to strengthen the lower edge of the curtain and provide contact with the sill. (For Aluminum doors aluminum angles are substituted.)

Barrel and Counterbalance

(4) **BARREL** — Shall be of steel pipe or casing of sufficient size to avoid deflection in access of .03 inches per foot of opening width. Barrel shall serve to coil curtain and encase spring mechanism.

(5) **SPRINGS** — Shall be helically wound torsion springs of oil tempered spring wire, so designed as to counterbalance the weight of the door curtain.

(6) **BARREL CASTINGS** — Shall be of heavy high grade gray cast iron, accurately machined for perfect fit in barrel. Shall serve to plug ends of barrel and to secure ends of counterbalance springs.

(7) **TENSION SHAFT** — Shall be of cold rolled shafting of sufficient size to carry the torsional load of the counterbalance springs.

(8) **BEARINGS** — The main bearings carrying the full barrel and curtain load, shall be either roller bearings, self-lubricating graphite bronze bearings, or grease sealed self-aligning ball bearing units, depending upon size requirements.

(9) **ADJUSTMENT WHEEL** — Shall be of heavy high grade cast iron. Shall provide easy adjustment of tension in all counterbalance springs.

Brackets

(10) **BRACKETS** — Shall be fabricated from steel plate not less than $\frac{5}{16}$" thick and of sufficient size and thickness to support the total door weight with a high factor of safety. Brackets shall be provided with a means to fasten hood securely. Brackets shall be fastened to supporting wall angle by not less than two $\frac{1}{2}$" diameter bolts.

Reduction Gearing

(11) **GEARS AND SPROCKET** — Shall be of high strength gray cast iron, machine molded from machine cut patterns. Spur gears shall be not less than 4 pitch and all pinions shall be not less than 3" pitch diameter.

(12) **OPERATING CHAIN** — Shall be of hot galvanized chain, without sharp projections and shall be of sufficient strength to prevent stretching.

Hood:

(13) **HOOD** — Shall be made from hot galvanized sheet steel not lighter than No. 24 U.S. gauge and shall be formed with beads or flanges sufficient to prevent deflection.

Guides

(14) **GUIDES** — Shall be fabricated from heavy steel angles not less than $\frac{3}{16}$" thick. Depth of groove shall be sufficient to maintain curtain in guides under a load of 20 lbs. per sq. ft. Wall angles shall be continuous from floor to top of brackets to proportion door load over full height.

LOCKING DEVICES

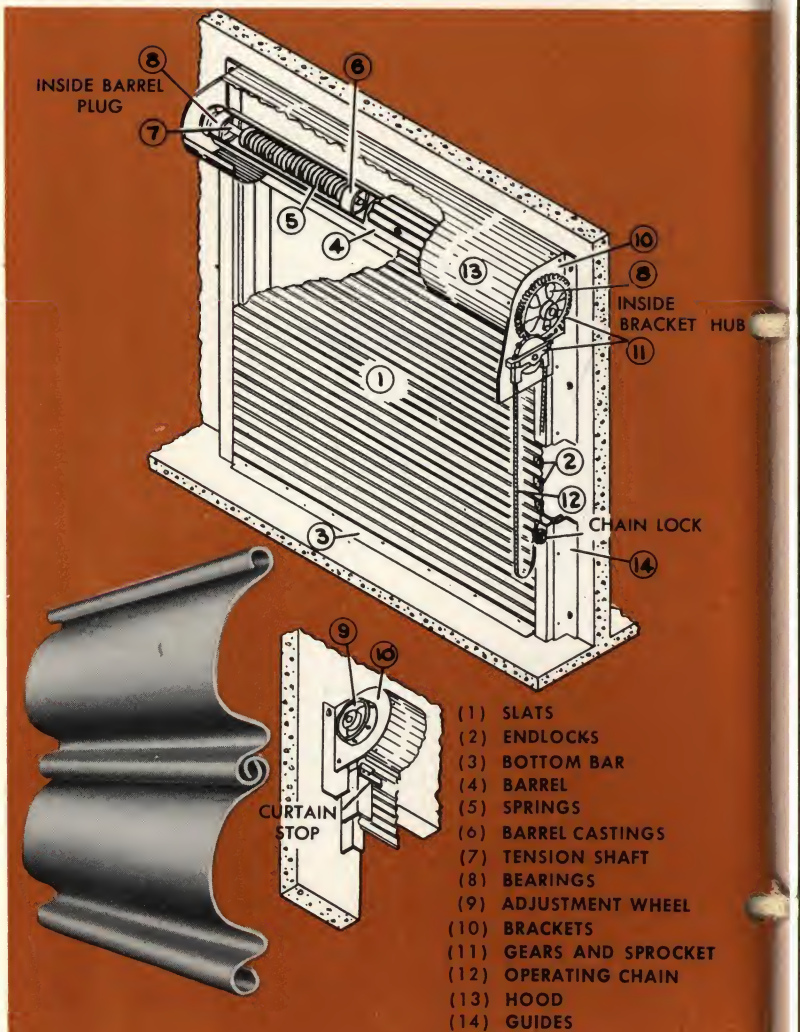
(a) Manually operated doors shall be provided with slide bolts on the bottom bar.

(b) Chain operated doors shall be provided with a cast iron keeper and pin for securing the hand chain.

(c) Crank operated doors shall be provided with a means for securing the operating shaft.

PAINT

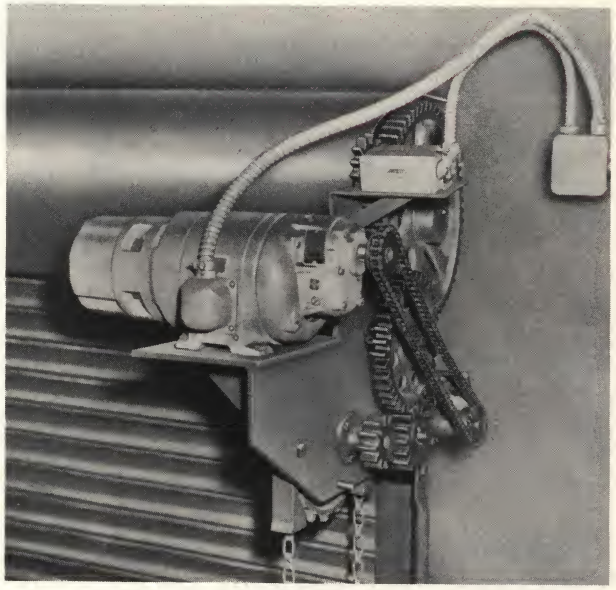
All parts of the door except bearing surfaces shall receive one shop coat of rust-inhibiting metal primer.



Power Operation

Use

"Pacific" automatic power units can be provided for almost any installation. Operation is similar to that of an automatic elevator. A momentary contact of the "Open" or "Close" button of the three-button push button station causes the door to revert to either the fully open or closed position at which point it is automatically stopped by a geared type limit switch. The door may be stopped at any point in either the opening or closing cycle by use of the "Stop" button. Over a period of time where a door is in frequent use, many man hours can be saved by the installation of these power drives.



Controls

In addition to the gear motor, each standard power unit includes a magnetic brake, a magnetic reversing starter with built in overload protection, a geared limit switch and one three-button push button station. Where control of power-operated doors is desired from the exterior of the building, key operated watertight push button stations can be provided. Special control systems can be provided to suit almost any individual requirement.

Emergency Operator

Each power unit is provided with a standby emergency hand chain operator for use in case of power failure. By moving a lever, operable from the floor level, the motor unit is completely disengaged from the gear train of the door and the hand operator is engaged. This distinct feature provides a positive mechanical interlock between power and hand operation as well as allowing the motor to be completely removed, if necessary, without affecting the hand operation of the door.

Safety Device

Where desired, and at additional cost, power operated doors can be furnished with a safety device consisting of a highly sensitive compressible tube weatherstrip across the bottom of the door. Upon contacting any obstruction during the closing cycle, the weatherstrip compresses and automatically stops the door or reverts it to its full open position.

Mounting

"Pacific" power units may be mounted alongside, above, below, or in front of the operating bracket. For doors mounted on the exterior side of the wall, power units may be mounted on the inside with a through-wall drive.

Optional Equipment

Wicket Doors

Where desired a wicket or pass door can be provided in the larger rolling door. This is often used where the only entry to a building is through the main door. Since an entry is hereby provided for personnel, many needless operations of the large door are omitted. The wicket door frame is constructed of angle iron and fitted with a sturdy latch and cylinder lock. The panel of the door is constructed of the same slats as the large door, and thereby blends into it, giving a uniform appearance. When the main door is raised, the wicket door and its frame swing back against the wall and completely clear the opening.

Weatherstripping

At additional cost, added weatherstripping devices can be furnished for use in extreme moisture or dust conditions. The bottom bars may be provided with rubber astragals. Jambs may be weatherstripped through the use of specially designed endlocks and combination spring bronze neoprene fabric weatherstrips. Hoods may be weatherstripped by the use of neoprene baffles.

Movable Intermediate Mullions

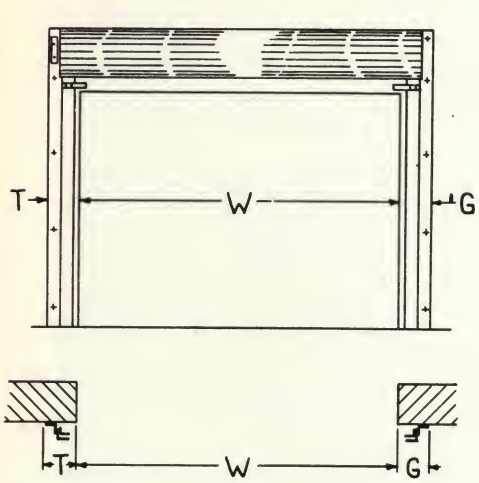
Where extremely wide openings are desired to be split into several doors rather than a single large door, for economy or other purposes, intermediate mullions are provided. The doors can be operated individually or when the full clear opening is to be used, the doors are raised and the mullions moved from the opening by one of several methods. Sliding mullions are pushed to the side of the opening. Pivoted mullions are swung up into the interior by a drum hoist or block and tackle. Small mullions may be lifted out and removed.

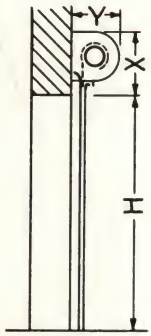
Windlocks

Windlocks are specially designed slat lugs which engage locking bars in the guides and prevent the curtain leaving the guides under excessive wind pressure. Windlocks are furnished as standard equipment on doors over 20'6" wide containing an area of 360 sq. ft. or over, and on all doors 24'0" wide and over. Windlocks may be provided on smaller doors at additional cost.

Interior Mounted Doors

Manually Operated—Face Mounted



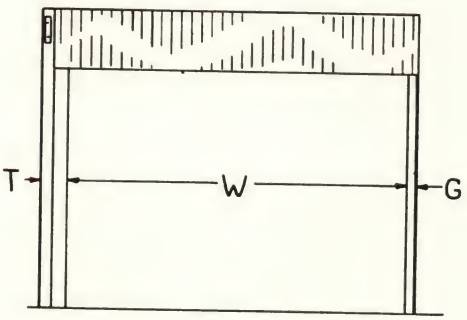


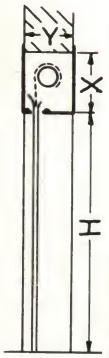
Model PF-10

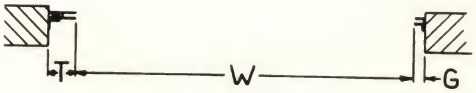
Dimensions in Inches

Height 'H' ft.	to 6				to 8				to 10				to 12			
Width 'W' ft.	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G
to 8	15	12	6	6	16	13	6	6	17	14	6	6	18	15	6	6
to 12	15	12	6	6	17	14	6	6	18	15	6	6	19	16	6	6

Manually Operated—Jamb Mounted





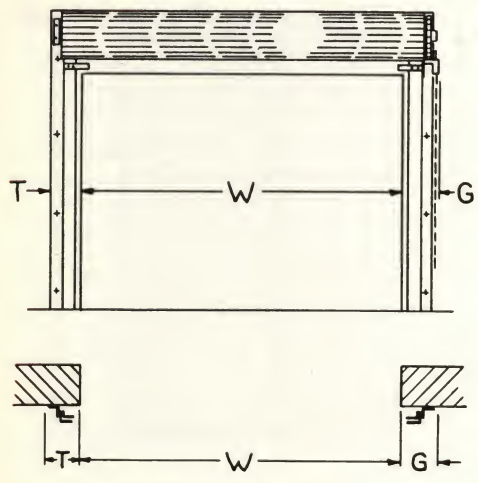


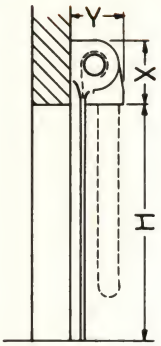
Model PJ-10

Dimensions in Inches

Height 'H' ft.	to 6				to 8				to 10				to 12			
Width 'W' ft.	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G
to 8	15	12	6	4	16	13	6	4	17	14	6	4	18	15	6	4
to 12	15	12	6	4	17	14	6	4	18	15	6	4	19	16	6	4

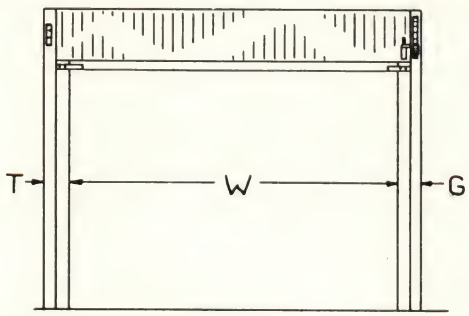
Chain Operated—Face Mounted

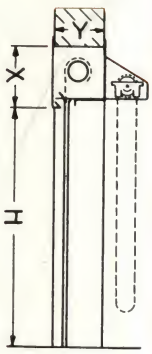


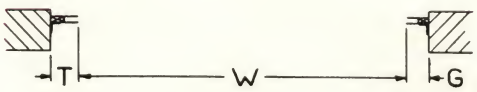


Model CF-10

Chain Operated—Jamb Mounted





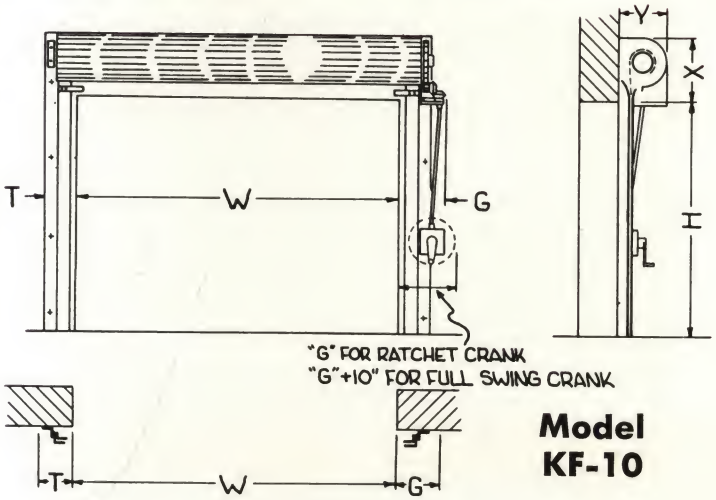


Model CJ-10

Dimensions in Inches

Height 'H' ft.	to 7				to 10				to 12				to 14				to 16				to 18				to 20				to 22			
Width 'W' ft.	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G
to 13	15	15	6	7	16	16	6	7	17	16	6	7	18	17	6	7	21	20	6	7	24	23	7	9	25	24	7	9	25	24	7	9
to 16	16	16	7	8	17	16	7	8	18	16	7	8	19	17	7	8	23	22	7	8	25	24	8	9	27	25	8	9	27	25	8	10
to 20	16	16	7	8	18	17	7	8	20	18	7	8	22	21	7	8	23	22	7	8	25	24	8	10	27	25	8	10	27	25	9	10
to 24	18	17	8	8	20	18	8	9	21	20	8	9	22	21	8	10	23	22	8	10	25	24	9	10	27	25	9	11	27	25	9	11

Crank Operated—Face Mounted

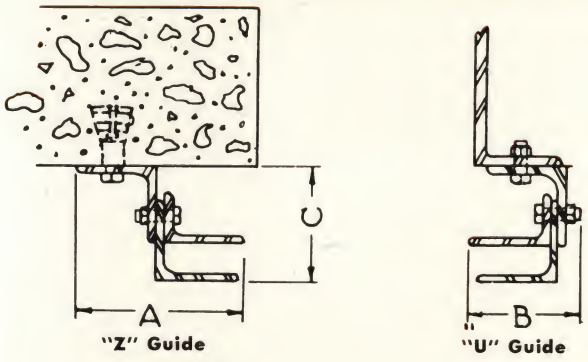


Model KF-10

Dimensions in Inches

Height 'H' ft.	to 7				to 10				to 12				to 14				to 16			
Width 'W' ft.	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G
to 13.....	15	15	6	9	16	16	6	9	17	16	6	9	18	17	6	9	21	21	6	9
to 16.....	16	16	7	10	17	16	7	10	18	17	7	10	19	17	7	10	23	22	7	10
to 20.....	16	16	7	10	18	17	7	10	20	18	7	10	22	21	7	10	23	22	7	10

Door Guides

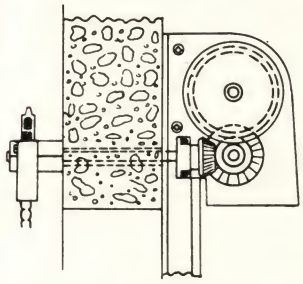


Dimensions in Inches

Width Ft.	A in.	B in.	C in.
To 13 incl.....	5 1/4	3 1/4	3 1/2
13 to 19.....	5 3/4	3 3/4	4
19 to 25.....	6 3/4	4 1/4	5
25 to 30.....	7 3/4	4 3/4	6
Over 30.....		CONSULT FACTORY	

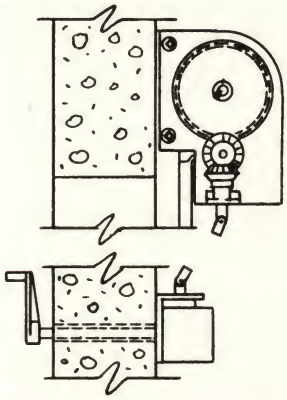
Exterior Mounted Doors

Chain Operated—Through Wall



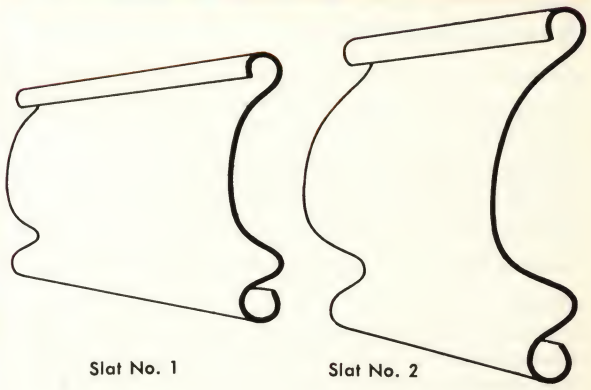
Model CF-30

Crank Operated—Through Wall



Model KF-30

Curtain Slats



Dimensions in Inches

Slat	Material	Gauge	Cen. to Cen.	Depth of Crown
Slat No. 1....	Steel	20 and 22	2 in.	1/2 in.
	Aluminum	18	2 in.	1/2 in.
Slat No. 2....	Steel	18 and 20	2 3/4 in.	7/8 in.
	Aluminum	18 and 16	2 3/4 in.	7/8 in.

STEEL AND ALUMINUM ROLLING GRILLES

Use

"Pacific" rolling grilles are designed to afford secure protection of openings without interfering with light, vision, and ventilation. While most cammonly used in schools, markets, counters, and store entrances, they are readily adaptable to almost any type of use.

Specifications

In general the specifications for "Pacific" rolling grilles are essentially the same as those listed for "Service Doors" with the following exceptions:

Steel Grilles

Curtain — Curtain shall be composed of $\frac{5}{16}$" round hard drawn galvanized steel bars running horizontally and spaced at not over 1 ½" vertical centers. Horizontal bars shall be flexibly connected by ⅛" x ¾" galvanized steel vertical links, spaced not over 7" on centers. Grille shall be provided with galvanized steel endlinks which shall engage in guides and prevent pulling out under excessive pressures.

Guides — Shall be fabricated from steel plates and shapes and shall be equipped with double locking bars to engage endlinks of grille.

Locking Devices — Standard locking devices shall be as specified for service doors. For manually operated grilles a center cylinder type locking device, operable from both sides, may be provided at additional cost.

Paint — Galvanized steel grille curtains are normally furnished unpainted.

Other parts of grille shall receive standard prime paint.

Aluminum Grilles

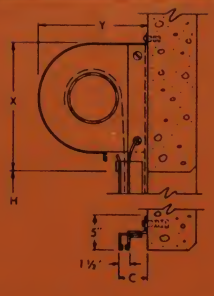
Curtain — Shall be as specified for steel grilles except that horizontal bars, vertical links and bottom bars shall be of aluminum.

Guides — Shall be as specified for steel grilles except that guides shall be fabricated from aluminum. In cases where grille guides are concealed, steel guides may be furnished.

Locking Devices — As specified for steel grilles.

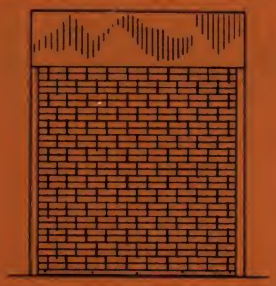
Finish — Aluminum grille curtains can be furnished in standard mill finish or in an etched alumilite finish at additional cost. The alumilite finish is recommended wherever the grilles are exposed to the weather or it is desirable to maintain the lustre of the finish.

Face Mounted



Model PFG-10

Jamb Mounted



Model PJG-10

Height—H	To 6'0"	To 8'0"	To 10'0"	To 12'0"
X	16"	18"	19"	20"
Y	14"	16"	17"	18"
C	2½"	3"	3½"	4"

Manual operation not recommended for sizes over 80 sq. ft. in steel grilles, or over 120 sq. ft. for aluminum grilles.

Larger size grilles available in chain, crank, or motor operation.

LABELLED STEEL ROLLING FIRE DOORS

Selection

Label Classification

"Pacific" fire doors are classified by the Underwriter's Laboratories as follows:

Class "A"—Openings in fire walls
Class "B"—Openings in vertical shafts
Class "C"—Openings in corridors or room partitions
Class "D"—Openings in exterior walls subject to fire exposure

All doors not exceeding 120 sq. ft. in area or 12 ft. in either dimension shall be provided with the Underwriter's Label for the appropriate type of use. Doors exceeding these size limitations, but not exceeding 576 sq. ft. in area or 24 ft. in either dimension may be provided with the Underwriter's Laboratories "Certificate of Inspection for Oversize Doors".

Operation

All doors for Class "A", "B", or "C" openings shall be automatic closing in the event of fire. Doors for Class "D" openings shall be automatic or non-automatic closing subject to local fire regulations. Service operation of doors not exceeding 80 sq. ft. in area shall be manual by means of handles on the bottom bar. Larger doors shall be service operated by means of a hand chain and reduction gearing or by a hand crank and reduction gearing. Doors up to 120 sq. ft. in area may be manually operated in cases where concealment of the mechanism is important and where the door is to be normally open, not requiring service use.

Double Doors

Class "A" openings should normally be provided with double doors. Other classes of openings are normally provided with single doors. Since fire protection regulations vary considerably in different localities, local authorities should be consulted to determine the exact number and type of doors required for a particular class of risk.

Mounting

The various types of mountings can be utilized to best suit the particular structural conditions involved or the degree of concealment desired. Doors which are concealed above the ceiling should be provided with access panels for servicing and testing purposes.

Use

"Pacific" automatic steel rolling fire doors are designed for use on openings where fire protection is the prime consideration. The doors are rugged in construction and provide a high degree of resistance to fire for long periods of time.

Advantages

Underwriter's Labelled

"Pacific" fire doors have been tested and approved by the Underwriter's Laboratories and bear the appropriate Label for each type of use.

Dual Purpose

While "Pacific" fire doors are primarily designed for the protection of openings against fire, each door may be operated for service use at any time. Service use of the doors does not interfere with the automatic closing mechanism in any way.

Automatic Closing Mechanism

The superior automatic closing device provided on "Pacific" fire doors is actuated by a 160° F. fusible link. Upon fusing of the link the mechanism drives the door to a fully closed position and insures positive closure at all times. All automatic closing doors are provided with a safety governor which controls the rate of descent during automatic closure.

Space Saving

Due to the basic construction of this type door, "Pacific" fire doors may be installed in almost any size or type of opening. Clearance requirements are considerably less than those required by other types of fire doors and as a result very compact installations can be achieved without utilizing valuable wall or floor space.

Concealment

In buildings such as hotels, hospitals, and retail stores, where appearance is a prime consideration, almost complete concealment of the doors may be effected by mounting the doors above the ceiling or recessing into the walls. For particularly unusual or difficult installations, consult "Pacific's" engineering department for further information.

Insurance Savings

On both new construction as well as existing buildings, the installation of "Pacific" labelled fire doors often results in a considerable reduction in fire insurance rates.

LABELLED STEEL ROLLING FIRE DOORS

Specifications

Operation — Doors shall be manually operated by means of handles on the bottom bar (not recommended for openings over 80 sq. ft. in area) or through reduction gearing by means of a hand chain or hand crank.

Curtain — Shall be composed of interlocking slats rolled from hot galvanized strip steel. Slats shall be fitted with malleable iron endlocks. Gauge of metal and type of endlocks shall be as required by the Underwriter's Laboratories standards. Bottom bar shall be composed of two steel angles not less than ⅛" in thickness and shall have provision for expansion at all assembly bolts.

Automatic Closing Device — Shall be thermally controlled by means of a fusible link. Upon fusing of the link, the door shall be forced to a fully closed position by means of an independent auxiliary spring contained within the barrel. After automatic closure the door shall not be difficult to reset. Permanent adjustment of the main counterbalance spring shall not be affected by automatic closure.

Safety Governor — All automatic closing fire doors shall be equipped with an automatic governor, inoperative during service operation, which shall limit the rate of descent of the curtain during automatic closure so as to prevent injury to persons accidentally in the opening.

Barrel and Counterbalance — Barrel shall be of steel pipe or casing of sufficient thickness to avoid deflection in excess of .03 inches per foot of span. Curtain weight shall be evenly balanced by helically wound torsion springs of oil-tempered spring wire. Counterbalancing springs shall be separate and independent of springs affecting automatic closure.

Bearings — Main door bearings shall be ball or roller bearings. All moving parts of the automatic closing mechanism shall be provided with non-ferrous bushings or bearings.

Brackets — Shall be fabricated from steel plate of sufficient thickness to safely support the full door load and of such size and shape as required by the door size and mounting conditions.

Hoods — Curtain coil shall be enclosed by a sheet metal hood of not less than No. 24 U.S. gauge. For Class "A", "B", and "C" doors, hood shall be equipped with a flame and smoke baffle which shall close against the curtain coil when thermally released.

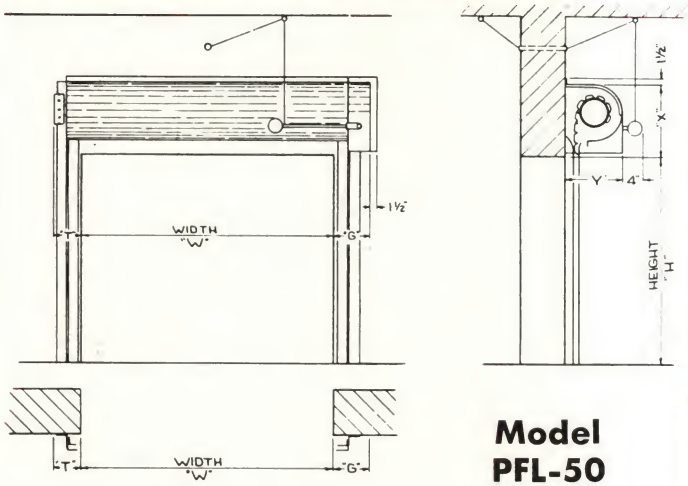
Guides — Shall be fabricated from steel angles or plates not less than $\frac{3}{16}$" thick and shall have provision for expansion at all assembly bolt connections and wall bolt connections. Wall bolts shall be spaced at not over 18" on centers.

Paint — All parts of the door except bearing surfaces shall receive one shop coat of rust-inhibiting metal primer.

Installation — Doors shall be installed by the manufacturer or his authorized representative and all work shall be in accordance with factory standards.

Single Doors

Manually Operated—Face Mounted

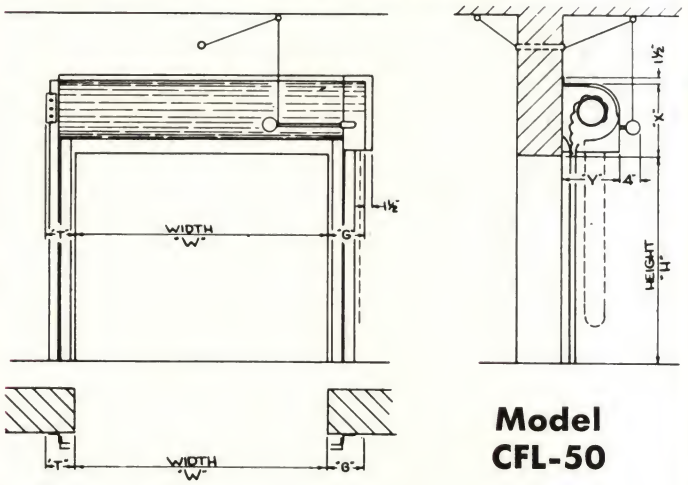


Model PFL-50

Dimensions in Inches

HEIGHT	TO 6'				TO 8'				TO 10'				TO 12'			
WIDTH	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G
TO 4'	19	17	6	7	19	17	6	7	19	17	6	7	19	17	6	7
TO 8'	19	17	6	7	19	17	6	7	19	17	6	7	19	17	6	7
TO 10'	19	17	6	8	19	17	6	8	19	17	6	8	19	17	6	8
TO 12'	19	17	6	8	19	17	6	8	19	17	6	8	19	17	6	8

Chain Operated—Face Mounted

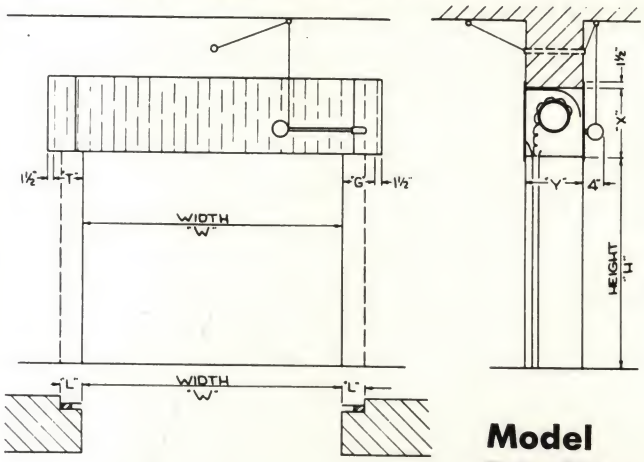


Model CFL-50

Dimensions in Inches

HEIGHT	TO 6'				TO 8'				TO 10'				TO 12'			
WIDTH	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G
TO 4'	19	17	6	10	19	17	6	10	19	17	6	10	19	17	6	10
TO 8'	19	17	6	10	19	17	6	10	19	17	6	10	19	17	6	10
TO 10'	19	17	7	11	19	17	7	11	19	17	7	11	19	17	7	11
TO 12'	19	17	7	11	19	17	7	11	19	17	7	11	19	17	7	11

Manually Operated—Jamb Mounted

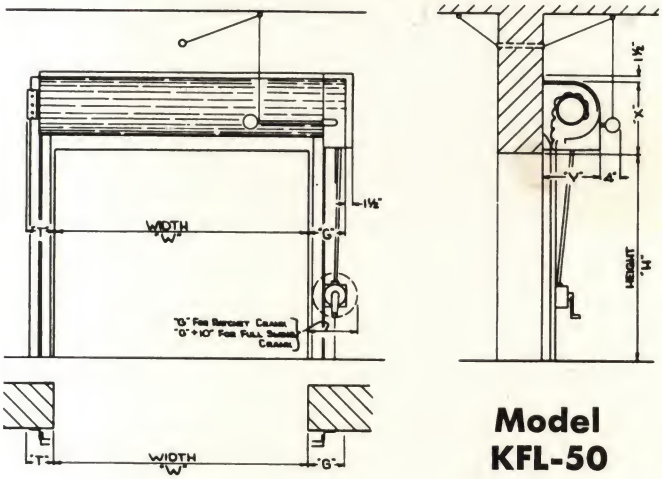


Model PJL-50

Dimensions in Inches

HEIGHT	TO 6′					TO 8′					TO 10′				
WIDTH	X	Y	T	G	L	X	Y	T	G	L	X	Y	T	G	L
TO 4′	19	17	6	7	4	19	17	6	7	4	19	17	6	7	4
TO 8′	19	17	6	7	5	19	17	6	7	5	19	17	6	7	5
TO 10′	19	17	6	8	5	19	17	6	8	5	19	17	6	8	5
TO 12′	19	17	6	8	5	19	17	6	8	5	19	17	6	8	5

Crank Operated—Face Mounted



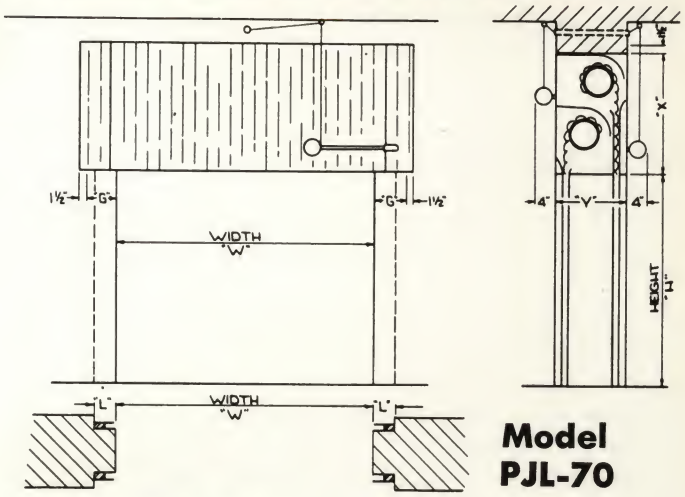
Model KFL-50

Dimensions in Inches

HEIGHT	TO 6′				TO 8′				TO 10′				TO 12′			
WIDTH	X	Y	T	G	X	Y	T	G	X	Y	T	G	X	Y	T	G
TO 4′	19	17	6	10	19	17	6	10	19	17	6	10	19	17	6	10
TO 8′	19	17	6	10	19	17	6	10	19	17	6	10	19	17	6	10
TO 10′	19	17	7	11	19	17	7	11	19	17	7	11	19	17	7	11
TO 12′	19	17	7	11	19	17	7	11	19	17	7	11	19	17	7	11

Double Doors

Manually Operated Superimposed Jamb Mounted

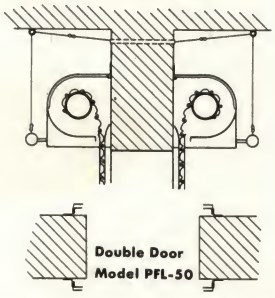


Model PJL-70

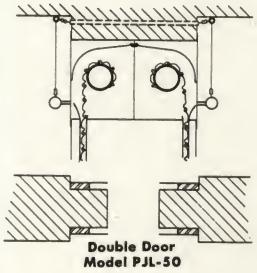
Dimensions in Inches

HEIGHT	TO 6′				TO 8′				TO 10′			
WIDTH	X	Y	G	L	X	Y	G	L	X	Y	G	L
TO 4′	29	18	7	4	30	18	7	4	32	19	7	4
TO 8′	29	18	7	5	30	18	7	5	32	19	7	5
TO 10′	29	19	8	5	30	19	8	5	32	20	8	5
TO 12′	29	19	8	5	30	19	8	5	32	20	8	5

Manually Operated Face Mounted

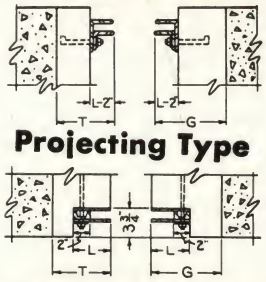


Manually Operated Jamb Mounted

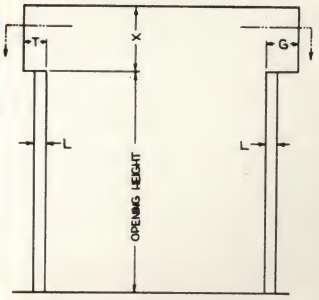


Jamb Mounting Details

DOOR GUIDES



OPENING



PACIFIC
ROLLING DOORS

Extruded Aluminum Counter Doors

Use

"Pacific" aluminum counter doors are specifically designed for use on counter openings where appearance, cleanliness and ease of operation are the foremost requirements. Proven applications include Cafeterias, Concession Counters, Bars, Ticket Windows and many other varied uses.

Advantages

"Pacific's" extruded slat design embodies many features not found in ordinary rolled slat counter doors.
Extruded slats are exactly identical in shape and correspondingly provide perfect interlocking ball and socket joints which produce added ease of operation. The use of extruded slats also permits varying the thickness of the section in order that added metal may be provided at the stress and wear points without sacrificing the overall lightweight construction.

The completely flat exterior surface of the "Pacific" slat not only is neat and modern in appearance but eliminates dirt collecting grooves and ridges.

The "Etched Alumilite" finish on all "Pacific" counter doors resists corrosion, chipping and scratching, as well as providing a beautiful appearance.

Specifications

Operation — Doors 12'0" wide and under shall be manually operated by means of lifting handles on the bottom bar. Doors over 12'0" wide shall be mechanically operated by means of a hand crank with a removable operating arm.

Curtain — Shall be composed of flat faced interlocking extruded aluminum slats, 1 ½" wide with a depth of crown of not less than ⅜". Material thickness on slat face shall be not less than .050". Alternate slats shall be fitted with cast aluminum endlocks at each end. Bottom bar shall be composed of extruded aluminum shapes.

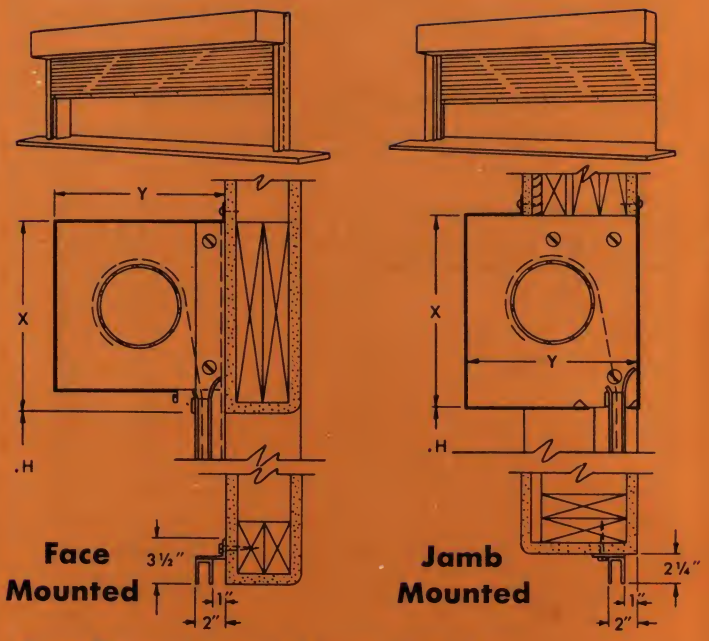
Barrel and Counterbalance — Barrel shall be of steel pipe or casing of sufficient size to avoid deflection in excess of .03 inches per ft. of opening width. Barrel shall enclose counterbalance unit consisting of oil tempered helically wound torsion springs. Barrel shall rotate on two grease sealed ball or roller bearing units.

Hood — Shall be of not less than 22 ga. aluminum, neatly formed with beads or flanges to prevent deflection.

Guides—Shall be fabricated of extruded aluminum shapes with a clear depth of groove of not less than 1 ⅞".

Locking Device — Shall consist of aluminum slide bolts located on the bottom bar.

Finish — All aluminum parts shall receive a satin finish "Etched Alumilite" finish. All other parts shall receive one shop coat of aluminum paint.



Note: For crank operated doors allow 4" additional sideroom on one side.

Height—H	To 5'0"	To 7'0"
X	12"	14"
Y	11"	12"

Opening widths up to 20'0"

PACIFIC ROLLING DOOR COMPANY

400 Derby Avenue Oakland 1, California Telephone KE 3-1767

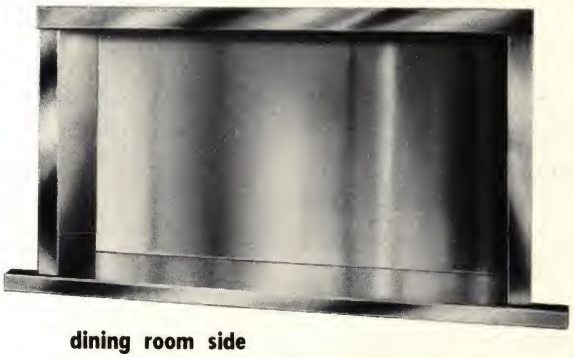
DISTRIBUTORS IN PRINCIPAL CITIES

Richmond pass windows

with: integral frames
for: school and institutional dining areas

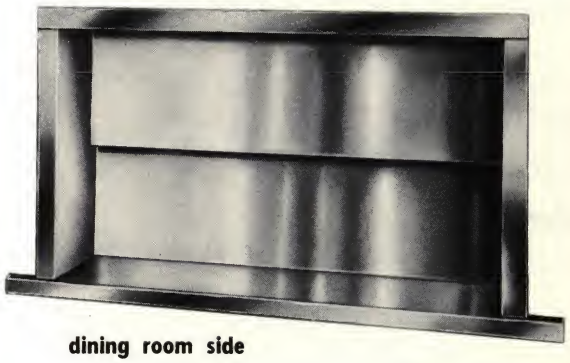
dining room side

rolling PASS WINDOW



dining room side

.....regular



dining room side

.....Telco

sliding PASS WINDOWS

ENGINEERED FOR THE BUILDING INDUSTRY
A PEELLE-RICHMOND PRODUCT

The Richmond Fireproof Door Co.
Richmond, Indiana

rolling PASS WINDOW

RICHMOND

pass windows

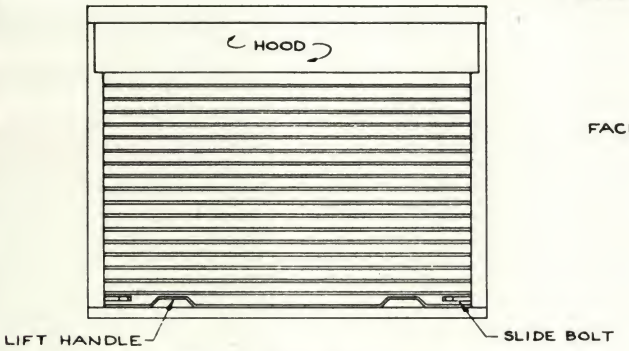
with integral frames

- **ARCHITECTS** specify Richmond Pass Windows to reduce specifications and design time and to assure owner of a quality installation.
- **CONTRACTORS** like Richmond Pass Windows because they save estimating and buying time and eliminate duplication of installation—when frame is installed—the panel is installed.
- **OWNERS** prefer Richmond Pass Windows because they give maintenance free, EASY operation. Quality design and workmanship permit easy cleaning with no cracks and crevices to act as dirt catchers.

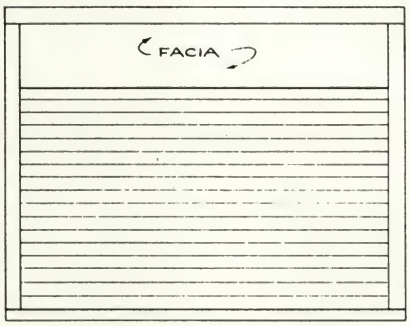
These desirable features account for the widespread use of Richmond Pass Windows in so many carefully planned school and institutional dining rooms and cafeterias. The three basic window designs shown at the right allow greater flexibility of choice in planning service access between kitchen and dining room.

unlimited usage

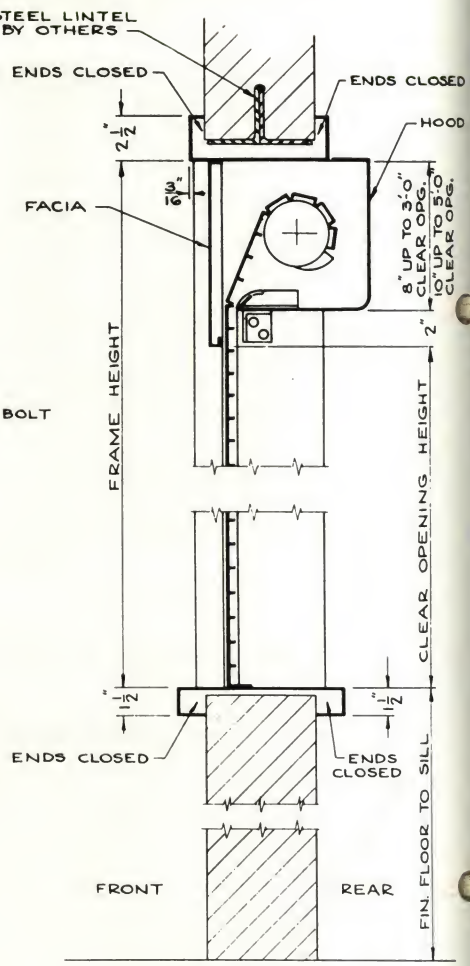
Richmond Pass Windows were first used between kitchen and dining area in schools and restaurants, but since have found great use in all types of service including baggage rooms, ticket windows, pharmacy and labs, tool crib and shop, parts storage and garage, school and industrial projection booths, interoffice communications, sales counters, dispatcher's office, etc.



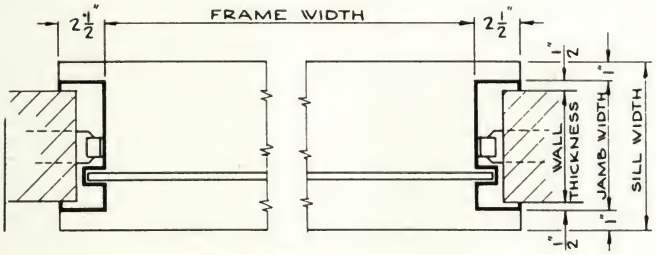
Rear Elevation



Front Elevation



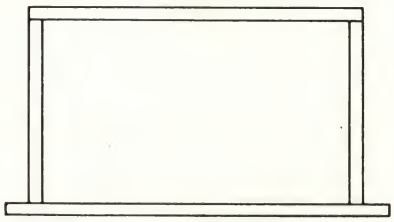
Vertical Section



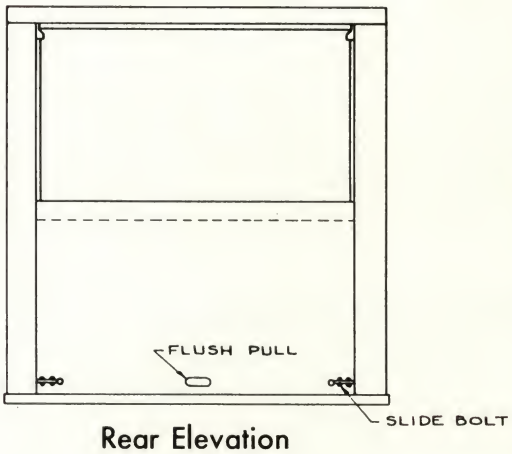
Plan Section

sliding PASS WINDOWS

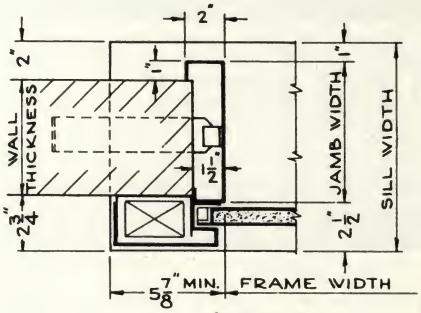
RICHMOND PASS WINDOWS



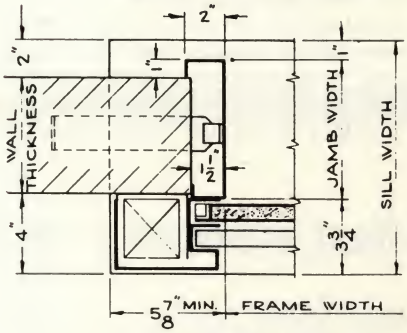
Front Elevation



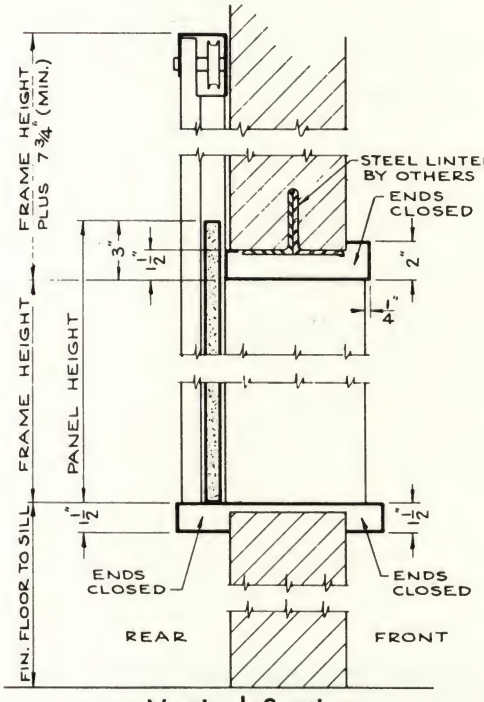
Rear Elevation



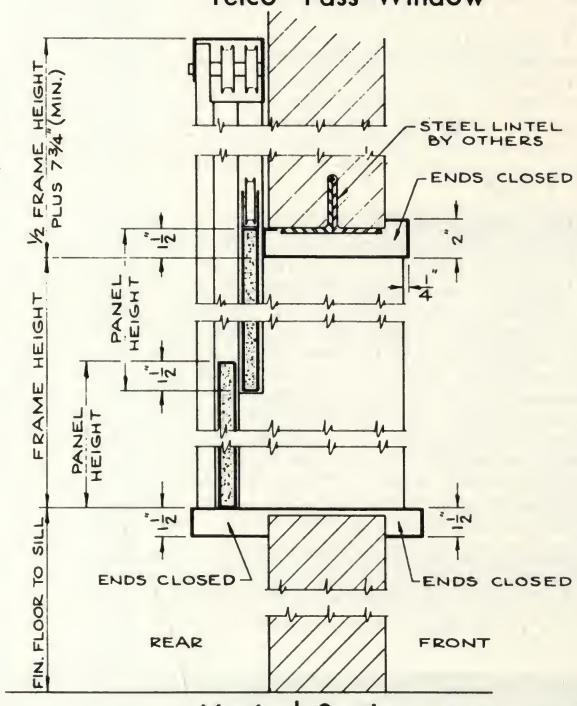
Jamb Section
Regular Pass Window



Jamb Section
"Telco" Pass Window



Vertical Section
Regular Pass Window



Vertical Section
"Telco" Pass Window

ENGINEERED FOR THE BUILDING INDUSTRY
A PEELLE-RICHMOND PRODUCT

specifications FOR PASS WINDOWS

rolling PASS WINDOW

The rolling window unit shall be manufactured by The Richmond Fireproof Door Company, Richmond, Indiana and shall be the size as shown on the drawings and as called for on the door schedule. The completely assembled unit shall consist of a rolling window assembly and stainless steel frame.

The rolling window will consist of extruded aluminum* slats and will be provided with endlocks to maintain proper alignment.

The drum will be of suitable thickness and diameter to insure smooth operation. An internal torsion spring shall be provided to counterbalance weight of rolling window. It shall be mounted as part of the complete assembly directly beneath the head of the stainless steel frame. A stainless steel hood will be provided to enclose end brackets and rolling mechanism.

An aluminum sliding lock bolt will be furnished at either end of window, together with lift handle.

An aluminum sliding lock bolt will be furnished at either vided consisting of 16 gauge jambs, head and 14 gauge sill.

Construction of rolling window shall be in accordance with the best standards and practices of the manufacturer.

Others to provide structural angle lintels to support masonry wall above.

All aluminum will be anodized.

*The substitution of "stainless" or "galvanized steel (not painted)" for "aluminum" can be made. If so, delete last paragraph of specification.

†A prime painted steel frame with a stainless steel sill may be substituted for an all stainless steel frame. If this is done, the fifth paragraph should read "A steel frame to suit wall thickness will be provided consisting of 16 gauge prime painted jambs and head and a 14 gauge stainless steel sill." Delete the word "stainless" where it occurs in other paragraphs.

sliding PASS WINDOWS / REGULAR AND TELCO

REGULAR PASS WINDOW

The Pass Windows shall be manufactured by The Richmond Fireproof Door Company, Richmond, Indiana or equal. Pass Windows shall be of the size shown on the drawings and as called for in the door schedule. They shall be completely assembled units with steel guides and integral frame and trim. The door panel shall be of hollow metal construction, ⅞" thick, (see paragraph No. 4 in alternate specifications) 16 gauge stainless steel sheets, both sides. Door panel filled with fireproof acoustical filler and reinforced with steel angles. Jambs and head shall not be less than 16 gauge stainless steel and sill not less than 14 gauge stainless steel. All stainless steel to be type 302-No. 4 finish.

"TELCO" PASS WINDOW

The Pass Windows shall be "Telco" Pass Windows as manufactured by The Richmond Fireproof Door Company, Richmond, Indiana or equal. Pass Windows to be of the size shown on the drawings and as called for in the door schedule. They shall be completely assembled units with steel guides and integral frame and trim. The door sections shall be of hollow metal construction ⅞" thick, (see paragraph No. 4 in alternate specification) of 16 gauge stainless steel sheets both sides of the panel, filled with fireproof acoustical filler and reinforced with steel angles. The sections shall be arranged so that both leaves will arrive at the fully open or closed position simultaneously. Jambs and heads shall not be less than 16 gauge stainless steel and sill not less than 14 gauge stainless steel. All stainless steel to be type 302-No. 4 finish.

CONTINUATION OF SPECIFICATIONS (Common to Both Types)

The door panels shall ride in steel guides and shall be connected to the steel enclosed counterweight by cable chain running over self lubricating sheaves to the door counterweights enclosed within stainless steel counterweight boxes. Each pass window shall be equipped with a chrome plated flush pull and chrome plated slide bolts.

Construction of the pass window shall be in accordance with best standards and practices of the manufacturer.

Others to provide structural angle lintels to support masonry wall above. All installation to be by others.

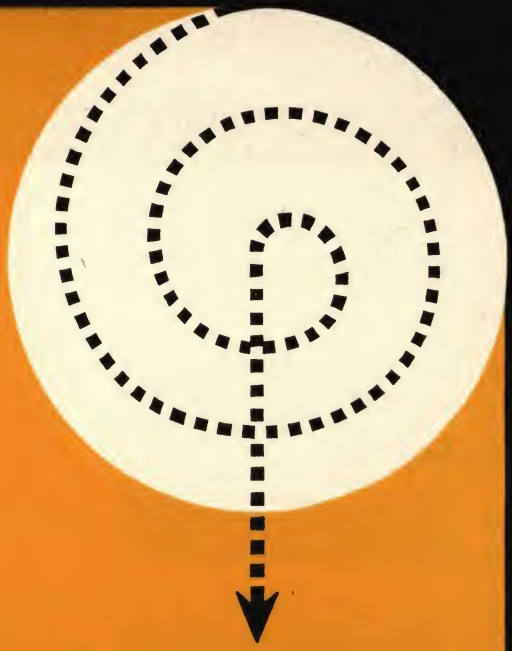
ALTERNATE SPECIFICATONS (Common to Both Types)

1. **Plain Steel Construction:**
   For specifying plain steel construction throughout, omit all mention of stainless steel and mention all steel to receive prime coat (or baked enamel).
2. **Plain Steel Construction with Stainless Steel Sill:**
   Omit mention of stainless steel construction and substitute the following: "sill to be 14 gauge stainless steel type 302-No. 4 finish. Plain steel parts to have prime coat (or baked enamel)."
3. **For Facia Plate:**
   A Facia plate is to be furnished on the kitchen side to conceal the wall between the rails and from the lintel of the opening to the top of the sheave housing.
4. **Pass Windows over 7'0" in width and including 10'0" in width, omit mention of ⅞" thick and substitute following:**
   The door panel shall consist of hollow metal construction 1-¾" thick, consisting of two thicknesses of 16 gauge stainless steel (or plain steel), completely filled with fireproof acoustical filler. The interior of the panel shall be adequately reinforced to suit the required panel width. The frame shall be constructed of either 14 gauge or 12 gauge stainless steel (or plain steel), depending upon the width of the opening and thickness of the wall.

THE RICHMOND FIREPROOF DOOR CO.
RICHMOND, INDIANA • TELEPHONE 8-1606

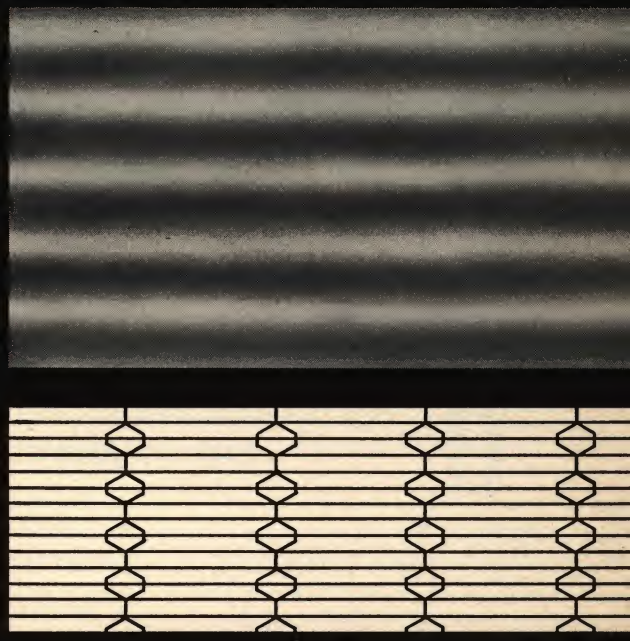
THE PEELLE COMPANY
47 STEWART AVENUE • BROOKLYN 37, NEW YORK • EVERGREEN 6-7600

Printed in U.S.A.



WILSON

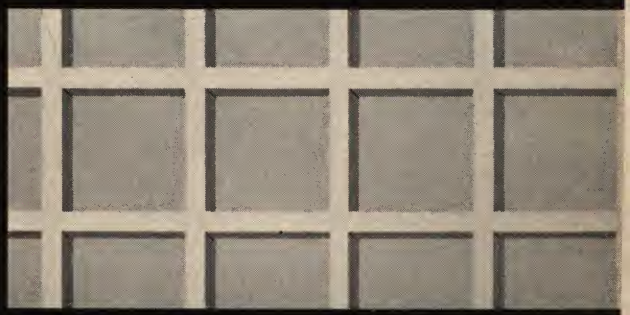
Quality SINCE 1876



16g
Wil

engineering specialists

- rolling steel doors
- rolling grilles
- midget slat closures
- overhead doors



The WILSON Corporation
NORFOLK, VIRGINIA

J. G. WILSON CORP.

WHY WILSON?

1. Experience since 1876 goes into all Wilson custom-made quality products.

2. Wilson Engineers are specialists in handling the most complex rolling door applications and installations.

3. Every Wilson door is registered, with the engineering and manufacturing records permanently maintained, for customer protection and future service.

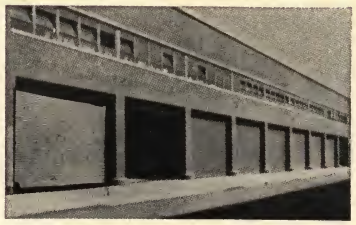
4. Wilson will submit their design recommendation for specialized closure requirements not covered by standard design.

STANDARD SPECIFICATIONS AND SALES DRAWINGS

All Commercial Rolling Steel Doors, Underwriters' Rolling Steel Doors, Grilles and Midget Slat Shutters have detailed standard specifications designated by the same number as the corresponding sales drawing shown in the following pages of this catalog. These standard specifications and sales drawings are available upon request at no charge by return mail:

Address: The J. G. Wilson Corporation
P. O. Box 599
Norfolk 1, Virginia

PROTECTION CONVENIENCE



ROLLING STEEL DOORS
COMMERCIAL
non-labeled

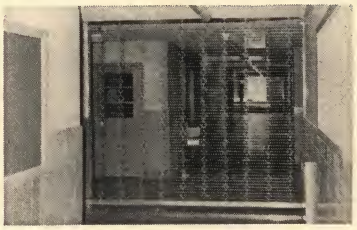
a

pages 4-9

ROLLING STEEL DOORS
UNDERWRITERS
labeled

b

pages 10-15



GRILLES
steel or aluminum

c

pages 16-17

MIDGET SLAT CLOSURES

d

pages 18-19

SECTIONFOLD OVERHEAD DOORS
wood or steel

e

pages 20-21

SPECIAL PRODUCTS

f

pages 22-25

Commercial
non-labeled

The mechanical features of Wilson Commercial Rolling Steel doors are designed to insure simple, easy operation and long life. Their efficiency has been tested and proved under all types of exposure and use. Wilson Standard Commercial Rolling Steel doors are for ordinary service. They are not restricted as to size or area, nor do they have automatic closing features. There are four general types of operation:

Self-coiling—Manually operated, standard for small openings.

Chain geared—Chain-gear operated, for medium and large openings.

Crank geared—Available as an Extra if specified.

Motor operated—Generally used for large openings or for large doors requiring quick operation by remote control.

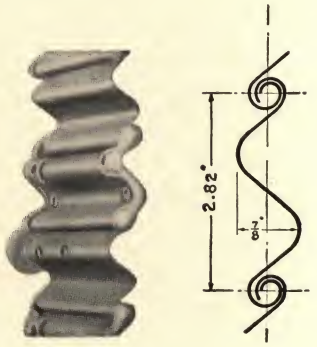
features

The Wilson curtain is composed of a series of cold rolled interlocking slats, formed from galvanized steel, which metal and protection are conceded to be more effective in retarding corrosion than any other similar product. The galvanized coating does not fracture by bending and will not peel. Absence of all sharp bends further insures maximum galvanic protection.

Slat design

over 10′ wide

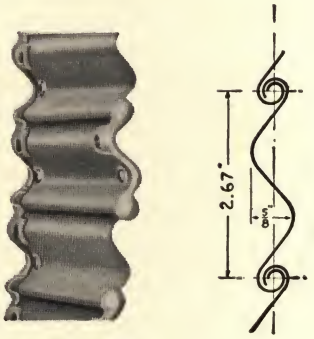
The Big 4 has ⅞ inch corrugations providing greater strength and protection of interlocking joints. Use of end shields takes wear of sliding in channel, adding considerably to the life of door. The slat is made in Nos. 22, 20, 18 and 16 U.S. Standard gauges, depending upon size.



Big 4 slat

up to 10′ wide

These slats are similar to the Big 4 type, except that the corrugations are ⅝ in. deep instead of ⅞ in.

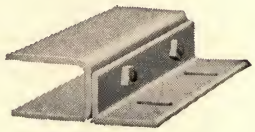


Little 4 slat

Groove design

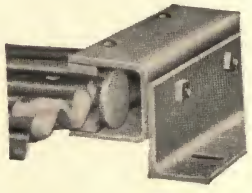
standard

Standard equipment on doors 14′5″ and under in width. The generous depth of the groove assures the retention of the curtain under normal wind pressures.



safety

Standard equipment on doors over 14′5″ in width. The illustration shows the channel which retains the windlock on the curtain and prevents the curtain from excessive deflection under wind pressure.



flat slat weather door

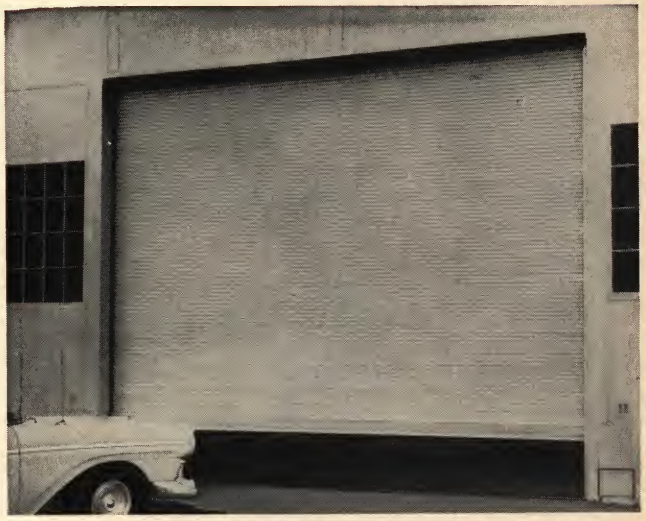
The Wilson Flat Slat Weather Door is without a doubt the best new development in the rolling steel door industry in many years. This door goes far beyond most weather specifications at a reasonable cost. The unique features of the Wilson Flat Slat Door are:

A—Continuous endlocks and windlocks on ALL slats, which provides maximum protection against curtain blowouts.

B—Special weather angle in the guides.

C—Flat slats which prevents rain or wind penetration. Also they are particularly desirable from an appearance standpoint.

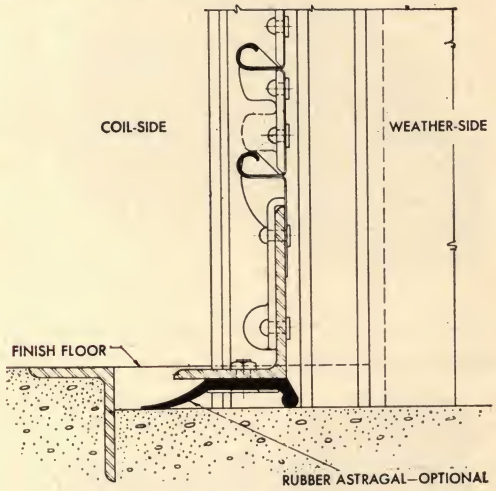
The response to the Wilson Weather Door has been one of unanimous approval. Architects throughout the country are now specifying the Wilson Weather Door because it provides maximum weather protection.



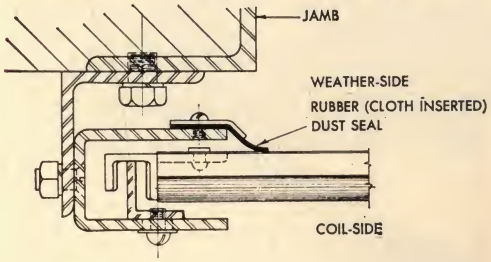
options

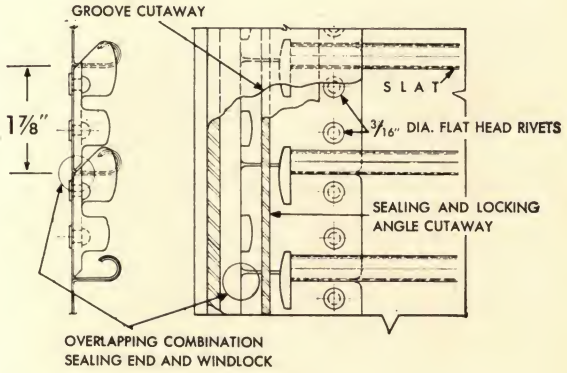
The following items are optional and can be supplied as extras where conditions require their use:

1. **hood baffle plate**
2. **rubber astragal on bottom bar**

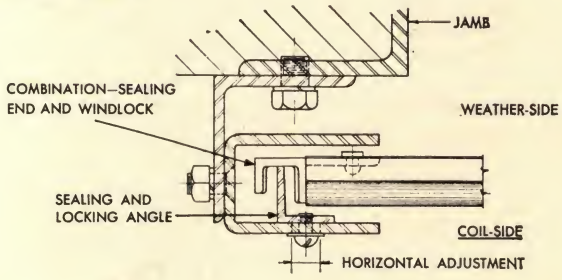


3. **dust-retarding rubber flap at guides**





standard groove

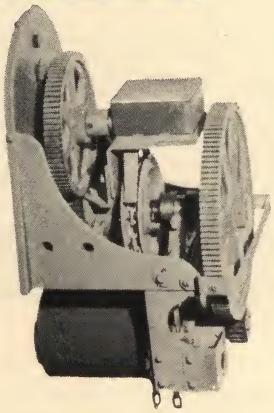


motor units

Three models of motor units are available. All use instantly reversible, ball bearing motors. They are controlled by a magnetic reversing starter with thermal overload relays and manufactured to NEMA standards, shoe type magnetic brake, geared limit switch integral with the motor operator, and a push button station marked "OPEN"—"CLOSE"—"STOP".

All models feature emergency handchain operation which permits removal of the motor if necessary. Use of emergency operator does not affect the settings of the limit switch. Many optional features are available as well as various control arrangements. Please consult our Engineering Department for details.

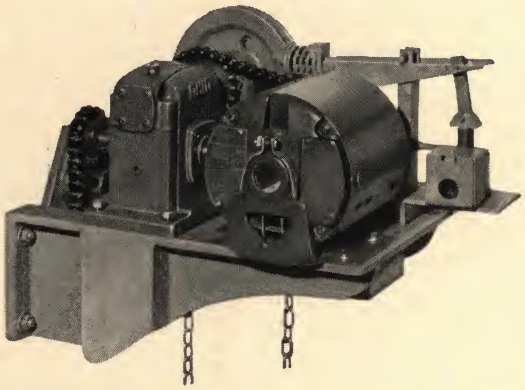
No. 7 small to medium doors



This unit features a spur gear train for speed reduction. The standard mounting position is shown although it may be mounted in front of the coil when sideroom is limited.

curtain	maximum opening area*
22 gauge	510 sq. ft.
20 "	430 " "
18 "	320 " "

No. 5350 small to medium doors



This unit features a worm and gear speed reducer running in an oil bath. Standard mounting position is shown, but this model may be mounted in front or on top of the coil where necessary.

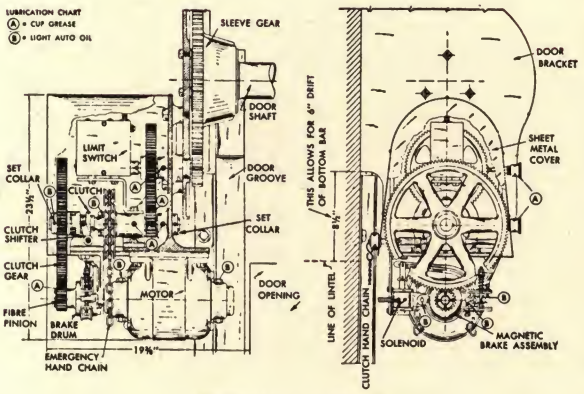
curtain	maximum opening area*
22 gauge	510 sq. ft.
20 "	430 " "
18 "	320 " "

No. 5400 large doors

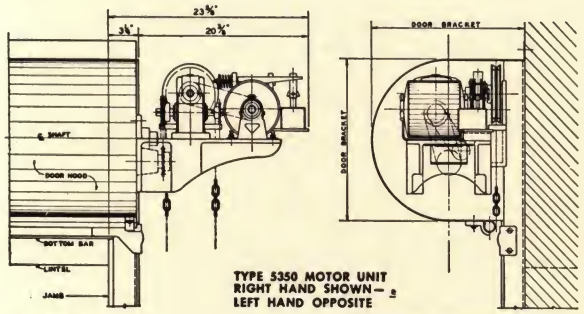
This unit uses integral horsepower motors and utilizes a worm and gear speed reducer running in an oil bath. The standard mounting is as shown, but in cases where sideroom is limited it may be mounted on top, in front, or below the coil.

curtain	maximum opening area*
20 gauge	1070 sq. ft.
18 "	820 " "

*** for all Commercial rolling doors except the flat slat weather door.**



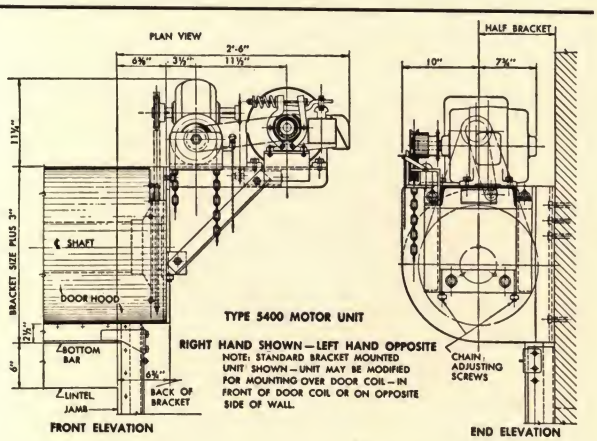
ASSEMBLY OF NO. 7 MOTOR UNIT



TYPE 5350 MOTOR UNIT
RIGHT HAND SHOWN — LEFT HAND OPPOSITE

FRONT ELEVATION

END ELEVATION



TYPE 5400 MOTOR UNIT

RIGHT HAND SHOWN — LEFT HAND OPPOSITE
NOTE: STANDARD BRACKET MOUNTED UNIT SHOWN — UNIT MAY BE MODIFIED FOR MOUNTING OVER DOOR COIL — IN FRONT OF DOOR COIL OR ON OPPOSITE SIDE OF WALL.

FRONT ELEVATION

END ELEVATION

specifications

16g
WiL

Curtain — made up of slats of steel, hot-dip galvanized. Wilson slats have malleable iron end locks to prevent lateral movement and to provide a wearing surface on both sides. Bottom reinforced by a steel angle. Unless otherwise specified, slats of the following gauges are used:

For openings up to 14′ wide—22 U. S. Standard
From 14′ to 20′4″ wide —20 U. S. Standard
Over 20′4″ wide —18 U. S. Standard

Shafts—commercial steel pipe or tube of sufficient diameter to carry the load, each end fitted with cast iron collars with pre-lubricated ball bearings. Shaft journals are of malleable iron or cold-rolled steel.

Springs—helical type, inside of shaft, of sufficient strength to counterbalance weight of curtain at any point, with a factor of safety of 25% in excess of the actual weight of the curtain. A suitable spring adjustment device shall be furnished for use in adjusting the counter-balancing spring. On doors over 240 sq. ft., a self-sustaining worm and wheel adjustment device is furnished as standard.

Grooves—special one piece channel 3/16″ thick, depth not less than 2½″. Doors over 14′5″ fitted with Wilson Safety Grooves and Anchors, securely bolted to building with suitable bolts.

Brackets—Cast iron, enclosed type, with web and flanges of ample strength for securing to building. Steel plate brackets will be furnished where special conditions are imposed by weight, method of mounting, etc. Door types A1000 and A1008 use 3/16″ steel plate, and type A1088 uses ¼″ steel plate. Brackets are fastened to structure by adequate means to suit structural design.

Gears—gray cast iron, machine moulded ¾″ pitch, 1″ face, simple or compound depending on weight of curtain. Journals cold-rolled steel studs riveted into web of bracket. All parts effectively protected from weather and accessible for lubrication.

Hoods—No. 24 gauge standard galvanized steel sheets. Where width requires made in sections with reinforcing braces at joints. Flashed into building where exposed to weather.

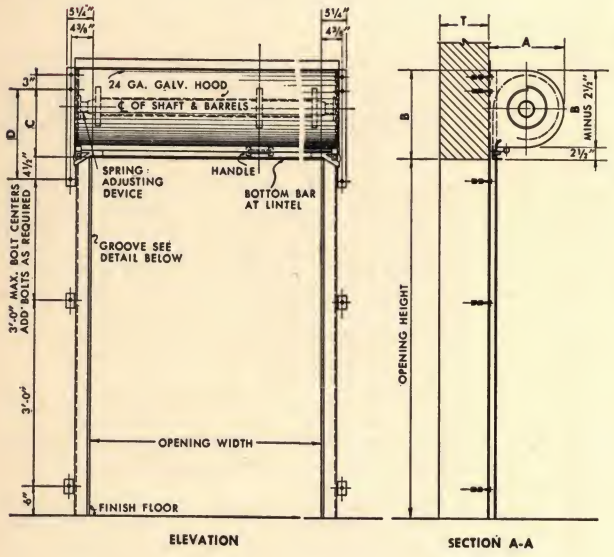
Wicket Doors—can be furnished, if specified, at extra cost.

Safety Bottom Bar Switch—consisting of a contact switch installed on bottom bar of motor operated doors to stop and reverse operator upon contact with any object in opening can be furnished, if required, at additional cost.

Wilson Commercial Rolling doors are also available in Aluminum and Stainless Steel in various finishes

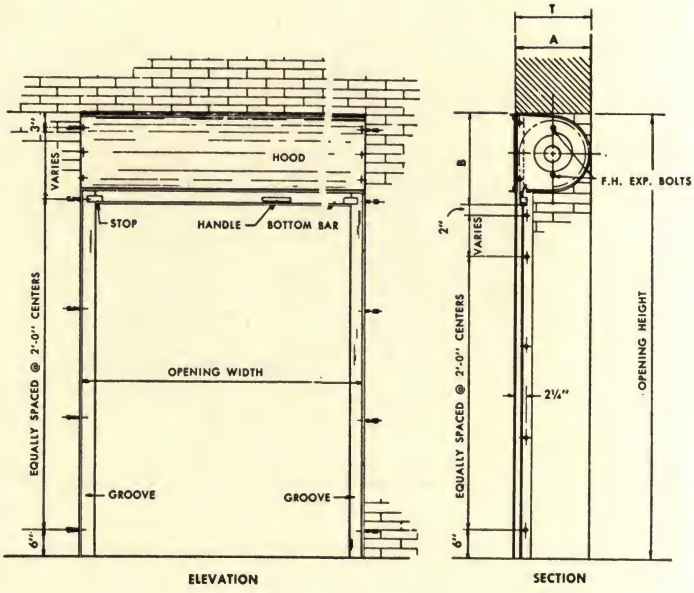
self-coiling openings up to 80 sq. ft.

face mounted—model A1000



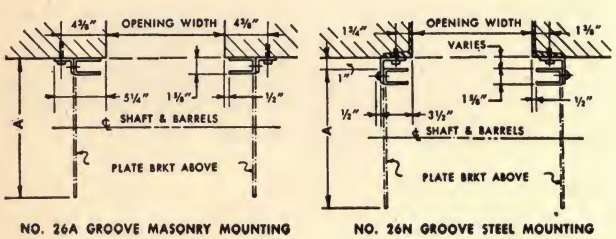
opening height up to	A	B	C	D	BBL size	bracket bolts
4′-9″	13″	15½″	11½″	16″	8″	⅜″ dia.
7′-0″	14″	16½″	12½″	17″	8″	⅜″ dia.
8′-9″	15″	17½″	13½″	18″	8″	⅜″ dia.
10′-6″	16″	18½″	14½″	19″	8″	⅜″ dia.

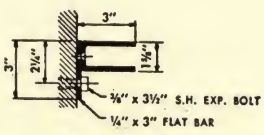
under lintel mounted—model 1002



opening height up to	A	B
6′-1″	13″	16″
8′-6″	14″	17″
10′-4″	15″	18″
12′-3″	16″	19″

groove mountings and brackets

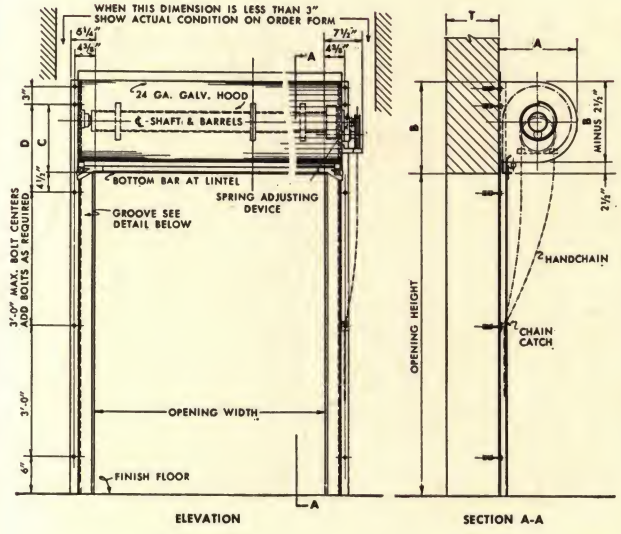




chain geared

face mounted—model A1008

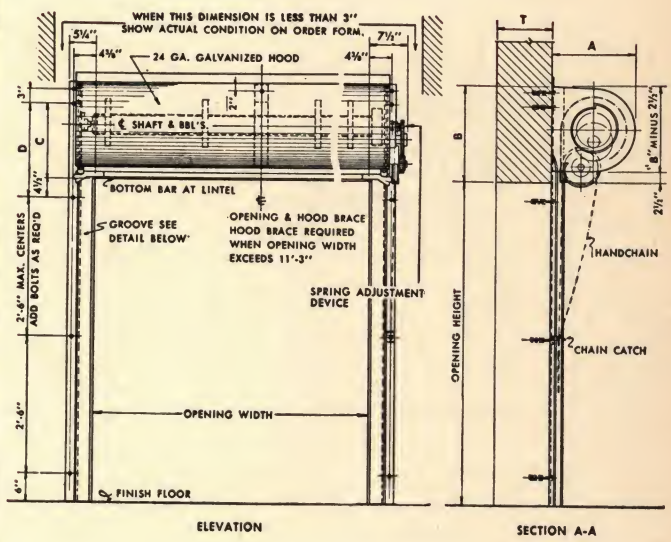
up to 120 sq. ft. only in area



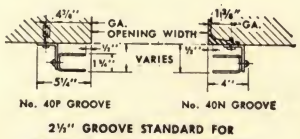
opening height up to	A	B	C	D	BBL size	bracket bolts
5′-6″	15″	18″	13½″	18″	8″	⅜″ dia.
8′-7″	16″	19″	14½″	19″	8″	⅜″ dia.
11′-0″	17″	20″	15½″	20″	8″	⅜″ dia.
12′-6″	18″	21″	16½″	21″	8″	½″ dia.

face mounted—model A1088

from 120 to 240 sq. ft. in area


WHEN THIS DIMENSION IS LESS THAN 3" SHOW ACTUAL CONDITION ON ORDER FORM.
24 GA. GALVANIZED HOOD
SHAFT & BBL'S
BOTTOM BAR AT LINTEL
GROOVE SEE DETAIL BELOW
OPENING & HOOD BRACE HOOD BRACE REQUIRED WHEN OPENING WIDTH EXCEEDS 11'-3"
SPRING ADJUSTMENT DEVICE
2'-6" MAX. CENTERS ADD BOLTS AS REQ'D
OPENING WIDTH
FINISH FLOOR
ELEVATION
HANDCHAIN
CHAIN CATCH
OPENING HEIGHT
B" MINUS 2½"
SECTION A-A

opening height up to	A	B	C	D	BBL size	bracket bolts	max. opening width
11′-0″	17″	20″	15½″	20″	8″	½″ dia.	17′-0″
12′-6″	18″	21″	16½″	21″	8″	½″ dia.	16′-0″
15′-0″	20″	23″	18½″	23″	10″	½″ dia.	15′-0″
16′-10″	22″	25″	20½″	25″	12″	½″ dia.	14′-0″

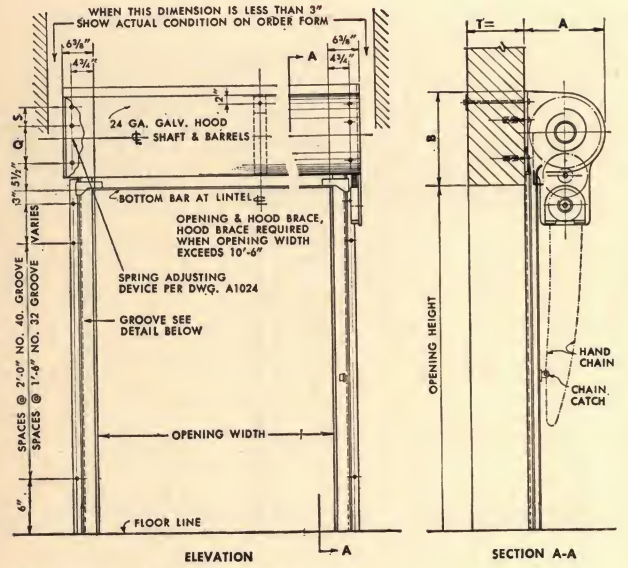


2½″ GROOVE STANDARD FOR OPENINGS UP TO 14′-5″ WIDE INCL.

2½″ GROOVE STANDARD FOR OPENINGS OVER 14′-5″ WIDE

chain geared continued

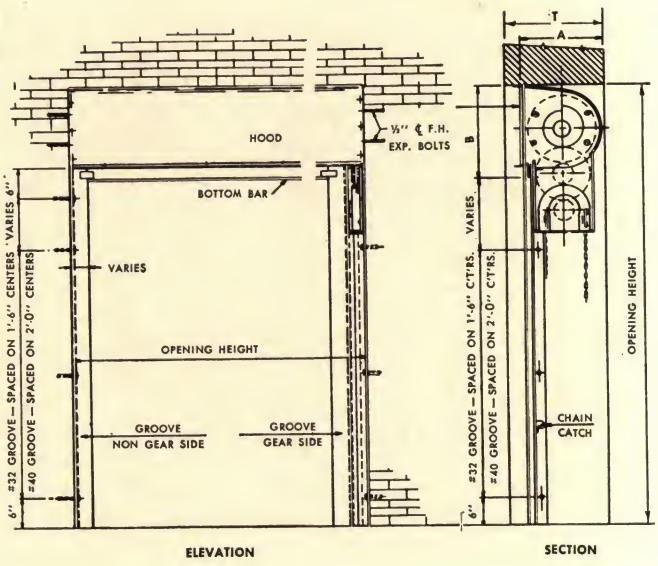
face mounted—model 1005
over 240 sq. ft. in area


WHEN THIS DIMENSION IS LESS THAN 3" SHOW ACTUAL CONDITION ON ORDER FORM
24 GA. GALV. HOOD
SHAFT & BARRELS
BOTTOM BAR AT LINTEL
OPENING & HOOD BRACE, HOOD BRACE REQUIRED WHEN OPENING WIDTH EXCEEDS 10'-6"
SPRING ADJUSTING DEVICE PER DWG. A1024
GROOVE SEE DETAIL BELOW
OPENING WIDTH
FLOOR LINE
SPACES @ 2'-0" NO. 40 GROOVE
SPACES @ 1'-6" NO. 32 GROOVE
VARIES
OPENING HEIGHT
HAND CHAIN
CHAIN CATCH
ELEVATION
SECTION A-A

CURTAIN: B4 SLAT 18 & 20 U.S. STD. GA. GALVANIZED

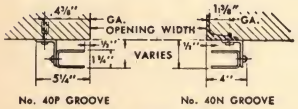
opening height up to	A	B	Q	S	BBL size	bracket bolts	max. opening width
20'-6"	23"	26"	13"	5"	12"	⅝" dia.	21'-0"
22'-6"	24"	27"	14"	5"	12"	⅝" dia.	20'-0"
30'-8"	28"	31"	17"	6"	15"	¾" dia.	25'-0"

under lintel mounted—model 1006



simple gear				compound gear			
opening height up to	A	B	BBL size	opening height up to	A	B	BBL size
5'-1"	14"	17"	8"	13'-3"	18"	21"	8"
7'-0"	15"	18"	8"	16'-11"	20"	23"	10"
10'-2"	16"	19"	8"	18'-11"	22"	25"	12"
12'-8"	17"	20"	8"	22'-8"	23"	26"	12"
				24'-3"	24"	27"	12"
				24'-11"	26"	29"	12"

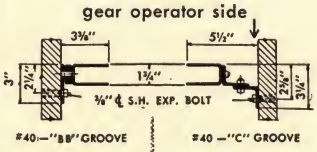
groove mountings



2½" GROOVE STANDARD FOR OPENINGS UP TO 14'-5" WIDE INCL.

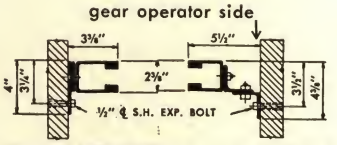
2½" GROOVE STANDARD FOR OPENINGS OVER 14'-5" WIDE

gear operator side



FOR OPENINGS LESS THAN 14'-5" WIDE

gear operator side



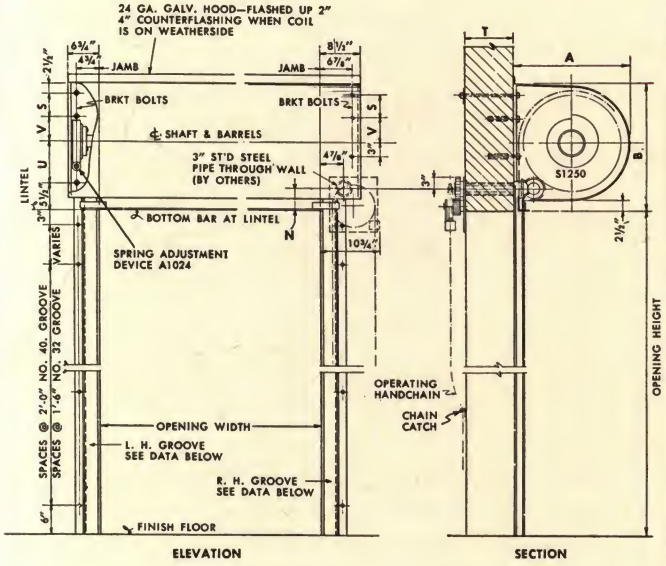
FOR OPENINGS MORE THAN 14'-5" WIDE

NOTE: Type "BB" groove may be used at non-gear end if spring tension device is not desired. If spring tension is desired type "C" groove must be used at non-gear end. Type "C" groove must be used at gear-end at all times.

thru-wall operation

chain operated—model 1009

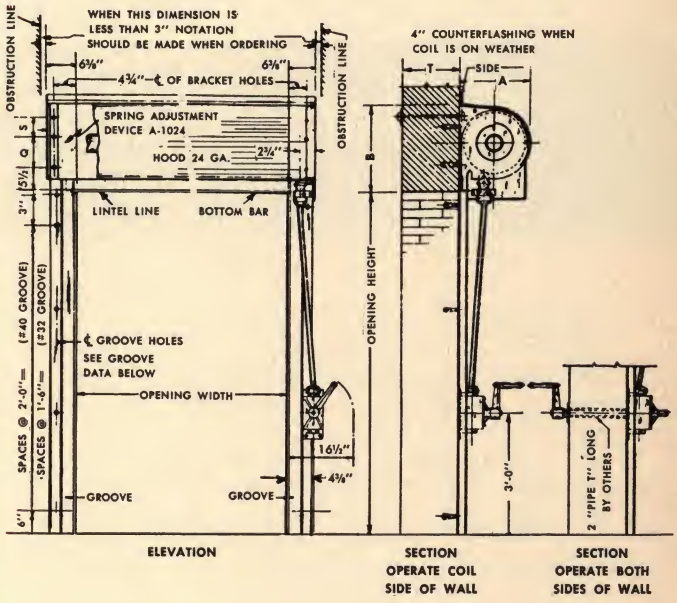
available with chain opposite coil side only.



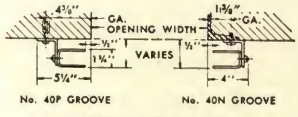
opening height up to	A	B	S	U	V	N	BBL size	max. opening width
8'-7"	16"	19"	3"	5"	3"	3 3/16"	8"	18'-0"
11'-0"	17"	20"	4"	5 1/2"	2 1/2"	4"	8"	17'-0"
12'-6"	18"	21"	4"	6"	3"	4"	8"	16'-0"
15'-0"	20"	23"	4"	7"	4"	3 13/16"	10"	23'-0"
16'-10"	22"	25"	5"	8"	4"	4 5/8"	12"	22'-0"
20'-6"	23"	26"	5"	8 1/2"	4 1/2"	5 5/16"	12"	21'-0"
22'-6"	24"	27"	5"	9"	5"	4 7/8"	12"	20'-0"

crank operated—model 1011

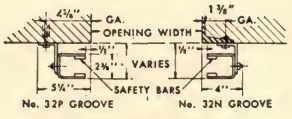
available with crank on either side or both sides of wall, depending on requirements.


WHEN THIS DIMENSION IS LESS THAN 3" NOTATION SHOULD BE MADE WHEN ORDERING
OBSTRUCTION LINE
℄ OF BRACKET HOLES
SPRING ADJUSTMENT DEVICE A-1024
HOOD 24 GA.
LINTEL LINE
BOTTOM BAR
℄ GROOVE HOLES SEE GROOVE DATA BELOW
OPENING WIDTH
GROOVE
OPENING HEIGHT
4" COUNTERFLASHING WHEN COIL IS ON WEATHER
SIDE
2 "PIPE T" LONG BY OTHERS
ELEVATION
SECTION OPERATE COIL SIDE OF WALL
SECTION OPERATE BOTH SIDES OF WALL

opening height up to	A	B	Q	S	max. opening width
11'-0"	17"	20"	8"	4"	17'-0"
12'-6"	18"	21"	8"	4"	16'-0"
15'-0"	20"	23"	10"	4"	23'-0"
16'-10"	22"	25"	12"	5"	22'-0"
20'-6"	23"	26"	12"	5"	21'-0"



2½" GROOVE STANDARD FOR OPENINGS UP TO 14'-5" WIDE INCL.



2½" GROOVE STANDARD FOR OPENINGS OVER 14'-5" WIDE

Underwriters'
labeled

UNDERWRITER TYPE, made in steel only, is used for insurance reduction purposes and where fire hazards exist and fire protection is desired on interior and exterior openings. This type is restricted to a definite size and area, is made for fully labeled requirements, and has been tested and approved by Underwriters' Laboratories, Inc. Where required, are equipped with automatic device, closing at a temperature of 160 degrees by fusible link.

Doors can be raised without difficulty after closing automatically; the automatic device can be reset and new fusible link inserted without removing the hood or dismantling the door.

3 Hour (A)—Fire Wall doors.

1½ Hour (B)—Vertical Shaft doors,

¾ Hour (C)—Corridor and Room Partition doors.

1½ Hour (D)—Exterior Wall doors.

Special Underwriters' Doors

"Oversize" Certificate of Inspection—Fire doors exceeding 120 sq. ft. opening in area of Inspection or 12'-0" in opening width or height when made in strict accordance with Underwriters' requirements, will be approved by the Underwriters but will carry an "Oversize" Certificate of Inspection in place of the standard label.

New York City "3 Hour" Label—*A Special Fire Door carrying a "3 Hour label" as required by the City of New York conforms generally to the design and construction of "A" Door except size limit of 112½ sq. ft. cannot be exceeded.*

features

These doors have been tested and approved by the Underwriters' Laboratories, and are made in accordance with their regulations evolved as a result of these tests.

The special features to which attention is directed are baffle plates in the hood and "fire-stops" on the edges of the slats, which prevent smoke and flame from passing through the opening.

Where required, the doors are equipped with automatic device, which at a temperature of approximately 160° F. causes the doors to close by fusing of one of two links, located at the head or side of the opening, and near the ceiling. On fusing of the link, an auxiliary spring drives the curtain down where it closes easily but firmly on the sill and can be raised without difficulty for emergency exit.

The automatic device can easily be reset and a new link inserted without removing the hood or dismantling the door. Escapement type governor to control the speed of the curtain is furnished as standard equipment.

Bottom bars and grooves are provided with slotted holes and fusible washers allowing for expansion due to heat and preventing buckling of doors or grooves. Bottom of groove is placed ¾" above sill for the same purpose.

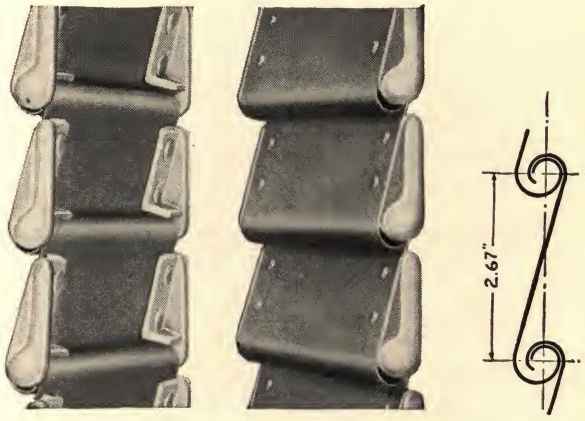
The Underwriters' requirements are that brackets and grooves be either fastened to wall by through bolts or to iron inserts furnished and installed by others. This is subject to modification by local board ruling. Brackets and grooves may be recessed or not, according to requirements, that is to say, clear height and width of opening may be obtained by providing proper recesses.

The doors may be manually opened by handle on the bottom bar or mechanically by crank gearing, depending upon the type and application.

If any door is too large to bear the Underwriters' label, the entire matter is submitted to their inspector and a Certificate of Inspection is issued.

A special fire door, carrying a "3 Hour" label as required by the City of New York conforms generally to the design and construction of the Wilson "A" door except special size limit of 112½ sq. ft. opening area cannot be exceeded.

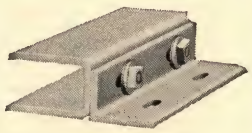
no. 2 slat

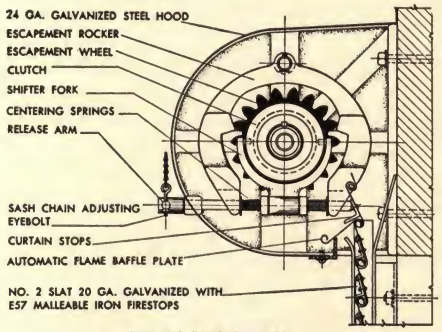


These slats, made of 20 U. S. Standard gauge, are used on Wilson Underwriter labeled doors for vertical shaft, fire wall, corridor and room openings. Slats have shields so shaped as to prevent smoke and flame from passing through grooves.

special Underwriters' channel

Provided with slots to allow for expansion encountered in the case of fire.





AUTOMATIC BRACKET WITH ESCAPEMENT GOVERNING DEVICE.

A Wilson Underwriters' Labeled Door, showing baffle plate in hood and fire-stops on edges of slats, preventing smoke and flame from passing through the opening.

specifications

16g
WiL

A—Curtain: No. 2 interlocking galvanized slat with malleable iron fire stops applied to every slat to provide continuous end baffles. Curtain is equipped with baffle plate to completely seal off hood and groove openings when curtain is closed.

B—Bottom Bar: Structural steel angle to provide stiffness at bottom of curtain.

C—Grooves: One-piece rolled steel channel section with structural steel angle for wall attachment.

D—Hood: Galvanized sheet steel providing complete enclosure of curtain coil. Braced at proper intervals as required by width of door.

E—Counterbalance Spring: Helical torsion high strength steel spring enclosed in tubular shaft.

F—Automatic Closing Mechanism: The automatic closing mechanism is an integral unit and completely separate from the counterbalance and operating mechanism. Upon parting of the fusible link, the curtain is closed by an auxiliary spring while the speed of travel is controlled by an escapement type governor. The curtain may be raised for emergency exit and then again closes automatically. Recharging the auxiliary spring and resetting the release are easily accomplished without removing the hood, thus permitting frequent tests.

G—Shaft: Steel pipe adequately proportioned to carry curtain weight and enclose counterbalance spring.

H—Barrels: Two-piece pivoted construction for easy removal from shaft without dismantling shaft from brackets.

I—Brackets: Heavily proportioned of cast iron shaped to contain coil and protect operating gears.

J—Gears: Machine molded teeth, gray iron certified castings enclosed and protected by hood and brackets.

K—Operating Crank: Attached to gear box to provide proper ratio and to permit operation from one or both sides of wall.

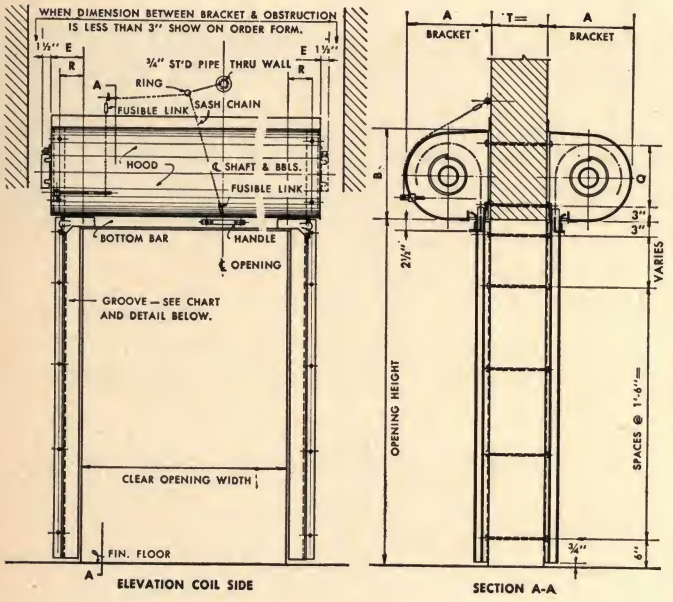
face mounted

Opening not to exceed 120 sq. ft.
Width or height not to exceed 12 ft.

3 hour (A)—model 1710

manual

Manual (push-up) operation is limited to 80 sq. ft. of opening area, width not exceeding 10′-4″ and height not exceeding 11′-4″. Above this size, crank geared operation is recommended.

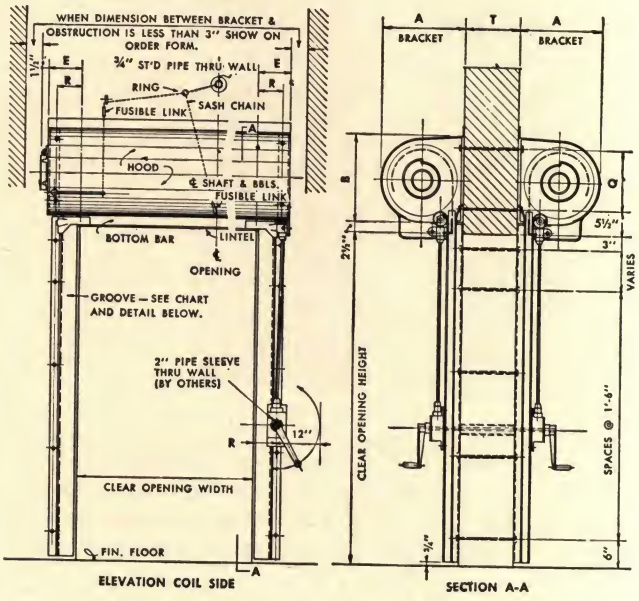


opening height up to	A	B	Q	BBL size	bracket bolts
6′-3″	15″	15½″	10″	8″	½″ dia.
8′-0″	16″	16½″	11″	8″	½″ dia.
8′-6″	17″	17½″	12″	10″	½″ dia.
9′-0″	18″	18½″	13″	10″	½″ dia.
10′-6″	19″	19½″	14″	10″	½″ dia.
11′-4″	20″	20½″	15″	10″	⅝″ dia.

3 hour (A)—model 1715

crank

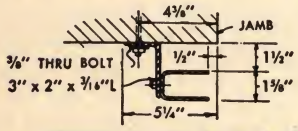
For openings larger than 120 sq. ft. or over 12′-0″ in width or height an Oversize Certificate of Inspection is furnished up to widths or heights not exceeding 24 ft. Consult our Engineering Dept. for clearance requirements.



opening height up to	A	B	Q	BBL size	bracket bolts
6′-3″	15″	15½″	10″	8″	½″ dia.
8′-0″	16″	16½″	11″	8″	½″ dia.
8′-6″	17″	17½″	12″	10″	½″ dia.
9′-0″	18″	18½″	13″	10″	½″ dia.
10′-6″	19″	19½″	14″	10″	½″ dia.
12′-6″	20″	20½″	15″	10″	⅝″ dia.
15′-0″	21″	21½″	16″	10″	⅝″ dia.
19′-6″	23″	23½″	18″	12″	⅝″ dia.

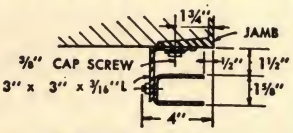
groove mountings

FOR OPENING UP TO 8′-0″ WIDE INCL.



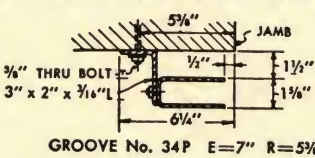
GROOVE No. 27P E=6″ R=4⅜″

FOR OPENING UP TO 8′-0″ WIDE INCL.



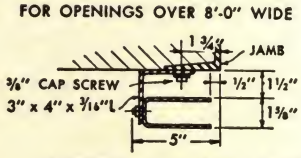
GROOVE No. 27N E=6″ R=4⅜″

FOR OPENINGS OVER 8′-0″ WIDE



GROOVE No. 34P E=7″ R=5⅜″

FOR OPENINGS OVER 8′-0″ WIDE

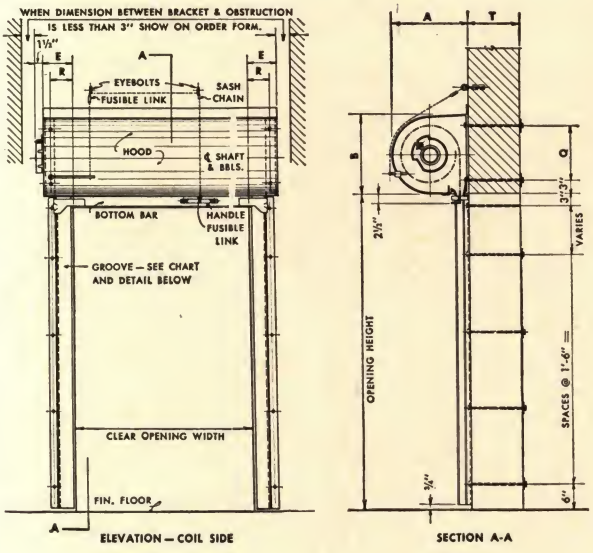


GROOVE No. 34N E=7″ R=5⅜″

1 ½ hour (B); ¾ hour (C)—model 1704

manual

Manual (push-up) operation is limited to 80 sq ft of opening area, width not exceeding 10′-4″ and height not exceeding 11′-4″. Above this size, crank geared operation is recommended.

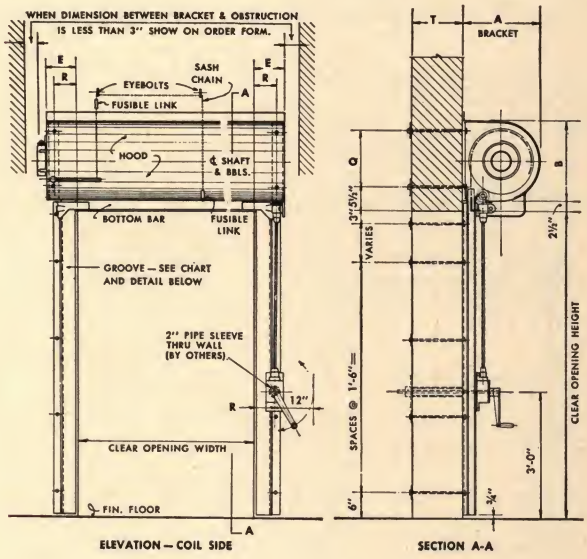


opening height up to	A	B	Q	BBL size	bracket bolts
6′-3″	15″	15½″	10″	8″	½″ dia.
8′-0″	16″	16½″	11″	8″	½″ dia.
8′-6″	17″	17½″	12″	10″	½″ dia.
9′-0″	18″	18½″	13″	10″	½″ dia.
10′-6″	19″	19½″	14″	10″	½″ dia.
11′-4″	20″	20½″	15″	10″	⅝″ dia.

1 ½ hour (B); ¾ hour (C)—model 1707

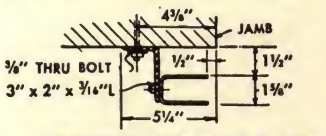
crank

For openings larger than 120 sq. ft. or over 12′-0″ in width or height an Oversize Certificate of Inspection is furnished up to widths or heights not exceeding 24 ft. Consult our Engineering Dept. for clearance requirements.



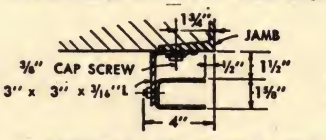
opening height up to	A	B	Q	BBL size	bracket bolts
6′-3″	15″	15½″	10″	8″	½″ dia.
8′-0″	16″	16½″	11″	8″	½″ dia.
8′-6″	17″	17½″	12″	10″	½″ dia.
9′-0″	18″	18½″	13″	10″	½″ dia.
10′-6″	19″	19½″	14″	10″	½″ dia.
12′-6″	20″	20½″	15″	10″	⅝″ dia.
15′-0″	21″	21½″	16″	10″	⅝″ dia.

FOR OPENING UP TO 8′-0″ WIDE INCL.



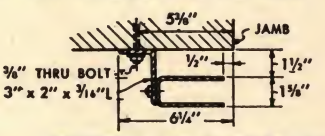
GROOVE No. 27P E=6″ R=4⅜″

FOR OPENING UP TO 8′-0″ WIDE INCL.



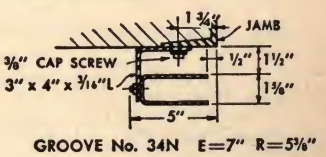
GROOVE No. 27N E=6″ R=4⅜″

FOR OPENINGS OVER 8′-0″ WIDE



GROOVE No. 34P E=7″ R=5⅜″

FOR OPENINGS OVER 8′-0″ WIDE



GROOVE No. 34N E=7″ R=5⅜″

face mounted

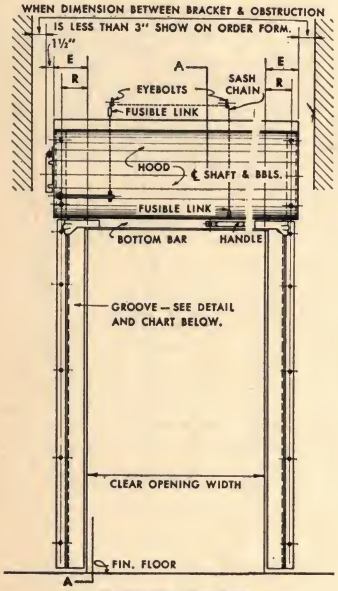
continued

Opening not to exceed 120 sq. ft.
Width or height not to exceed 12 ft.

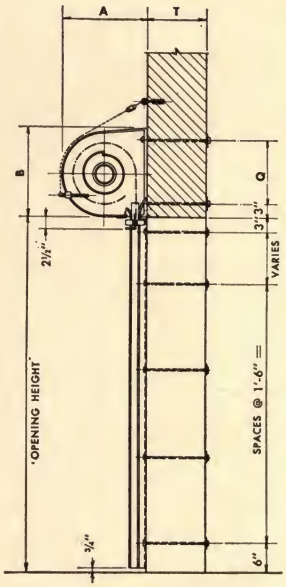
1½ hour (D)—model 1721

manual

Manual (push-up) operation is limited to 80 sq ft of opening area, width not exceeding 10′-4″ and height not exceeding 11′-4″. Above this size, crank geared operation is recommended.



ELEVATION — COIL SIDE



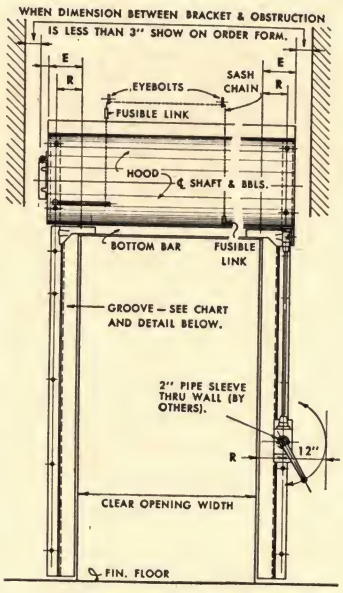
SECTION A-A

opening height up to	A	B	Q	BBL size	bracket bolts
3′-4″	14″	14½″	9″	8″	½″ dia.
4′-0″	15″	15½″	10″	8″	½″ dia.
6′-6″	16″	16½″	11″	8″	½″ dia.
7′-6″	17″	17½″	12″	8″	½″ dia.
8′-0″	18″	18½″	13″	8″	½″ dia.
8′-9″	19″	19½″	14″	10″	½″ dia.
11′-4″	20″	20½″	15″	10″	⅝″ dia.

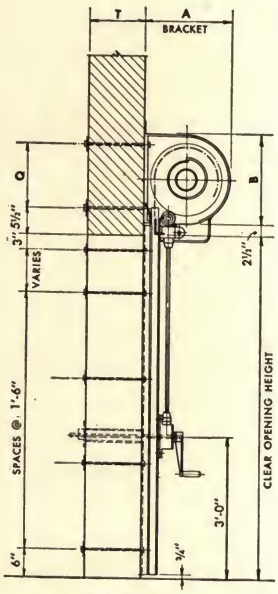
1½ hour (D)—model 1727

crank

For openings larger than 120 sq ft or over 12′-0″ in width or height an Oversize Certificate of Inspection is furnished up to widths or heights not exceeding 24 ft. Consult our Engineering Dept. for clearance requirements.



ELEVATION COIL SIDE

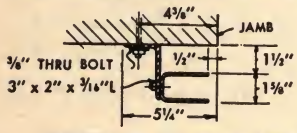


SECTION A-A

opening height up to	A	B	Q	BBL size	bracket bolts
6′-6″	16″	16½″	11″	8″	½″ dia.
7′-6″	17″	17½″	12″	8″	½″ dia.
8′-0″	18″	18½″	13″	8″	½″ dia.
8′-9″	19″	19½″	14″	10″	½″ dia.
12′-0″	20″	20½″	15″	10″	⅝″ dia.
13′-6″	22″	22½″	17″	12″	⅝″ dia.
16′-0″	23″	23½″	18″	12″	⅝″ dia.

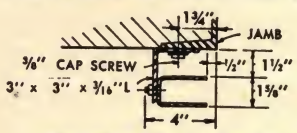
groove mountings

FOR OPENING UP TO 8′-0″ WIDE INCL.



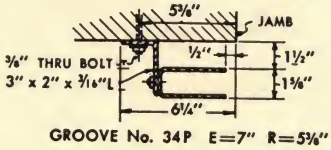
GROOVE No. 27P E=6″ R=4⅜″

FOR OPENING UP TO 8′-0″ WIDE INCL.



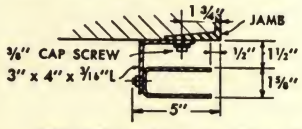
GROOVE No. 27N E=6″ R=4⅜″

FOR OPENINGS OVER 8′-0″ WIDE



GROOVE No. 34P E=7″ R=5⅜″

FOR OPENINGS OVER 8′-0″ WIDE

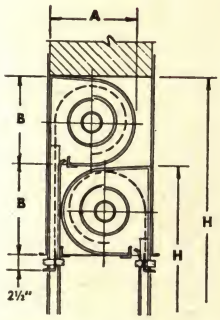


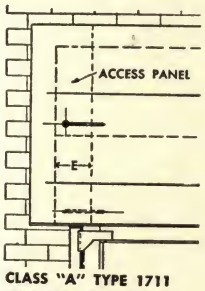
GROOVE No. 34N E=7″ R=5⅜″

under lintel mounted*

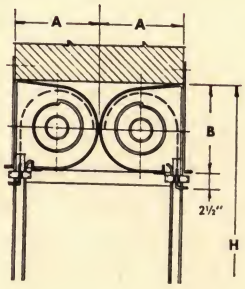
manual operation

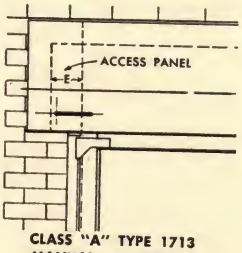
3 hour (A)—model 1711, vertical
model 1713, horizontal





CLASS "A" TYPE 1711
MANUAL—AUTOMATIC
VERTICAL MOUNTING



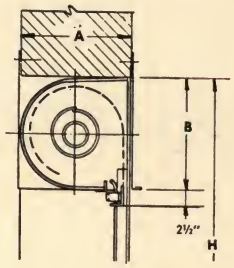


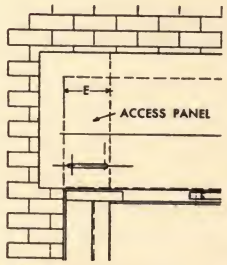
CLASS "A" TYPE 1713
MANUAL—AUTOMATIC
HORIZONTAL MOUNTING

opening height up to	A	B	
6′-0″	14″	14½″	
7′-9″	15″	15½″	
9′-6″	16″	16½″	
10′-2″	17″	17½″	
11′-4″	19″	19½″	
width up to	**C**	**D**	**E**
8′-0″	2″	5¼″	8″
10′-4″	2″	6¼″	9″

1½ hour (B)
¾ hour (C)
Model 1703—
non-automatic

Model 1706—
automatic



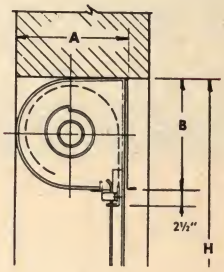


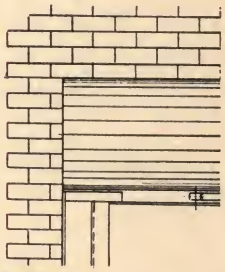
CLASS B & C
TYPE 1703 MANUAL NON-AUTOMATIC
TYPE 1706 MANUAL AUTOMATIC

opening height up to	A	B
6′-0″	14″	14¾″
7′-9″	15″	15¾″
9′-6″	16″	16¾″
10′-2″	17″	17¾″
11′-4″	19″	19¾″
width up to	**D**	**E**
8′-0″	5½″	7½″
10′-4″	6½″	8½″

1½ hour (D)
Model 1720—
non-automatic

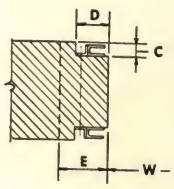
Model 1723—
automatic

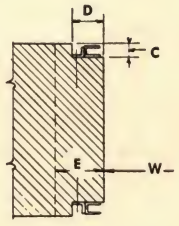


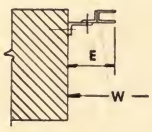


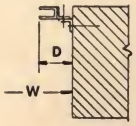
CLASS "D"
TYPE 1720 MANUAL NON-AUTOMATIC
TYPE 1723 MANUAL AUTOMATIC

opening height up to	A	B
8′-0″	16″	16½″
9′-2″	17″	17½″
10′-6″	19″	19½″
11′-4″	20″	20½″
width up to	**D**	**E**
8′-0″	5½″	7½″
10′-4″	6½″	8½″









* Consultation with our Engineering Department is recommended for required opening clearances

Grilles and Shutters

Wilson Diamond Rolling Grille offers a practical decorative solution to the problem of openings where it is desirable to admit light and air, yet have the protection necessary against petty theft or intrusion.

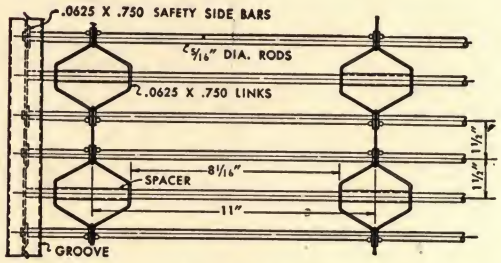
wide application of uses

Gateways	Produce Markets
Transformer Rooms	Elevator Shafts
Corridor Openings	School Building Corridor segregation
Vaults	
Storage Rooms	Industrial Buildings

It embodies the same principles and construction as used in Wilson Rolling Steel Doors. The curtain coils on a shaft, enclosing a helical counter-balancing spring, and travels in steel guide channels in which the ends of the curtain are retained. The coil is covered by a sheet metal hood.

features

Wilson's Patented Grille is constructed of 5/16" rods, 1 1/2" on centers connected with diamond-shaped links. No hand can pass through this design. The Diamond Grille is sturdy in construction. Recently a 44' wide Diamond Grille was installed in Birmingham Ala.



GRILLE DETAIL

Operation can be by manual push-up, chain, crank or motor. Grilles may be placed on the face of the wall, to coil above the lintel, or between jambs and below the lintel, or on the outside face of the wall, with operation from either side. An important feature of the Wilson Diamond Grille is the fact that the grooves fasten at the head and floor only. This enables between jambs installations in corridors to be made without cutting or marring walls.

Standard locking device on push-up grilles consists of a slide bolt and hasp, while chain-geared grilles have a chain catch. A cremone type cylinder lock, operable from either side of the curtain, is available at an extra charge. Wilson Diamond Grilles are furnished in galvanized steel as standard. However, for an additional charge, it may be furnished in aluminum or stainless steel in a variety of finishes.

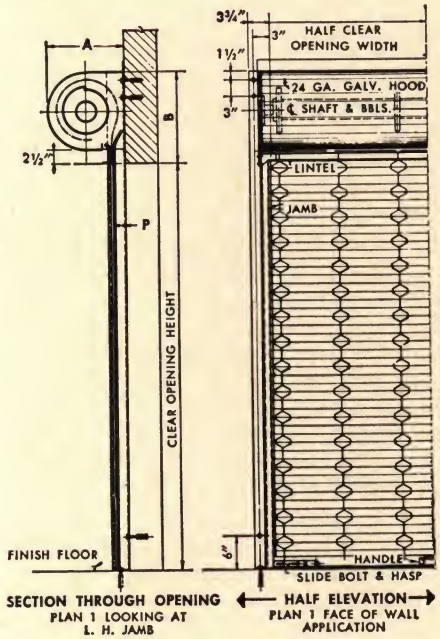
Heavy Duty Industrial Grille

Also available at additional cost is Wilson's heavy duty industrial grille where conditions necessitate the use of particularly heavy construction.

diamond grille model 1027

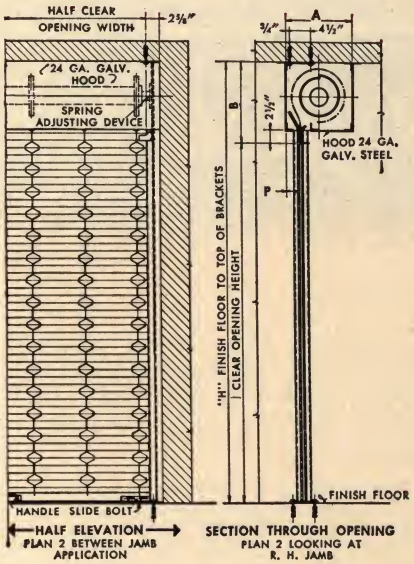
16g
WiL

face mounted



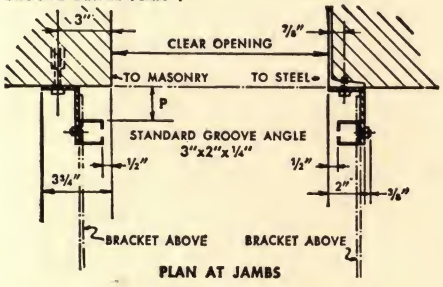
opening height	A	B	P
4′-7″	14″	16½″	1¾″
7′-0″	15″	17½″	1¾″
8′-0″	16″	18½″	1¾″
10′-8″	17″	19½″	2″
12′-0″	18″	20½″	2″

under lintel mounted

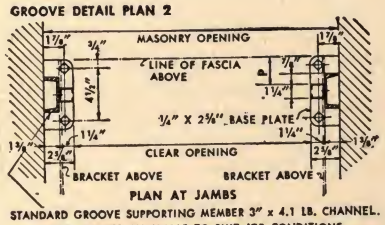


dim. H	A	B	P	T
6′-0″	14″	16½″	2⅜″	3″
8′-6″	15″	17½″	2⅜″	3″
9′-6″	16″	18½″	2⅜″	3″
12′-3″	17″	19½″	2⅜″	3″
13′-8″	18″	20½″	2¾″	3⅜″

GROOVE DETAIL PLAN 1



GROOVE DETAIL PLAN 2



STANDARD GROOVE SUPPORTING MEMBER 3" x 4.1 LB. CHANNEL.
OTHER SHAPES AVAILABLE TO SUIT JOB CONDITIONS

Midget Slat Closures

For opening and closing relatively small apertures other than portals there is a far better, more suitable way than using doors, windows, movable walls or partitions.

As far back as 1930 the problem of finding the solution for opening and closing relatively small openings was definitely recognized. The J. G. Wilson Corp. pioneered the design and construction of the first lightweight closures in both steel and aluminum—MIDGET SLAT ROLLING CLOSURES—that have long since become the acknowledged standard for this type of equipment.

Since then many thousands of WILSON MIDGET SLAT CLOSURES have been specified in new buildings and for installation in existing structures. You will find Midget Slat Closures in use in concession booths, across the fronts of newsstands, soda fountains, lunch counters; in school, factory and institution cafeterias. They are installed in openings between dining rooms and kitchens and between other rooms.

They serve as store fronts; are used on various types of counters in railroad, airline, bus and ferry terminals and on ocean liners. They function for refreshment, luncheon, candy and soda counters in theatre and hotel lobbies, major league ball parks and stadiums. You will find them in use as closures for kitchenettes, closets and storage spaces.

If crank or motor operation is desired consult Engineering Department for detailed information.

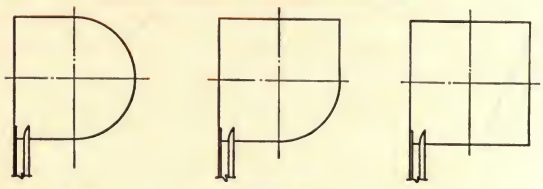
features

The Wilson Midget Slat Rolling Closure is recommended for use on smaller-sized openings other than portals. It is strong, durable, light, easy to clean, and requires a minimum of space. Operates smoothly by push-up method. Wide openings can be closed by several Midget Slat curtains divided by light removable pilasters. Standard curtains are of interlocking flat slats of 24 gauge galvanized steel that can be painted in the field to match any trim. Hoods or fascias are furnished as standard construction.

Slats of aluminum, aluminized steel, stainless steel or 22 gauge galvanized steel available on special order. Extruded aluminum slats available in a variety of finishes. Special vinyl sealing astragals on bottom bars are furnished as an extra when desired. For extra protection and strength special safety endlocks may be installed on wider openings or where installations are open to the weather. Lined grooves are also available if specified.

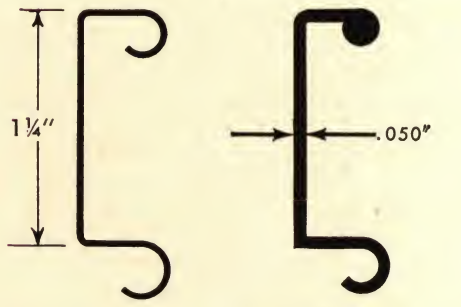
A more detailed pamphlet describing the Wilson Midget Slat Closure and various methods of installation is available upon request.

bracket types



TYPE "A" TYPE "B" TYPE "C"

TYPE "A" STANDARD ON PLAN 1 APPLICATIONS
TYPE "B" STANDARD ON PLAN 2 APPLICATIONS
TYPE "C" FURNISHED ONLY WHEN SPECIFIED

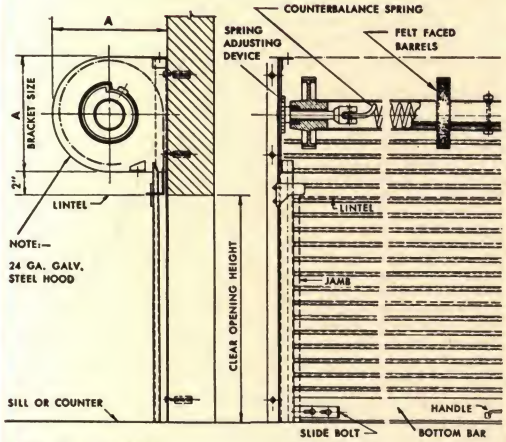


ROLLED SLAT FULL SIZE EXTRUDED SLAT FULL SIZE

details

16g
WiL

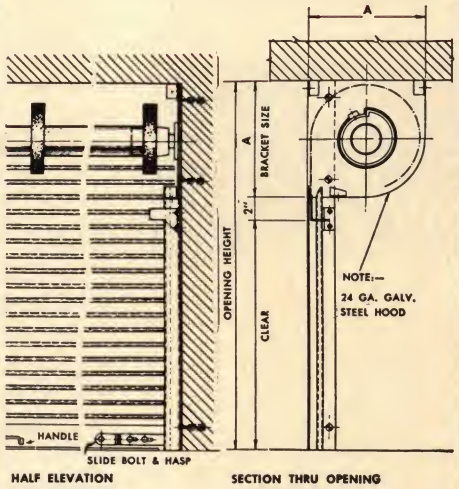
face mounted



SECTION THRU OPENING PLAN 1 LOOKING AT L.H. JAMB

HALF ELEVATION PLAN 1 FACE OF WALL APPLICATION

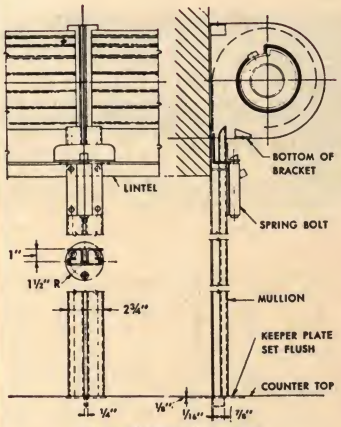
under lintel mounted



HALF ELEVATION PLAN 2 BETWEEN JAMB APPLICATION

SECTION THRU OPENING PLAN 2 LOOKING AT R.H. JAMB

mullion detail

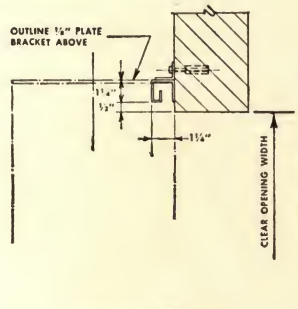


DETAIL REMOVABLE MULLION
NOTE: BRACKETS MUST BE SET UP 3"
WEIGHT OF MULLION = 3 LBS. PER FT.

opening height	maximum opening width	bracket size "A"
1′-0″	16′-0″	9″
2′-0″	16′-0″	9″
3′-0″	16′-0″	9″
4′-0″	16′-0″	9″
5′-0″	14′-0″	10″
6′-0″	12′-0″	10″
7′-0″	10′-0″	11″
8′-0″	9′-0″	11″

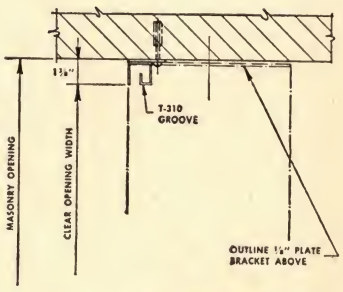
Note: For openings exceeding these sizes consult Engineering Department

groove plan 1



SECTION THRU JAMB

groove plan 2



SECTION THRU JAMB

wood

steel

Sectionfold Overhead Doors

Wilson Sectionfold Overhead Doors meet the demand for the best and latest developments in closures. They are convenient, durable, simple and dependable. Having few parts and devoid of exposed springs, cables and chains, they present a cleancut and trim appearance, inside as well as out. They can be easily adapted to many kinds of residential, institutional, commercial and industrial purposes.

Swinging doors with their tendency to sag, to be blocked by snow and ice, to blow shut just as a car is about to pass through, have hidden costs in time required to operate, repair and maintain—costs that are considerable in most cases.

Suspension on Preformed Aircraft cables and the exclusive Wilson drum construction permits their use on doors up to 22 feet high. When closed, Sectionfold doors occupy a minimum of floor space. When raised, they are overhead and out of the way, giving full width and height to the opening. Wicket doors can be furnished, if specified, at extra cost. Where headroom is available and it is desirable to locate the horizontal tracks a greater distance above the lintel line than the normal track construction, vertical lift tracks and shafts can be furnished.

types

wood

Wilson Sectionfold doors of wood can be used for public or private garages, service stations, factories, warehouses and other commercial buildings. They can be operated manually, by chain gear, or motor. Each helical oil tempered steel counterbalance spring is made after the weight of the door is known. This assures perfect balance and adjustment can be made through a single adjusting wheel.

steel

Wilson has recently introduced a new steel overhead door to the industry, which represents a substantial advance in the field. The new construction provides both trouble-free operation and durability. It consists of a modern flush exterior surface and finished interior appearance.

The Wilson steel overhead door is specified for commercial and industrial applications.

SPECIAL WILSON SAFETY FEATURES

Wilson strongly recommends the use of 3″ track and safety catches on vertical and Hi-Lift Doors where an appreciable amount of the door weight is on the lifting cables when the door is in the open position.

operation

push-up

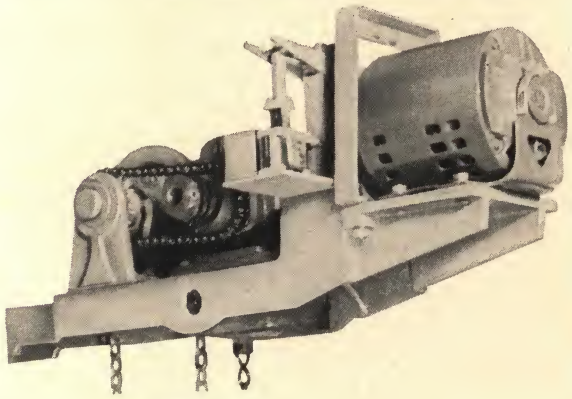
Recommended on all doors up to 12 ft in. height where the area is not over 144 sq. ft. and the thickness of the door is not over 1¾ in. (Note: Where heavy glass is used or the door is heavier than standard wood, chain gear operation is recommended.

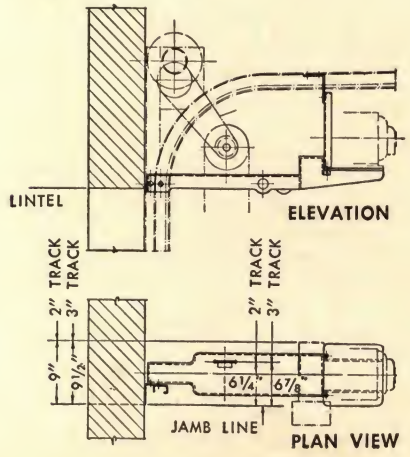
chain gear

Recommended on all doors over the sizes listed under push-up. Lifted by Preformed Aircraft cables; all gears and cut steel pinion equipped with anti-friction bearings for smooth and easy operation. All load bearing shafts revolve on pre-greased ball bearings.

Type 5300 motor unit

Recommended where a door is opened and closed at frequent intervals during the day. Unit is composed of a motor, worm and gear reducer running in oil bath, magnetic reversing starter, solenoid brake, geared limit switch and control station. All electrical equipment is made by the foremost electrical manufacturers. Features include emergency hand chain and a special built-in friction clutch.





specifications

16g
WiL

wood

Sections: Stiles and rails—1¾ in. thick; kiln-dried clear fir, mortised, tenoned and steel doweled. Open for glass as required.

Panels: ¼ in. exterior grade Masonite DORLUX.

Reinforcing: All doors over 12 ft 2 in. to 14 ft 8 in. wide are fitted with single 16-gauge galvanized reinforcing; doors over 14 ft 8 in. to 18 ft 2 in. inclusive, double 16-gauge galvanized reinforcing; and doors over 18 ft 2 in. special galvanized built-up truss reinforcing. The purpose of the special built-up truss is to lend needed strength to the most vulnerable part of the door and prevent deflection of the door sections due to the entire weight being carried from the lower corners of the door. Center tracks are unnecessary with Wilson reinforcing, since it has been designed to withstand normal wind loads when doors are down without deflection and this load is considerably more than load involved when door is in raised position.

Tracks: Hot rolled steel, 2-in. track 13-gauge and 3-in. track 11-gauge. All tracks painted. Vertical tracks are attached to continuous back angles or clip angles as applicable.

Hardware: All door fittings are of pressed steel, galvanized to prevent rusting. All rollers and sheaves are ball bearing with solid steel, case-hardened, outer rims. Side lock with cylinder and two keys that may be operated from either side of the door, locking the door to the track, will be furnished unless otherwise specified, on push-up doors and chain catch suitable for padlocking furnished on chain operated doors.

Weathering device: Not standard, but will be furnished without extra charge when specified.

Counterbalanced: All doors are counterbalanced by means of helical oil-tempered springs, enclosed in steel tubing or pipe shafts revolving on ball bearings and mounted parallel with the opening. An adjusting device for applying the proper amount of tension is furnished on all doors.

steel

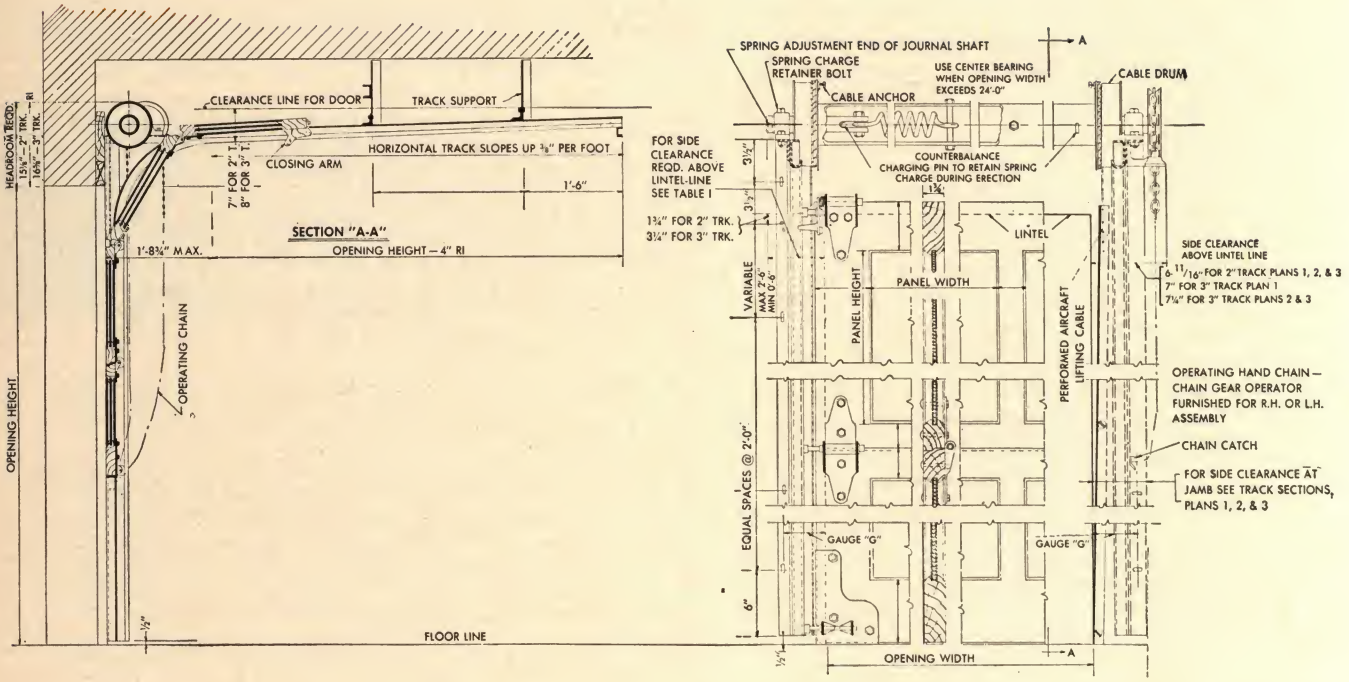
Sections and Reinforcing: Sections are constructed of galvanized sheets formed into channel shapes with 2 inch flanges. Each flange is reinforced with spot welded box-type vertical members at each end and at intermediate locations as required to form a rigid unit. End box-type members carry roller hinges. Intermediate continuous hinges are spot welded to each section to form a tight weather seal and to provide horizontal reinforcing to withstand wind pressures of 30 pounds per square foot.

Standard Sections are constructed of 20 ga. (US Std) sheets. Heavier material will be used as required at extra cost.

Standard Sections are 20 inches or 24 inches high as required by opening height.

DETAILS

wood chain geared operation

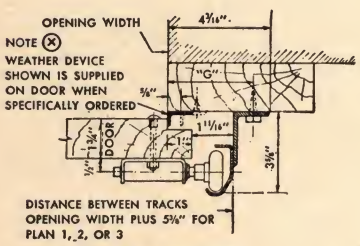

HEADROOM REQD.
15½" – 2" TRK. – RI
16½" – 3" TRK. – RI
CLEARANCE LINE FOR DOOR
TRACK SUPPORT
HORIZONTAL TRACK SLOPES UP ¾" PER FOOT
CLOSING ARM
7" FOR 2"
8" FOR 3"
1'-6"
SECTION "A-A"
1'-8¾" MAX.
OPENING HEIGHT – 4" RI
OPERATING CHAIN
OPENING HEIGHT
FLOOR LINE
½"
SPRING ADJUSTMENT END OF JOURNAL SHAFT
SPRING CHARGE RETAINER BOLT
USE CENTER BEARING WHEN OPENING WIDTH EXCEEDS 24'-0"
CABLE ANCHOR
CABLE DRUM
COUNTERBALANCE CHARGING PIN TO RETAIN SPRING CHARGE DURING ERECTION
FOR SIDE CLEARANCE REQD. ABOVE LINTEL-LINE SEE TABLE I
1¾" FOR 2" TRK.
3¼" FOR 3" TRK.
LINTEL
SIDE CLEARANCE ABOVE LINTEL LINE
6 11/16" FOR 2" TRACK PLANS 1, 2, & 3
7" FOR 3" TRACK PLAN 1
7¼" FOR 3" TRACK PLANS 2 & 3
VARIABLE MAX 2'-6" MIN 0'-6"
PANEL HEIGHT
PANEL WIDTH
PERFORMED AIRCRAFT LIFTING CABLE
OPERATING HAND CHAIN – CHAIN GEAR OPERATOR FURNISHED FOR R.H. OR L.H. ASSEMBLY
CHAIN CATCH
FOR SIDE CLEARANCE AT JAMB SEE TRACK SECTIONS, PLANS 1, 2, & 3
EQUAL SPACES @ 2'-0"
6"
GAUGE "G"
GAUGE "G"
OPENING WIDTH
A
A

schedule of door sections and paneling

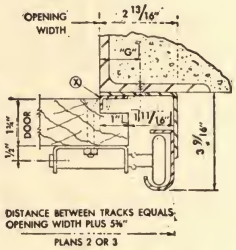
opening widths	panels	opening heights	sections
up to 6'-0"	2	up to 8'-6"	4
6'-0" to 12'-0"	4	8'-6" to 10'-6"	5
12'-0" to 16'-0"	5	10'-6" to 12'-6"	6
16'-0" to 20'-0"	6	12'-6" to 14'-6"	7
20'-0" to 24'-0"	7	14'-6" to 16'-6"	8
24'-0" to 27'-0"	8	16'-6" to 18'-6"	9
27'-0" to 30'-0"	9	18'-6" to 20'-6"	10

track data

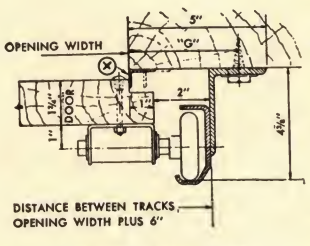
application	2" track "G"	2" track bolt	2" track "G"	2" track bolt
plan 1	3½"	⅜" lag bolt	4⅛"	½" lag bolt
plan 2	3⅝"	⅜" S.H. exp bolt	4⅝"	⅜" S.H. exp bolt
plan 3	1 1/16"	5/16" F.H.M.S.	1½"	⅜" F.H.M.S.



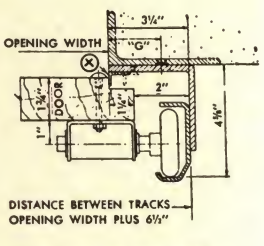
SECTION THROUGH JAMB
2" TRACK – PLAN-1



SECTION THROUGH JAMB
2" TRACK – PLAN 3

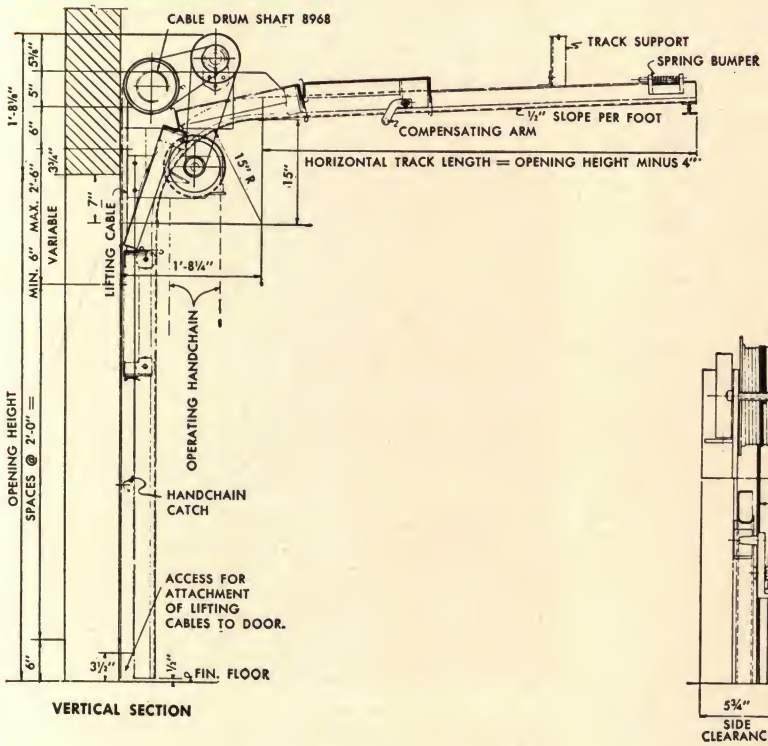


SECTION THROUGH JAMB
3" TRACK – PLAN-1

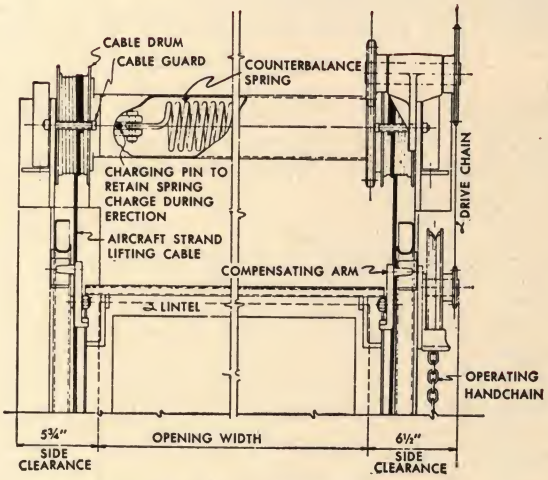


SECTION THROUGH JAMB
3" TRACK – PLAN-3

steel



VERTICAL SECTION

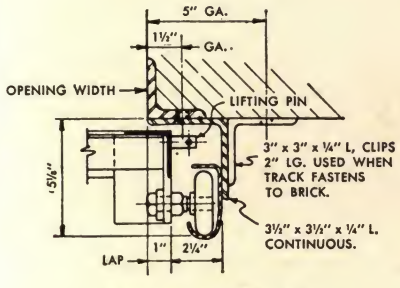


ELEVATION OF SHAFT MECHANISM
CHAIN GEAR OPERATION

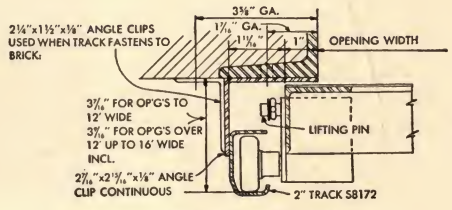
MULTIPLE CHAIN GEAR OPERATION
Standard on doors for openings exceeding the following:
All openings over 16'0" high and 16'0" wide
All openings over 20'0" wide

CHAIN GEAR OPERATION
Standard on doors for openings exceeding: 100 sq. ft. area or 10'0"opening height

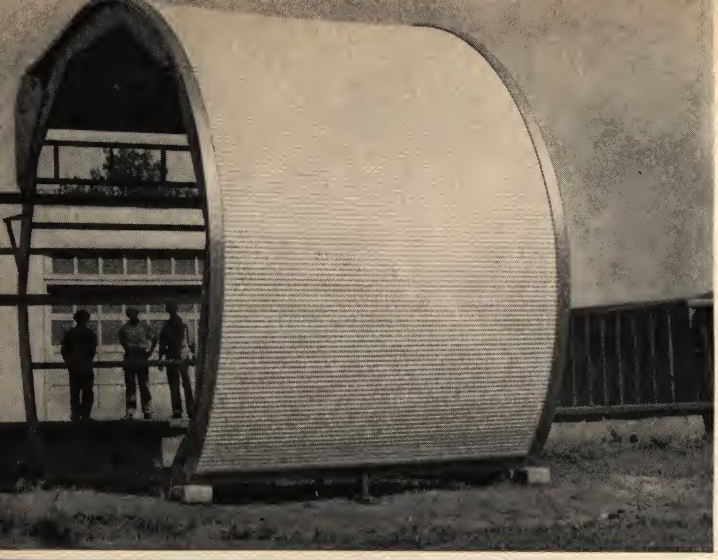
MANUAL (HAND OPERATION)
Gearing omitted. Standard on doors for smaller openings.



PLAN SECTION AT JAMB
3" TRACK



PLAN SECTION AT JAMB
2" TRACK



Special Products

Ever since its inception in 1876 Wilson has specialized in manufacturing unusual and unique products to solve specific closure problems.

Experience has proven that Wilson engineers are able to adapt existing products or design new ones to suit almost any type of rolling closure problem.

In the following two pages are listed only a few of the many such applications and installations.

In addition to these products Wilson has manufactured special chain lift counter weighted wood Bi-parting Doors in Louisville, Kentucky designed for positive opening and closing.

Also a Wilson special application of a Midget Slat Shutter for trucks is the Koildor. This closure is installed on the rear of the vehicle. It provides real convenience by rolling up out of the way minimizing the chance of damage.

Wilson manufactures a combination rolling steel door and grille closure where ventilation, light and maximum security are required.

If you have a rolling closure problem Wilson would like to help you work out a practical solution.

RADOME WINDOW SHIELD

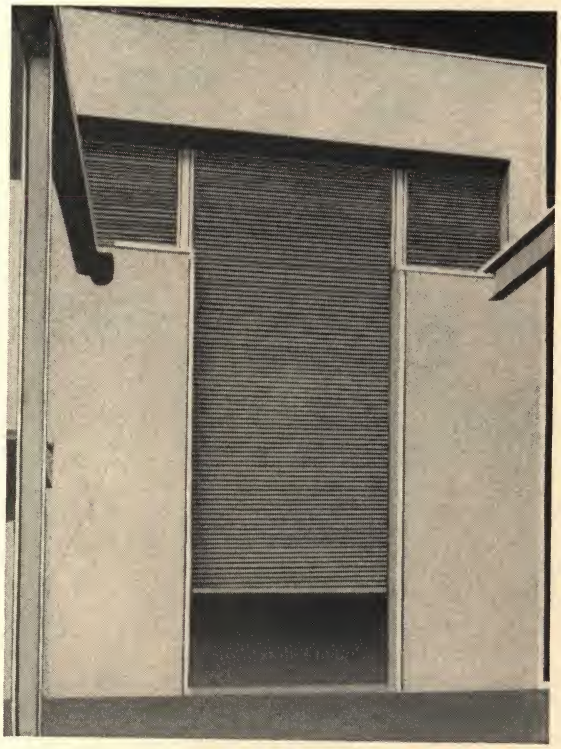
A few years ago the J. G. Wilson Corporation undertook the development of a protective shield for precision radar missile tracking equipment, which was being supplied for various Air Force installations. Working closely together, Wilson and prime contractor engineers developed within a short time the radome window shield.

ONE SECTION WOOD OVERHEAD DOOR

Philadelphia architects, Ballinger & Co., working with contractor, Barclay White & Co., were designing a Food Distribution Warehouse for the City of Philadelphia which required a single section, straight vertical-lift wood overhead door with a two-piece wicket door in the center extending the full opening height. Wilson engineers came to their aid. A wood overhead door was developed specifically to meet these requirements.

ESCALATOR ENCLOSURES

Wilson manufactures special closures for escalators to prevent the spread of fire between floors of a building. For detailed information, contact our Engineering Department.



CRANEWAY DOORS

Wilson has been a pioneer in developing Craneway Doors. Experience acquired through years of development enables Wilson engineers to solve the problems involved in Craneway installations.

LARGE DOORS

Wilson specializes in manufacturing large rolling doors of all types. The Wilson engineers have many years of valuable experience in overcoming the myriad of difficulties involved in the manufacture of such doors. Recently, Wilson has made an installation of four 40′-0″ wide doors of Underwriter construction in Teterboro, New Jersey. Pictured is a 44′-0″ wide grille which is just one sample of Wilson ingenuity with large closures.

ROLLING WOOD PARTITIONS

Wilson manufactures special wood horizontal and vertical rolling partitions used in churches and schools as room dividers. Also, they are adaptable to counter openings and wardrobes. Wilson rolling partitions will provide many years of admirable service.

A.I.A. File No. 16-D

Contact your local Wilson representatives in the cities listed by states below:

Alabama	Birmingham Montgomery
California	Belmont Los Angeles San Francisco
Colorado	Denver
Delaware	Delmar
Florida	Jacksonville Miami Orlando Tampa
Georgia	Atlanta Augusta Savannah
Hawaii	Honolulu
Illinois	Chicago
Indiana	Elkhart Fort Wayne Indianapolis
Iowa	Davenport Des Moines
Kansas	Wichita
Kentucky	Louisville
Louisiana	New Orleans Shreveport
Maine	Portland
Maryland	Baltimore Hagerstown
Massachusetts	Boston Holyoke
Michigan	Detroit
Minnesota	Duluth Minneapolis
Mississippi	Jackson
Missouri	Kansas City St. Louis
Nebraska	Omaha
New Jersey	Upper Montclair
New Mexico	Albuquerque
New York	Buffalo New Hartford New York Rochester Syracuse
North Carolina	Charlotte Greensboro Winston-Salem
Ohio	Canton Cleveland Toledo
Oklahoma	Tulsa
Oregon	Portland
Pennsylvania	Erie Lancaster New Castle Philadelphia Pittsburgh Scranton York
Puerto Rico	Santurce
South Carolina	Charleston Greenville
Tennessee	Bristol Kingsport Knoxville Memphis Nashville
Texas	Amarillo Dallas El Paso Houston San Antonio
Utah	Salt Lake City
Virginia	Norfolk Richmond
Washington	Seattle
Washington, D.C.	

Consult yellow pages of your telephone directory for addresses.

Catalog 60

The **WILSON** Corporation

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Sogrne

DOORS

. . . FOR AVIATION

. . . FOR INDUSTRY

Byrne DOORS

The first Byrne airplane hangar door was constructed in 1928. Shortly thereafter, the same principle of counterbalanced overhead doors was incorporated in the Byrne industrial door. Since that early date, Byrne engineers have constantly designed improvements into both airplane hangar and industrial doors.

In recent years, such outstanding developments as the automatic self-indexing safety stop has been introduced. This safety feature stops the door instantly when its movement is obstructed. Byrne engineers also have been responsible for such innovations as the Byrnaperture, positive drive motor operators, and automatic wheel brakes for large hangar doors.

Typical examples of doors built by Byrne are illustrated in this catalog. Where unusual applications are being considered, Byrne's research and engineering facilities are immediately at your disposal. Your inquiries are invited.

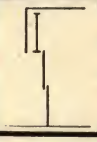
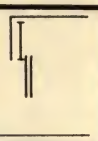
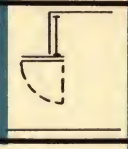
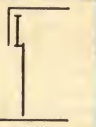
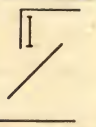
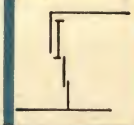
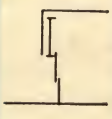
Shown here is a brief compilation of the various types of doors produced by Byrne and the principal features applying to each. In general, all of these doors incorporate standardized engineering and construction details. However, each is custom-built to meet the individual requirements of the particular job and, in many cases, basic designs can be altered to meet special conditions of the structure in which the doors are to be installed.

This chart has been prepared to quickly show in a simple fashion the units which comprise each type of Byrne door, the opening movement, and the dimensional limitations of each. Other pertinent information is also included.

On the following pages are illustrations of actual installations of the various types of doors as well as detail drawings and specifications. Information on special adaptations is available upon request.

physical characteristics

type of door	height	width
unbraced canopy pages 4 & 5	up to 30′-0″	up to 120′-0″
braced canopy pages 4 & 5	up to 55′-0″	any width
telescopic canopy pages 4 & 5	up to 50′-0″	any width
motorized slide pages 6 & 7	any height	any width
crane entrance pages 8 & 9	as required	as required
custom arm guided canopy pages 8 & 9	up to 18′-0″	up to 30′-0″
custom turnover pages 8 & 9	see page 11	see page 11
custom vertical lift pages 8 & 9	see page 11	see page 11

min. headroom	min. jamb space	movement: closed	movement: part.open	movement: open	operation	use
2′-1″	2′-3″				door rises vertically 6″, then tilts into position with about half projecting outside of hangar forming a canopy.	commercial aircraft; military aircraft; executive and private hangars; large trucking docks.
2′-6″	2′-3″				door rises vertically 6″, then tilts into position with about half projecting outside of hangar forming a canopy.	commercial aircraft; military aircraft; hangars and manufacturing plants.
special	special				bottom section moves up to ½ opening height. Both sections then tilt to full opening position.	commercial aircraft; military aircraft; hangars and manufacturing plants.
none	width of door leaf + 1′-6″	see pages 6 & 7			doors roll into pockets at either or both jambs.	commercial aircraft; military aircraft; executive and private hangars; large trucking docks.
special	special	see pages 8 & 9			see page 8	see page 8
2′-0″	1′-7″				movement same as unbraced door	truck doors
2′-0″	1′-9″				bottom section rises until even with top leaf, then both sections rise and tilt to horizontal position.	for truck entrance; railroad entrance.
½ door opening height + 1′-5″ (for 2 leaf)	1′-6″				both sections start moving at same time, bottom section twice as fast as top section.	for truck entrance; railroad entrance.

motor operated canopy type

Hangar door openings present problems involving specialized technical skill. To assure a door that is structurally sound, easy and economical in operation, fast-acting, dependable and weather-tight, a competent and experienced manufacturer is the first requisite. Byrne engineers are qualified by 31 years of progressive development with doors of all kinds.

Byrne Canopy Doors are designed to meet any size requirements. They are motor operated, upward acting, suspended by cables which transmit dead loads to compact counterweights. They offer lifetime economies to hangar management by providing:

Swift Operation using minimum operating power.

Snug Weathering permitting reduced initial investment in heating plants and substantial annual fuel savings.

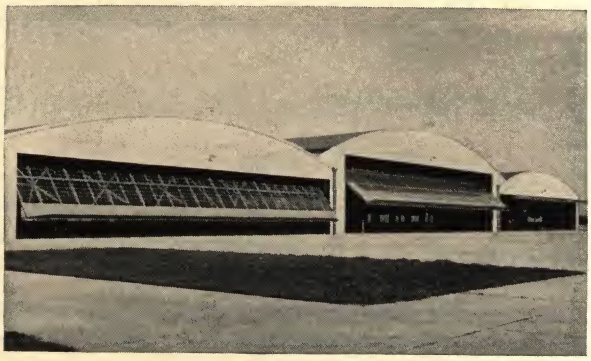
Minimum Maintenance costs which have run less than ¼ of 1% per annum over periods of 20 to 25 years.

Space Saving permitting full use of enclosed floor area and forming canopies, which add to the effective working space during mild weather.

Complete Safety of multi-cable, balanced suspension; rigid construction to withstand hurricane wind velocities; automatically self-locking operator mechanisms and overload relays.

unbraced canopy

Byrne Unbraced Canopy Doors are recommended for openings up to 120' wide by 30' high. They are restrained by jamb guides and overhead tracks. Adjacent doors must be separated by fixed columns or mullions.



braced canopy

Byrne Braced Canopy Doors are recommended for heights up to 55'. They may be used in single sections up to 150' wide, or in multiple sections to provide clear openings of any width. Multiple sections may be operated independently or in unison. The doors are restrained by a linkage system which braces the doors directly to the structural framing and transfers wind stresses into the superstructure.

telescopic canopy

Byrne Telescopic Canopy Doors can be made in sections for any width of opening. Sections may be operated independently or simultaneously. The door is divided horizontally into two leaves, the upper leaf is hinged to the supporting steel, the lower leaf is suspended by cables. In operation the lower leaf raises to approximately one-half the opening height, both leaves then tilt outward forming a canopy in the full open position.

operation and controls,
unbraced and braced canopy

Operation shall be according to the established Byrne principle, employing multiple-cable suspension and a vertical, tilting motion. The first movement in opening shall be a vertical rise to unlock the lateral bolting system. The door shall then tilt on its own horizontal center and open upward with its lower half projecting outside to form a canopy.

Operator shall be provided with high starting torque, reversible, two-speed motor, solenoid brake, bronze gear and steel worm reduction unit and traction drum. Speed reducer shall be self-locking, of sufficient strength to sustain the specified wind loads. Operator speed shall be at a rate of nine vertical inches of door opening per second. Motor shall be equipped with automatic speed change controls. First movement in opening and final closing shall be at half normal speed. A drum-type master control switch shall be located inside of building near each jamb for each door leaf. Magnetic reversing switch shall have thermal overload relay. Limit switch shall be a positive type, connected with electrical system to stop door at its fully open and closed position. Single speed motors and operation shall be provided for door areas under 1600 sq. ft.

A permanent hand chain operator with clutch lever for each door shall be installed in an accessible position at side wall of building.

telescopic canopy

Operation shall be according to the established Byrne principle, employing multiple-cable suspension.

Vertical lift operator shall be provided with a single speed high torque motor, a worm gear speed reducer, a solenoid brake and traction drum. Tilt operator shall be provided with a high torque motor with built-in brake, a roller chain reduction to a line shaft connecting bevel gear boxes on trunnions that drive the power screws that actuate the tilt arms. The power screws shall be self-locking and of sufficient strength to sustain the specified wind load.

Operator speed shall be at a rate of seven and one-half vertical inches of door opening per second. A drum-type master control switch shall be located inside of building near each jamb for each door leaf. Magnetic reversing switch shall have thermal overload relay. Limit switch shall be a positive type, connected with electrical system to stop door at its fully open and closed positions.

A permanent hand chain operator with clutch lever for each door shall be installed in an accessible position at side wall of building.

specifications

General—The main hangar doors where shown on plans shall be Unbraced, Braced, or Telescopic Canopy (insert type desired) as manufactured by Byrne Doors, Inc., or an approved equal which shall have been in successful use for a period of five years under similar conditions.

Scope of the Work—Complete door leaf and mechanism, including self-locking operator, motor and controls, cables and sheaves shall be provided and installed by the door manufacturer.

Not included in this work are the steel framing and supports, trolley beams, door sill nosing, door jambs, counterweight guides and guards, concrete for counterweights, glass, glazing, field painting and electric wiring to motors and controls. All such work shall be furnished and installed by their respective trades according to the door manufacturer's details.

Door Construction—Door leaf and guide system shall be designed to withstand horizontal wind pressures as follows:

A. For the Braced and Unbraced Canopy Doors, 20 lbs. per sq. ft. in the closed position and 15 lbs. per sq. ft. in a 45° partially open position.

B. For the Telescopic Canopy Door, 15 lbs. per sq. ft. in the closed position and 5 lbs. per sq. ft. in a partially open position.

Sections of convenient sizes for practical handling shall be shop fabricated with suitable field assembly joints. Plate panels shall be 13-gauge flat steel sheets reinforced as necessary with angle stiffeners. Sash panels shall be 1⅜ in. solid rolled-section fixed steel windows designed for outside putty glazing.

Jambs and head shall be weathered with approved flexible material to fit snugly against contact surfaces.

Sheaves and Cables—Sheaves shall be heavy design, mounted on roller bearings and hardened races and pins. Cable shall be improved plow steel wire-rope of sufficient capacity to sustain the dead weight of the door with 25% impact allowance plus the vertical component of wind, all with a minimum safety factor of five.

Operation and Controls—Insert type desired (Unbraced, Braced or Telescopic Canopy).

guaranty

Each bidder shall state the type of door proposed and the name of manufacturer, and shall submit a list of similar installations and the dates installed. On completion he shall furnish a written guaranty against defective material and workmanship for a period of one year after acceptance.

important note

A large mechanically-operated door involves the work of several trades. The division of responsibility must be clearly defined to insure economy, a complete installation, reliability and long life.

motorized sliding type

specifications

General—The main hangar doors shall be motor operated horizontal-sliding type doors as manufactured by Byrne Doors, Inc., or an approved equal which shall have been in successful use for a period of five years under similar conditions.

Not included in this work are the top guides and supports, bottom rails and ties, cable anchors, glass, glazing, field painting and electric wiring to motors and controls. All such work shall be furnished and installed by their respective trades according to the door manufacturer's details.

Operator System—The operator shall consist of a gear motor with built-in brake, a cone clutch to cushion starting, stopping, and reversing loads, chain reduction and drive sprocket assembly mounted in the lead leaf (or the trailing leaf or on the building, whichever location is most advantageous). The operator shall employ a positive drive which will not be dependent on the traction between door wheel and bottom track. A system of cables shall be used to transmit motion to each leaf at differential speeds so that all leaves arrive at their full open or closed positions simultaneously. The speed of the leading leaf shall not exceed 60 feet per minute.

Transmission Cable—Transmission cable used for moving the leaves shall be improved plow steel running over cast iron sheaves of a size not less than 24 cable diameters. Sheaves shall be mounted on roller bearings.

Motor—Motor shall be rated for door operator duty, constant torque with integrally mounted magnetic brake. It shall be of sufficient size to operate doors under normal conditions at not more than 75% rated capacity.

Control Switch—The control switch shall consist of a drum reversing type lever and spring return switch at one jamb for each operator.

Control—Control shall consist of positive-acting limit switches. The magnetic starter shall be factory wired and enclosed in a metal cabinet with overload and undervoltage protection. A wiring diagram shall be on the inside of the hinged cover.

Electric Equipment—All electrical equipment and controls shall be furnished by the door manufacturer. The electrical contractor shall furnish and install all wiring and conduits to and between controls and make service connections to motor with unfused safety switch furnished by him near the starter panel.

Emergency Operation—Doors shall be equipped with a means for emergency conversion to tractor towing operation.

(See photos to right—Page 7)

Byrnaperture doors

In the interest of economy, a modern architectural design for hangar doors provides for the housing of the nose and wings of the airplane, with the fuselage and tail remaining on the outside of the hangar. This design has promoted the development of the Byrnaperture, which closes tightly around the fuselage of the plane, keeping drafts and weather from mechanics working inside the hangar. The Byrnaperture is an improvement over the less flexible fuselage closures which heretofore have relied upon canvas curtains.

The Byrnaperture may be operated either mechanically or by electric power, and it provides a snug closure over a wide variety of fuselage contours. The illustrations show an electrically operated aperture which has a range of operation to provide closure for planes from the small Convair fuselage to the large DC-8 fuselage, as well as the large commercial jet planes planned for the future. The specification for the Byrnaperture is as follows:

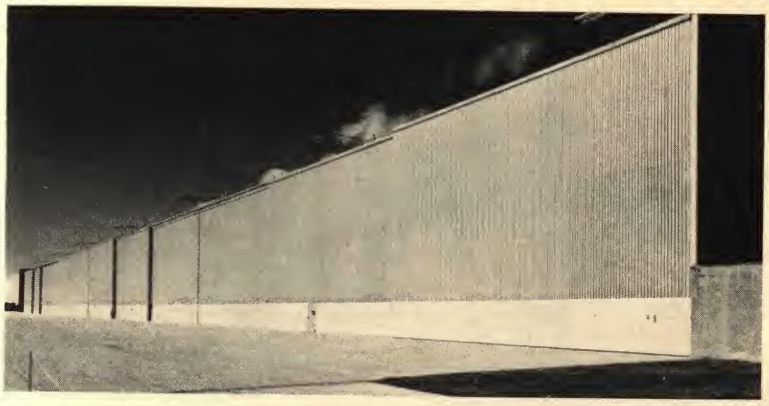
specifications

The hangar doors shall be provided with fuselage apertures similar and equal to the Byrnaperture, as manufactured by Byrne Doors, Inc., Ferndale, Michigan. The location of the apertures shall be as shown on the architect's drawings.

Each aperture shall consist of a series of movable segments which shall fit securely around the fuselages and antennae of a specified range of aircraft. Segments shall be constructed of aluminum and foam rubber gaskets with sufficient flexibility to provide snug, weather-tight closures. Sliding aluminum surfaces shall be provided with nonmetallic anti-friction separators. Byrnaperture segments shall be actuated by electrically operated system of screws and linkages. Each screw and/or linkage to have individual motor operators with an adjustable slip clutch. The control buttons shall have the following stations: constant pressure for closing of segments and momentary pressure for opening. Limit switches shall be provided for the Byrnaperture segments and the closure panel so that the main leaf cannot be operated until the segments and closure panel are in the fully open position.

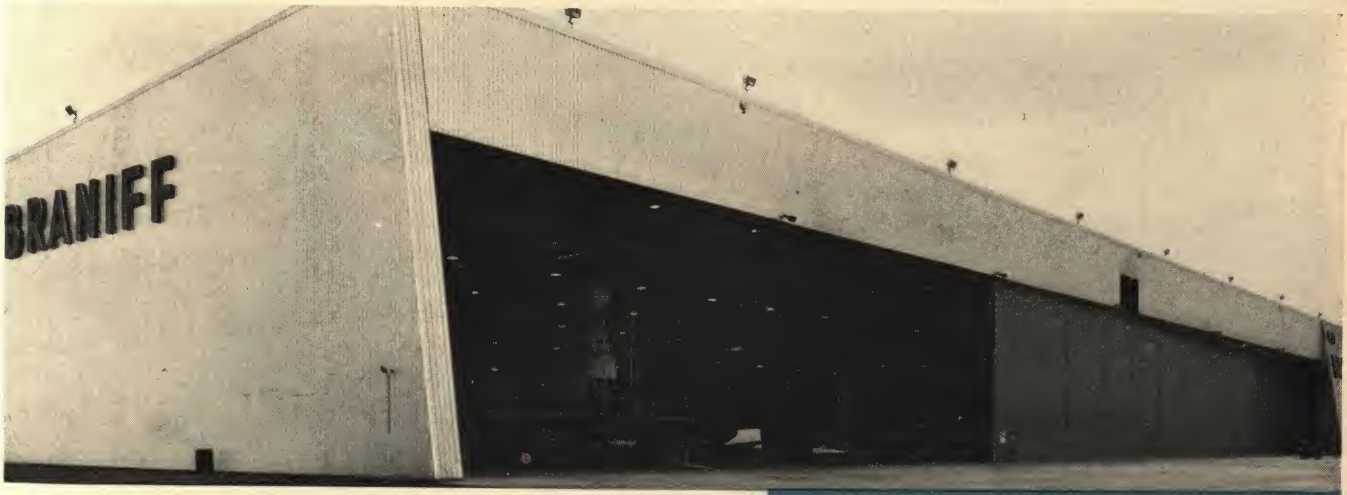
To close the fuselage opening when not in use, a manually operated slide door shall be provided with suitable locking devices in both the open and closed positions.

(Continued, with illustrations, next page (7), at immediate right)



Trans World Airlines
Overhaul Facilities
Mid-Continent International Airport
Kansas City, Missouri

Braniff International Airways
Maintenance Base
Love Field,
Dallas, Texas



General and Detailed Views of Byrnapertures,
Los Angeles International Airport, Los Angeles, California

(*Specifications continued from preceding page* (6), *at left*)

Both the aperture segments and the sliding closure doors shall be designed to withstand wind loads as specified without exceeding specified deflections or stresses.

When mechanical operation is required, the actuation of the segments shall be provided by a system of hand cranks placed at a location near the floor elevation.

crane entrance doors

Doors for crane entrances are usually one of two different types. One type combines Byrne Unbraced Canopy upward acting doors at the crane rails with swinging or sliding doors below. The upward acting door is always motorized, while the lower doors may be either motorized or manually operated. This is the type door shown in the photographs.

The other principal type uses a single leaf, hinged along the soffit of the building, with the swinging or sliding doors below as mentioned in the paragraph above. A unique system of cable reeving insures positive opening and closing control.

In both types of these doors, the upward acting and the hinged, the employment of electrical interlocks insures complete safety with automatic or selective controls located as desired. The operating speed of these doors is about 45 ft. per minute. Byrne offers other types of crane entrance doors to suit varying building conditions and crane designs. Engineering consultation, furnished without obligation, is necessary for the successful development of a crane entrance enclosure.

(See photos at right—Page 9)

custom counterweighted doors

custom arm guided canopy

The Byrne Arm Guided Canopy Door can be furnished for openings up to 500 square feet in area. The initial opening movement is a straight vertical rise which overcomes obstruction by ice or snow.

The single section door leaf reduces crackage, with exceptionally tight weathering resulting. The guide plates and linkage arms which control the operation are compactly designed for minimum projection into the building. Smooth, easy operation is secured by hand chain or motor control.

In the open position the door projects beyond the face of the building forming a canopy which is frequently used to increase the working area.

(See photo at right—Page 9)

custom turnover

The Byrne Custom Turnover Door is recommended for openings up to 25 feet wide by 25 feet high. It requires only two feet of head room above the lintel. In its full open position it projects back into the building slightly more than half of the door opening height.

Smooth, rapid operation makes the Turnover Door ideal equipment where frequent and dependable service is required. Materials or vehicles may be stored close to the door without interfering with its operation.

Continuous power for Trolley Bus Entrances can be automatically and positively secured with the opening of the door.

A wide latitude of architectural treatment is obtainable by varying the arrangement of the main door members, panels and fenestration in both steel and aluminum construction.

(See photos at right—Page 9)

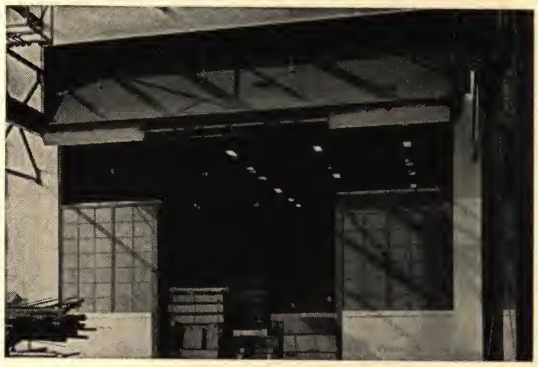
custom vertical lift

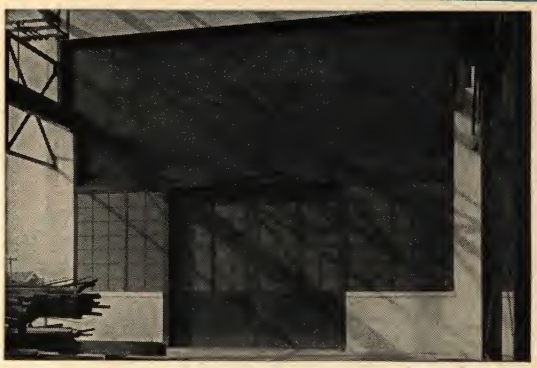
The Byrne Custom Vertical Lift Door can be furnished without limitation in width or height. Depending on the head room available, it is built in one, two, three or four sections.

The basic simplicity of the Vertical Lift Door makes it a first choice whenever clearances permit its installation. Byrne Vertical Lift Doors are used for railroad entrances, bus terminals, warehouses, piers and a variety of industrial purposes.

The increasing demand for wide unobstructed openings to admit tractor-trailer combinations is successfully met by Byrne Doors which have been furnished for openings up to 80 feet wide.

(See photo at right—Page 9)





general description for custom counterweighted doors

Operation: (Insert type desired.)

Arm Guided Canopy Doors—The first movement in opening shall be a vertical rise. The door shall then tilt on its own horizontal center and open upward with its lower half projecting outside to form a canopy across the doorway. (See diagram this page.)

Turnover Doors—In opening, the bottom section shall raise vertically to a position behind the top section, after which both sections shall act in unison, their tops moving inwardly while their lower edges continue rising until both sections lie in a horizontal position behind the head of the opening. (See diagram page 11.)

Vertical Lift Doors—In opening, all sections shall slide upward simultaneously, the upper section traveling at a fraction of the speed of the second, etc., so that all sections shall arrive at the fully open position, above the lintel and in a vertical position inside the building, at the same time. (See diagram page 11.)

Construction: Stiles and rails shall be constructed of formed plates with all joints welded and ground smooth on outside surfaces. Members shall be so arranged that the sash and plates give the outside of the leaves a paneled effect. No welds, screw heads or other protrusions shall mar the exterior appearance of the sections. All members shall be straight and true and fit together neatly. Welded assembly shall join all parts of the sections securely. Sections shall present a clean and workmanlike finish on both sides.

Vertical guides shall be fabricated from structural steel shapes or plates bolted and welded together to give ample strength at their connections in performing their proper functions. No castings shall be used where tension stresses occur in the door construction.

Material: All frame members, panels, sash, and guides shall be fabricated from structural grade new billet steel. Sheave wheels and rollers shall be grey cast iron. Brackets attaching hardware to leaves shall be formed rolled steel.

Operators (Mechanical): Door shall be operated by continuous hand chains to produce swift, smooth movement of the door sections.

Operators (Motor): Motor operators shall be provided as indicated by the plans and specifications. They shall include motors, limit switches, brakes, reversing panels and three-button control stations. Auxiliary hand chain operators shall be provided.

Integrally mounted limit switches shall stall operation without damage to equipment when doors meet obstructions. One-half cycle of operation shall re-index the limit switches.

Hardware: All rollers and sheaves shall have anti-friction bearings as required to insure smooth, long time operation. Plow-steel wire rope shall have sufficient capacity to sustain the dead weight of the door with 25% impact allowance, with a minimum safety factor of five. Space shall be provided in the design to accommodate steel weights needed to properly balance the door sections.

Shop Finish: Doors, guides and operators shall be given a protective coat of metallic primer before shipment. Hand chain, shafting and moving operator parts shall not be painted.

Erecting and Wiring: Erection of doors, operating equipment and electrical operators shall be done by the door manufacturer, or by an experienced door erecting company. Wiring for the electrical equipment shall be done by the electrical contractor and not by the door manufacturer.

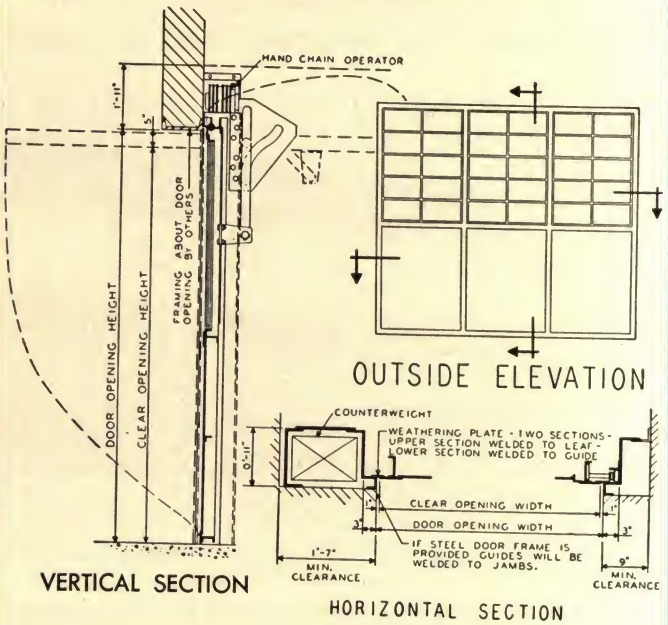
Glazing: Sash shall be outside putty glazed by others, using steel glazing clips. Glass, putty and glazing are not furnished by the door manufacturer.

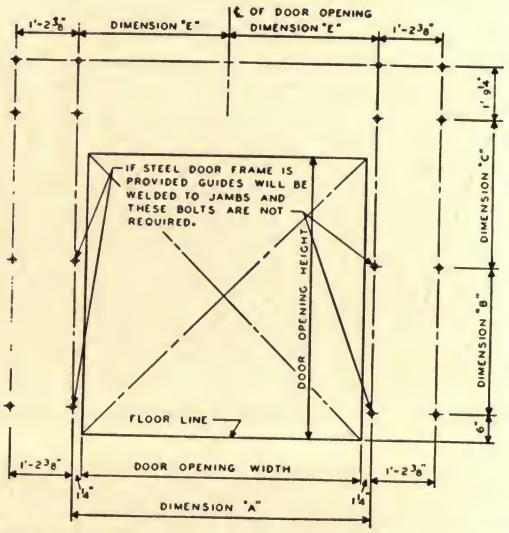
Note: Anchor bolts to be ½" diameter and embedded securely in masonry or framed into building steel at locations indicated on diagram. Anchor bolts are to project 1¼" from inside face of wall. Anchor bolts to be furnished and set by masonry contractor.

CUSTOM ARM GUIDED CANOPY *

*counterweighted door features

- no springs to weaken, wear out or bind
- heat saving—snugly fitting solid sections
- sturdy—built to withstand any wind pressure
- sash—may be installed as desired
- lower maintenance—all steel, few working parts, no multiplicity of friction joints to bind, rust or corrode.

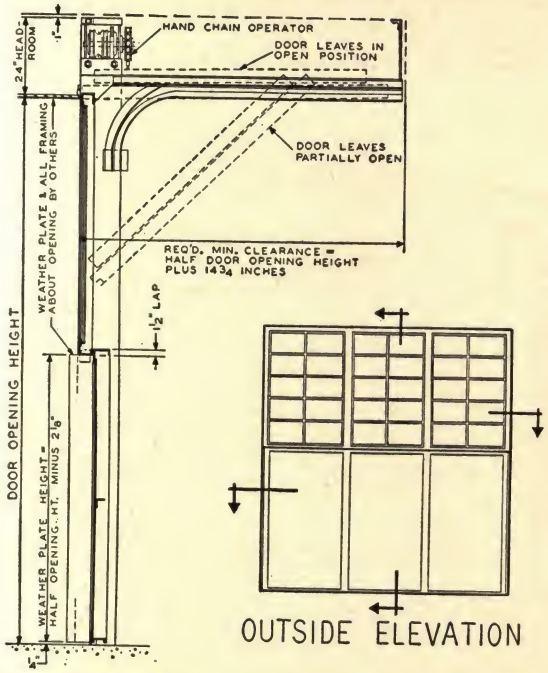

HAND CHAIN OPERATOR
FRAMING ABOUT DOOR OPENING BY OTHERS
DOOR OPENING HEIGHT
CLEAR OPENING HEIGHT
OUTSIDE ELEVATION
COUNTERWEIGHT
WEATHERING PLATE - TWO SECTIONS - UPPER SECTION WELDED TO LEAF - LOWER SECTION WELDED TO GUIDE
CLEAR OPENING WIDTH
DOOR OPENING WIDTH
IF STEEL DOOR FRAME IS PROVIDED GUIDES WILL BE WELDED TO JAMBS.
MIN. CLEARANCE
VERTICAL SECTION
HORIZONTAL SECTION

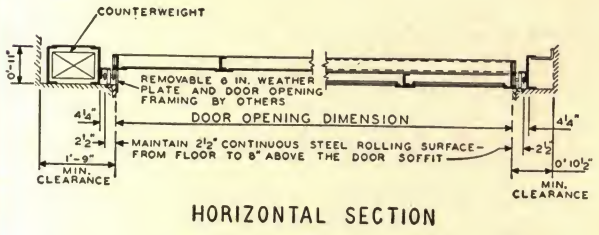

℄ OF DOOR OPENING
DIMENSION "E"
DIMENSION "E"
IF STEEL DOOR FRAME IS PROVIDED GUIDES WILL BE WELDED TO JAMBS AND THESE BOLTS ARE NOT REQUIRED.
DOOR OPENING HEIGHT
DIMENSION "C"
DIMENSION "B"
FLOOR LINE
DOOR OPENING WIDTH
DIMENSION "A"

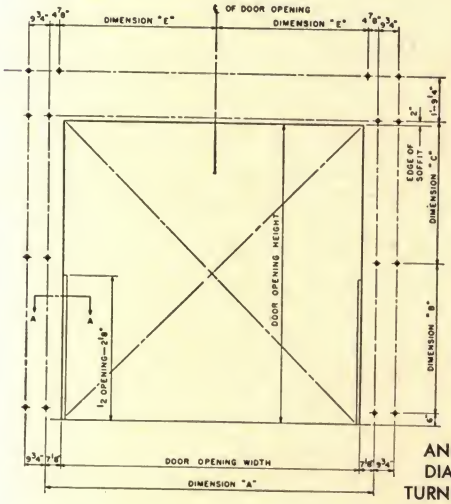
ANCHOR BOLT DIAGRAM FOR ARM GUIDED CANOPY DOORS

opening width	opening height	"A"	"B"	"C"	"E"
12'-0"	12'-0"	12'-2½"	6'-0"	5'-7"	6'-1¼"
16'-0"	12'-0"	16'-2½"	6'-0"	5'-7"	8'-1¼"
20'-0"	12'-0"	20'-2½"	6'-0"	5'-7"	10'-1¼"
12'-0"	14'-0"	12'-2½"	2@6'-0"	1'-7"	6'-1¼"
16'-0"	14'-0"	16'-2½"	2@6'-0"	1'-7"	8'-1¼"
20'-0"	14'-0"	20'-2½"	2@6'-0"	1'-7"	10'-1¼"

CUSTOM TURNOVER DOORS *


HAND CHAIN OPERATOR
DOOR LEAVES IN OPEN POSITION
DOOR LEAVES PARTIALLY OPEN
REQ'D. MIN. CLEARANCE = HALF DOOR OPENING HEIGHT PLUS 14¾ INCHES
24" HEAD ROOM
WEATHER PLATE & ALL FRAMING ABOUT OPENING BY OTHERS
1½" LAP
DOOR OPENING HEIGHT
WEATHER PLATE HEIGHT = HALF OPENING HT. MINUS 2⅛"
4"
OUTSIDE ELEVATION
VERTICAL SECTION

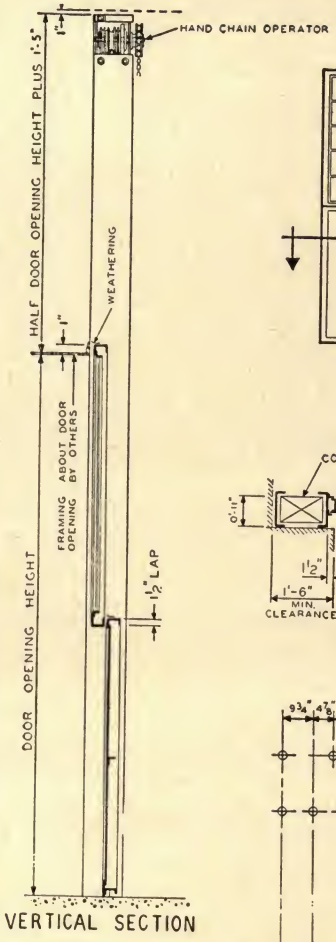


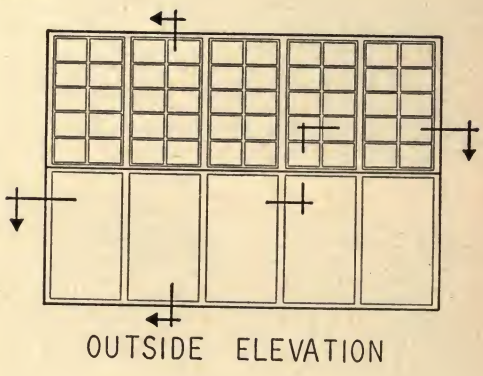


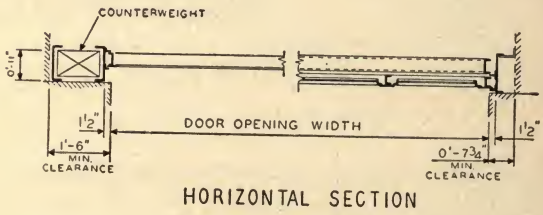
ANCHOR BOLT DIAGRAM FOR TURNOVER DOORS

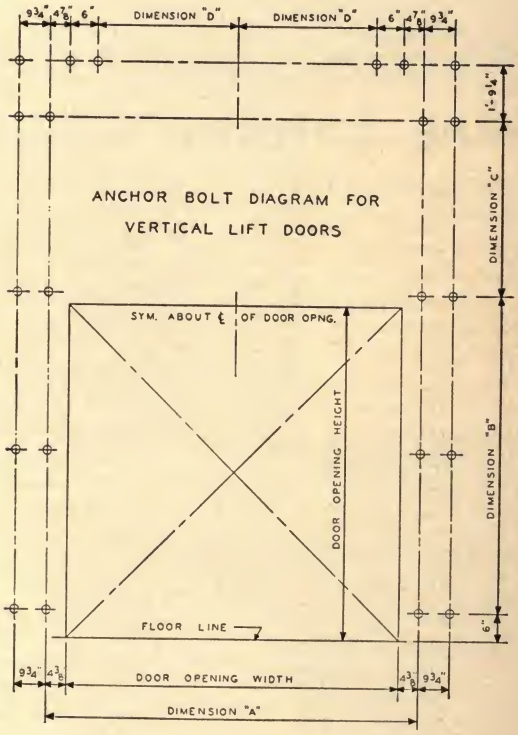
opening width	opening height	"A"	"B"	"C"	"E"
12'-0"	12'-0"	13'-2¼"	1@6'-0"	5'-8"	6'-2¼"
16'-0"	12'-0"	17'-2¼"	1@6'-0"	5'-8"	8'-2¼"
20'-0"	12'-0"	21'-2¼"	1@6'-0"	5'-8"	10'-2¼"
12'-0"	14'-0"	13'-2¼"	2@6'-0"	1'-8"	6'-2¼"
16'-0"	14'-0"	17'-2¼"	2@6'-0"	1'-8"	8'-2¼"
20'-0"	14'-0"	21'-2¼"	2@6'-0"	1'-8"	10'-2¼"
17'-0"	22'-0"	18'-2¼"	3@6'-0"	3'-8"	8'-8¼"

CUSTOM VERTICAL LIFT *









opening width	opening height	"A"	"B"	"C"	"D"
12'-0"	12'-0"	12'-8¾"	2@6'-0"	5'-1"	5'-5½"
16'-0"	12'-0"	16'-8¾"	2@6'-0"	5'-1"	7'-5½"
20'-0"	12'-0"	20'-8¾"	2@6'-0"	5'-1"	9'-5½"
12'-0"	14'-0"	12'-8¾"	3@6'-0"	2'-1"	5'-5½"
16'-0"	14'-0"	16'-8¾"	3@6'-0"	2'-1"	7'-5½"
20'-0"	14'-0"	20'-8¾"	3@6'-0"	2'-1"	9'-5½"
17'-0"	22'-0"	17'-8¾"	5@6'-0"	2'-1"	7'-11½"

Byrne

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*Blaw-Knox Construction Company
*Bucyrus-Erie Company
*The Budd Company
Canada Dry Ginger Ale, Inc.
*Caterpillar Tractor Company
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*Erie Mining Company
Firestone Tire & Rubber Company
*Fisher Body Division
*Ford Motor Company
Ideal Cement Company
International Business Machines Co.
International Harvester Company
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Missouri-Pacific Lines
National Cash Register Company
*New England Power Company
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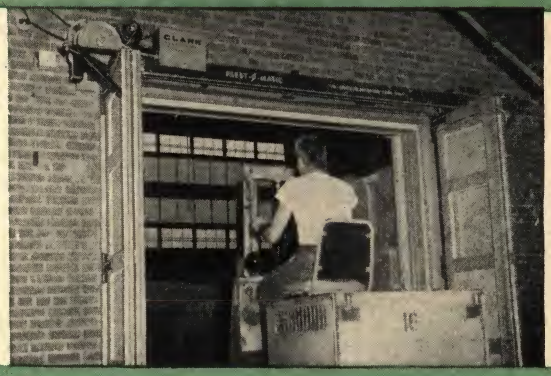

CLARK

PREST-O-MATIC® *PACKAGED* industrial doors

complete automatic door assemblies

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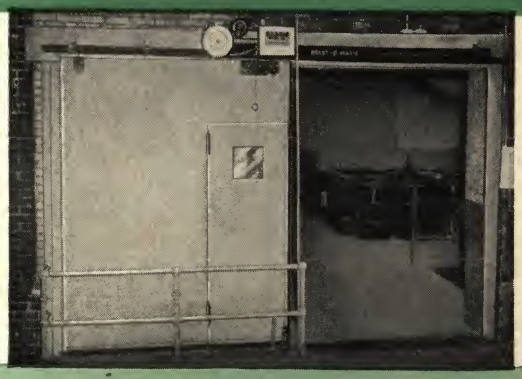

A.I.A.—File 16-D

air or electric powered...

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long dependable service

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PREST-O-MATIC
packaged industrial doors

Clark Prest-O-Matic Door Units are self-contained complete automatic door assemblies. They include doors, frame, hardware in place, factory mounted motor operator, all ready to install. Pull cord switches, push buttons or other selected controls, and optional equipment, are supplied as part of the complete integrated unit.

FOUR STANDARD MODELS

1. Model BF—Bifold. A four leaf, folding, fast operating door.
2. Model BFS—a combination of the Bifold and Sliding Models.
3. Model DHS—Double Horizontal Sliding. Two door leafs biparting to each side.
4. Model SHS—Single Horizontal Sliding. A single leaf sliding to one side only.

ADVANTAGES

Expedite Traffic. Fork trucks or other vehicles proceed without stopping through automatically opening Prest-O-Matic doors. Time saved by truck drivers results in lower dollar costs.

Save Heat or Air Conditioning. Loss of heat or air conditioning is reduced to a minimum by fast operating Prest-O-Matic door units. When closed specially designed neoprene gaskets provide extra tight seal.

Improve Employee Morale. Prolonged opening of factory doors can often mean a severe hardship to nearby workers. Tests have proven reduction in "open-door-time" on Prest-O-Matic installations of as much as 80%, thus eliminating draft conditions and resultant employee discomfort.

AIR OR ELECTRIC OPERATION

All Prest-O-Matic doors and operators shown in this catalog are available with compressed air or electric motors. Choice is entirely optional and dependent upon local conditions and requirements.

Clark electric operators incorporate fractional horse power motor, geared limit switch, solenoid brake, adjustable safety clutch, pre-wired control box with components of standard manufacture. Explosion proof equipment is available where necessary. Standard models available for 110V SP 60C; 220V SP 60C; 220V 3P 60C and 440V 3P 60C.

Compressed air operators are provided with pistons of adequate size and stroke, and include lubricator, filter, and water trap. Units require minimum pressure of 65 psi and a 110V electric line for connection to 6 Volt transformer supplied with doors. Compressors can be supplied with doors or obtained locally.

Each type operator is factory assembled and ready for power connections, and all features and optional equipment are common for either type of power supply. Drawings showing clearance requirements for electric doors may be used for air powered doors or details will be submitted upon request.

FEATURES

Controls. Approach pull cord or push button switches constitute the most widely acceptable type of control. Others such as floor plates, photoelectric cells, and special types to meet unusual conditions are available.

Door Construction. Doors are Fir panel construction with wood casings and header. Flush plywood or metal covering obtainable at extra cost.

Safety Edge. Optional safety edge automatically opens door upon striking personnel or obstructions during closing cycle.

Pedestrian Door. A small hand operated, hinged pass door can be incorporated for use by pedestrians.

Manual Release. All doors provide a disconnect device for manual operation in the event of power failure.

INSTALLATION

The speed and ease with which Prest-O-Matics can be installed has drawn praise from plant engineers and contractors on many occasions.

Simple, complete instructions are supplied, and installation is easily and quickly accomplished, usually within a few hours, by an average maintenance crew. The vertical casings and header are fastened with suitable bolts to wood, steel, or masonry walls. No cutting, drilling, or fitting of the doors within the opening is required.

Power supply is connected to electric or air terminals on operator and pull cord switches or other controls placed as desired.

GUARANTEE

Many years of customer experience with Prest-O-Matic Complete Door Units has proven their reliability and satisfactory service in hundreds of installations. Therefore, all Prest-O-Matics are warranted for a period of one year against defective workmanship or materials.

PATENTS

Clark Doors are produced by an organization with a reputation for high quality products, covering a span of over 70 years. (Patent Numbers 2262351, 2472791, 222757, 2134397, 2412871, 2471197. Other patents pending.)

1 BIFOLD – MODEL BF

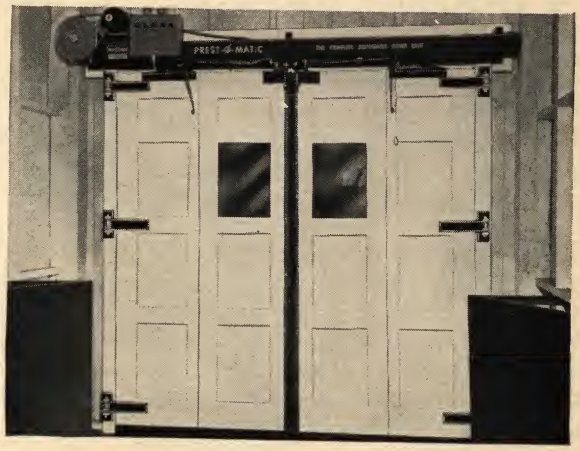
The Bifold Prest-O-Matic Door Unit is a rapid opening door especially suitable to areas where limited sideroom exists.

Consisting of two pairs of hinged door sections, hung on heavy duty ball bearing hinges, each folds to the side when in the open position. Hinges are attached at factory to insure precision fit and save installation time. Neoprene seals are attached to bottom and leading edge and a snug air tight seal is provided. Safety edge and double acting pedestrian door are optional features.

Installation of the Bifold model can be made with as little as 7¾" sideroom providing a chase is cut in abutting wall to accommodate the door drive bracket located at top of each outside section.

Speed of operation is approximately 2 - 3 feet of opening per second depending upon size and weight of door.

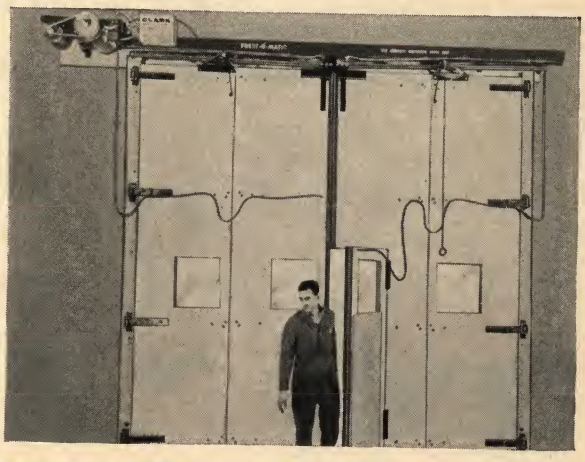
A template is supplied with each Bifold model to locate fastening holes for casings which are predrilled at factory. Bifold models are available for sizes up to 15′ by 15′ but the larger sizes require additional side room.



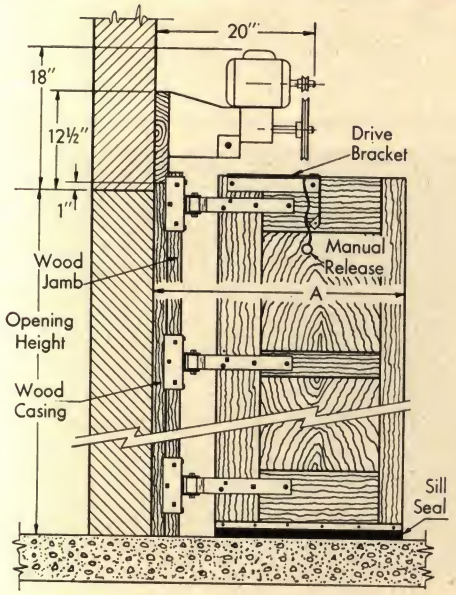
Standard Model BF-Bifold unit installed in entrance to tobacco warehouse. Note "funnel type" protective barrier.

2 COMBINATION BIFOLD – MODEL BFS

Models BFS Combination Bifold-Sliding consists of Bifold door sections on one side and a sliding door section on the other. This type of door is adaptable to situations where the projecting arc of the Bifold is not desirable on both sides and sufficient room is not available for installation of a double or single sliding door.



Large metal covered Bifold model with pedestrian door and heavy duty electric operator.



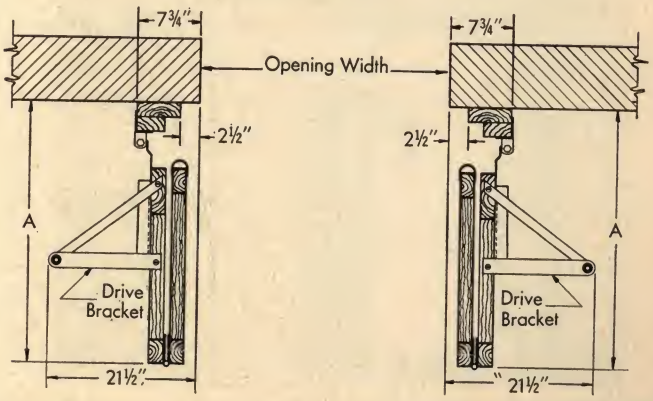
MODEL BF

Dimensions A—¼ opening width plus 9".

Doors larger than 10′ x 10′ may require additional sideroom.

Two lights clear plain glass included in wood panel doors. If desired otherwise, please specify.

Optional pedestrian door swings on double acting hinges.



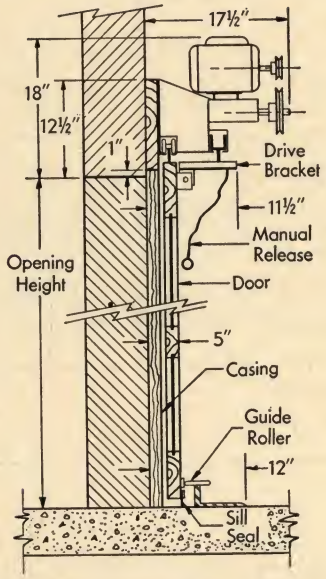
3 DOUBLE HORIZONTAL SLIDING – MODEL DHS

Model DHS (Double Horizontal Sliding) unit consists of two door sections meeting in the center of the opening and sliding on tracks above the doorway to each side. Clear wall space equal to ½ the opening width, plus 6″, is required on each side of the doorway.

Each door is equipped with neoprene seals on the leading, trailing, and bottom edges. These seals are automatically relieved when the door starts its opening cycle. Two guide rollers retain the door sections against the wall. Safety edge and single acting pedestrian door are optional features. Speed of opening and closing is approximately 2′ per second.

The Model DHS unit is particularly effective in areas where speed of operation is important and where floor space is limited such as on loading platforms and busy warehouses or production areas.

Standard Model DHS unit in food warehouse. Note protective barriers.

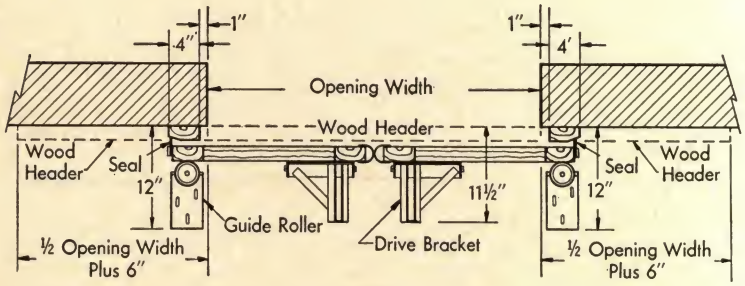


MODEL DHS

In cases of restricted headroom write for detailed headroom information. Full 18″ shown is not required entire length of header.

Two lights clear plain glass included in wood panel doors. If desired otherwise, please specify.

Optional pedestrian door is single acting, opening toward side of wall on which door unit is installed.



Model DHS Prest-O-Matic unit with small manual pedestrian door.

Model DHS occupies little space in congested areas. Safety edge will open door if accidentally closed upon personnel or obstruction.

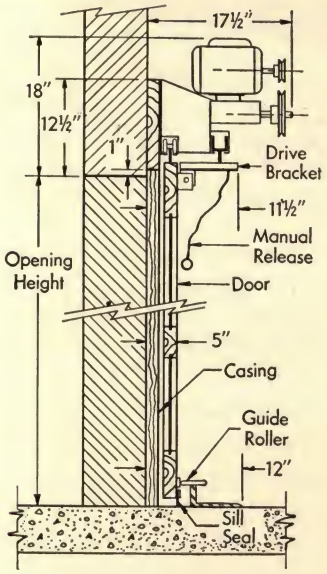
4 SINGLE HORIZONTAL SLIDING–MODEL SHS

Model SHS (Single Horizontal Sliding) unit consists of a single door section sliding on tracks above the doorway to one side, right or left as specified. Clear wall space equal to the opening width, plus 6″ is required on one side and 5″ on the opposite side.

Each door is equipped with neoprene seals on the leading, trailing and bottom edges, and a guide roller to retain the door sections against the wall. On large doors, or in openings subject to static air pressure, a traveler guide may be necessary. Speed of opening and closing is approximately 1′ per second.

The Model SHS unit is effective in doorways where extra fast operation is not of paramount importance, and where clearance is not available on both sides of the doorway for a double sliding model. Like the Model DHS this door slides close to the wall and frees dock storage or working space for other uses.

Model SHS door slides out of way behind partition. Note manual release cord for use in power failure.



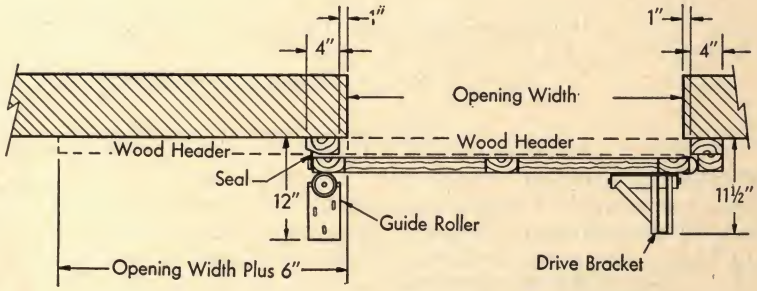
MODEL SHS

Left sliding door is shown; right slide is mirror image.

In cases of restricted headroom write for detailed headroom information. Full 18″ shown is not required entire length of header.

One light clear plain glass included in wood panel doors. If desired otherwise, please specify.

Optional pedestrian door is single acting, opening toward side of wall on which door unit is installed.



to obtain complete information

To obtain a detailed proposal or recommendation on Prest-O-Matic units, it will be helpful if we are provided with the following information:

1. Width and height of opening.
2. Clear wall space each side and above opening.
3. Power supply (Volts-Phase-Cycles, if electric).
4. Is pedestrian door desired?
5. Atmospheric conditions or pressure other than usual.
6. A rough sketch is helpful.

PREST-O-MATIC SPECIFICATIONS

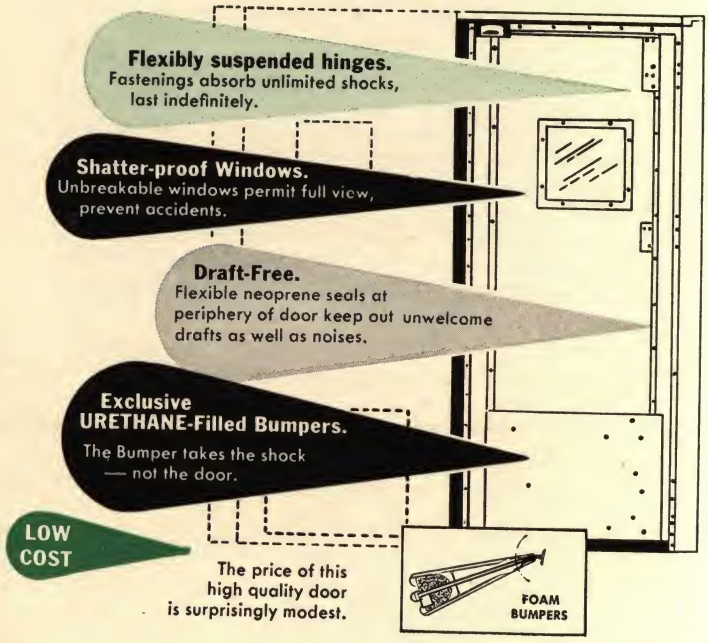
"Automatic doors shall be Prest-O-Matic Complete Door Assemblies as manufactured by Clark Door Co., 515 Hunterdon Street, Newark 8, N.J." Then indicate on plans or specifications:

1. Model desired.
2. Door construction—standard wood, or metal covered.
3. Frame construction—standard wood, or metal covered.
4. Opening dimensions—width and height.
5. Power supply.
6. Type and number of controls.
7. Pedestrian door (optional).
8. Safety Edge (optional).
9. Direction of slide to open (Model SHS).

CLARK

shock absorber door

exclusive
URETHANE-*filled* BUMPERS
absorb the shock


Flexibly suspended hinges.
Fastenings absorb unlimited shocks, last indefinitely.
Shatter-proof Windows.
Unbreakable windows permit full view, prevent accidents.
Draft-Free.
Flexible neoprene seals at periphery of door keep out unwelcome drafts as well as noises.
Exclusive URETHANE-Filled Bumpers.
The Bumper takes the shock — not the door.
LOW COST
The price of this high quality door is surprisingly modest.
FOAM BUMPERS

Shrugs off shocks that wreck ordinary doors.
Won't rip, warp or come off the fastenings.

Sturdy • lightweight • flexible fastenings.

This easily installed, self-closing door takes daily pounding in stride. Constant opening by heavy laden fork trucks driven at moderate speeds can't weaken the hinges, the frame or the door itself. Because the trucks never touch the door.

Instead, the full impact is absorbed by the highly resilient flexibly mounted URETHANE Bumpers. Flexible hinge arrangement provides equal distribution of stress through the entire length at either side. Spring return at the door top assures tight, accurate closure after each opening. Spring return is unconditionally guaranteed.

The Clark Shock-Absorber Door comes in a complete, easy to install unit. No extra parts or hardware to buy. The initial cost is the complete cost.

With trucks driven at normal speeds, the Shock-Absorber Door permits hundreds of thousands of openings and closings with no "time-out" for costly repairs. Nothing to tear. No pivots to wear. No spring hinges to replace, no expensive rubber sheeting to rip or blow open.

Available in standard sizes. The Shock-Absorber Door is constructed to fit all standard openings with no sacrifice in quality. Width 6′ to 9′
Height 7′ to 10′

CONSTRUCTION:

• urethane-filled bumpers
Special polyurethane formula on heavy steel bumper plate cushions blows. Standard bumpers extend full width of door. 24″ in height, bumpers are mounted 2″ above floor level.

• rigid door
The Shock-Absorber Door is of lightweight, aluminum-covered honeycombed construction.

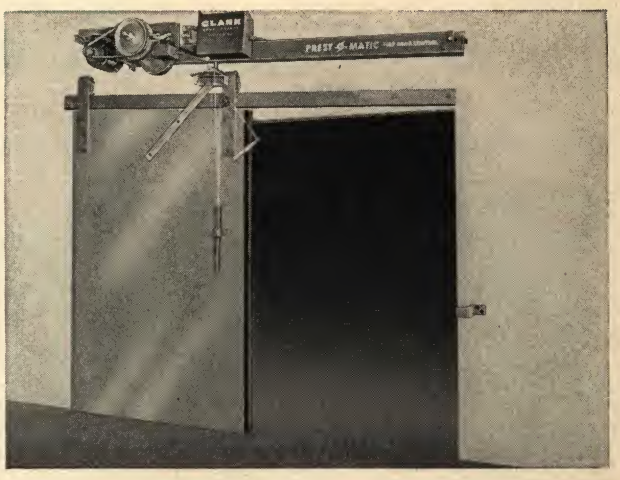
• flexible fastenings
Hinges stay put because stress is uniformly distributed. Guaranteed Spring Return motors return door to closed position at set regulated speed. Motor cable fastens to top leading edge of door.

• flexible neoprene seals
The Shock-Absorber Door seals at all edges, assures tight, positive, draft-free closure.

• plexiglas windows
Two 14″ x 17″ shatter-proof Plexiglas windows are provided. Window openings are 5′ from floor.

PREST-O-MATIC *fire door operator*

The Prest-O-Matic Electric or Compressed Air powered fire door operator provides a dependable means of converting a standard fire door into an automatically operated door. It is designed for use with standard flat track fire doors, inclined or level track. In the event of fire, when the door has been left in the open position, the Clark Fuse-O-Link disconnect bracket disengages the door from the operator, thus allowing it to close by gravity or weight counterbalance.



ADVANTAGES

convenience

When a Prest-O-Matic fire door operator has been installed, your fire doors are "put to work." You enjoy all the benefits of automatic door operation.

reduced cost

Power operated fire doors reduce time for fork trucks, dollies, and pedestrians to pass through doorways. Constant drafts on nearby workers are eliminated.

greater protection

Fire doors left continuously in the open position often are blocked by obstacles or knocked off the track, thus becoming ineffective. Such deficiencies are usually quickly detected when the door is in continual service and thus a Prest-O-Matic operated door is always ready.

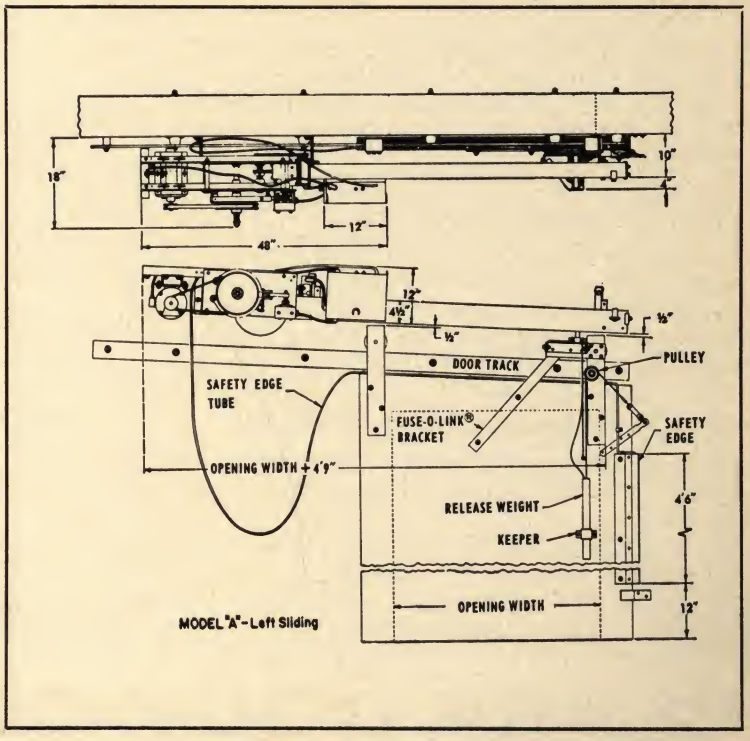
dependable performance

Prest-O-Matic Air or Electric Operators provide the rugged service required for operations of heavy fire doors. They incorporate the finest precision components and, like standard Prest-O-Matic Industrial Door Units, have developed a reputation for service free operation and freedom from costly maintenance.

GENERAL INFORMATION

1. Prest-O-Matic Fire Door Operators are supplied factory assembled and ready for fastening to the wall above the fire doors.
2. The unit is fastened to wall with suitable fasteners, such as lag screws or bolts, above the door track. Complete instructions as well as a template for location of bolt holes are supplied. When Fuse-O-Link Disconnect Bracket is attached to the door and power supply and control switches are connected, automatic door is ready for operation.
3. Usual controls are pull cord switches or push buttons, but other types are available. A safety edge kit for fastening to the leading edge of the door can be included, and when thus equipped the door will reverse its travel upon striking a person or obstruction while closing.
4. A simple hand controlled release bracket permits manual operation of the door at any time—especially important in case of power failure.
5. Standard electric models operate on 110V SP 60C, 220V SP 60C, 220V 3P 60C, and 440V 3P 60C. Air operated units require 65 psi air pressure.

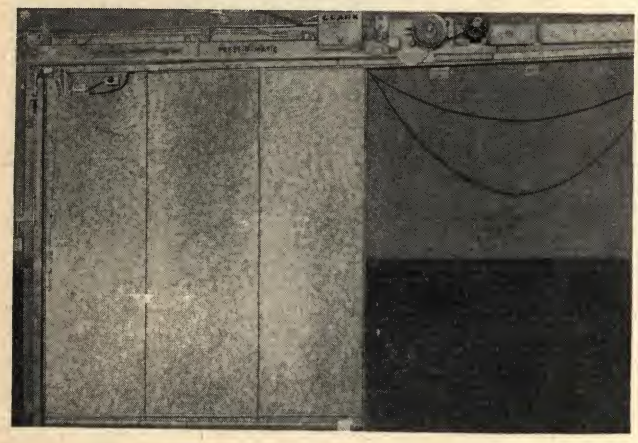
Approximately 12″ is required above the top of the door hanger bracket for installation. Drawing below illustrates one of four typical standard models available to fit most side and head room restrictions.



CLARK power operated and manual cold storage doors

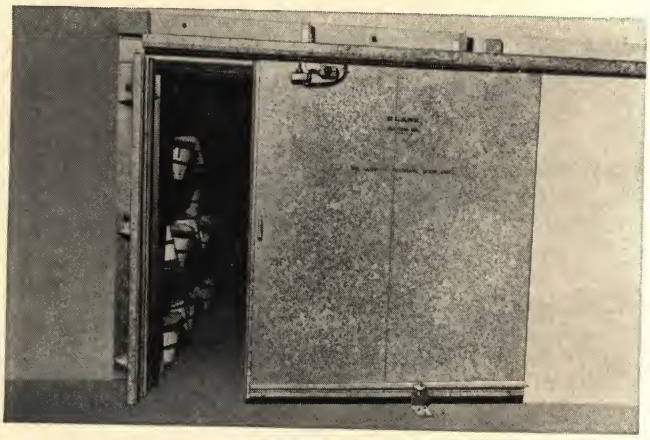
Clark Door Company also manufactures a comprehensive line of automatic and hand operated cold storage doors, a brief description of which is given below. A separate catalog will be sent upon request, or you may refer to Sweet's Architectural File, Catalog #23c/CL.

PREST-O-MATIC-power operated DOORS



Clark Prest-O-Matic Cold Storage Doors are self-contained complete automatic door assemblies, air or electrically operated. They are available in horizontal or vertical sliding types, and in numerous models to meet temperature requirements ranging from light cooler storage areas to extreme low temperature freezer compartments.

CLARK hand operated DOORS



Clark Manual Sliding Cold Storage Doors offer a new concept in door design and operation. Sliding quickly and easily to one side, or above the opening, these doors hug the wall and free valuable floor space for useful purposes. Standard models are available for all temperature ranges, and in types suitable to palletized traffic, package passing, milk loading platforms, conveyor or meat rail operations and others.

THE CLARK DOOR COMPANY

Identified with the industry since 1878 the Clark name represents three generations of experience. Doors and assistance on doorway problems have been provided for thousands of organizations like those listed on this page. The entire Clark staff is dedicated to the manufacture of quality door products, and to research and development in the field of improved doorway methods and construction.

special door problems

The services of the Clark Engineering Department are at your disposal, and we are glad to offer assistance, whenever possible, in connection with unusual doorway problems. Your inquiry, with details and drawings if available, is invited and will be given prompt attention.

detailed drawings on request

Enlarged drawings and more detailed information on specific products described herein will be sent promptly upon request.

Due to fluctuation in the availability of materials, and the desire to develop and incorporate improvements, the right is reserved to change materials, details of construction, and specifications without notice.

a few prominent users of CLARK DOORS

* Aluminum Company of America
* American Stores Co.
* Borden Co.
* Campbell Soup Co.
  Caterpillar Tractor Co.
  Continental Can Co.
* Dow Chemical Co.
* E. I. duPont deNemours
* Finch, Pruyn & Co.
* Ford Motor Co.
* General Electric Co.
* General Motors Corp.
* Hoffman-La Roche, Inc.
* Horn and Hardart Co.
* International Business Machines Corp.
* International Harvester Co.
* International Paper Co.
* Liggett & Meyers Tobacco Co.
* Minute Maid Corp.
* National Dairy Products Corp.
* National Presto Industries
  North American Aviation, Inc.
* Pittsburgh Plate Glass Co.
* Procter and Gamble Manufacturing Co.
* Radio Corporation of America
* Western Electric Corp.
* Winn-Dixie Stores, Inc.

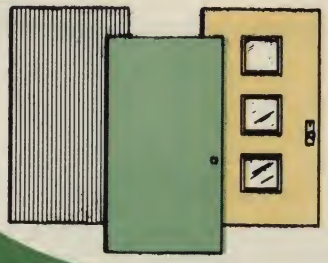
*repeat orders

CLARK DOOR COMPANY, INC.

521 HUNTERDON STREET • NEWARK 8, NEW JERSEY

Printed in U.S.A.

D AND H "The Complete Door Line"



PyroDor

ALUMINUM and VINYL-ON-STEEL FLUSH DOORS
(See Sweet's Architectural File 16a/Du)

PyroDor

Mineral Core FLUSH WOOD DOORS
(See Sweet's Architectural File 16c/Du)

D AND H

SLIDING PyroDor®

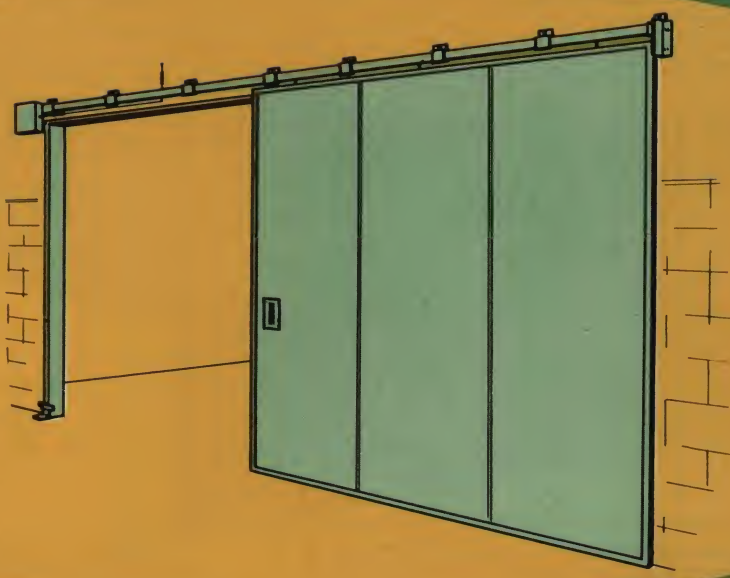
PyroDor®
INTEGRAL METAL DOOR and FRAME UNITS
(See Sweet's Architectural File 16b/Du)

FLUSH DESIGN

LOWEST HEAT TRANSMISSION
250° F., 30 Minutes

NEW PYROMATIC
Fully Automatic
DOOR CLOSER

UL CLASS A Label



A.I.A. FILE No. 16-B

DUSING and HUNT, INC., LE ROY, N. Y.

Flush Design SLIDING PyroDor

MODEL SL

Outmodes THESE OLD TYPE FIRE DOORS

Standard of the Industry for 60 Years
Gone is the unsightly heavy hardware, rope, pulleys, traveling counterweight and closing device.

D&H *SLIDING* PyroDor

GIVES ARCHITECTS A NEW CONCEPT

. . . An opportunity for planned design, combining the highest element of safety with modern styling. Wherever openings in walls to fire hazard areas are required, the new D & H (UL) labeled Sliding PyroDor fills the need.

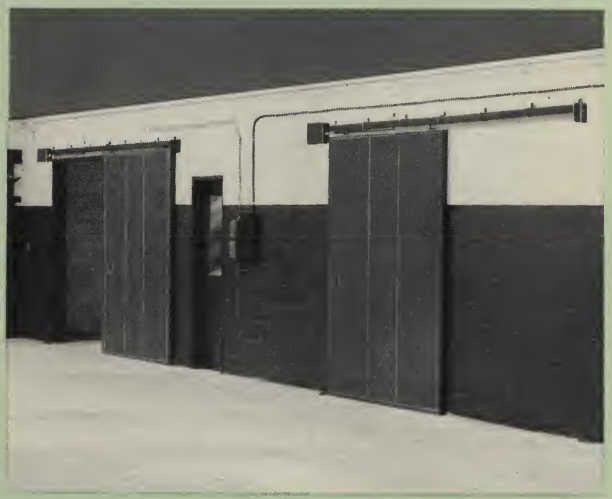


Photo of a recent installation to show pleasing modern flush design styling.

SINGLE, HORIZONTAL SLIDING

D&H PyroDor®

SUCCESSFULLY TESTED AND APPROVED
by Underwriters Laboratories, Inc.
for CLASS "A"—3 HR. TEST
with Heat Transmission Rating
250°F Max. in 30 Min.

The Forward Look in Fire Doors!

- Contemporary Flush Design — Smooth Flush Overall Door Surface.
- Interlocking PyroPanel Sections for Quick Field Assembly — Simplifies Shipping and Installation.
- Structural Solid Mineral Core — Unequal in any other Fire Door Construction for Lowest Heat Transmission. Life Long Protection with no Deterioration.
- Zinc Coated and Bonderized Heavy Gauge Steel for maximum corrosion resistance, and years of heavy service.
- Hardware — completely new in design for Fire Doors. Door hangers and guide rollers fully concealed — protected from damage, pleasing in appearance.
- "PyroMatic" Sliding Door Closer — the first and only Device approved and labeled by Underwriters' Laboratories, Inc. for closing fireproof Sliding Doors automatically in the event of fire.

ENGINEERED to meet maximum requirements for door openings in fire walls, division or partition walls, both exterior and interior.

APPLICABLE for Factories, Warehouses, Garages, Mercantile, School, Institutional and Government type buildings.

© 1959 - Dusing and Hunt, Inc.

Dusing and Hunt Offers the Most Complete Line of Flush Doors - Steel • Ai

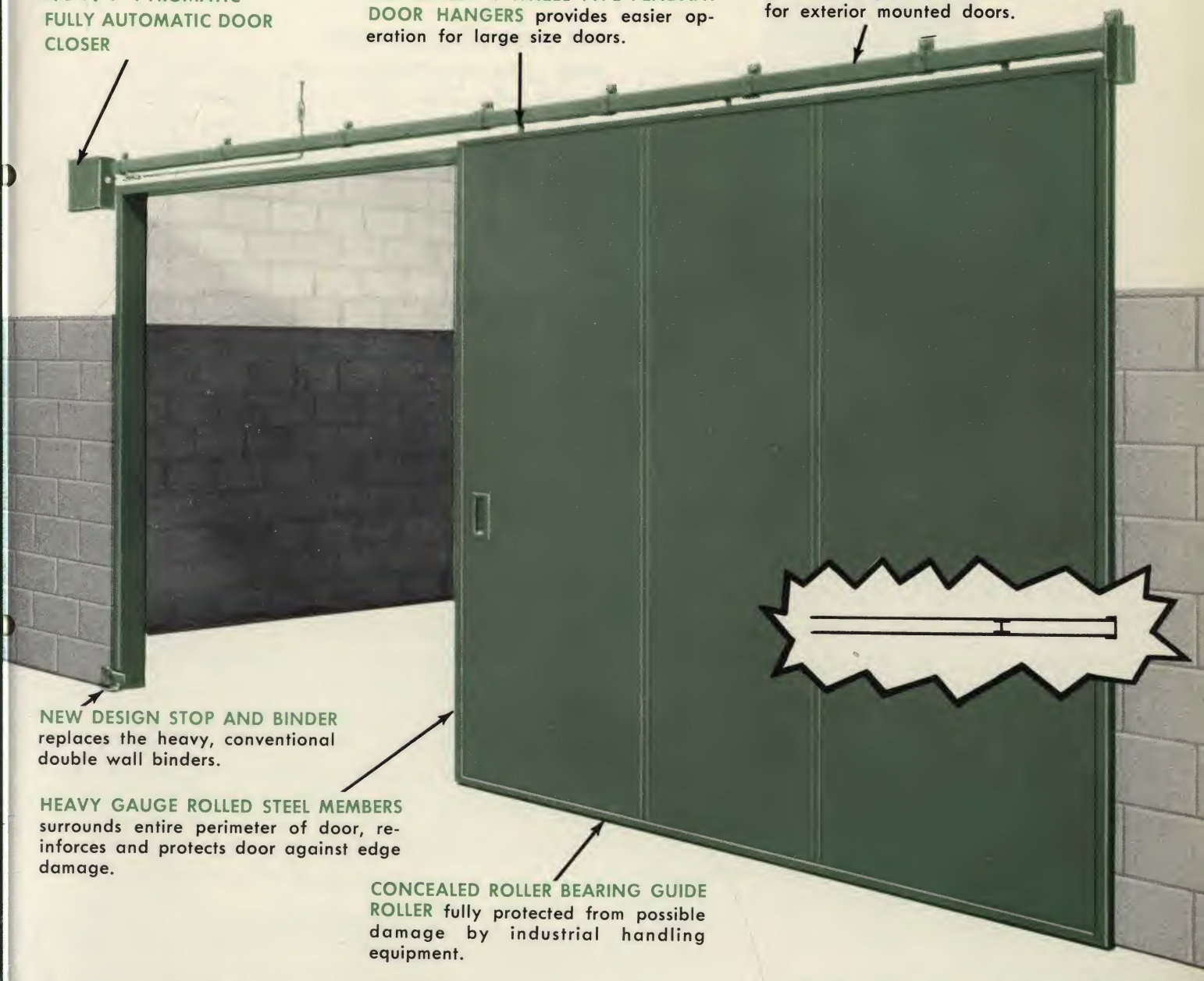
NEWEST DEVELOPMENT IN THE INDUSTRY

SLIDING PyroDor®

MODEL SL

OUTSTANDING CONSTRUCTION FEATURES

Fabricated to D & H High Standards of Construction



NEW! **PYROMATIC FULLY AUTOMATIC DOOR CLOSER**

CONCEALED 4 WHEEL TYPE PENDANT DOOR HANGERS provides easier operation for large size doors.

TOTALLY ENCLOSED BOX TYPE TRACK protection against dirt and the elements for exterior mounted doors.

NEW DESIGN STOP AND BINDER replaces the heavy, conventional double wall binders.

HEAVY GAUGE ROLLED STEEL MEMBERS surrounds entire perimeter of door, reinforces and protects door against edge damage.

CONCEALED ROLLER BEARING GUIDE ROLLER fully protected from possible damage by industrial handling equipment.

Underwriters' Laboratories, Inc.
INSPECTED
FIRE DOOR NO.
RATING: 3 HR. (A) TEMP. RISE - 30 MIN. - 250 F. MAX.

CONSULT D & H DISTRIBUTORS for clearances and other application problems.

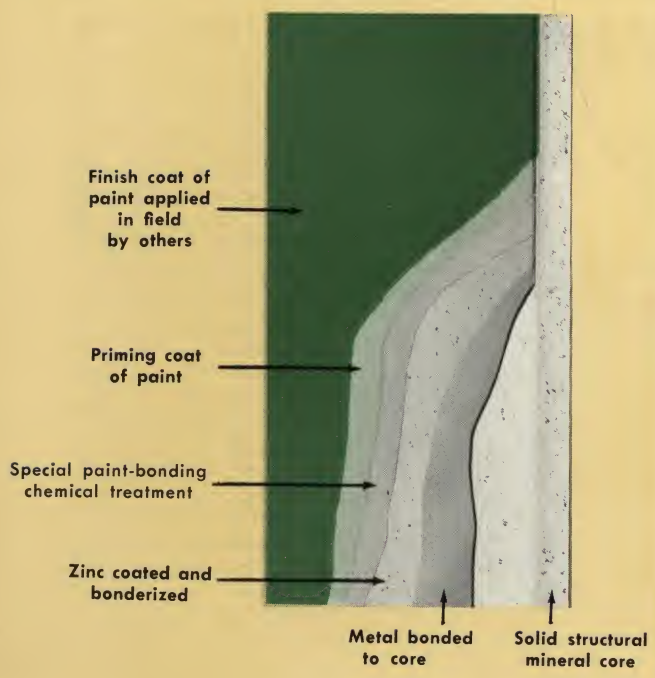
SECTIONAL INTERLOCKING PYROPANELS can be quickly assembled in field, eliminates handling large heavy single or 2 section door panels, lower transportation and installation costs.

ıum • Vinyl-on-Steel • Wood

DUSING and HUNT, Inc.

SLIDING PyroDor FLUSH DESIGN

MODEL SL — GENERAL INFORMATION


Finish coat of paint applied in field by others
Priming coat of paint
Special paint-bonding chemical treatment
Zinc coated and bonderized
Metal bonded to core
Solid structural mineral core

SUPERIOR CONSTRUCTION

Every PyroDor has incorporated into its basic steel construction a solid, structural mineral core. Light in weight with remarkable insulating properties.

CALCIUM SILICATE CORE

This material is inorganic and rigid. The light weight and low thermal-conductivity of this material is a result of millions of microscopic air spaces formed during manufacture. It is hydroscopic, yet it is insoluble and remains dimensionably stable, even when saturated in water. It is warp-proof, vermin-proof, and rot-proof. This core material has a nominal density sufficient to provide the most desirable combination of important properties needed for fire-proof doors.

SUGGESTED SPECIFICATIONS

Sliding Fire Doors, where indicated on plans or called for in Door Schedule, to be Model "SL" Sliding PyroDors, as manufactured by Dusing and Hunt, Inc., Le Roy, New York. Doors to be Underwriters' labeled according to the opening classification and required hourly fire text rating, 3 hr. "A", 1½ hr. B, also C, D & E, all with temperature rise in 30 Min. of 250°F. Max.

All doors to be straight horizontal sliding type, complete with the Dusing and Hunt Series 700 "GUARDIAN" Hardware Underwriters' labeled.

Each door to be equipped with a D&H PYRO-MATIC automatic door closer permitting the door to be manually operated at all times, but closing automatically in case of fire. Closing device to be Underwriters' labeled.

Doors and all hardware to be finished with a coat of the manufacturer's standard primer. Finishing coats of paint to be applied by others.

INSTALLATION: Doors and hardware to be installed in accordance with the revised standards of NFPA and manufacturer's instructions by competent erectors familiar with installation of fire doors and hardware.

Distributors in Principal Cities. Consult the Yellow Pages, or Sweet's Architect File or write direct.

DUSING and HUNT, Inc.

Over 50 years Manufacturing Fireproof Doors and Metal Trim

LE ROY, N. Y.

Form No. DHSL-60

Litho in U.S.A.

FOR AIRCRAFT • MISSILES • INDUSTRIAL BUILDINGS

Custom built

STEEL DOORS ENGINEERED BY

FLEMING

National Airlines Hangar, Miami. Weed—Russell—Johnson, Architects and Ammann & Whitney Engineers. Traction driven, each door is 75′ wide x 46′ high and the hinged sloping roof section is 21′-4″ long. The independent leaves can move to any position along the 450′ hangar.

THE FLEMING STEEL CO.

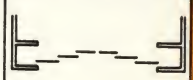
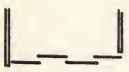
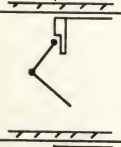
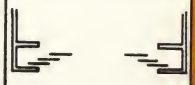
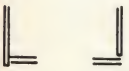
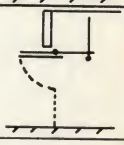
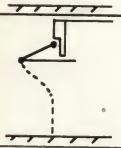
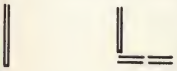
NEW CASTLE, PENNSYLVANIA

Fleming "Engineered" DOORS . .

The Fleming Steel Company, founded in 1921, has specialized in the engineering fields of structures, mechanical and hydraulic mechanisms, and electrical controls. These 37 years of accumulated design and manufacturing experience have given Fleming the "know-how" to produce many hundreds of doors, a few of which are described on these pages. This extensive background of experience is your assurance that Fleming can design and manufacture the most feasible and economical door for your installation.

Fleming doors are **Custom Built** to suit the specific openings they fill. Custom production allows the widest latitude in meeting special and unusual conditions and applications. Fleming doors are **Engineered** by experienced registered professional engineers into matched and balanced systems of proper size and strength. Our engineers have pioneered outstanding developments in this field such as "unit drive" operators, pneumatic safety stops, positive closing devices, hydraulic hi-torque brakes, and many other notable features.

for AIRCRAFT and MISSILES

INDEX →	— CANOPY —			STRAIGHT AND CURVED TRACK SLIDE			TAIL DOORS
TYPE	TELESCOPIC	UNBRACED	BI-FOLD	BI-PARTING	UNI-DIRECTIONAL	INDEPENDENT	LIFT SWING CANOPY
SEE PAGE	4 & 5	4 & 5	4 & 5	6 & 7	6 & 7	6 & 7	6 & 7
MOUNTING	INSIDE	INSIDE	INSIDE OR OUTSIDE	INSIDE OR OUTSIDE	INSIDE OR OUTSIDE	INSIDE OR OUTSIDE	INSIDE
TRAVEL — CLOSED							REFER TO SPECIFIC TYPE FOR DATA
TRAVEL — HALF OPEN							
TRAVEL — FULL OPEN							
OPENING SIZE — MAX. WIDTH	UNLIMITED	130 FT.	150 FT.	350 FT.	200 FT.	UNLIMITED	50 FT.
OPENING SIZE — MAX. HEIGHT	75 FT.	35 FT.	40 FT.	75 FT.	75 FT.	100 FT.	25 FT.
USUAL SPEED	30 TO 45 FPM	45 FPM	45 FPM	40 TO 75 FPM	40 TO 75 FPM	40 TO 75 FPM	25 TO 45 FPM
OPERATOR	MOTOR	MOTOR	MOTOR	MOTOR OR MANUAL	MOTOR OR MANUAL	MOTOR OR MANUAL	MOTOR OR MANUAL
APPLICATION AND OTHER DATA	**Telescopic**—Largest airline and military hangars, aircraft manufacturing plants. Separate operating sections, controlled independently or in unison, used side by side for widest openings. **Unbraced**—For small to medium private, commercial and military hangars. Some industrial applications. Single leaf door fully counterweighted is fast, snugly weathered, economical. **Bi-Fold**—For medium sized hangars, inside or outside mounting available. Sketches above show motion of outside mounted door—reverse for inside mounted which folds inward.			For all classes of hangars within opening limitations above. Some industrial usage, viz; aircraft plants, loading platforms and docks. Tail doors frequently used in conjunction to add height at center. Fuselage apertures allowing part of plane to project outside available. Overhead or ground level motor operators made in several types. Minimum structural requirements reduce building cost. Most economical hangar door type made. Note:—Curved track slide doors for around the corner operation available for inside mounting only.			

. . A DOOR TYPE INDEX

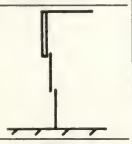
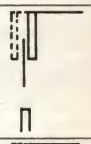
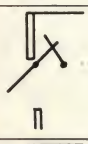
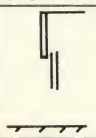
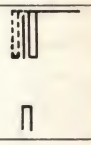
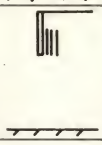
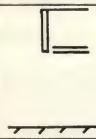
Fleming's policy is to design, produce, and install doors, under one guarantee, that will withstand the hardest types of use and abuse. Doors of—

SOUND DESIGN . . . PRACTICAL CONSTRUCTION . . . FINE WORKMANSHIP

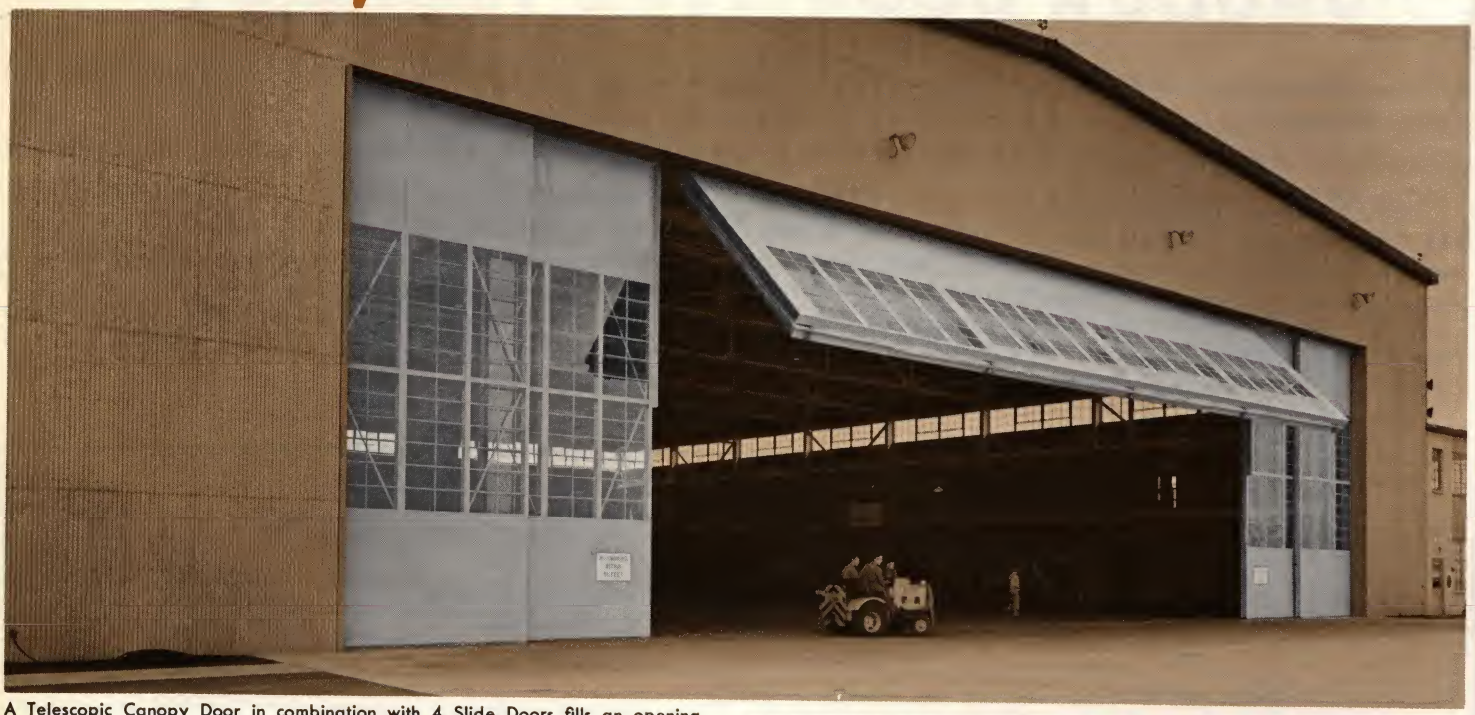
Call in Fleming engineers in the initial planning stage of your project to select the right door for your specific requirements and permit your building designs to go forward without delays or the need for later revisions. They will provide layouts, applicable details, specifications and budget prices. Call any Fleming representative, located in all principal cities, or call Fleming directly. We will be happy to assist you. No charge or obligation for these services which are instantly available on request.

The table below is a quick index to the features and general usage of the more common doors designed and manufactured by Fleming. Full information and applicable details will be supplied immediately, on request, by any Fleming representative or our main office.

for INDUSTRIAL BUILDINGS

— CRANEWAY —			— VERTICAL LIFT —		— CANOPY —			SLIDE and SWING
VERTICAL LIFT	BRACED IN-SWING	BRACED OUT-SWING	2 SECTION	3 SECTION	ARM GUIDED	TRACK GUIDED	TURN OVER	SINGLE / MULTIPLE / ACCORDION
8 & 9	8 & 9	8 & 9	10	10	11	11	11	12
INSIDE OR OUTSIDE	INSIDE	INSIDE	INSIDE OR OUTSIDE	INSIDE OR OUTSIDE	INSIDE	INSIDE	INSIDE	INSIDE OR OUTSIDE
								REFER TO SPECIFIC TYPE FOR DATA
								
								
130 FT.	130 FT.	UNLIMITED	80 FT.	80 FT.	20 FT.	45 FT.	20 FT.	60 FT.
25 FT.	25 FT.	50 FT.	45 FT.	45 FT.	20 FT.	25 FT.	25 FT.	50 FT.
30 FPM	30 FPM	30 FPM	45 TO 60 FPM	45 TO 60 FPM	30 FPM	30 TO 45 FPM	30 TO 45 FPM	30 TO 75 FPM
MOTOR	MOTOR	MOTOR	MANUAL OR MOTOR	MANUAL OR MOTOR	MANUAL OR MOTOR	MANUAL OR MOTOR	MANUAL OR MOTOR	MANUAL OR MOTOR
General—For crane passage from building to yard or between partitioned sections of same building, as mill to motor rooms in steel mills, generator to boiler rooms in power plants, etc. **Vertical Lift**—Used for exceptionally large openings where ample headroom is available either inside or outside building. **In or Out-Swing**—Where headroom is limited. Out-Swing allows crane to work inside, under roof, up to end wall. In-Swing most used. **Load Doors**—Slide or swing leaves, for ground level access of crane loads, vehicles and railroad cars. Motorization recommended.			A heavy duty door favored by steel mills. For truck and railroad entrances; freight houses; loading docks. Made in 1, 2, 3, and 4 sections to suit available headroom. Outside mounting used where inside headroom insufficient and for replacement doors. Replacement type can be installed without changing existing structural framing, power piping, or electrical cables.		Frequently used for truck and railroad entrances on foundries, hot mills, and machine shops. The canopy formed by door in open position protects inside operations during rainy weather yet allows necessary ventilation. Choice of type depends on building construction and size of opening. Requires relatively little headroom. Turn-over type favored for piers and wharves.			For truck and railroad entrances; mono-rail passage; railroad roundhouses; with crane doors.

Fleming CANOPY HANGAR DOORS



A Telescopic Canopy Door in combination with 4 Slide Doors fills an opening 132′ wide x 33′ high on this military hangar. The two part Motorized Telescopic Canopy is 78′ wide x 33′ high. INSERT—Inside view of Canopy.

Fleming designs canopy doors to fill the needs of any hangar. One type will usually be found more advantageous for a specific opening. Selection is determined by size, hangar usage, building design, structural framing, available clearances, and features desired. Fleming engineers will gladly assist you to select the most suitable type.

Canopy doors provide—fast dependable all weather operation with complete safety; tight weathering for maximum heat conservation; low yearly maintenance expense; optimum usable interior working and exterior apron space; controlled opening heights for vehicles and smaller aircraft.

TELESCOPIC CANOPY DOORS—made in completely independent horizontal sections, do not require side guides. A number of sections side by side will fill any width opening. Sections may be operated alone, in combination, or in unison. Sections are usually 60′ to 80′ wide. Each consists of a vertically rising lower and top hinged upper leaf. The lower leaf moves up behind the top leaf and then both swing out and up to form the canopy. The telescopic canopy is recommended for openings 40′ to 75′ high.

BI-FOLD CANOPY DOORS—made in two styles, Out-Fold and In-Fold, for openings up to 150′ wide by 40′ high, require less operating clearance but more headroom than do top guided canopies. Divided into two horizontal sections, the lower section is hinged to the upper and the top section is hinged to the end wall truss, a few feet above the soffit, which eliminates convection heat losses. Operators can be located overhead or at the floor. Fully counterweighted, this canopy is frequently used for medium sized hangars.

UNBRACED CANOPY DOORS—for openings up to 130′ wide by 35′ high, are single piece doors guided by overhead curved tracks and by vertical jamb rollers. Minimum structural support, no back bracing, and small headroom requirements permit use on bow-string type roofs. Special sill feature eliminates ice and snow removal nuisance. Motor operators can be located at jambs, overhead, or at floor level for easy servicing. Special architectural effects obtainable using aluminum or stainless steel door coverings.

TYPICAL INSTALLATIONS

South Weymouth Naval Air Station
Chincoteague Naval Air Station
Seymour Johnson Air Force Base
Dover Air Force Base
Charleston Air Force Base
Gore Air Force Base

Oregon Air National Guard
Maryland Air National Guard
Virginia Air National Guard
Kentucky Air National Guard
Aberdeen Proving Grounds

Curtiss Wright Corporation
Aircraft Service Corporation
Miller Aviation Company
Sharon Steel Company
Sundorph Aeronautical Corporation

CONDENSED SPECIFICATIONS

General: Door to be Fleming "Engineered" Unbraced Canopy type made by Fleming Steel Company or an equal, approved in writing by the Architect.

Scope: Furnish and install doors with panels, covering, sash, pilot doors, top tracks, hardware, weathering, wire ropes, sheaves, mechanical parts, motor operators, electrical controls, and auxiliary manual operator. Other trades to furnish in place, from approved door drawings; counterweights—guides and guards; jamb guides; collateral steel supports for top tracks, sheaves, and operating equipment; glass and glazing; wire, conduit and wiring labor.

Drawings: Completely detailed, including wiring diagrams, to be approved by Architect prior to fabrication. Furnish details to other trades.

Design Criteria: Leaves and guides to withstand horizontal wind loads in closed position of 20# per sq. ft.—15# per sq. ft. partially open. Operator to function against 5# wind load. Maximum deflection on 1/120 of span. Fiber stresses from dead load plus 25% impact 24,000# per sq. in.—27,000# per sq. in. from wind loads. Safety factor five.

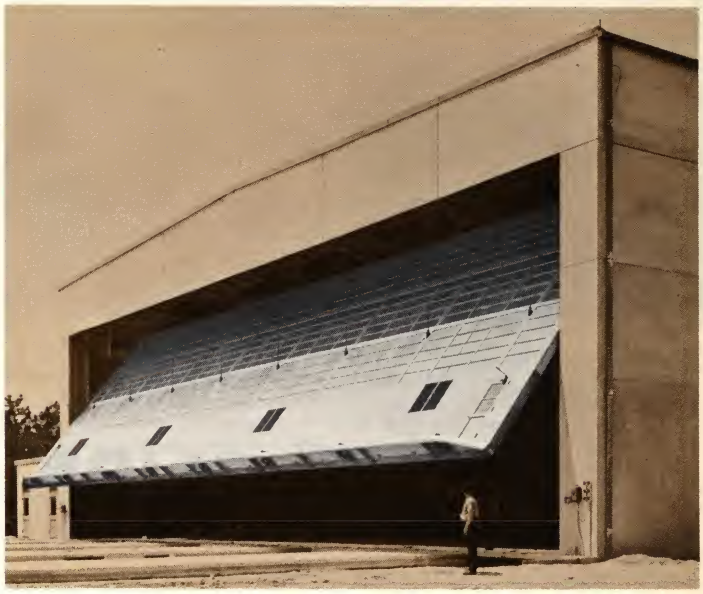
Material: Framing members and panels hot rolled open hearth steel. Minimum member $\frac{3}{16}$" thick. Covering 13 gauge. Angle glazed sash and pilot doors standard industrial type. Weathering 2 ply C.I. packing rubber $\frac{1}{8}$" thick. Wire ropes 6 x 37 lubricated hemp center improved plough steel. Sheaves, sprockets, drums, other castings, close grained alloyed gray cast iron. Roller chains of prestressed, fatigue resistant, precision steel. Bearings anti-friction type pressure lubricated.

Construction: Arrangement and size of structural framing members, panels, sash inserts, pilot doors as indicated on drawings. Shop fabricate for field assembly. Field bolt—weld where necessary. Attach sash and covering by plug or edge welds at 9" center. Grind welds smooth.

Weathering: Head and sill weathering 2 ply C.I. rubber attached to soffit plate and bottom of door respectively. Retain with steel keeper bars 1" x $\frac{3}{16}$" and ¼" cadmium plated bolts at 12" centers. Metal jamb weathering as shown on drawings.

Hardware: Sill locking devices, under each supporting cable, to hold door securely closed against wind, shall engage and disengage floor boxes when door closes or opens. Floor boxes to be set by general contractor.

Operation: Door suspended on cables shall be guided at jambs by vertically rising rollers and at top by rollers engaged in curved tracks. Opening movement 6" vertical rise followed by simultaneous tilting rising motion to horizontal full open position with bottom half of door projecting outside to form canopy.



A Fleming Motor Operated Unbraced Canopy Door 110' wide x 30' high. The four large louvres below the sash line provide continuous interior ventilation.

Reversible hi-torque gearhead motor with integral magnetic brake shall positively drive traction sheaves. Cables from door to pass over traction sheaves and continue to concrete slabs, mounted in guided counterweight racks, at jamb of opening. Provide auxiliary manual operator. (Use two speed motors for doors over 1750 sq. ft.

Electrical control by drum switch, located at jamb indicated on drawings, shall operate magnetic reversing starter equipped with overload and undervoltage protection. Provide 110 volt control transformer where line voltage exceeds 220. Positive acting, mechanically actuated limit switches shall stop door at limits of travel. Furnish anti-plug relays, pilot door and manual operator interlock switches.

Shop Paint: Frame members, covering sheets, sash, and curved tracks one coat blue lead and oil. Machinery gray enamel. Field painting by others.

Erection: By door manufacturer. Erect plumb and square. Door shall be adjusted, tested and left in proper operating condition before turning over to owner.

Guarantee: Against all defects in material and workmanship for one year.

Two 60' wide by 22' high Motor Operated Unbraced Canopy Doors provide entrance to separate maintenance and painting areas in this fixed base hangar.

This handsome modern hangar uses a Fleming Motor Operated Unbraced Canopy Door 100' wide by 20' high to provide fast, dependable, all weather operation.

Fleming "Unit Drive" Traction Type Motor Operated Bi-Parting Doors with Wrap-Around Cable System on TWA Hangars at Chicago's Midway Airport. Doors outside mounted. Each opening 270′ wide x 40′ high. Ammann & Whitney, Architect-Engineer.

Fleming SLIDE HANGAR DOORS

Slide doors are the least expensive and among the most satisfactory of all hangar doors because of their simplicity, low headroom and reduced structural requirements, smaller initial cost, and minute yearly maintenance expense. The leaves may be inside or outside mounted, stacking, when open, in pockets, "A"-frames, or cantilevered guides. They may be either manually or motor operated. Pilot doors, truck doors, fuselage apertures, sash, plastic panels, insulation, louvres, etc., can be provided.

STRAIGHT SLIDE DOORS are made in three types. **Uni-directional** leaves—any number—all travel to one side. **Bi-parting** leaves—an even number—divide at the center, half going to the right, half to the left. **Independent** leaves—any number—each self propelled, are free to move to any position. Moving on large wheels over rails set into floor, no part of door weight is supported by the building. Rollers on top of the leaves slide in overhead guides. Rails and guides are not furnished with the door.

Two sets of inside mounted Traction Type—Linear Cable System—Motor Operated Doors 175′ wide x 30′ high. Motor Operated Tail Doors 12′ wide x 15′ high.

An Executive Hangar equipped with Fleming Uni-Directional Traction Drive Motor Operated Doors 180′ wide x 32′ high.

CURVED TRACK SLIDE DOORS are used where usual stacking provisions for straight slide leaves cannot be provided. They move on curved floor tracks around the corner of the hangar and nest along the side walls inside the building. Any of the three door types can be used.

"UNIT DRIVE" MOTOR OPERATORS are recommended for large and heavy leaves, where doors are opened frequently, and to conserve hangar heat. These fast, reliable units provide years of trouble free service. Two types, each made in several styles, offer a wide choice for each installation.

Overhead Drives for uni-directional and bi-parting doors, are mounted above the jambs. Seldom used because of the difficulty of installing tail doors, they are also hard to service and lubricate.

Bottom Drives, either Traction style or Fixed Chain style can be used with uni-directional and bi-parting doors. [Independent doors have individual traction drives.] Recommended for ease of servicing and lubrication, they can be mounted on leading leaves, jamb leaves, or fixed at the jambs of the opening. The traction style drives one or both wheels by chain and sprocket mechanism. The fixed chain style has a positive chain drive between it and the adjacent leaf. Alternate cable systems—the Linear or the Wrap-Around—can be used with either traction or fixed chain style drives to connect the idler leaves to the driven leaves and move them at proportional speeds to arrive at the open or closed positions simultaneously.

TAIL DOORS provide entry space for the tails of the largest aircraft. The height reduction effected on the main slide doors frequently means substantial cost savings on both doors and building. Located in the center of the hangar end wall, above the slide doors, they are generally motor operated. Made in three types—LIFT, SWING, and CANOPY.

"ENGINEERED" TO PROVIDE TROUBLE-FREE SERVICE FOR THE LIFE OF THE BUILDING . . .

CONDENSED SPECIFICATIONS

for Bottom Traction Drive with Wrap-Around Cable System

Fleming will gladly furnish specifications and assistance in selecting any one of the many other slide door drive systems.

General: To be Fleming "Engineered" Slide Hangar Doors made by Fleming Steel Company or an equal, approved in writing by the Architect.

Scope: Furnish and install doors with top rollers, bottom wheels, covering, sash, pilot doors, hardware, weathering, mechanical parts, motor operators, electrical controls, and auxiliary manual operator. Other trades to furnish in place, from approved door drawings, top guides; bottom rails; cable anchorages; glass and glazing; wire, conduit and wiring labor.

Drawings: Completely detailed, including wiring diagrams, to be approved by Architect prior to fabrication. Furnish details to other trades.

Design Criteria: Leaves and guides to withstand horizontal wind loads in closed position of 20# per sq. ft. Maximum deflection 1/120 of span. Fiber stresses from dead loads limited to 24,000# per sq. in.—27,000# per sq. in. from wind loads.

Material: Framing members and covering hot rolled open hearth steel. Minimum member $\frac{3}{16}$" thick. Covering 13 gauge. Sash and pilot doors standard industrial type. Weathering 2 ply C.l. packing rubber ⅛" thick. Wire ropes 6 x 37 lubricated hemp center plough steel. Sheaves, sprockets, other castings, close grained alloyed gray cast iron. Roller chains of prestressed, fatigue resistant, precision steel. Bearings anti-friction type pressure lubricated.

Construction: Arrangement and size of structural framing members, covering, sash inserts, pilot doors as indicated on drawings. Vertical members continuous for height of door. Shop fabricate for sectional field assembly. Field bolt—weld where necessary. Attach sash and covering by plug or edge welds at 9" center. Grind welds smooth.

Weathering: Leaves lap each other and jambs in closed position. Jamb and sill weathering 2 ply C.l. rubber, formed as indicated on drawings. Attach with steel keeper bars 1" x $\frac{3}{16}$" and ¼" cadmium plated bolts at 12" centers. Metal head weathering as shown on drawings.

Hardware: For each leaf two double flange steel wheels with pressure lubricated roller bearings, of diameter shown on drawings. Two oilite bronze bushed top guide rollers of size and type shown. One top bumper for leading edge and one rail bumper for rear edge. One rubber track wiper at leading and trailing edge. One hand pull; one cane bolt or wheel lock (on manual doors only).

Shop Paint: Frame members, covering sheets, and sash one coat blue lead and oil. Machinery gray enamel. Field painting by others.

Motor Operator: Reversible hi-torque gearhead motor with integral magnetic brake, mounted on powered leaf, shall drive one or both wheels by means of roller chain and sprockets. A wrap-around cable shall pass over sheave back of leading edge and sheave on bracket behind trailing edge of each idler leaf. Provide take-up and tensioning devices for each cable. Couple from driven leaf to cable on adjacent leaf, etc., to impart differential speeds so that all arrive open or closed together. Furnish auxiliary manual operator on driven leaf.

Design system to operate against 8# per sq. ft. wind load at speed of 40 (up to 75) feet per minute. Motor to operate normally at no more than 75% rated capacity. Size wire ropes for safety factor of 8. Sheaves to be 24 cable diameters and mounted on pressure lubricated anti-friction bearings. (Use two speed or fluid coupling motors for doors over 5000 square feet.)

Airline Hangar with Fleming Bi-Parting Motor Operated Doors 180′ wide x 30′ high. The Canopy Type Tail Door is 20′ wide x 20′ high.

Locate a drum switch at jamb indicated on drawings, to operate magnetic reversing starter equipped with overload and undervoltage protection. Provide 110 volt control circuit transformer where line voltage exceeds 220. Positive acting limit switches, mechanically actuated, shall stop doors at limits of travel. Furnish anti-plug relays, pilot door and manual operator interlock switches.

Erection: By door manufacturer. Erect plumb and square. Doors shall be adjusted, tested and left in proper operating condition.

Guarantee: Against all defects in material and workmanship for one year.

TYPICAL INSTALLATIONS

Mohawk Airlines	Fort Benning
National Airlines	Fort Bragg
Northeast Airlines	Fort Polk
Seaplane Airways	Bates Field
Swiss Airlines	Bradley Field
Trans World Airlines	Byrd Field
Western Air Lines	Gore Field
Burlington Municipal Airport	Gowan Field
Charlestown Municipal Airport	Glenn Martin Field
Jamestown Municipal Airport	Mitchell Field
Mansfield Municipal Airport	Smith Lake Field
Minneapolis-St. Paul Airport	Standiford Field
Morgantown Municipal Airport	Andrews Air Force Base
Philadelphia Northeast Airport	Brookley Air Force Base
Portland International Airport	Chanute Air Force Base
Worchester Municipal Airport	Charleston Air Force Base
Montana Aeronautics Commission	Congaree Air Force Base
Texas Company	Goose Bay Air Force Base
Valley Aviation Company	Grandview Air Force Base
Atlanta General Depot	Hanscom Air Force Base
Lexington Signal Depot	Hill Air Force Base
Charleston Navy Yard	Kirtland Air Force Base
Lemoore Naval Air Station	Luke Air Force Base
Coast Guard Air Station, N. C.	McGuire Air Force Base
Fort Belvoir	Nellis Air Force Base
	Perrin Air Force Base

Mohawk Airlines Double Hangar and Headquarters Base in Utica, N. Y., designed by Ammann & Whitney, Engineers, has two 300′ wide x 38′ high openings. Each opening is closed with four 75′ wide x 38′ high traction drive Independent Slide Leaves.

Outside Mounted LIFT Type Crane Door 100′ x 18′ Each Self-Supporting Motorized Slide Door 20′ x 46′. Note size of men in door opening!

LIFT Type Crane Door 94′ wide x 14′ high combined with Motorized Slide Door 20′ wide x 33′ high.

This enormous OUT-SWING Crane Door is 120′ wide x 16′ high. The large crane has cabs at either end so Fleming provided Two Independent Motorized Sliding Cab Doors each 17′ wide x 6′-6″ high.

Fleming

"Engineered"

CRANE DOORS

Fleming has installed many craneway doors for military, industrial, and railroad buidings. They allow overhead cranes to move from main bulding to storage yard, rail siding, or another building without having to transfer the crane load by means of a shop buggy, thereby materially increasing plant production and lowering handling costs. Another important application is the installation of crane doors in walls partitioning sections of the same building—as between mill and motor rooms in steel mills, or between generator and boiler rooms of power plants. With this arrangement one crane can serve both functions where formerly two were required, one of which was seldom used. Very substantial savings result from the elimination of an un-needed crane and because the crane door replaces a large portion of the partition wall.

Incorporation of crane doors into new or existing buildings requires careful coordination of architectural and structural design with door requirements. Fleming engineers will gladly recommend the proper type of crane door for your building and furnish you with all necessary design data, specifications, and clearance dimensions needed to integrate the door with the building.

Fleming "ENGINEERS" many types of crane doors. The most used types are [1] IN-SWING—hinged along its head, the door swings up and into the building. [2] OUT-SWING—the door hinged at the soffit line swings up and out, forming a full canopy in front of the opening. [3] LIFT—the door rises vertically along the inside or outside face of the wall. Choice of type depends on building design and available clearances.

All crane doors are motorized for operation at speeds ranging from 30 to 45 ft. per minute. Fleming's "Positive Closing Device" securely closes and locks them against high wind pressures. All operating equipment is inside the building under roof, protected from weather. Weathering around the perimeter of the door retains costly heat in the building and protects men, equipment, and materials from the elements.

LOAD DOORS—usually motor operated slide or swing leaves, are used in conjunction with crane leaves, to provide ground level access for materials, trucks and railroad cars, and to permit passage of crane loads. The combination of leaves are equipped with electrical and mechanical interlocks to assure proper sequenced operation by personnel and eliminate any possibility of damage to leaves, equipment or material.

LEFT—An OUT-SWING Crane Door 80′ wide x 18′-6″ high combined with a motorized Slide Door 21′ wide x 14′ high. Slide door shown in open position. Crane door shown half open.

CONDENSED SPECIFICATIONS

General: To be "Engineered" In-Swing Crane Door of the "Positive Closing" type combined with motorized Slide Door as made by Fleming Steel Company or an equal, approved in writing by the Architect.

Scope: Furnish and install doors with panels, braces, hardware, weathering, wire ropes, mechanical parts, motor operators, electrical controls, and positive closing device. Other trades to furnish in place, from approved drawings: jamb closure plates; collateral steel supports for door hinges, line shaft and operating equipment; wire, conduit, and wiring labor.

Drawings: Completely detailed, including wiring diagrams, to be approved by Architect prior to fabrication. Furnish details to other trades.

Design Criteria: To withstand horizontal wind loads in closed position of 20# per sq. ft. Operator to function against 8# wind load. Maximum deflection 1/120 of span. Fiber stresses from dead load plus 25% impact, 24,000# per sq. in.—27,000# per sq. in. from wind loads.

Material: Framing members, braces, and panels hot rolled open hearth steel. Minimum member $\frac{3}{16}$" thick. Panels 13 gauge. Weathering 2 ply C.I. packing rubber ⅛" thick. Wire ropes 6 x 37 lubricated hemp center improved plough steel. Sprockets, drums, other casting, close grained alloyed gray cast iron. Roller chains of pre-stressed, fatigue resistant, precision steel. Bearings anti-friction type pressure lubricated.

Construction: Arrangement and size of structural framing members, panels, and braces to be as indicated on drawings. Shop fabricate for sectional field assembly. Field bolt—weld where necessary. Attach panels by plug or edge welds at 9" centers. Grind welds smooth.

Weathering: 2 ply canvas inserted rubber retained with steel keeper bars 1" x $\frac{3}{16}$" and ¼" cadmium plated bolts at 12" centers, located as shown on drawings.

Operation: Crane leaf hinged on brackets from bottom of truss shall swing in and up to horizontal position above soffit clear of crane. Folding braces, as shown, shall transfer wind loads from closed door into structure. Cables reeved between braces and drums mounted on line shaft overhead shall unlatch door and pull it to full open position. In closing drums shall unwind cables allowing door to swing down until when nearly closed "positive closing devices" act to force leaf securely shut.

Slide leaf, mounted on two roller bearing wheels, powered by a traction type operator, shall slide to one side clearing entire lower opening. When fully open it shall engage an electrical interlock which shall complete the crane leaf electrical circuit allowing it to be operated.

Opening movement of crane leaf shall set mechanical and electrical interlocks on slide door to prevent it from being opened manually or electrically. Closing sequence shall reverse interlock procedure. Wire crane door so it cannot be stopped until it reaches full open or closed position.

Crane leaf operator to be reversible hi-torque gearhead motor with integral magnetic brake driving by sprockets and roller chain a line shaft on which are mounted steel cable drums. Support line shaft on pressure lubricated anti-friction bearings as shown.

A reversible hi-torque gearhead motor with integral brake mounted on slide leaf shall drive it by means of roller chain operating over sprocket attached to one wheel.

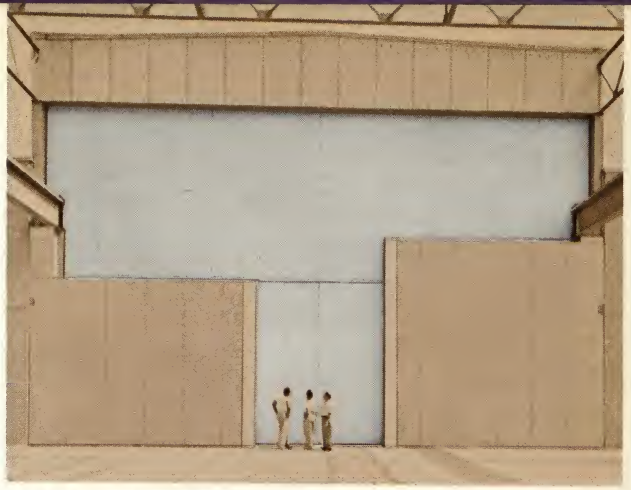
Size motors to operate crane and slide leaves normally at no more than 75% of rated capacity. Current characteristics 3 phase, 60 cycle, ——— volts.

Electrical control by separate push buttons for each operator, located at jamb indicated on drawings, shall operate magnetic reversing starters equipped with overload and undervoltage protection. Provide 110 volt control circuit transformers where line voltage exceeds 220. Use positive acting, mechanically actuated limit switches for slide door and cam operated limit switches for crane door. Furnish necessary interlock switches for both slide and crane leaves.

Shop Paint: Door leaves, braces, and other steel equipment one coat blue lead and oil. Machinery gray enamel. Field painting by others.

Erection: By door manufacturer. Erect plumb and square all parts properly aligned and securely fastened. Door shall be adjusted, tested and left in proper operating condition.

Guarantee: Against all defects in material and workmanship for one year.



A fine example of IN-SWING Type Crane Door 60′ x 18′ combined with Double Swing Doors 14′ x 17′ high.

IN-SWING Crane Door 65′ wide x 7′ high combined with Motorized Slide Door 14′ wide x 24′ high on typical industrial plant.

Separating motor room from mill room in steel mill this IN-SWING Crane Door is 96′ wide x 18′-6" high. Independent Motorized Sliding Cab Door is 15′ wide x 7′ high.

TYPICAL INSTALLATIONS

Bethlehem Steel Company
Climax Molybdenum Company
L. B. Foster Company
B. F. Goodrich Company
Harbison-Walker Refractories Company
Ingersoll-Rand Company
International Detrola Company
Letterkenny Ordnance Depot, U. S. Army
U. S. Marine Corps Depot of Supplies
Minneapolis-Honeywell Company
National Supply Company
Northern Pacific Railroad Co.
Norfolk Navy Yard
Olin-Mathieson Chemical Corp.
Underwriters' Laboratories
U. S. Steel Corporation
Wright Air Development Center, U. S. Air Force
Yuba Consolidated Industries

A battery of 28 Fleming 2-Section Motorized Vertical Lift Doors on a large railroad freight terminal. Each door 24′ wide x 12′ high.

Fleming
VERTICAL LIFT DOORS

Vertical Lift Doors are widely used on steel mills, industrial buildings, freight terminals, and warehouses, and favored by plant engineers, production and maintenance men because their heavy duty construction withstands the hardest types of use and abuse. The trend is to one large door instead of several smaller ones on truck docks and similar locations where their fast reliable operation lowers shipping costs and improves production efficiency.

Built in two styles—INSIDE MOUNTED or OUTSIDE MOUNTED—they are made in 1, 2, 3, and 4-SECTIONS to suit available headroom. The outside mounted style—used where headroom inside is too small or to replace existing doors—requires no alterations to existing framing, power or piping lines, or relocating fixed equipment. Fleming Vertical Lift Doors are perfectly counterbalanced for easy operation with either manual or motor operators. Motorized doors operate at 45 vertical feet per minute. The doors can be fitted with sash, pilot doors, insulation, louvres, and other special features.

CONDENSED SPECIFICATIONS

General: To be "Engineered" 2-Section Vertical Lift Doors (or, Arm Guided Industrial Canopy Doors) made by Fleming Steel Company or an equal, approved in writing by the Architect.

Scope: Furnish and install leaves, panels, sash, guides, counterweight towers and containers, counterweights, hardware, weathering, wire ropes, sheaves, mechanical parts, motor operators, electrical controls, and endless hand chain auxiliary manual operators clutch controlled from floor. Other trades to furnish in place, from approved door drawings: foundation work; glass and glazing; wire, conduit, and wiring labor.

Drawings: Completely detailed, including wiring diagrams, to be approved by Architect prior to fabrication. Furnish details to other trades.

Design Criteria: Doors to withstand horizontal wind loads in closed position of 20# per sq. ft. Operator to function against 8# wind load. Maximum deflection 1/120 of span. Fiber stresses from dead loads plus 25% impact 24,000# per sq. in.—27,000# per sq. in. from wind loads.

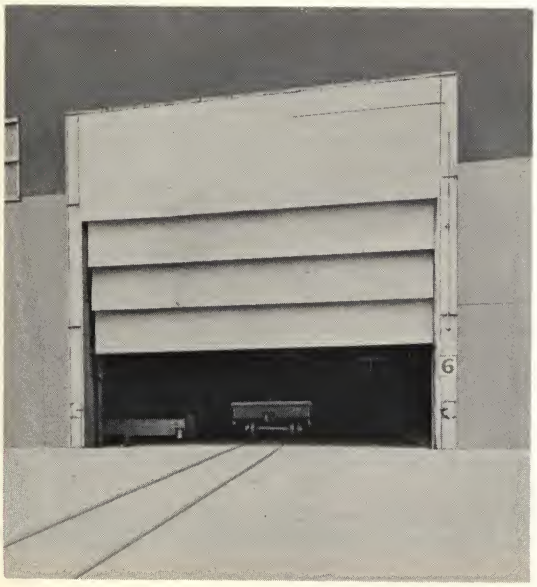
Material: Framing members, braces, guides, etc., hot rolled open hearth steel. Minimum member $\frac{3}{16}$″ thick. Panels 13 gauge. Sash standard fixed industrial type—(specify angle glazing on canopy doors). Weathering 2 ply C.I. packing rubber ⅛″ thick. Wire ropes 6 x 37 lubricated hemp center improved plough steel. Sheaves, drums, other castings, close grained alloyed cast iron. Roller chains of pre-stressed, fatigue resistant, precision steel.

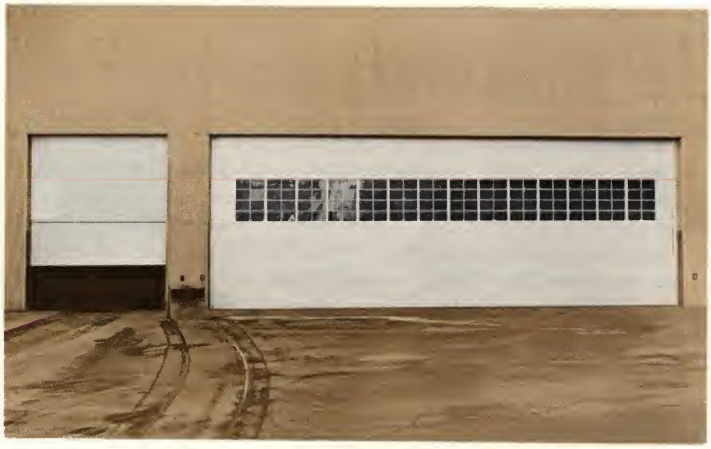
Construction: Arrangement and size of structural framing members, panels, guides, etc., to be as indicated on drawings. Cope and weld joints all around. Attach sash and panels by plug or edge welds at 9″ centers. Counterweight tower to be rigid self-supporting unit, completely enclosed 7′ high, with full height internal guides for counterweights. Provide counterweight container equipped with pivoted rope equalizing device. Adjust all ropes at equalizer. For doors up to 500 sq. ft. furnish steel plate counterweights—for larger doors concrete slabs.

Weathering: (Vertical Lift) 2 ply rubber at head, sills and meeting rails. (Canopy) 2 ply rubber at head and sill—metal at jambs as shown on drawings. Retain with 1 x $\frac{3}{16}$″ steel keeper bars and ¼ cadmium plated bolts at 12″ centers.

Hardware: (Vertical Lift) Furnish anti-friction slides at corners of each leaf to engage jamb guide angles. (Canopy) Provide jamb rollers of size indicated, fitted with anti-friction bearings. Furnish hand operated jamb locking devices for all manually operated doors.

Operation: (Vertical Lift) Door shall be suspended on cables reeved from leaves over operating drums to counterweights and guided by vertical jamb angles. Operating drums driven by either hand chain or motor operator control movement of leaves which shall move vertically at differential speeds to open or close simultaneously. Operating speed shall be 45 (up to 60) vertical feet per minute.





ABOVE—Motorized Lift Doors on a steel mill. 1-Section Door 60′ wide x 21′-6″ high docks 7 trucks at once. Railroad door 2-Section 17′ x 22′.

LEFT—Outside Mounted Fleming 3-Section Motorized Vertical Lift Door 36′ wide x 24′ high serves both railroad and trucks.

Fleming Motorized Canopy Door 60′ wide x 20′ high on military maintenance shop provides entrance for largest equipment.

(Canopy Doors) Doors shall be suspended on cables reeved from leaf over operating drum to counterweights and guided by jamb rollers at middle and radius arms attached near top of leaf to building jamb. Operating drums driven by either hand chain or motor operators control door which shall move upward at 30 (up to 45) feet per minute and pivoting from vertical plane lay, when open, horizontally with lower half projecting outside forming canopy.

Reversible hi-torque gearhead motor with integral magnetic brake, mounted on counterweight tower, shall drive operating drum by roller chain and sprocket arrangement. Endless hand chain operator shall drive operating drum thru pinion gear—when used as auxiliary it shall be clutch controlled from floor.

Electrical control by constant pressure 2-button push button station, located at jamb indicated on drawings, shall activate magnetic reversing starter equipped with overload and undervoltage protection. Provide 110 volt control transformer where line voltage exceeds 220. Positive acting, geared cam actuated limit switches shall stop door at limits of travel. Furnish manual operator interlock switch.

Shop Paint: Leaves, braces and other steel equipment one coat blue lead and oil. Machinery gray enamel. Field painting by others.

Erection: By door manufacturer. Erect plumb and square all parts properly aligned and securely fastened. Door shall be adjusted, tested and left in proper operating condition.

Guarantee: Against all defects in material and workmanship for one year.

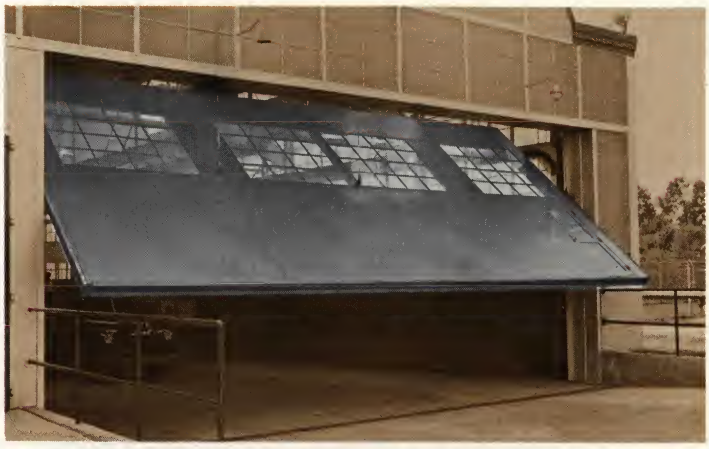
TYPICAL INSTALLATIONS

Aberdeen Proving Grounds
American Bridge Company
American Steel & Wire Co.
Andrews Air Force Base
Armco Steel Company
Atomic Energy Commission
Tennessee Colorado New Mexico
Bessemer Limestone & Cement Co.
Boeing Airplane Company
A. M. Byers Company
Continental Machine & Foundry Co.
Cooper-Bessemer Company
Crucible Steel Company
Erie City Iron Works
Ingraham-Richardson Mfg. Company
Jones & Laughlin Steel Company
Monsanto Chemical Company
National Tube Company
Naval Gun Factory
Norfolk Navy Yard
Oliver Iron Mining Company
Polk State School
Sante Fe Railroad
Sharon Steel Company
University of Wisconsin
United States Steel Corporation
Clairton Works Irwin Works
Fairless Works South Works
Gary Works Edgar Thomson
Homestead Works Vandergrift Works
Western Carolina Teachers College
Western State Penitentiary

Fleming INDUSTRIAL CANOPY DOORS

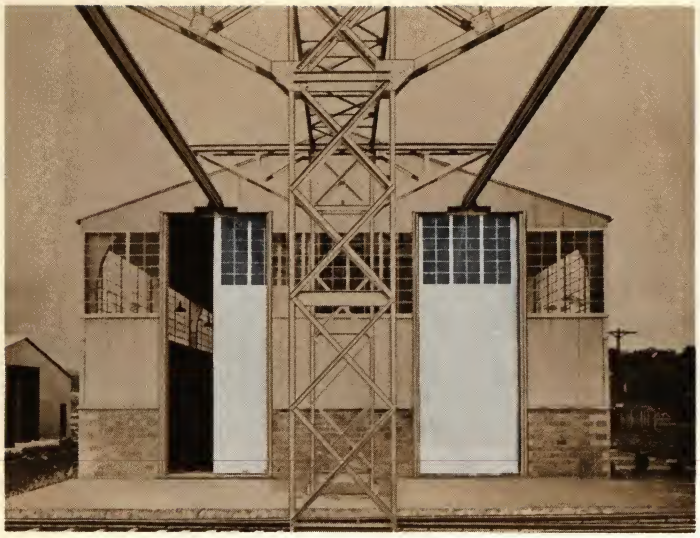
Canopy Doors are ideal on industrial buildings, foundries, warehouses, rail and truck docks, where headroom is limited and floor space at a premium. The additional protected working area provided by the canopy formed when the door is in its open position reduces wasted manhours and increases working and loading efficiency. Basic simplicity of design and practical sturdy construction assures long trouble-free life, safe, rapid and economical operation in all weather.

Fleming builds four types of industrial canopy doors—ARM GUIDED, TRACK GUIDED, TURN-OVER, and BI-FOLD—to meet the needs of all types of applications. The turnover is primarily for wharves and piers and does not form a canopy. In operation, the door rises vertically to free the bottom of ice and snow, and tilting about its horizontal axis rises upward until when open it forms a canopy with its lower half projecting outside the opening. Fully counterweighted, the door opens smoothly and speedily with either manual or motor operators.



ABOVE—A Track Guided Motorized Canopy Door 35′ wide x 16′ high encloses aircraft plant loading dock. Four trucks can load regardless of weather.

RIGHT—A typical Track Guided Fleming Industrial Canopy Door on a foundry building for truck entrance. Door 12′ wide x 14′ high.



Mono-rail passage through two Single Slide Doors, each 12′ wide x 30′ high.

Bi-Parting Slide Doors, 18′ wide x 12′ high, for general truck entrance.

Fleming SLIDE & SWING DOORS

Fleming's manually and motor operated slide and swing doors are much used for general purpose industrial openings. Their exceptionally heavy duty construction especially suits them for heavy traffic openings where they receive maximum use and require minimum maintenance. Custom built, they are available in any size and with any desired features such as sash inserts, pass doors, insulation, louvres, mono-rail cut-outs, etc.

Slide Doors are made in three styles—Single, Bi-Parting, and Multiple slide—any of which may be Inside or Outside Mounted. They may be of the Top Hung or Bottom Rolling type. Motor operation is recommended for fast easy movement and heat conservation in the building. Single and Bi-Parting slide doors can be arranged to pass mono-rail beams, an important and frequent industrial requirement, quickly and easily filled with Fleming Doors.

Swing Doors are used in restricted openings where neither headroom nor side clearances for other door types are available. They are often used in conjunction with Crane Doors as load doors and are favored for railroad roundhouses and other similar structures having a large number of doors side by side. Made in three styles—Single, Double, and Accordion Leaves—they may be Inside or Outside Mounted. Accordion doors are used where the openings are too wide for either single or double swing leaves. Motor operators are available for all three styles.

TYPICAL INSTALLATIONS

American Bridge Company
Atomic Energy Commission
Georgia—Idaho—New Mexico
Austenal Corporation
Bethlehem Steel Company
Climax Molybdenum Company
Cooper-Bessemer Company
Corona Brewing Company
Detroit Steel Company
L. B. Foster Company
B. F. Goodrich Company
Harbison-Walker Refractories Co.
Ingersoll-Rand Company
Letterkenny Ordnance Depot
Lock Joint Pipe Company
Marine Corps Depot of Supplies
Minneapolis-Honeywell Company
National Supply Company
National Tube Company
Naval Air Station, Jacksonville
Newport Steel Company
Northern Pacific Railroad
Norfolk Navy Yard
Olin-Mathieson Chemical Corp.
Potomac Edison Company
Underwriters' Laboratories
U. S. Steel Corp.
Yuba Consolidated Industries

Multiple Slide Doors, 35′ wide x 30′ high on typical industrial building.

FLEMING REPRESENTATIVES ARE LOCATED IN ALL PRINCIPAL CITIES

Double Swing Doors on an interior industrial opening 12′ wide x 20′ high.

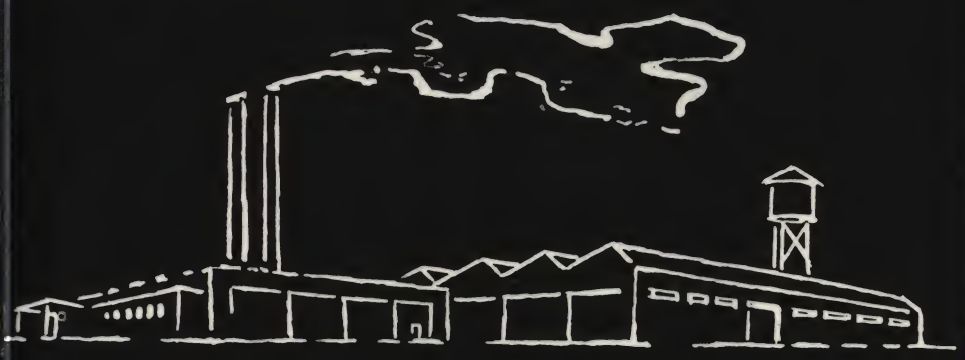
THE FLEMING STEEL COMPANY
NEW CASTLE, PENNSYLVANIA

INTERNATIONAL DOORS

INTERNATIONAL SERVICE

...for aviation

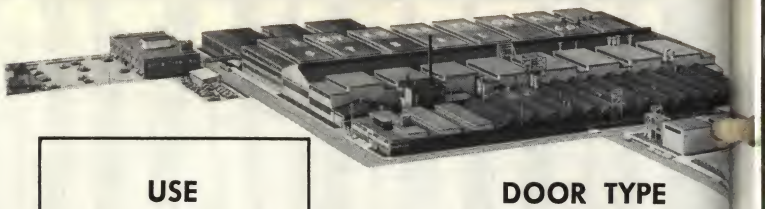
and industry



INTERNATIONAL STEEL COMPANY

EVANSVILLE, INDIANA, U.S.A.

INTERNATIONAL DOORS
for aviation and industry



For over 60 years, International Steel Company of Evansville, Indiana, has been a leader in supplying custom-built doors to aviation, industry, and business. In that time, International has accumulated the technical and practical knowledge required to solve virtually ANY problem involving doors.

Our production facilities and our ingenuity have kept pace with our steady growth, and today International is exceptionally well qualified to help YOU plan and establish your specific door requirements. Regardless of how unusual or exacting your specifications, International welcomes the opportunity to develop the *one best* solution to your door problems. International Industrial and Hangar Doors are custom-made to meet individual requirements and specifications for each installation.

doors for every need

Is your door area exceptionally wide, or high? Does its smallness call for special engineering to save space? Are there headroom problems, unusual weather conditions, or special usage factors that make your industrial or hangar door requirements extremely "out of the ordinary"? In all of International's many years of experience as door specialists, we have always found the *right* answer to such problems from both the engineering and economic angles. You pay no premium for calling upon International to do the job right. You DO save time, money and worry from the start . . . and right on through the many years of dependable, trouble-free service rendered by your International Door installation.

engineering service

The services of International Steel's engineering department are at your complete disposal for preliminary planning of your door requirements. Calling upon our engineering staff does not obligate you in any way. In fact, this is the most satisfactory means of arriving at the best, most economical solution to any custom-built door problem in the shortest possible time.

You know the job you want done . . . *what* you want from your door installation. We know, from experience, just how that can be accomplished in the most efficient and satisfactory manner for all concerned. So, if it is merely a matter of "getting together" for preliminary planning . . . call us now!

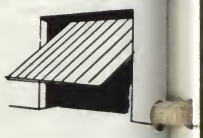
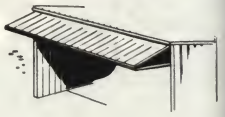
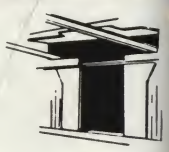
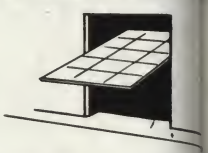
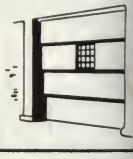
Also, if you desire, we will be glad to explain International's complete erection facilities.

proved by wide use

Many long-standing installations all over the nation . . . in industrial plants, commercial buildings and aviation structures . . . attest to International's firm policy of designing and producing only doors that assure permanent satisfaction in every respect.

Four inherent qualities guarantee this satisfaction with every International Door. These qualities are: (1) Easy, fast-acting operation, (2) Utmost safety and protection, (3) Longest trouble-free service, and (4) Lasting weather-tightness.

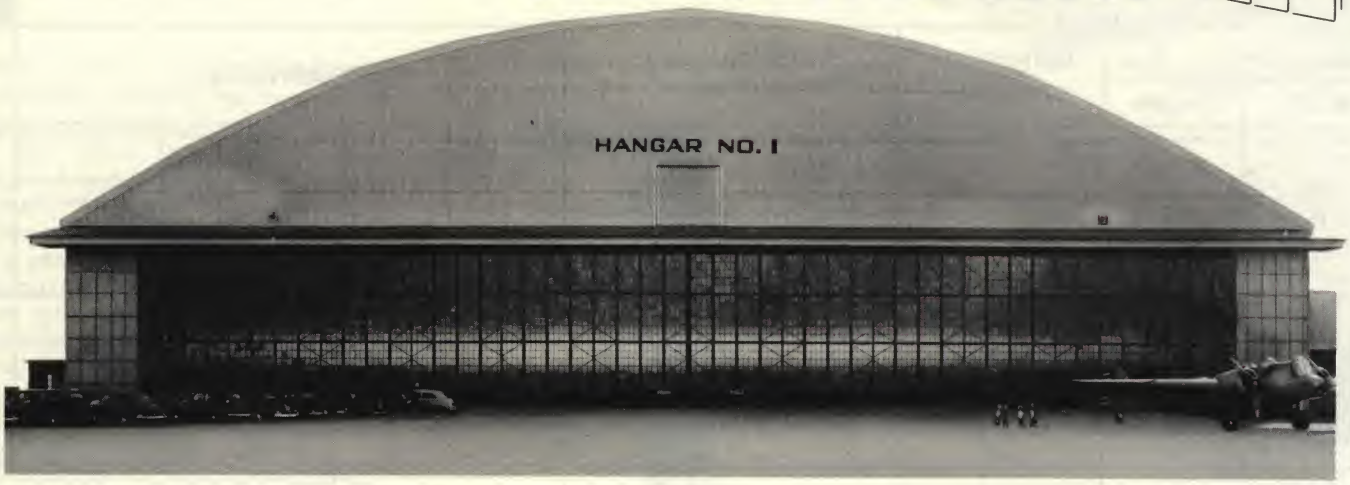
Regardless of where you are located, International assures you complete, efficient cooperation on any door problem. No doubt, there are a number of International Door installations in your vicinity. A partial list of users is given on page 16 . . . additional names will be sent you on request.

	USE	DOOR TYPE
AVIATION	All Size Openings	STRAIGHT SLIDE
	Major Openings	TELESCOPING CANOPY
	Most Small and Medium Openings	UNBRACED CANOPY 
	Medium to Large Openings — Where Headroom Is Limited	BRACED CANOPY
	Small Shop and "T" Hangars	BIFOLD CANOPY 
	Special Space-Saving Medium Openings	CURVE TRACK SLIDE
INDUSTRIAL	Inside and Outside Crane Operation	CRANE DOORS w/LOAD LEAVES 
	Where Headroom Is Limited	INDUSTRIAL TURNOVER 
	Where Headroom Is Not Limited	INDUSTRIAL VERTICAL LIFT
	Space Saving	VERTICAL LIFT PIER DOORS 

GUIDE TO DOOR TYPE SELECTION

DIMENSIONS — Feet		METHOD OF OPERATION	OPERATING PATTERN	ADVANTAGES	SEE PAGE
Width	Height				
60 to 800	20 to 60	Manual and Motorized	Composed of number of floor-mounted leaves which move horizontally to sides of opening . . . either power-driven or by hand.	Lowest cost door for large openings. Manual operation on leaves up to 12′ x 24′. Floor-mounted leaves remove weight from structure. Several methods of motorized operation available.	4 – 5
60 to 500	40 to 65	Motorized	Door is divided horizontally. Bottom leaf rises behind top leaf, both leaves swing out and up. They come to rest horizontally, forming canopy opening.	Divided vertically into individual operating sections — open only as required. Heat saving. Counterweights integral part of door, save space. Lower leaf rises vertically for complete use of inside and outside areas. Economical in large openings.	6
50 to 120	14 to 30	Motorized	Rises vertically in initial opening movement, then swings out and up with approximately 60% of door height projecting horizontally over opening outside.	Economical for small to medium openings where headroom is available. Fast operation saves heat. Does not encroach on usable floor space in opening or closing. Canopy offers protection from inclement weather.	7
40 to 500	16 to 35	Motorized	Swings out and up from closed position, and comes to rest with approximately 50% of door height projected outside as a canopy over opening.	Minimum headroom required above truss bottom chords. Sectionalized into individual operating units permitting lower door height over wings and high door for tail. Eliminates tail door operation.	8
3 SIZES ONLY 40′ 0″ 45′ 0″ 50′ 0″	9′ 7⅜″ 12′ 0″ 12′ 0″	Manual	Door breaks outward at horizontal center. Bottom moves in initially, then rises vertically and center moves outward. Comes to rest with about ½ door opening height projected outside over opening.	Economical overhead door for small shop and "T" hangars. Low maintenance. Easy to operate. No projection inside hangar. Cannot become icebound, bottom half moves inward.	9
60 to 100	20 to 30	Manual	Operation similar to straight slide doors except all leaves are stored inside building. Adjustable swivels on bottom rollers permit use of curved rails into structure.	Saves space at low cost. Floor mounted. Slides along inside wall out of way. No need for outside tracks, so no blocking by snow, mud, slush. Stored "around-the-corner" inside. Recommended when building areas do not permit door pockets.	10
20 to 100	4 to 10	Motorized	Crane doors swing in and up, and are hinged to soffit — completely out of the way. They permit ease of movement of crane into or out of building.	Where crane runways extend out of building, here crane door is ideal for sealing area through which crane must pass against weather. Saves heat. Available with steel sash for maximum light entry. Fast operating.	11
10 to 20	10 to 20	Manual and Motorized	Door is normally in 2 sections. The bottom leaf rises vertically behind top leaf. Both leaves swing up and in, and come to rest inside, behind and clear of opening, parallel to floor.	Advantageous especially where headroom is at premium. Use motorized to provide fast operation, minimum heat loss. Rigid rugged construction assures long trouble-free service, permanently tight weathering.	12
10 to 20	10 to 20	Manual and Motorized	Door moves vertically up above the opening, and stores directly behind and above opening.	Tubular or structural construction. Use for strength, durability, weather-tightness. Available in 1, 2, or 3 sections depending upon headroom. Conserves valuable floor space. Usually mounted inside, but can be mounted outside building.	13
16 to 20	16 to 20	Manual	Multi-sectioned. Door moves directly up, behind and above door opening.	Affords better use of space directly behind door opening. Permits maximum utilization of lighting and sprinkler systems in areas adjacent to door openings.	14

STRAIGHT SLIDE DOORS



Bi-Parting Power Operated Straight Slide Hangar Doors (250' x 37' high) built by International for U. S. Army Air Force, Scott Field, Illinois.

The International Straight Slide Door is the most simple and inexpensive of the large doors. Manually operated units, available in floor mounted type, are recommended only where doors are used infrequently and weather is generally mild.

The motor-operated International Straight Slide Door is recommended where fast operation, avoidance of heat loss, and heavy weight are prime requisites. This type of door is best suited for floor mounting — removing weight of leaves from structure . . . and is most successfully used for hangar installations. The International Motor-Operated Straight Slide Door is low in initial cost and economical to maintain. Three alternate methods of motor operation are available: (1) INDIVIDUALLY POWER OPERATED: Where large leaves are used, each leaf can be individually operated by a traction drive complete with controls and drive within each leaf; (2) BI-PARTING POWER OPERATED: A traction drive attached to center leaves only, driving one half to one side by means of a series of interconnecting cables. All leaves arrive at the full open position simultaneously; (3) PARTIAL GROUP POWER OPERATED: Separate groups of 3 leaves with a traction drive on each center leaf of each group.

International Straight Slide Doors are furnished complete with top and bottom rollers, cane bolts, wheel locks, pull handles, bumpers, weathering, steel sash inserts, pilot doors, and where desired, motor operators and controls. Type of covering, number of sash and electrical safety edge for leading leaves are optional.

Slide door leaf frames are of hot-rolled or formed shapes, welded or bolted to develop full strength of members joined. Welds on face which would interfere with covering or sash inserts are ground smooth. Frame members are straight within $\frac{1}{8}$" in 20'0".

Main members of International Straight Slide Doors are designed to resist 20 pounds per square foot wind load, with deflection not exceeding 1/120 of span.

Covering is optional, either flat steel sheet 14-gauge, or International Galvanized Beaded Sheets. Attachment is made by welding, or by $\frac{1}{4}$"-20 round-head, self-tapping machine screws.

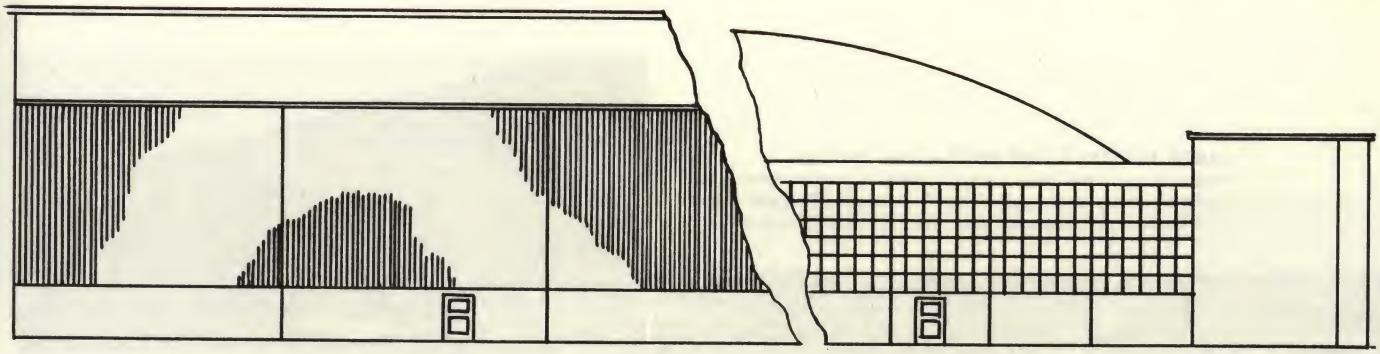
Steel sash is standard fixed, inside putty glazed, and attached by welding or $\frac{1}{4}$"-20 round-head, self-tapping machine screws.

All leaves are fitted at sides and bottom with cloth inserted rubber weathering and at top with bent steel plates.

Items not furnished by door manufacturer: guide angles, rails and ties, glass, putty, field painting, and electric wiring for motor operators.

(Detailed specifications available on request.)

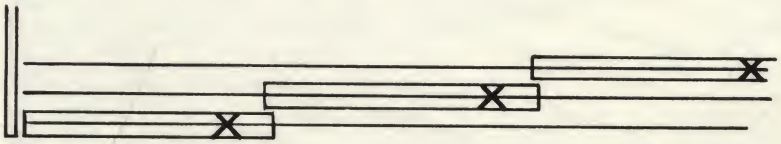
International Straight Slide Door Section 10' x 25' and weighing approximately one ton. Operated easily by one man. Installed at Nashville, Tennessee, Airport.



INDIVIDUAL OR PARTIAL GROUP

FULL GROUP — SINGLE OR BI-PARTING

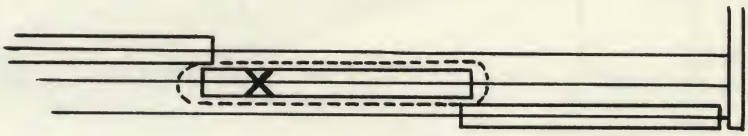
STRAIGHT SLIDE HANGAR DOORS



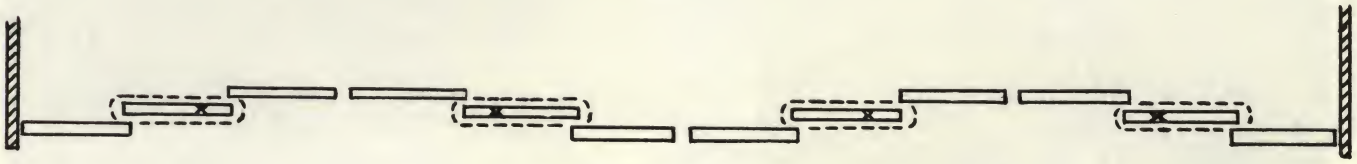
X: DENOTES MOTOR OPERATOR

INDIVIDUALLY POWER OPERATED

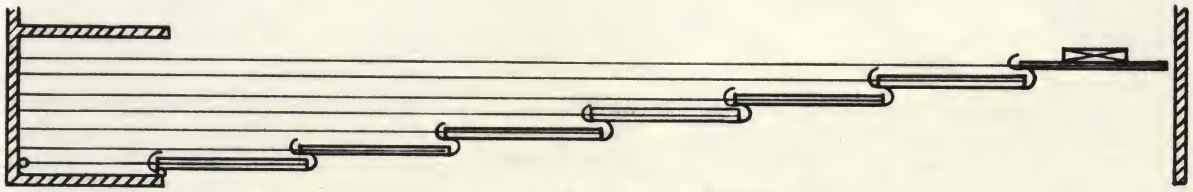
DOOR POCKET OPTIONAL



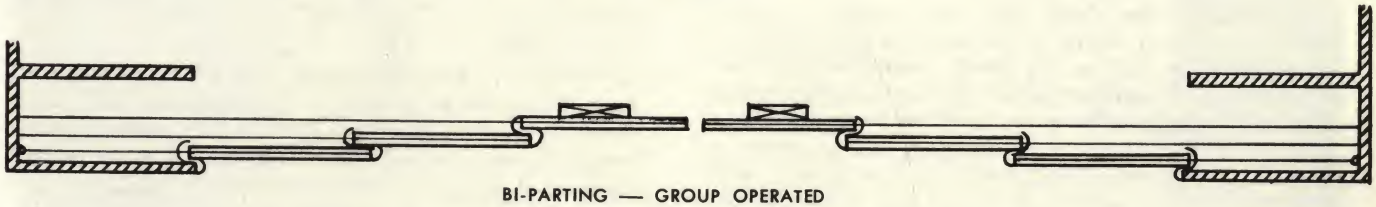
PARTIAL GROUP POWER OPERATED



MULTIPLE PARTIAL GROUP



FULL GROUP OPERATED



BI-PARTING — GROUP OPERATED

NOTE: MANUALLY OPERATED DOOR SIMILAR

telescoping canopy doors

LARGE ENTRANCE EFFICIENCY — This exclusive International Steel door design is ideal for major openings. Installation for Boeing Airplane Company B-47 Flight Hangar in Wichita, closing a total door area of 95,000 square feet.

The Installation for Boeing Airplane Company at Seattle, Washington, permits opening ENTIRE LENGTH of hangar, 780 feet, and to a maximum height of 65 feet.

International Steel's exclusive Telescoping Canopy Doors are particularly suited to major-sized openings. There are no fixed vertical columns, no mullions between operating sections . . . so that unobstructed use of the entire opening area is provided.

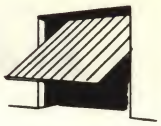
No part of the door takes up productive space, either outside or inside of the structure, at any stage of opening or closing. No jamb counterweight areas are needed, as counterweights are integral with door. Sectional construction saves heat by permitting partial opening. Doors can be opened just as much or as little as is needed each time . . . low objects, such as trucks, require only that a lower leaf of one section be opened.

International Steel's Telescoping Canopy Door is divided horizontally into sections, vertically into individual operating leaves. Each operating leaf of the door operates from a single power source, and is arranged in a top and bottom section of approximately the same height. The bottom section rises vertically behind the top section. At a predetermined height both sections swing out and up to form a canopy outside over the door opening. Door construction permits partial opening when desired, at any position in the leaf's travel.

Absence of counterweights and cables permits future expansion of building. There are no rails to become clogged with snow or ice. Lower sections move vertically on opening, eliminating problems of drifted snow or striking any object in front of door.

Furnished complete with all operating mechanism, electric motors, controls and counterweights . . . International's Telescoping Canopy Doors are most efficient and economical for exceptionally large openings.

unbraced canopy doors

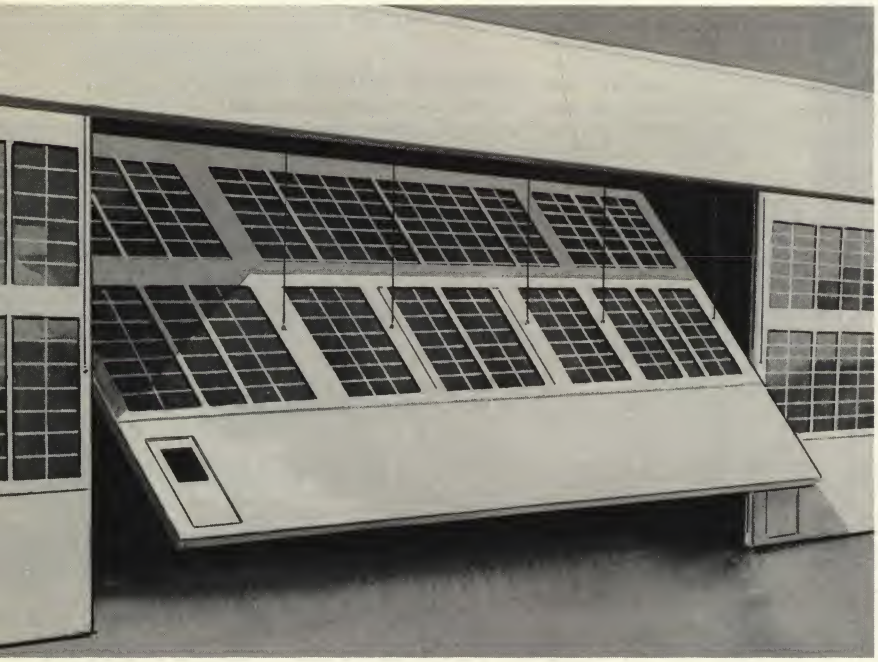


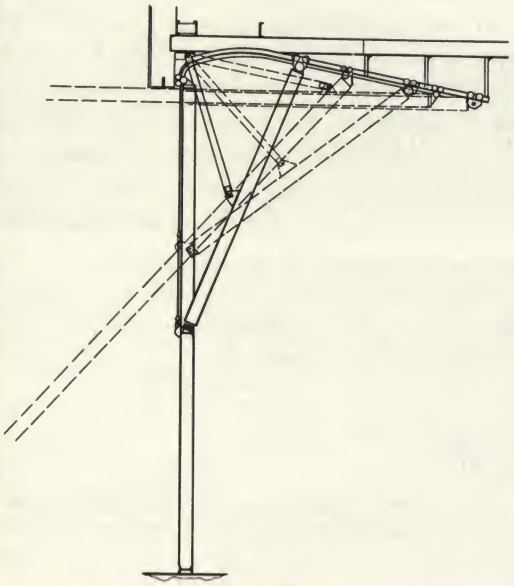
International's Unbraced Canopy Door is exceptionally well-suited for most small and medium openings — up to 120′ wide and 30′ high — where interior clearance is limited and usable interior floor space is minimum. This door does not interfere with usable floor space when opening or closing.

In operation the International Unbraced Canopy Door rises vertically, then tilts inward and moves on upward, coming to rest in the full-open position with the lower half projecting outside . . . providing a canopy that offers protection against inclement weather when doors are open.

International-built Unbraced Canopy Doors, each 56′ wide by 15′ high, installed at the Ohio Oil Company hangar, Findlay, Ohio.

braced canopy doors





VERTICAL SECTION

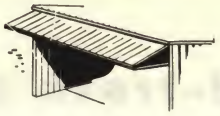
International Braced Canopy Doors are engineered for installation in medium to large openings, specifically applicable where headroom is limited. Because they are sectionalized into individual operating units, lower door heights are permitted and opening area may be fully utilized.

Braced Canopy Doors when open lie horizontally under the lintel with approximately 50% of height of leaf extending out of building to form canopy over the opening. Leaves are counterweighted and individually operated, electrically, from control stations at jambs of openings. Weather-tight when closed, this type of door is stable in any position if stopped while being opened or closed. Each opening is provided with leaves of equal size to fill opening with no intermediate columns.

International Steel's installation of Braced Canopy Doors includes (1) designing, fabrication and erection of door leaves and their hardware; (2) all weathering at heads, jambs, sills, and between leaves; (3) pilot doors (if required) and their hardware; (4) complete operating mechanism, with mounting brackets and base assemblies; (5) motors, reversing panels, limit switches and other electrical control equipment; (6) counterweights, their guides and enclosures at floor level.

McConnell Aircraft Corporation, St. Louis, Missouri.

bi-fold canopy doors



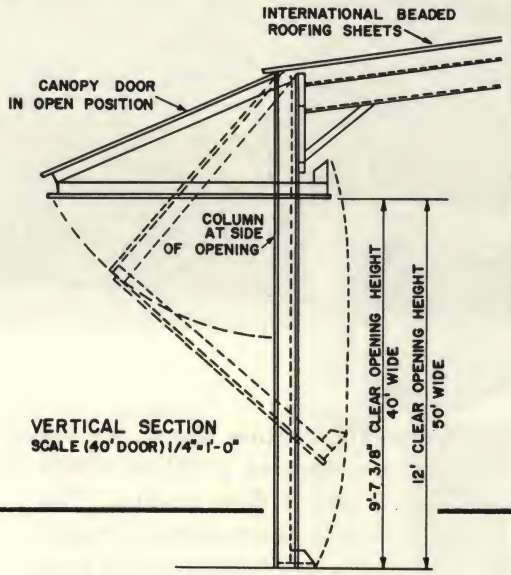
The exclusive International Bi-Fold Canopy Door is outstanding for its simplicity of design, lasting dependability, and space-saving efficiency. Of extra-rugged, all-steel construction (requiring an absolute minimum of maintenance) this door is so precisely engineered that it can be manually opened or closed in only 30 seconds.

This door does not project inside the structure, thus providing additional usable space and eliminating the possibility of damage to propellers. It is standard equipment on all International "T" Hangars. Operation is smooth and easy under all weather conditions . . . it does not become icebound.

Furnished in three sizes only: 40′0″ x 9′7⅜″ clear opening, 45′0″ x 12′0″ clear opening, and 50′0″ x 12′0″ clear opening. These sizes accommodate the majority of single- and twin-engine executive aircraft.

The Bi-Fold Canopy Door is constructed of hot-rolled structural shapes welded into four assemblies per door. Top and bottom leaf halves are bolted together in the field. Top leaf is hinged to supporting building steel, and bottom leaf is hinged to top leaf. Two jamb rollers which travel in guides center the door leaf and control its direction. Pilot door optional in all sizes.

60′ x 100′ Shop Hangar Building with 50′ x 12′ International Bi-Fold Canopy Doors at Naas Flying Service, Crystal Airport, Minneapolis, Minnesota.


INTERNATIONAL BEADED ROOFING SHEETS
CANOPY DOOR IN OPEN POSITION
COLUMN AT SIDE OF OPENING
9′-7 3/8″ CLEAR OPENING HEIGHT 40′ WIDE
12′ CLEAR OPENING HEIGHT 50′ WIDE

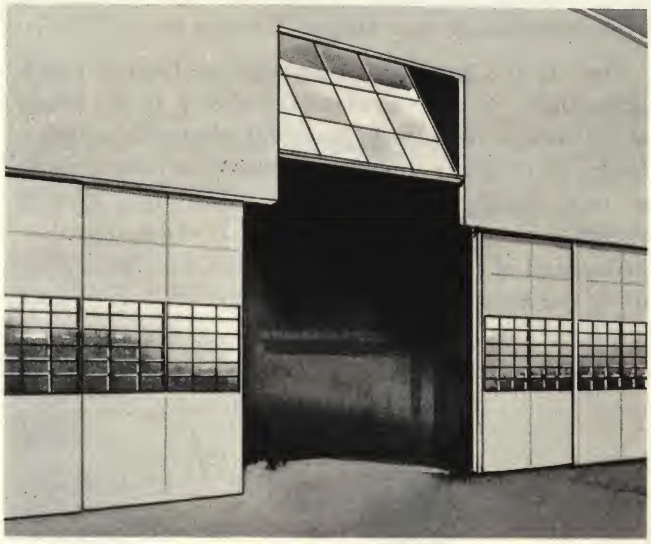
VERTICAL SECTION
SCALE (40′ DOOR) 1/4″=1′-0″

tail doors

International Steel Motor-Operated Tail Doors are designed as one- or two-section vertical lift, Unbraced Canopy, Bi-Fold, Braced Canopy or Hinge type. They are used in conjunction with straight slide or curved track slide doors where added tail height must be provided in the center of the hangar entrance.

All International Tail Doors are furnished complete with power unit, electrical controls, shafting, drums, sheaves, necessary cables, and weathering. Glass area is optional.

International Tail Doors are engineered to resist a wind load of 20 pounds per square foot, without exceeding extreme fibre stress of 27,000 pounds per square inch. Deflection under above wind load shall not exceed 1/120 of span.



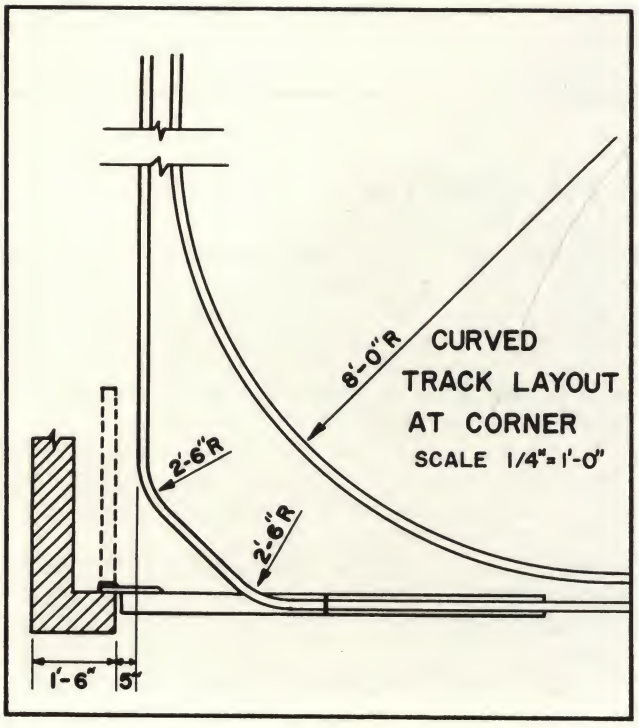
Drawing shows typical International Tail Door operating pattern.

curved-track slide doors

Typical Installation of an International Curved Track Slide Door (100' wide x 38' high) designed for hangar service.

International Curved-Track Slide Doors are the ideal solution to entrance opening problems where building areas will not permit door pockets. This type of door is identical with International Straight Slide Doors in construction, but bottom rollers have adjustable swivels. This permits easy movement of doors around curved rails into the structure. Jamb leaves are narrow and hinged to swing in.

One of the primary advantages of Curved-Track Slide Doors is their operational ability in all kinds of weather conditions. In localities where the exterior tracks of ordinary doors are jammed by snow, slush or mud during extreme weather, this door assures smooth, easy operation at all times. It slides along the inside wall of the structure, out of the way, and eliminates the need for outside tracks.



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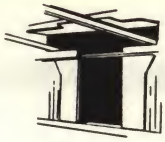
crane doors



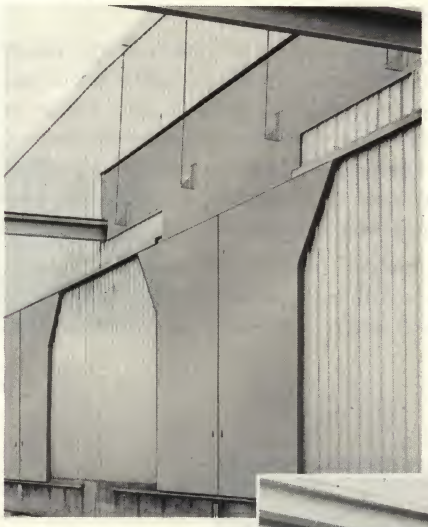
International Crane Doors offer definite advantages where a craneway runs from the building interior to an outside yard. They operate quickly, providing easy entrance or exit to the building for the crane, and affording protection against the elements for workmen inside during extreme weather conditions. Working efficiency inside the building is increased, particularly in materials handling operations.

Sizable savings in heating costs during cold weather months are made with this type of door. Weathertight and highly wind resistant, International Crane Doors open and close quickly — at an average speed of 45 feet per minute.

Operating mechanism is installed inside the structure and safeguarded from damage by outside elements. Where daylighting is desired, steel sash can be included in the design to permit maximum entry of outside light.

For maximum ease of use; dependable, trouble-free life; safety of operation; and fast, smooth opening and closing . . . International Crane Doors are the answer.

Exterior view of International Crane Door installation, showing the door completely closed against weather.



Exterior view, same installation, with International Crane Door fully open to permit operation of crane.

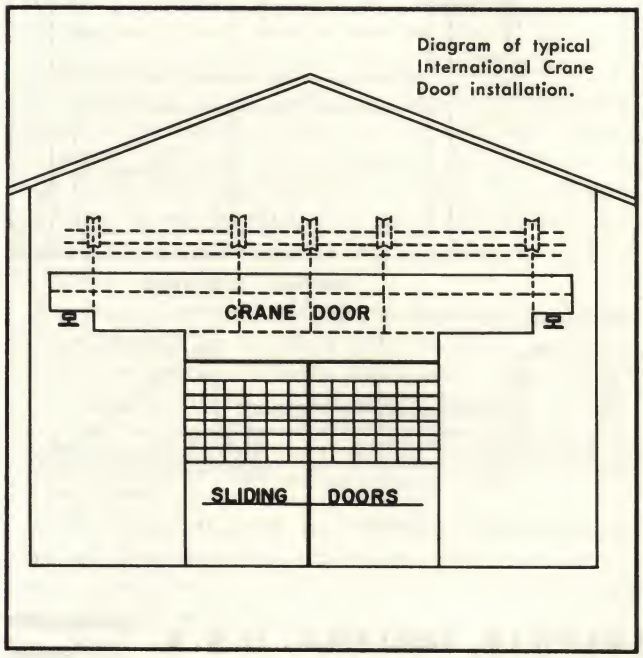
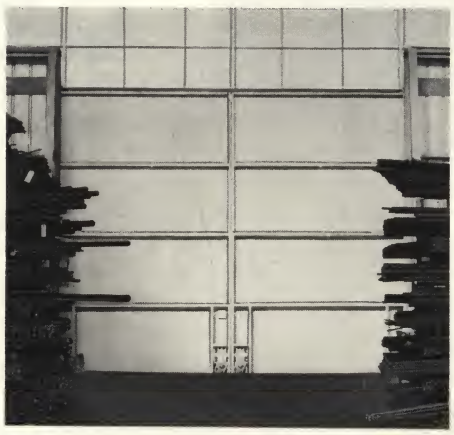
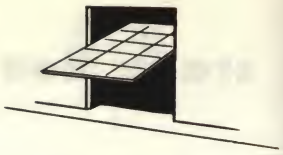


Diagram of typical International Crane Door installation.

Interior view, showing crane door completely closed. Note that bottom parts of doors are constructed for easy full-width opening. These slide doors may be swing type if desired.



industrial turnover doors



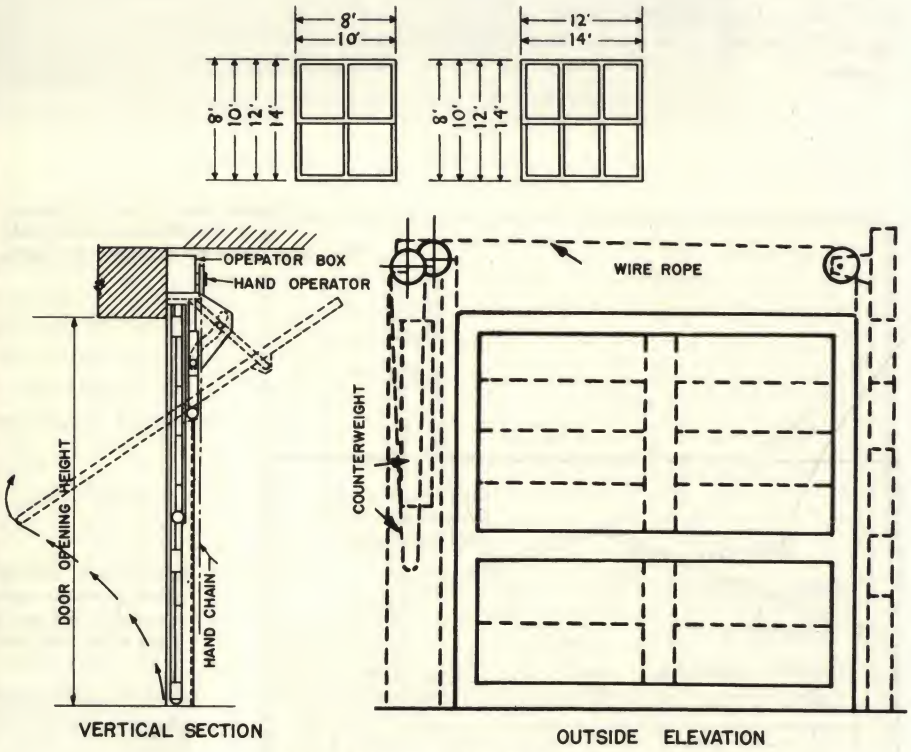
International Industrial Turnover Doors are available in one- and two-section styles to fit variable entrance opening requirements.

A combination of the vertical lift and canopy doors, this type is especially suitable where only minimum interior clearance is available during any phase of the door-operating cycle. Effectively counterbalanced, the Industrial Turnover Door is easily operated manually. Where size or location does not permit manual operation, electric operators can be installed.

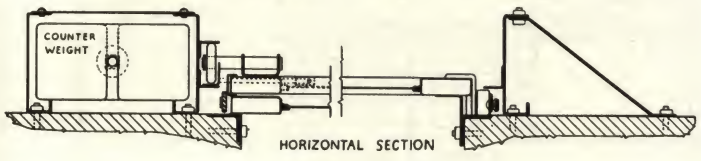
One-section Industrial Turnover Doors are limited in maximum size to 168 square feet, and are furnished manually operated only. Two-section doors can be supplied in larger sizes, for manual or power operation.

Door leaves are of tubular or channel-type construction. Each door is composed of a top and bottom leaf of similar size. Tubular frame members are of $1\frac{3}{4}$ x 5 x 16-gauge steel tubing, or such channel shapes as may be required for the opening size. Leaves are covered with 13-gauge steel sheets held in place by retainer angles, or screwed or welded directly to the frame. Upper leaves can be furnished with steel sash inserts if desired. Guides for jamb attachments and guide rollers are structural or rolled shapes, determined by door size and usage.

Typical installation of single-section International Industrial Turnover Door.



SINGLE-SECTION CANOPY TYPE



TWO-SECTION TURNOVER

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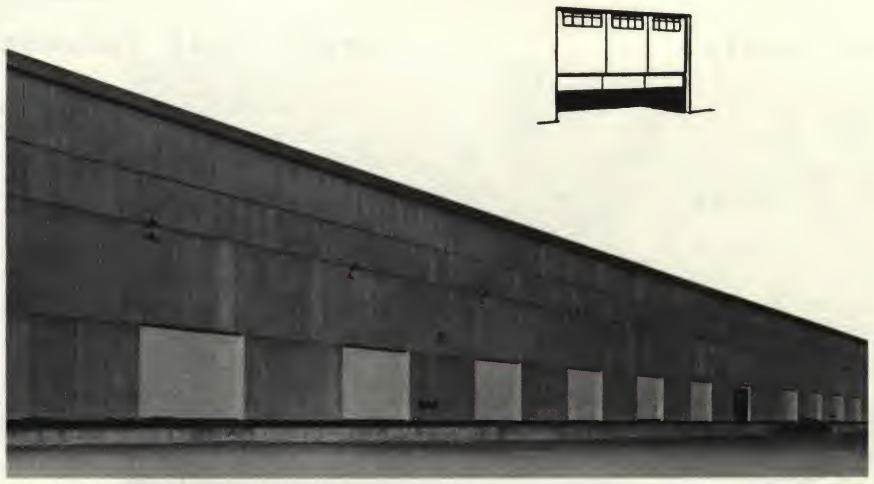
INTERNATIONAL SERVICE

industrial vertical lift doors

INTERNATIONAL DOORS



Battery of International Vertical Lift Doors at Beeler Warehouse Corp., Evansville, Indiana.

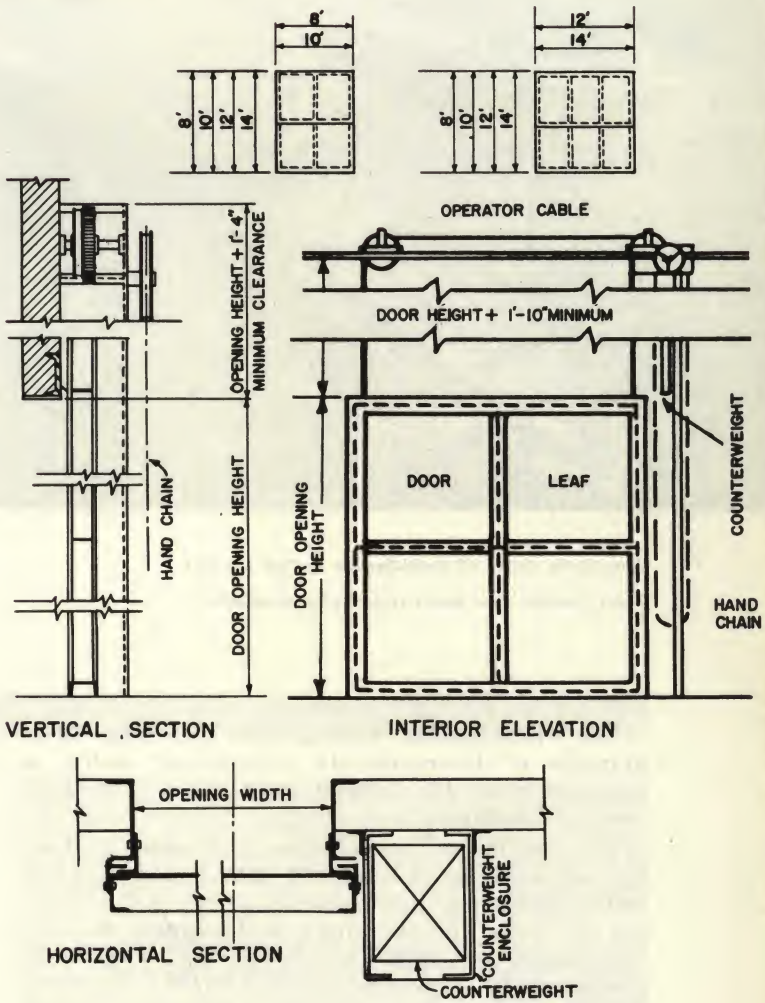
International Industrial Vertical Lift Doors are available in 1-, 2-, or multi-section units, permitting adaptation to fit space and entrance limitations. They are particularly suited to use where overhead clearance is not limited, and conservation of inside working area is important. Narrow jamb space, and unobstructed overhead area, provide ideal conditions for installation of this type of door.

Industrial Vertical Lift Doors are engineered for either power or manual operation, in light or heavy construction, to meet any requirements of size and function. They may be mounted either inside or outside, permit use of inside space up to the door, and are not affected in operation by snow, debris, or uneven ground outside of door. Glass can be inserted in any section, and pass doors may be provided in lower sections to provide entrance not requiring full door opening.

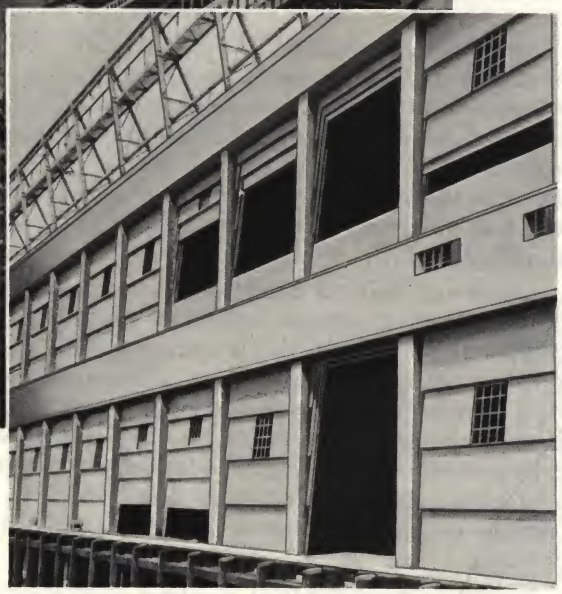
International Industrial Vertical Lift Doors are constructed to meet specific entrance requirements. Leaves in the multi-section type are set one behind the other, with travel so arranged that all leaves arrive at the full open position together. Manual door operator is an International shop assembled unit which can be arranged for electric operation if required.

Leaves are covered with 13- or 14-gauge steel sheet welded, bolted or fastened with machine screws to tubular or channel frames. Steel sash inserts, inside putty glazed, can be placed where required. All corners and intersections are welded and smoothed on exposed surfaces, and welds develop the full strength of the section.

Full-counterbalanced for smooth operation, this type of door requires minimum effort to raise or lower. Completely weather-tight when closed, dirt, dust, air and weather are kept out . . . cutting heat loss.



vertical lift pier doors (multi-section)



View above shows 63 Multi-Section Vertical Lift Pier Doors, Smaller view shows typical pier installation.

The Multi-Section Vertical Lift Pier Door is an example of International's outstanding ability to fabricate doors for unusual application, or to meet unusual conditions.

This particular type of door is designed to meet the requirements of advanced pier design, in which ceiling limits have been raised to permit higher stacking of cargo. International's Multi-Section Vertical Lift Pier Doors take full advantage of this design alteration, by providing full use of this increased storage area . . . even that directly behind door openings. This door stacks compactly directly above and behind door opening. Lighting systems and sprinklers are given maximum utilization in areas adjacent to door openings.

International Multi-Section Vertical Lift Pier Doors are furnished in two basic types: (1) standard first deck doors and (2) special barrier-placing second deck doors. First deck doors are multi-section with one upper leaf provided for glass. Second deck doors are similar, except that they are so arranged that the lower 4′0″ high panel may be left in place when door is opened. If full door opening is desired, barrier panel locks to bottom door panel and becomes part of the door.

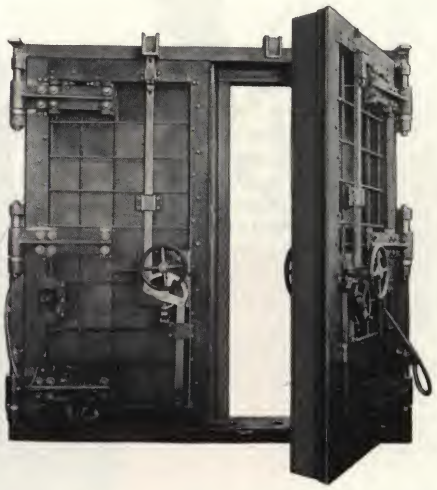
Doors and guides are designed to withstand required horizontal wind pressures. Door jambs are attached to the structural framing where required.

INTERNATIONAL STEEL COMPANY · EVANSVILLE, INDIANA, U.S.A.

INTERNATIONAL SERVICE

special door types

Regardless of how specialized your door requirements may be, International Steel Company either has built doors for similar application . . . or CAN build yours. New buildings, new processes, new industries . . . all constantly call for "something that's never been done before" in door design and construction. That's the time to call International for the quickest, best, time-saving, money-saving answers to ANY door problem.



This concrete reinforced door, 9" thick, was built by International to meet the extreme conditions of jet engine testing at the General Electric Company plant, Lockland, Ohio.

other International products

In addition to doors for industry and aviation, International offer steel *plus* planning for any plant or project. Structural and warehouse steel, steel buildings, railroad products, revolving door entrances, stainless steel products and Lindsay structures . . . these are some of International's products and services. Whenever you need steel for any purpose . . . check with International.

An International revolving and swing door installation . . . typical of many entrance problems constantly solved by International.

A complete Mul-T Hangar installation by International at Bishop Airport, Flint, Michigan.

A typical International shop hangar installation made for the City of Bogalusa, Louisiana.

INTERNATIONAL SERVICE

Partial List of International Hanger and Industrial Door Users

Boeing Airplane Company
(Wichita and Seattle)
Lockheed Aircraft Corp.
(Marietta, Georgia)
Piasecki Helicopter Co.
Cessna Aircraft Corp.
Grumman Aircraft
Engineering Corp.
Ohio Oil Co.
U. S. Navy
U. S. Army
U. S. Army Engineers Corps
U. S. Army Quartermaster Corps

U. S. Air Force, at:
Youngstown AFB
Hanscom AFB
Plattsburg AFB
Westover AFB
Forbes AFB
Walker AFB
Portsmouth AFB
Indiana Air National Guard
Kansas Air National Guard
North Dakota Air National Guard
Dept. of Marine and Aviation,
City of New York
Beeler Warehouse

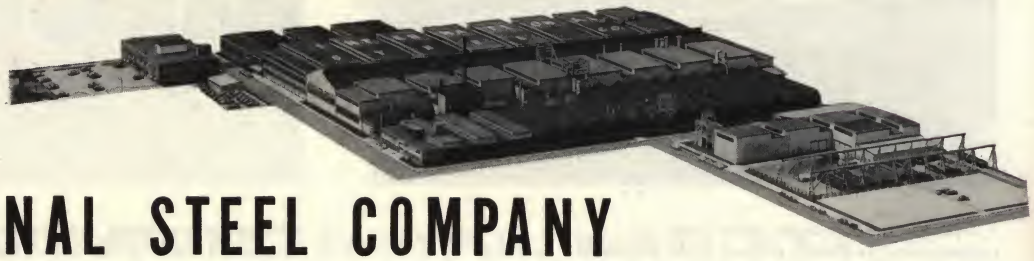
General Electric Co.
(Evandale, Ohio)
General Foods Corp.
Igleheart Bros. Division
J. F. Beasley Construction Co.
International Nickel Co., Inc.
Interstate Oil Pipeline Co.
General Motors Corp.
Mead Johnson and Company
Orr Iron Company
J. R. Winter Pressed Steel Co.
American Steel & Wire Co.
The Texas Co.
Southern Ind. Gas
& Electric Co.

NATIONWIDE SERVICE

New York to Texas . . .

Washington to Georgia and Florida . . .

everywhere in the nation you'll find International Steel Products. From the new grandstands at the Indianapolis Motor Speedway to power stations in the new AEC expansion, new factories, plants, industrial and shopping centers . . . you find "STEEL BY INTERNATIONAL." Our service is truly nationwide. No matter where you are, geographically . . . call International.



INTERNATIONAL STEEL COMPANY

1561 EDGAR STREET, EVANSVILLE 7, INDIANA · TELEPHONE: HArrison 5-3311

"ALMETL"

TRADEMARK REG. U.S. PAT. OFF.

... the automatic Fireman ever on guard . . . . .

UNDERWRITERS APPROVED

FIRE DOORS

FIRE DOOR HARDWARE

Bar the Progress of Fire!

Protect Property Against Fire Loss

GUARANTEED 25 YEARS

MERCHANT & EVANS COMPANY

2035 WASHINGTON AVENUE, PHILADELPHIA 46, PA., U. S. A.

Established 1866

A 40-YEAR-OLD RECORD . .
NO "ALMETL" DOOR HAS EVER FAILED IN

SPECIFY ALMETL FIRE DOORS

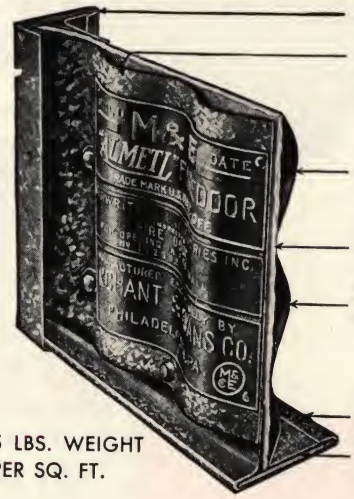
- **EASY TO OPERATE • EASY TO INSTALL**
- **STRONG • WILL NOT ROT • LIGHT IN WEIGHT**
- **DURABLE • REQUIRE LITTLE MAINTENANCE**

Built of quality materials by skilled workmen "Almetl" Fire Doors are Approved and Labeled by the Underwriters' Laboratories Inc., Chicago, Ill., and by Factory Mutual Laboratories, Boston, Mass. Endorsed and recommended by over 250 National, State and Municipal Fire and Safety Control Authorities,

SPECIFICATIONS:

Doors shall be "Almetl" construction as manufactured by Merchant & Evans Company or equal of two thicknesses of not less than 24 gauge galvanized corrugated steel interlined with sheet asbestos and securely riveted in a heavy rolled steel frame fully encased with galvanized steel of 24 gauge minimum thickness and so arranged to eliminate dirt or moisture pockets. Corrugated sheets to be laid transversely to allow for expansion and to be securely riveted together with tinned rivets and burrs. Fire Doors shall conform to the standards of the Underwriters' Laboratories and shall bear their label.

NON-COMBUSTIBLE CONSTRUCTION STOPS FIRE DEAD



5 LBS. WEIGHT PER SQ. FT.

"ALMETL"

OVER 40 YEAR RECORD . . . WITHOUT FAILURE IN FIRE OR SERVICE

The many spectacles of wanton sacrifice of property and lives by fire are a vivid commentary on that most inexplicable human weakness — the necessity of "learning by experience."

Today fire control and prevention is a science of mathematical precision — a science in which "ALMETL" products play a conspicuous and auspicious part.

"ALMETL" Labeled Fire Doors, with their never failing "heat antenna" — the fusible link — bar the progress of fire and hold with the tenacity of a solid masonry wall. Over forty years of experience have gone before, with no failure in fire or in service — and it is on that record that competent planners of adequate fire protection specify — "ALMETL".

Experience has demonstrated — concisely and repeatedly, that there is no comparable substitute for the "ALMETL" noncombustible construction.

"ALMETL" Doors, with full protection, average equal or lower installed cost than any substitute. In spite of their low cost, they materially reduce insurance premiums.

After a fire! An "ALMETL" Door still stands —a barrier, ready again to defy the flames.

Exposed side of two "ALMETL" Doors, after confining fire to small area.

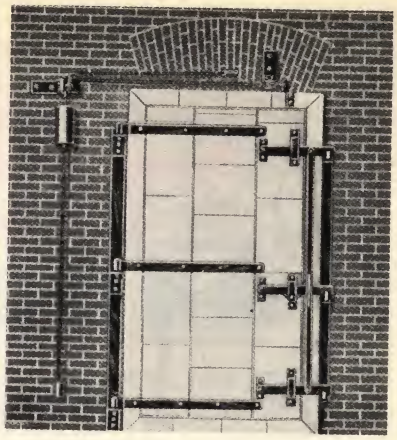
MERCHANT & EVANS COMPANY
2035 WASHINGTON AVENUE, PHILADELPHIA 46, PA., U. S. A.

FIRE OR SERVICE

STANDARD TYPES OF "ALMETL" FIRE DOORS

Complete labeled automatic hardware for all types of labeled doors with detailed erection print and instruction sheet with each set.

SINGLE SLIDING



SINGLE SWINGING

UNDERWRITERS' LIMITATIONS FOR 3 HR. CLASS "A" LABEL

MAXIMUM SIZE OF OPENING

TYPE DOOR	AREA IN SQ. FT.	WIDTH	HEIGHT
Single slide	120	12	12
Single swing	60	6	12
Pairs of swing	120	10	12
Vertical slide	80	10	10

Underwriters' certificate of inspection can usually be supplied for most larger openings. M & E Tin Clad Doors are made from only the best grade materials and bear the Underwriters' Label:
Class "A", 3 ply, 2¾" thick and Class "B", 2 ply, 1¾" thick.

SINGLE SWINGING

• • • • FIRE DOORS

HEADROOM FOR GRAVITY CLOSING DOORS

Width of Opening	Minimum Headroom Required
3'0"	19½
4'0"	21
5'0"	22½
6'0"	24
7'0"	26½
8'0"	27
9'0"	28½
10'0"	30
11'0"	31½
12'0"	33

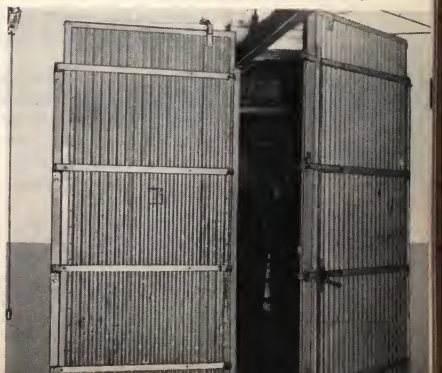
DOUBLE SLIDING SERVICE DOORS

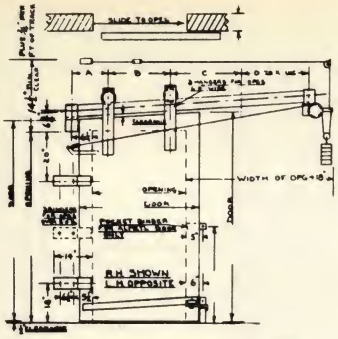
DOUBLE SWINGING

SINGLE SLIDING

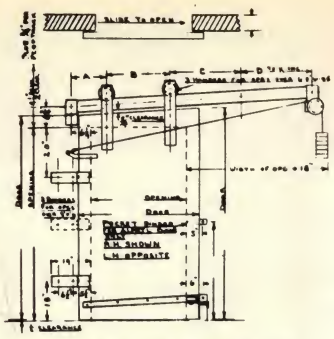
DOUBLE SLIDING

NOTCHED PAIR SWING (NOT LABELED)

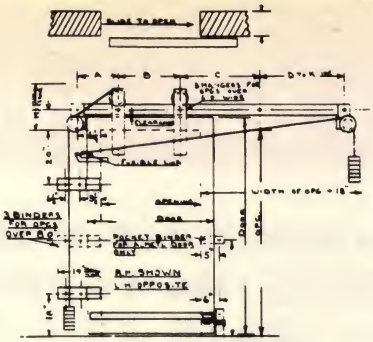




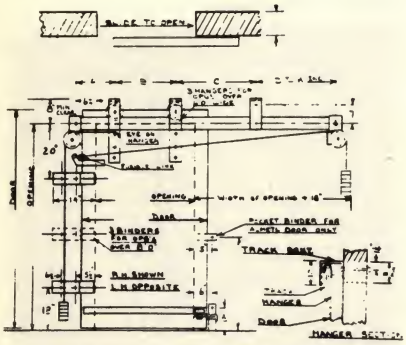
SINGLE SLIDE INCLINE TOP
WITH #1102 HARDWARE



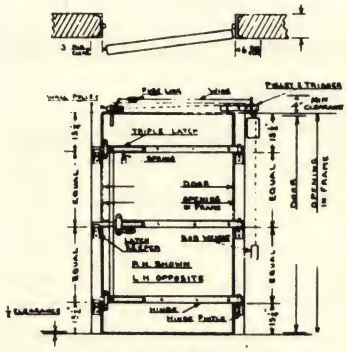
SINGLE SLIDE INCLINE TOP
WITH #1201 HARDWARE



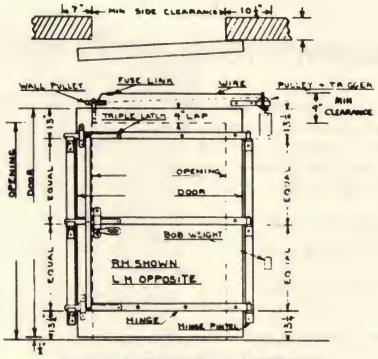
SINGLE SLIDE LEVEL TOP WITH
#1303 AUTOMATIC CLOSING
HARDWARE



SINGLE SLIDE LEVEL TOP WITH
#1304 DROP BRACKET AUTOMATIC
CLOSING HARDWARE

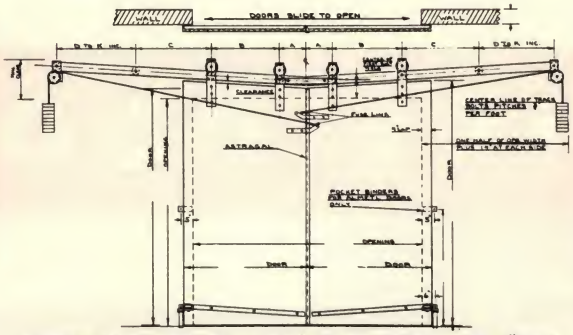


SINGLE SWING FLUSH DOOR
IN FRAME WITH #1406
AUTOMATIC CLOSING HARDWARE

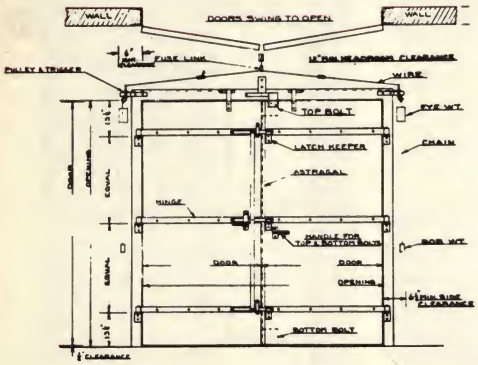


SINGLE SWING LAP TYPE
DOOR WITH #1406
AUTOMATIC CLOSING
HARDWARE

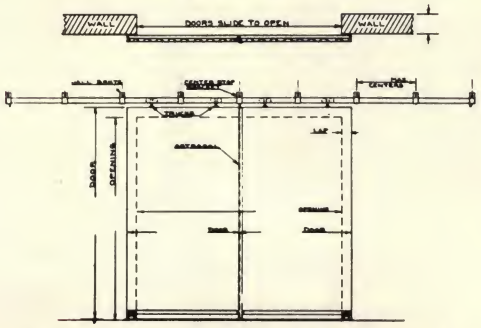
FIRE DOOR and HARDWARE CHART



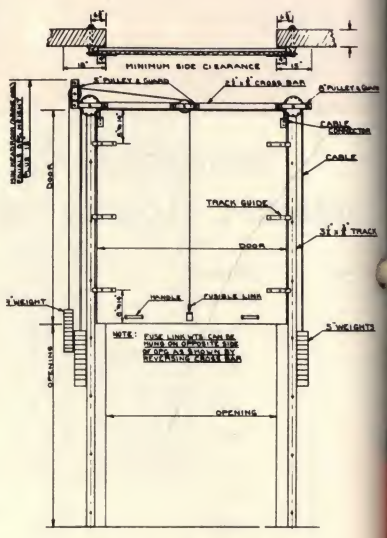
CENTER PARTING INCLINE TOP FIRE DOORS WITH #1204
AUTOMATIC CLOSING HARDWARE



PAIR FLUSH TYPE SWING M & E ALMETL FIRE DOORS
WITH #1506 AUTOMATIC CLOSING HARDWARE



CENTER PARTING LEVEL TOP M & E SERVICE
DOORS WITH BOX TYPE TRACK HARDWARE



VERTICAL SLIDE FIRE DOOR
COMPLETE WITH #1203
AUTOMATIC CLOSING
HARDWARE

SERVICE DOORS *for all commercial purposes*

To cover all openings when insurance approved and labeled doors are not required. They can be installed on the inside or outside of any opening and can be designed to fit into every building use.

FEATURES: Light weight (about 4¾ lbs. per sq. ft.). Easy to move — fully weatherproof. Will not warp, shrink or twist. Use inexpensive hardware. Can be equipped with metal sashes for glass lights. Can be installed by any competent building mechanic.

MERCHANT & EVANS COMPANY

2035 WASHINGTON AVENUE, PHILADELPHIA 46, PA., U.S.A.

Established 1866

MOSHER
INDUSTRIAL DOORS

. . . Proven by Years of Hangar Use

- Electrically Operated
- Priced to Compete with Manually Operated Doors
- Cost Less Than a Wall
- Fits Any Building—Old or New

MOSHER MANUFACTURING COMPANY
MINNEAPOLIS 13, MINNESOTA

MOSHER ELECTRICALLY OPERATED **DOORS**

Offers these Advantages

any width . . . almost any height

Mosher industrial doors can be furnished in any width, and in just about any height industry is likely to need. Multiple panels are used for widths beyond 80 feet.

inexpensive

Mosher doors actually cost less than a wall. They cost less installed than any similar doors cost before they're installed. Electrically operated, they are priced to compete with doors that have to be opened and closed manually.

for any building, old or new

Mosher doors fit any building of any type, old or new—frame, masonry, or metal structures. Prefabricated buildings, too. No special construction or superstructure is needed to support your Mosher industrial door.

electrically operated

Mosher doors are raised, lowered, stopped—all with a single electrical control, through a manual Up-Down-Off switch. A positively acting limit switch stops the operator automatically in the open or closed position without shock or jolt.

no new wiring

The Mosher door operator uses the same current as your electric razor. It can be plugged into any 110 volt a-c outlet. There is no large expensive motor requiring special wiring.

no obstructions

Mosher wide opening doors make every square foot of your building usable. There are no intermediate posts or other obstructions with even the widest Mosher door. And the raised door provides a protective canopy over the area just outside your building.

low maintenance cost

Mosher industrial doors cost practically nothing to maintain. Simple design eliminates expensive operating machinery. There are no balance springs, tracks, track rollers, guides, or counterweights to need adjustment or replacement.

withstands wind and flood

Mosher doors have withstood winds at velocities beyond 100 miles per hour. They have come safely through floods more than four feet deep. There is no need to remove ice or snow before a Mosher door can be operated.

FEATURES

Mosher doors are individually engineered for each building. Their sturdy construction is a result of an electrically welded strong steel frame on which is bolted and screwed inner and outer aluminum skins. To protect against heat, cold, or noise—fibre glass insulation is sandwiched between inner and outer coverings when specified. For metal buildings, an exterior surface can usually be furnished to match the building. Doors are fabricated, shipped, and erected in panels for easy handling and safer transit. The services of our supervisor during erection will reduce erecting costs and are recommended.

the operator

The Mosher door operator is mounted above the top of the door and controlled from a manually operated switch installed at any convenient point. The bottom of the door touches the building only when the door is closed. Operator holds door rigid at any degree of opening.

glazing

Glazed panels are furnished when specified. Corrugated plastic panels are also available.

bi-fold

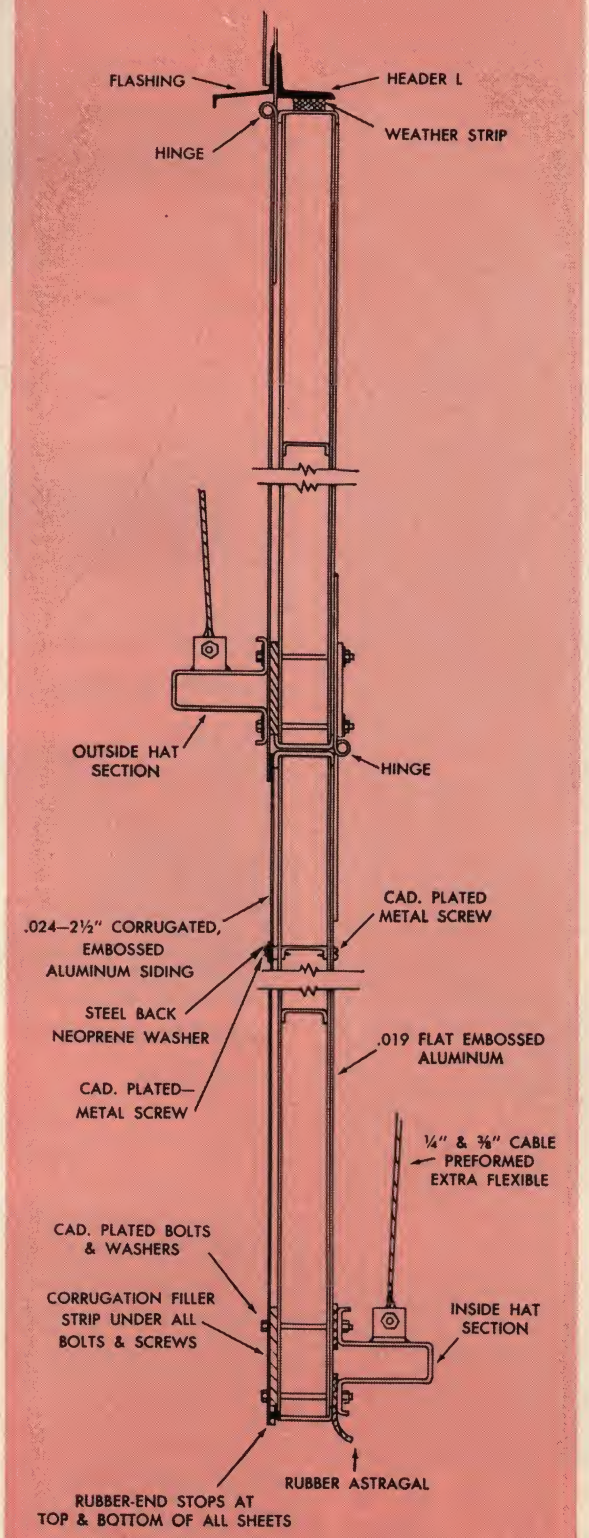
Your Mosher door folds horizontally as it rises upward and outward to form a protective canopy. Steel purlins are installed across the width of the door, inside and outside.

access and walk-in doors

Where foot traffic to and from building is necessary while your Mosher door is closed, access or walk-in doors can be installed at any desired point.

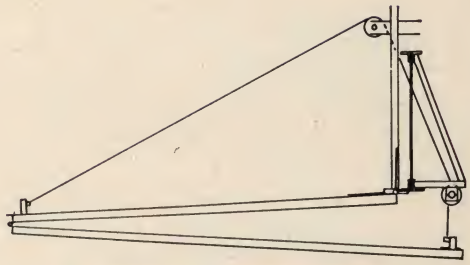
Cessna Aircraft Co., Morristown, New Jersey

Stewart Lumber Co. Wood Treating Plant and Dry Kiln, Minneapolis, Minnesota

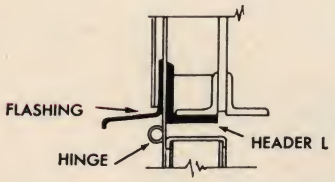


TYPICAL DOOR SECTION

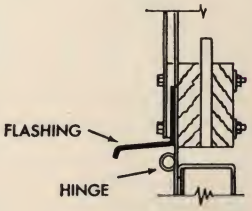
Patent No. 2548042
U.S. and Canadian patents pending



BRACKET ARRANGEMENT

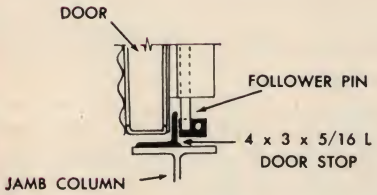


DOOR FRAMING WITH LONG SPAN JOIST

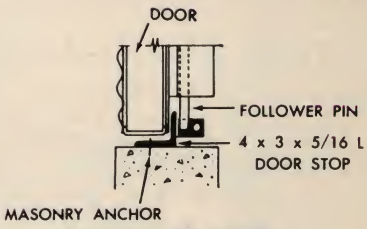


DOOR FRAMING WITH WOOD ARCH

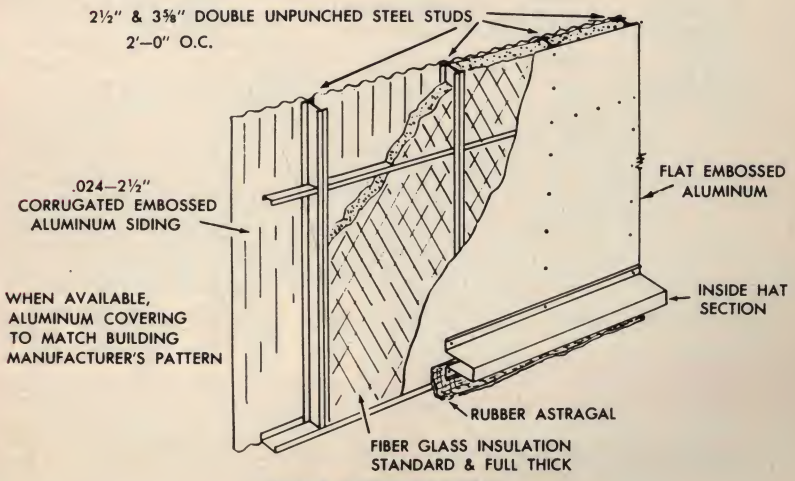
INSTALLATION DETAILS



SECTION AT JAMB (STRUCTURAL)



SECTION AT JAMB (MASONRY)


2½" & 3⅝" DOUBLE UNPUNCHED STEEL STUDS 2'—0" O.C.
.024—2½" CORRUGATED EMBOSSED ALUMINUM SIDING
WHEN AVAILABLE, ALUMINUM COVERING TO MATCH BUILDING MANUFACTURER'S PATTERN
FLAT EMBOSSED ALUMINUM
INSIDE HAT SECTION
RUBBER ASTRAGAL
FIBER GLASS INSULATION STANDARD & FULL THICK

DOOR COMPOSITION

MOSHER

ELECTRICALLY OPERATED

DOORS

SUGGESTED SPECIFICATIONS

general

Door where shown on drawing shall be a free operating door of the bifold type without counterweights, balance springs, or tracks, electrically operated to swing upward and downward, to provide a projecting canopy when in open position; all as manufactured by Mosher Manufacturing Company of Minneapolis, Minnesota, or as approved by architect.

construction

frame Frame sections shall be of uniform quality structural grade steel conforming to ASTM specifications, Designation A-245, but with minimum yield point of 40,000 psi instead of 33,000 psi. All sections to be treated with rust resisting red oxide or red zinc chromate paint.

surface covering Door frame shall be covered on both sides with corrugated embossed aluminum (with sheets as furnished by building manufacturer to match building exterior).

insulation Door shall be insulated with fiber glass insulation between surface coverings.*

dimensions Dimensions shall be as shown on Drawing.

operator Door shall be raised and lowered by means of a steel cable or cables wound on a drum or drums and passed through a pulley by a three-position manual switch located as indicated on drawing. Operator shall permit door to be positively locked in position at any degree of door opening. No counterweights or balance springs shall be employed.

access or walk-in door* Access or walk-in door shall be provided in lower section of door as shown on Drawing and shall be of dimensions shown on Drawing.

glazing* Door shall be glazed as shown on Drawing with clear window glass of standard commercial quality (with corrugated, translucent plastic of high impact strength).

installation Door shall be installed by Contractor. (Installation shall be supervised by door manufacturer)*

*Optional at modest additional cost

INFORMATION NEEDED ON INQUIRIES

Every Mosher door is individually engineered to the requirements of the building in which it's going to be used. To provide specific information about your planned installation, we shall need the following data. (See page 3 for installation details.)

Construction: metal ____ frame ____ masonry ____
other ____
Roof: flat ____ gable ____ round ____ other ____
Height of opening: ____ Width of opening: ____
Desired clearance height (door open): ____
Is walk-in door desired? ____
Number of glazed openings desired: ____
Glazing material to be used: ____
Insulation required: ____

OUR BEST SALESMEN ARE SATISFIED USERS

There is no more persuasive salesman than a satisfied customer—and of salesmen like this Mosher has a host. Mosher doors are in constant use on buildings large and small, from one end of the land to the other. You, too, can specify a Mosher door with confidence if you know that users recommend and approve Mosher installations. Listed below are only a few of the many cities and towns where Mosher doors are being used every day.

ALASKA
Anchorage
Bethel
Fairbanks

CALIFORNIA
Oakland

CANADA
Fort William
Montreal

FLORIDA
Sarasota
Miami

ILLINOIS
Carlinville
Chicago
Crystal Lake
Decatur

ILLINOIS—cont.
Elgin
Libertyville
Mount Vernon
Palestine
Salem

INDIANA
Anderson
Fort Wayne
Kokomo
Lafayette

IOWA
Cedar Falls
Decorah
Maquoketa
Mason City
Riceville
Waterloo

KANSAS
Kansas City
Lawrence
Saratoga

LOUISIANA
Shreveport

MAINE
Augusta
Greenville

MARYLAND
Fort Meade
Washington, D.C.

MICHIGAN
Alma
Benton Harbor
Detroit
Grand Ledge

MICHIGAN—cont.
Lansing
Midland
Pontiac

MINNESOTA
Albert Lea
Brainerd
Minneapolis
New Ulm
St. Cloud
St. Paul

NEBRASKA
North Brunswick
Omaha

NEW JERSEY
Morristown

NEW YORK
Olean
Syracuse

NEW MEXICO
Encino

NORTH DAKOTA
Starkweather
Williston

OHIO
Austinburg
Cincinnati
East Liberty
Marion

PENNSYLVANIA
Aliquippa
Beaver Falls
Harrisburg
Pottstown

SOUTH DAKOTA
Esmond
Pierre

TEXAS
Austin
Big Spring
Houston
Kerrville

VERMONT
North Springfield

WISCONSIN
Fond du Lac
La Crosse
Madison
Osceola

WYOMING
Pinedale

MOSHER
MANUFACTURING COMPANY

421 N. E. JOHNSON ST. • MINNEAPOLIS 13, MINN.

PHONE: FEderal 9-4776

HOUSTON, TEXAS

MINNEAPOLIS, MINNESOTA

ANCHORAGE, ALASKA

SIOUX CITY, IOWA

HOUSTON, TEXAS

FREMONT, MICHIGAN

A.I.A. File No. 16-D

Peelle Hangar Doors nearing completion in the TWA jet transport maintenance hangar at New York International Airport

PEELLE *Hangar Doors*

THE PEELLE COMPANY, 47 Stewart Avenue, Brooklyn 37, N. Y.

A.I.A. File No. 16-D

TWA JETLINER SERVICE HANGAR, NEW YORK INTERNATIONAL AIRPORT

ENGINEERS: AMMANN & WHITNEY • GENERAL CONTRACTORS: GROVE, SHEPHERD, WILSON & KRUGE, INC.

Hangar Doors for the Huge New Jet Planes Pose Many Engineering Problems

Large individually designed doors of all kinds have long been a Peelle specialty. For this reason, it is natural that The Peelle Company has been repeatedly called in to work on hangar door problems since the early beginnings of the aviation industry. This type of work led to a great deal of experience in the motorization of doors and the transmission of power in the most practical and efficient manner to assure quick easy opening and closing with trouble-free performance under all sorts of conditions.

While Peelle has applied many types of motorized operation to hangar doors, the illustrations on these pages cover only three of them as applied to horizontal sliding doors. They are: (1) The individual leaf operator. (2) The multiple leaf operator in the lead or center panel. (3) The multiple leaf operator mounted in the door pocket driving by chain to lead or center panel. In the second and third operator arrangements an interrope system transmits motivating power to the remaining door leaves.

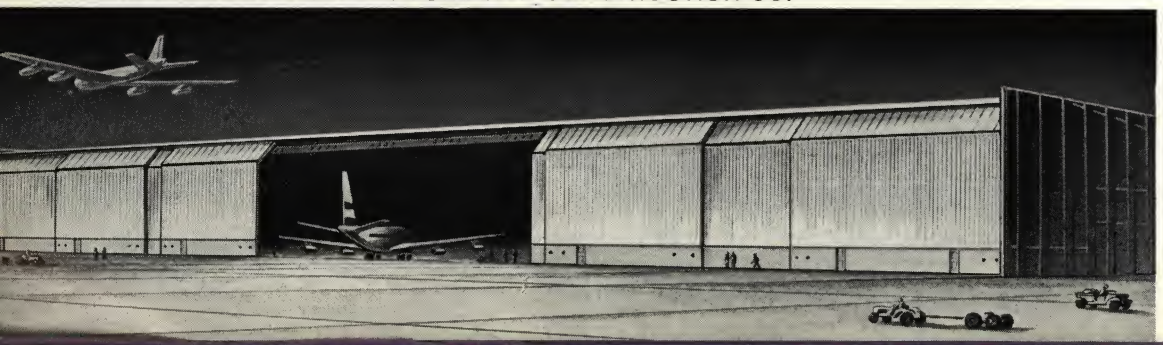
The motorization of huge doors like these, however, is only part of the problem. Such doors require engineering that goes far beyond the simple matter of filling openings. The basic problem is to integrate the doors with the structure for functional efficiency. This entails the construction of hangars designed to support door loads and to allow space for the door and its controls.

For this reason, those who are directly concerned with the design of hangars find that it is extremely advantageous to call in The Peelle Company at the *beginning* of the planning stage. This enables the Peelle engineering department to work along with the designers to produce the most satisfactory doors that can be engineered into the main structure before it is too late to adapt the design of the hangar to accommodate the doors.

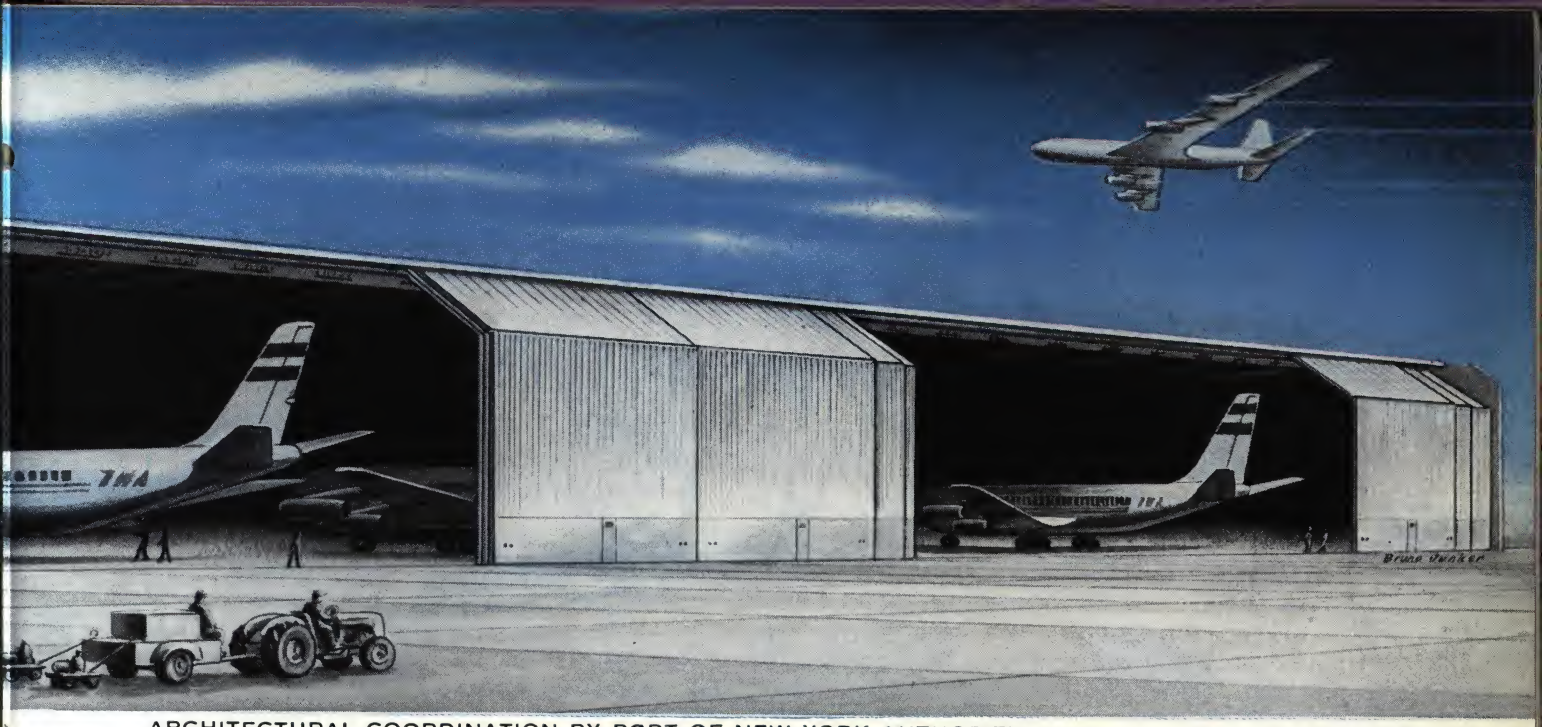
The computation of wind loads, the selection of materials and the structural excellence of hangar doors are all matters that receive careful consideration by the Peelle engineering department.

Inquiries are invited from architects and engineers who are planning the construction of aviation hangars. Peelle engineering offers a wealth of practical know-how and the resourceful solution of problems. Peelle hangar door engineering is of the greatest value to those who utilize it before plans on the main structure are too far advanced.

PAN AMERICAN HANGAR AT THE NEW YORK INTERNATIONAL AIRPORT
ARCHITECT: CHESTER L. CHURCHILL • ENGINEERS: AMMANN & WHITNEY
GENERAL CONTRACTORS: CORBETTA CONSTRUCTION CO.



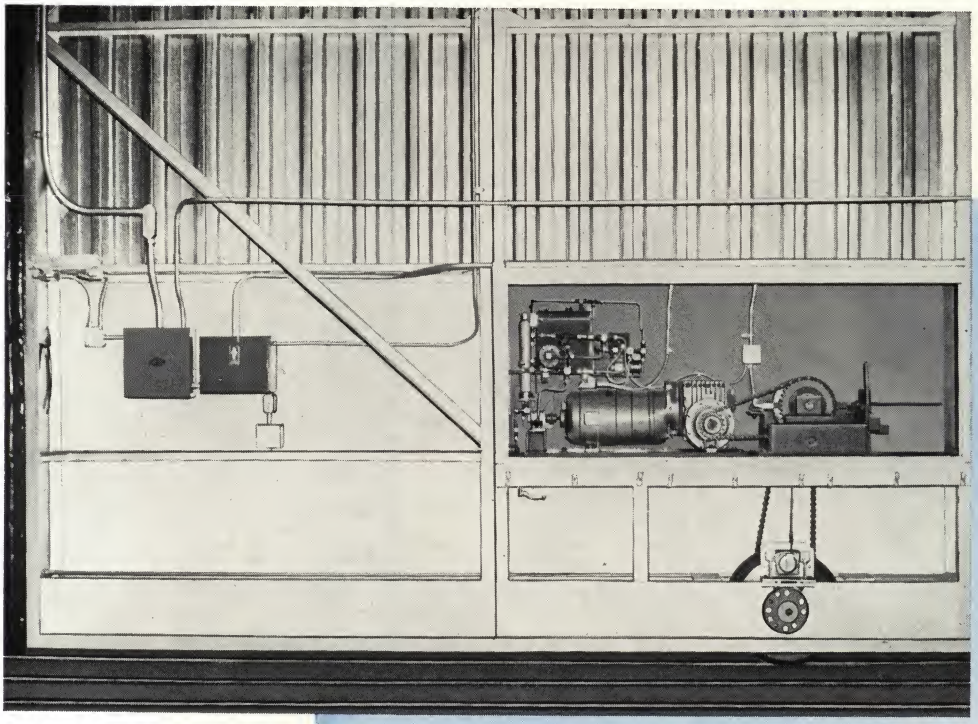
At left is the Pan American World Airways jetliner maintenance hangar, Hangar #14, New York International Airport. This hangar has a cantilever roof design and door panel arrangement similar to the TWA Hangar #12 described above, except the hangar openings are 639'-6" long, by 52'-2⅜" high. Each hangar is equipped with eight door panels operating individually on a pair of parallel tracks.



ARCHITECTURAL COORDINATION BY PORT OF NEW YORK AUTHORITY

TWA jetliner service hangar, Hangar #12, New York International Airport, is illustrated above. This building consists of two hangars with a cantilever roof construction producing an opening size of 819'-2" long x 48'-8½" high. Inasmuch as the hangar roof is of a cantilever design with a total upward and downward deflection of 30" due to changes in temperatures and loads, the hangar access doors were designed with vertical panels and inclined panels to compensate for this deflection. The twelve doors to each hangar opening are arranged to operate in groups of three with an operator in each panel.

16h
Pe



STRUCTURAL DETAILS OF TWA HANGAR DOORS

Photograph at left shows a partial interior elevation of the hangar access doors. The door panels were constructed of structural steel channel framing in convenient sizes for shipment and assembly at the job site. The lower seven feet of the door panel exterior covering is a twelve-gauge flat steel sheet with the balance of the vertical facing on the door panels, fluted aluminum siding on the TWA hangar and fluted galvanized steel on the Pan American hangar on opposite page. This facing material is easily varied to suit the individual preferences of architects or owners.

The photograph shows the bottom support wheel equipped with a floating brake disk with a hydraulically operated spot brake. The stopping distance of the door panel is determined upon the pressure applied to the brake, which is easily adjusted to increase or shorten the brake-stopping distance. This driven wheel is motivated by the integral motor, fluid coupling, gear reduction unit through an intermediate jack shaft assembly. This assembly is designed to permit disengagement of the motor drive so as to facilitate operation of the doors by either a crank handle operator or a tow bar, in the event of power failure. The jack shaft assembly is also equipped with a torque-limiting device to control the amount of tractive force applied to the wheels in the event of an obstruction in the path of the door.

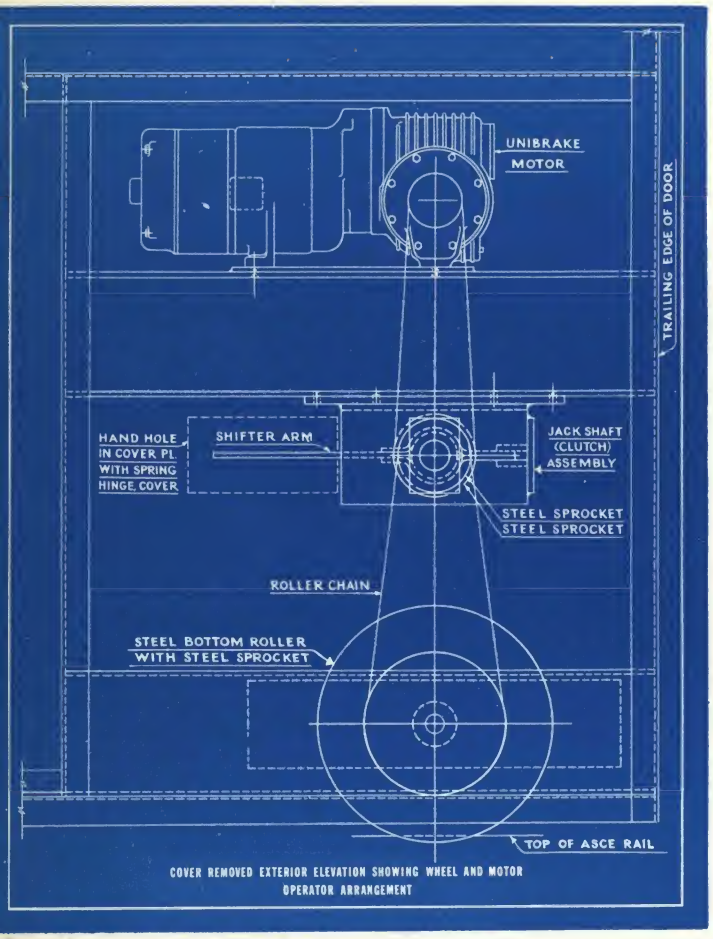
Pressure in the hydraulic system is obtained by the pump attached to the high speed shaft of the motor with all auxiliary hydraulic equipment necessary to make a complete installation and the pressure maintained by an accumulator.

All electric controls are mounted on the door panel and receive their power supply from a fixed overhead, copper bars and sliding trolley.

To the left of the photograph is shown a leading edge of the door panel equipped with a soft, sensitized leading edge arranged to stop the door if it should come in contact with an obstruction.

The adjacent architectural rendition depicts the hangar door installation at the Aviation Trades High School in Queens, New York City, showing a scheme of center parting doors with the tractive power brought to the center leaves and transmitted to the adjacent leaves by a set of interconnecting cables, arranged to start all panels moving simultaneously and arriving in their fully opened or closed position at the same instant.

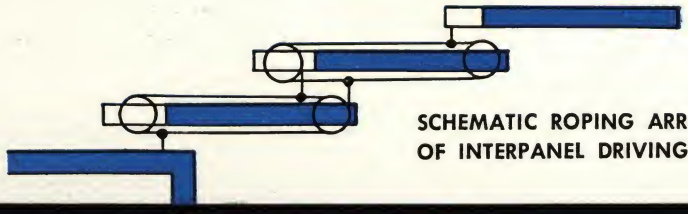
AVIATION TRADES HIGH SCHOOL HANGAR, QUEENS, N. Y.
ARCHITECTS: CHAPMAN, EVANS, DELAHANTY



COVER REMOVED EXTERIOR ELEVATION SHOWING WHEEL AND MOTOR OPERATOR ARRANGEMENT

SCHEMATIC DRAWING SHOWING OPERATION OF AVIATION TRADES HIGH SCHOOL HANGAR DOORS

Drawing at left shows a traction drive operator with an integral motor brake and gear head unit driving a jack shaft assembly which drives the leading wheel of the center panel by means of the chain and sprocket arrangement. This jack shaft assembly is equipped with means for manual operation by tractor. As in the photograph on the previous page, all electrical controls are mounted within the panel and the power brought to the panel in a similar fashion. An alternate method of power operation would be to re-rope the driving chain to provide power to both wheels of the center panel, thus doubling the tractive effect of the doors.



SCHEMATIC ROPING ARRANGEMENT OF INTERPANEL DRIVING CABLES

PARTIAL LIST OF RECENT PEELLE HANGAR DOOR INSTALLATIONS

U.S. AIR FORCE
Bradley Field, Windsor Lock, Conn.

C. A. A. CENTER
Will Rogers Airport, Okla. City, Okla.

U. S. A. F. BASE
Minot, North Dakota

GREATER ROCKFORD AIRPORT AUTHORITY
Rockford, Ill.

AVIATION TRADES HIGH SCHOOL
Long Island City, N. Y.

GEORGE M. BREWSTER & SONS
Teterboro, New Jersey

U. S. A. F. ELLSWORTH A. F. BASE
Elder, South Dakota

WIEN ALASKA AIRLINES
Fairbanks, Alaska

U. S. N. MAINTENANCE HANGAR
Forest Sherman Field, Pensacola, Florida

U. S. A. SUFFOLK COUNTY, A. F. B.
Westhampton, L. I., N. Y.

HANGAR #7 (LOCKHEED)
New York International Airport

BROOME COUNTY AIRPORT
Mt. Ellric, New York

U. S. N. AIR STATION
Memphis, Tenn.

U. S. N. AIR STATION
Willow Grove, Penna.

U. S. A. AIRPLANE HANGAR
Fort Sill, Okla.

U. S. A. F.
Lowry Field, Denver, Colo.

DOUGLAS AIRCRAFT COMPANY
Tulsa, Okla.

U. S. A. F.
Scott Field, Belleville, Ill.

U. S. N. AIR STATION
Buckley Field, Denver, Colo.

THE PEELLE COMPANY

47 Stewart Avenue, Brooklyn 37, N. Y. • Telephone: EVergreen 6-7600

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Phone: Independence 3-4493	Phone 8-1606	Phone Locust 7-5605	N. Hollywood Phone: Hollywood 4-5820

ENGINEERED FOR THE BUILDING INDUSTRY
PEELLE-RICHMOND PRODUCTS

Printed in U.S.A.

Richards-Wilcox

INDUSTRIAL and COMMERCIAL DOORS
DOOR HARDWARE and OPERATORS

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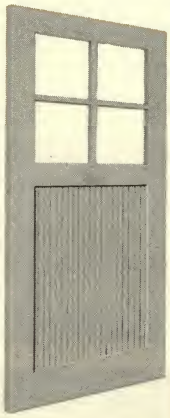
branch offices	12

RICHARDS-WILCOX
Manufacturing Company
AURORA • ILLINOIS

wood doors

"STA-RITE" No. 546



The "Sta-Rite" door is an all-purpose door for commercial and industrial openings. The panels are built up of clear grade narrow tongue-and-grooved strips of wood nailed together every 4". This type of laminated door panel will overcome excessive shrinking and swelling. The framework of the door is solid and varies from 1¾" to 3" in thickness. Exceptionally large doors may be built in sections and bolted together. Wicket doors not exceeding 3'0" wide by 7'0" high may be used.

recommended sizes

door thickness	sliding doors horizontal or vertical lift	swinging doors	folding doors
1¾" or 2¼"	width to 8'2"	to 3'6"	to 2'6"
	height to 8'1"	to 8'0"	to 10'0"
2¼" or 2½"	width 8'3" to 12'2"	3'7" to 5'0"	2'7" to 4'0"
	height 8'2" to 10'1"	8'1" to 16'0"	10'1" to 16'0"
2½" or 2¾"	width 12'3" to 22'0"	5'1" to 7'0"	4'1" to 5'0"
	height 10'2" to 16'1"	16'1" to 22'0"	16'1" to 22'0"

note:

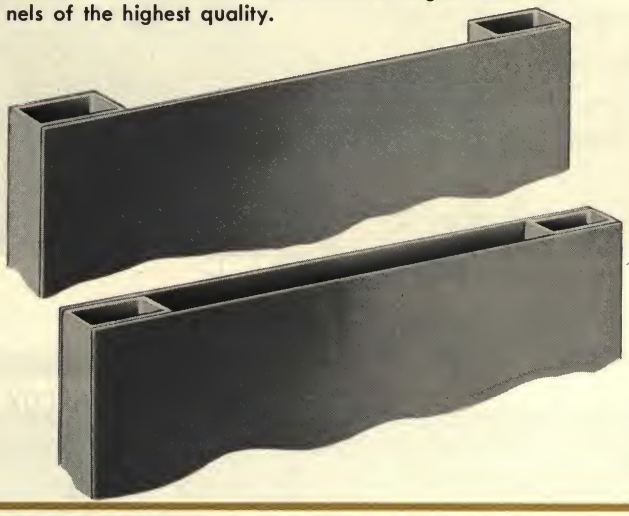
door thickness	weight per sq. ft.	panel thickness
1¾"	3 lbs.	13/16"
2¼"	5 lbs.	1⅛"
2½"	6 lbs.	1⅛"
2¾"	6½ lbs.	1⅛"

"SUPER-WAY" No. 448

This rugged door is for all types of openings ranging in sizes from the smaller Commercial to the larger Industrial and airplane hangar openings.
Doors over 4' in width have tee bars welded both vertically and horizontally inside the frame . . . helping to provide greater rigidity for the longer lifetime of the doors.

steel doors

The Richards-Wilcox No. 800 series doors opens a new conception in door construction. The photos illustrate the versatility of these doors. These doors are suitable for R-W Hardware and can be used for straight sliding, slide-fold hinged, or vertical-lift installations.
Richards-Wilcox features a wide range of standard sizes and designs while providing the finest in door engineering. The doors are constructed of top quality cold formed steel tubing, cold rolled sheets; flatness stretcher level standard and structural angles or channels of the highest quality.



All doors are capable of being insulated for various conditions . . . contact home office for details.

reinforcing

Suitably reinforced according to size of door and type of hardware.

shop painting

Before shipment, doors to receive a coat of rust-inhibitive primer.

R-W No. 872 (Plate one side)

Frame: 2½ x 4 in. x 14 ga. cold formed steel tubing.
Face: 14 ga. cold rolled sheets; flatness stretcher level standard.
Construction: Mitered frame, welded. All corners and intersections ground smooth. Face rigidly attached to frame by welding. All joints in face to occur over reinforcing members.

R-W No. 873 (Plates both sides)

Frame: 2½ x 4 in. x 14 ga. cold formed steel tubing.
Face: 14 ga. cold rolled sheets; flatness stretcher level standard.
Construction: Mitered frame, welded. All corners and intersections ground smooth. Faces rigidly attached to frame by welding. All joints in faces to occur over reinforcing members.

All wood parts of each door are treated with a high quality wood preservative for longer life of the doors. Doors can be supplied with standard size sash, if desired. Glass not included.

application and hardware

"SupeR-Way" doors are suitable for any R-W Hardware combination and can be used for straight sliding, slide-fold, hinged, or vertical lift installations.

construction

The wood members are slightly rounded squared tongue and grooved wood strips, dipped in deep penetrating preservative before assembling. All wood members are nailed together in a staggered fashion for lasting durability. They are spiked every 4″ through the tongue and groove, piece by piece to each other. The spikes are thus embedded between the strips—not a spike exposed. This forms a rigid structure of unusual strength.

steel frame

Steel frame members are welded together for rigidity. For doors 1½″, 2″, and 2½″ thick . . . steel angle frames are used, while doors 3″, 4″, 5″, and 6″ thick, steel channel frames are used. All supporting hardware is attached to this steel frame . . . steel to steel contact.

finish

Entire door is factory finished with one coat of gray enamel.

recommended sizes

frame	panel thickness	maximum size: sliding doors	maximum size: swinging doors	maximum size: folding doors	weight per square foot
1½″ angle	1⅛″	8′4″ x 8′2″	3′0″ x 8′0″	4′0″ x 8′0″	5 lbs.
2″ angle	1⅛″	10′8″ x 10′2″	5′0″ x 10′0″	4′0″ x 10′0″ or 3′6″ x 12′0″	6 lbs.
2½″ angle	1¾″	8′8″ x 14′2″ 10′8″ x 12′2″ one section or 21′0″ x 12′2″, two sections	6′0″ x 12′0″	4′0″ x 16′0″	8 lbs.
3″ channel	1¾″	8′8″ x 16′2″, 10′8″ x 15′0″, one section or 21′0″ x 15′0″, two sections	6′0″ x 16′0″	4′6″ x 22′0″	9 lbs.
hangar type doors—20 lbs. per sq. ft. wind pressure					
4″ channel	1¾″	10′4″ x 19′0″ or 12′4″ x 17′6″			10 lbs.
5″ channel	1¾″	10′4″ x 24′0″ or 12′4″ x 22′0″			11 lbs.
6″ channel	1¾″	12′4″ x 26′0″			12 lbs.

R-W No. 874 (Center panel)

No. 874-1 (1¾″ thick).
Frame: 1¾″ x 5 in. x 16 ga. cold formed steel tubing.
No. 874-2 (2½″ thick).
Frame: 2½ x 4 in. x 14 ga. cold formed steel tubing.
Panels: 14 or 16 ga. cold rolled sheets; flatness stretcher level standard.
Construction: Welded frame, all corners mitered and ground smooth. Panels to be held in place by continuous steel retaining angles.

R-W No. 875 (Plate one side)

Frame: Structural angles or channels as determined by size of door.
Face: 14 ga. cold rolled sheets; flatness stretcher level standard.
Construction: Welded structural frame. Face attached to frame by spot welding (or by machine screws). All joints in face occur over reinforcing member.

R-W No. 876 (Plates both sides)

Frame: Structural angles or channels as determined by size of door.
Face: 14 ga. cold rolled sheets; flatness stretcher level standard.
Construction: Welded structural frame. Faces rigidly attached to frame by welding. All welds on face of door ground smooth. (Alternate: faces attached by machine screws). All joints in faces to occur over reinforcing members.

NOTE: Any of the No. 800 series of doors can be supplied with standard size sash, if desired. Glass not included.

fire doors

"FYER-WARD" flush fire door No. 647

Suitable for A, B, C, D, E or F locations

This door presents entire flush surfaces on both sides made up from 22 gauge galvanized steel panels about 10" wide, extending the full height of the door. The door panels are channel shaped interlocking members, the flanges extend through the full thickness of the door, serving as stiffening reinforcements. Steel rods extend through the door horizontally through holes in the flanges of the channels, serving to unite the two sides into a rigid construction. A sheet of corrugated asbestos is installed between the metal sheets, providing not only the insulating qualities of the asbestos, but also forming two air spaces inside the door.
These doors are 1-13/16" thick and weigh 5 pounds per square foot.

A finished fire door installation No. 1647

For swinging doors only
For class B, C, D, and E openings (not class A)

No. 1647 is a No. 647 door prepared for hardware and mortise lock. It is applicable for use with a number of finished, approved hardware and frame combinations.
Single installations are for openings not more than 4 x 8 ft. and doors in pairs for openings not more than 8 x 8 ft. Doors are mounted flush.

"FYER-WALL" corrugated fire door No. 347

This door consists of two thicknesses of corrugated sheet steel with a layer of sheet asbestos between. The corrugations on the exposed side of the door are vertical and on the wall side are horizontal.
The sides and the top of the frame are heavy, exposed rolled steel angle, with the edge of the corrugated sheet on the exposed side of the door formed around the inside of the angle. The bottom of the frame is a heavy tee bar with the corrugated sheets fitted over the stem of the tee bar so no pockets are formed at the bottom of the door which would collect dirt, and also sheds water. The sides, top and bottom of the frame are securely welded together making a door of unusual ruggedness and rigidity.
These doors are 2½" thick and weigh approximately 5 pounds per square foot.

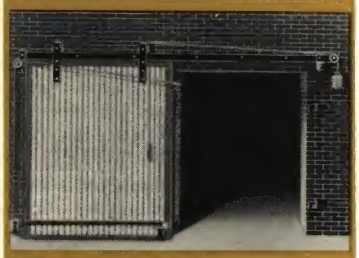
Tin clad fire door No. 446

Standard No. 446-2 (1¾") doors (max. 4' wide x 8' high) are made of two layers of tongue-and-groove lumber with one vertical and the other horizontal and weigh 6 pounds per square foot. No. 446-3 (2½") doors have 3 layers and weigh 8 pounds per square foot.

hardware sets

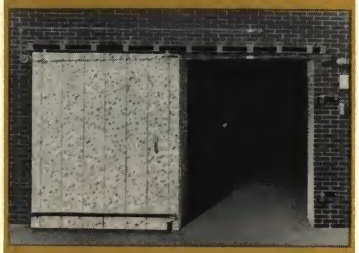
for sliding doors

No. 347 "FyeR-Wall" corrugated door shown with No. 1303 hardware set (with single door and flat track installed level).



No. 446 tin clad doors shown with No. 604 hardware set (with bi-parting doors and round track installed on incline).

No. 647 "FyeR-Ward" flush doors shown with No. 2353 hardware set (with single door and box track installed level).



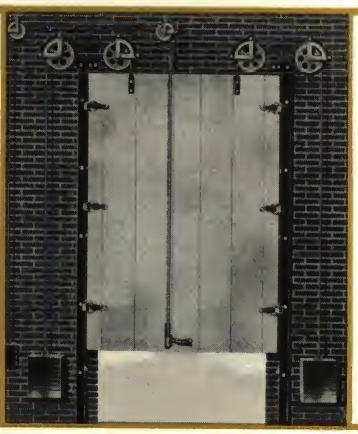
for swinging doors

Where space requirements permit, swinging doors can be used in pairs or singly. Any of the three R-W Fire Doors ("FyeR-Ward," "FyeR-Wall", Tin Clad) can be used with the corresponding hardware sets. These doors and hardware sets are suitable for any type door frame.

for vertical-lift doors

one section vertical-lift doors

For use where there is not sufficient sidewall space for sliding doors. Hardware sets are available with one or two sets of large weights.
Headroom required—One set of weights—21½" plus height of opening. Two sets of weights—22½" plus height of opening.
Sidewall requirement—One set of weights—15" on one side, 21" on the other. Two sets of weights—21" on one side, 28" on the other.



Hardware sets for sliding fire doors are available with three types of tracks (box, flat, or round) which may be installed on an incline or level. These hardware sets are for all three types of R-W Fire Doors ("FyeR-Wall", "FyeR-Ward", or Tin Clad). The selection of single or double doors, inclined track or level track should be determined by space requirements. The single sliding door on an inclined track is the ideal installation. Where wall space is limited the double bi-parting door on an inclined track is recommended. If there is limited headroom, a level track may be used with a single door. Where both headroom and wall space are limited, double bi-parting doors may be used with level track. In installations where headroom is extremely limited, a level track with drop brackets can be used. The doors close automatically at the approach of fire by a system of weights and fusible links. Where a single link is used it is exposed in the opening of the doorway. When double links are used, one is in the door opening exposed from both sides and the other one is near the ceiling. If either link fuses, door is released and closes by gravity or counterbalance. NOTE: Check local codes for single link acceptability.

		single door track inclined		double door track inclined	single door track level			double door track level	
		single link	double link		single link	single link (drop bracket)	double link		(drop bracket)
	type of door	catalog number of hardware set							
box track	flush (No. 647)		2351*	2352*			2353*	2354*	
flat track	tin clad (No. 446)	201*	102*	204	303*	304*	315*	302	305
	corrugated (No. 347)	1201*	1102*	1204*	1303*	1304*	1315*	1302	1305
	flush (No. 647)	2201*	2102*	2204	2303*	2304*	2315*	2302	2305
round track	tin clad (No. 446)	646*	645*	604	641*	640*		602	605
	corrugated (No. 347)	1646*	1645*	1604	1641*	1640*		1602*	1605
	flush (No. 647)	2646*	2645*	2604	2641*	2640*		2602	2605

* Included on list of fire door hardware inspected by the Underwriters' Laboratories, Inc., sponsored by the National Board of Fire Underwriters. Also approved by the Factory Mutual Laboratories.

for single doors

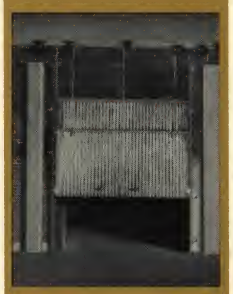
No. 406 for tin clad doors
No. 1406 for "FyeR-Wall" corrugated doors
No. 2406 for "FyeR-Ward" flush doors
These hardware sets can be used with any of the following door frames: channel frame, frame in the face of the wall, rabbeted angle frame, lap door.
Headroom required—9" above the top of door.
Sidewall requirement—On hinge side 11" beyond door. On latch side 4" beyond door.

for pairs of doors

No. 506 for tin clad doors
No. 1506 for "FyeR-Wall" corrugated doors
No. 2506 for "FyeR-Ward" flush doors
These hardware sets can be used with any of the following door frames: channel frame, frame in the face of the wall, rabbeted angle frame, lap door.
Headroom required—10" above the top of door.
Sidewall requirement—11" on each side of the doors.

one section vertical lift

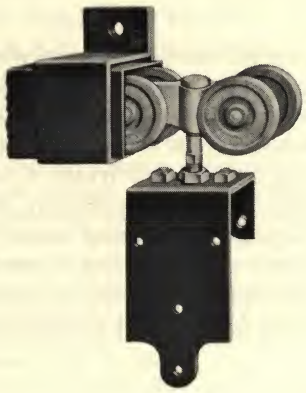
	hardware sets using 1 set of large weights			hardware sets using 2 sets of large weights		
type of door	max. width of opening	max. height of opening	hardware catalog no.	max. width of opening	max. height of opening	hardware catalog no.
tin clad (No. 446-2)	10′	2′	203-21	10′	6′	203-22
tin clad (No. 446-3)	6′8″	3′	203-31	10′	7′	203-32
corrugated (No. 347)	5′	4′	1203-1	10′	8′	1203-2
flush (No. 647)	4′	5′	2203-1	8′10″	9′	2203-2
				8′	10′	
tin clad (No. 446-2)	8′	6′	103-21	12′	7′	103-22
tin clad (No. 446-3)	7′	7′	103-31	11′	8′	103-32
corrugated (No. 347)	6′	8′	1103-1	10′	9′	1103-2
flush (No. 647)	5′	9′	2103-1	9′	10′	2103-2
	4′6″	10′		8′	11′	
				7′	12′	



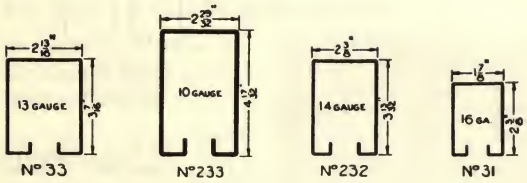
two section vertical lift doors

No. 402 for tin clad doors
No. 1402 for "FyeR-Wall" corrugated doors
No. 2402 for "FyeR-Ward" flush doors
For use where there is not sufficient headroom for one section vertical doors.
Headroom required—One-half height of opening plus 19"
Sidewall requirement — Doors weighing less than 300 lbs.—22" on one side, 16" on the other. Doors weighing more than 300 lbs.—22" on one side, 30" on the other

hardware sets for sliding doors

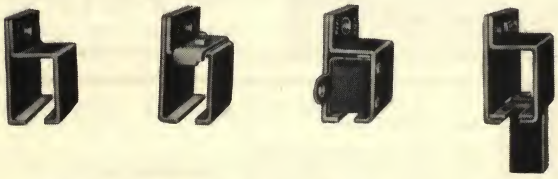


Lock-joint trolley track



R-W Lock-Joint Trolley Tracks are made in seven sizes and types to meet the requirements of varying door sizes. All R-W tracks are made for use with the R-W Lock-Joint Bracket to assure positive alignment and prevent separation of track sections at joints.

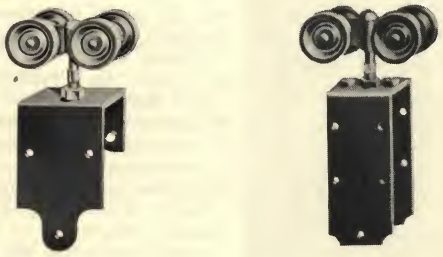
Brackets



No. 1 No. 39 No. 2 No. 12

The Lock-Joint Bracket is fitted with a clamp which fits into slots in the ends of each length of R-W Lock-Joint Track, forcing track ends squarely and tightly together in a perfect, permanent joint. Illustrated above are the Lock-Joint Bracket, No. 2 End Bracket, and No. 1 Center and No. 12 Center stop Brackets.

Hangers



R-W Hangers are made in both roller bearing and ball bearing types, as illustrated. Either type is available with the complete hardware sets described in the next column.

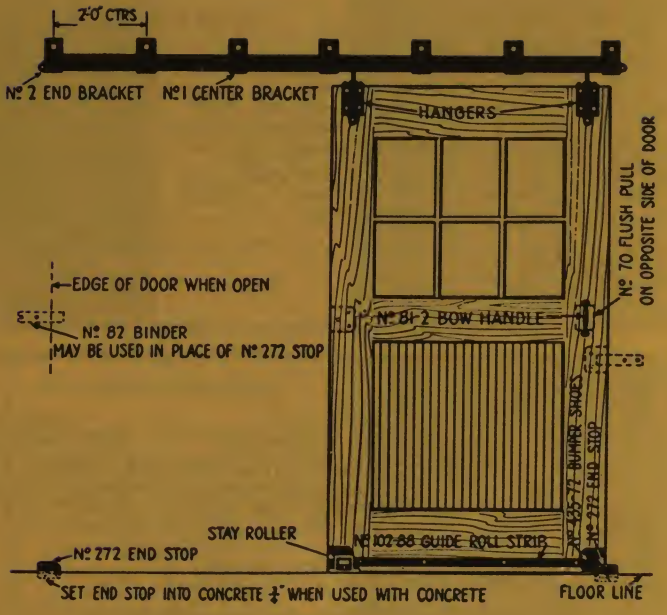
Richards-Wilcox Hardware for straight sliding doors, single or double, is furnished in complete sets as listed below. Each piece in each set is designed for strength, and for lasting, trouble-free service. To order specify catalog number, door construction, and width of opening.

complete sets contain the following hardware:

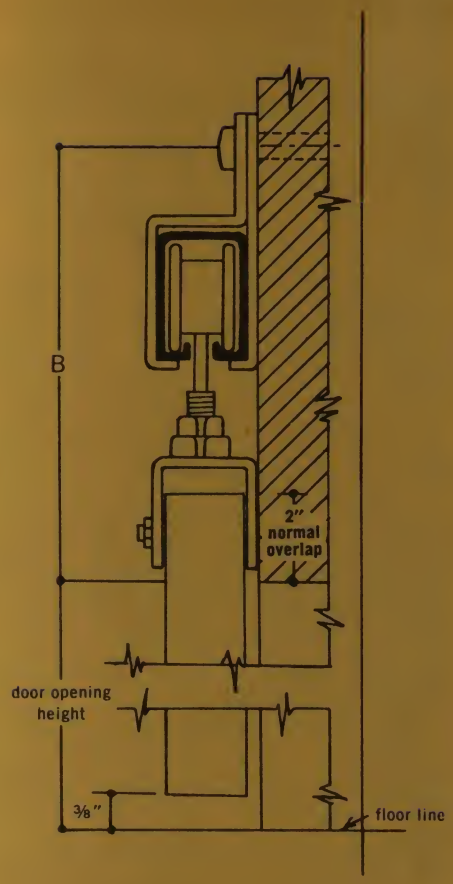
single doors	double doors
1 pair hangers	2 pair hangers
lock-joint trolley track*	lock-joint trolley track*
2 end brackets (No. 2)	2 end brackets (No. 2)
lock-joint brackets (No. 39)*	lock-joint brackets (No. 39)*
center brackets (No. 1)*	center brackets (No. 1)*
1 bow handle	1 center stop bracket (No. 12)
1 flush pull	2 bow handles
4 bumper shoes	2 flush pulls
2 floor end stops**	8 bumper shoes
1 stay roller	2 floor end stops**
guide roll strips*	1 center floor guide
	2 stay rollers
	guide roll strips*

* Specify the width of opening and the required amount will be included in the set.

** Wall binders (No. 82) will be furnished instead of floor end stops if so specified.

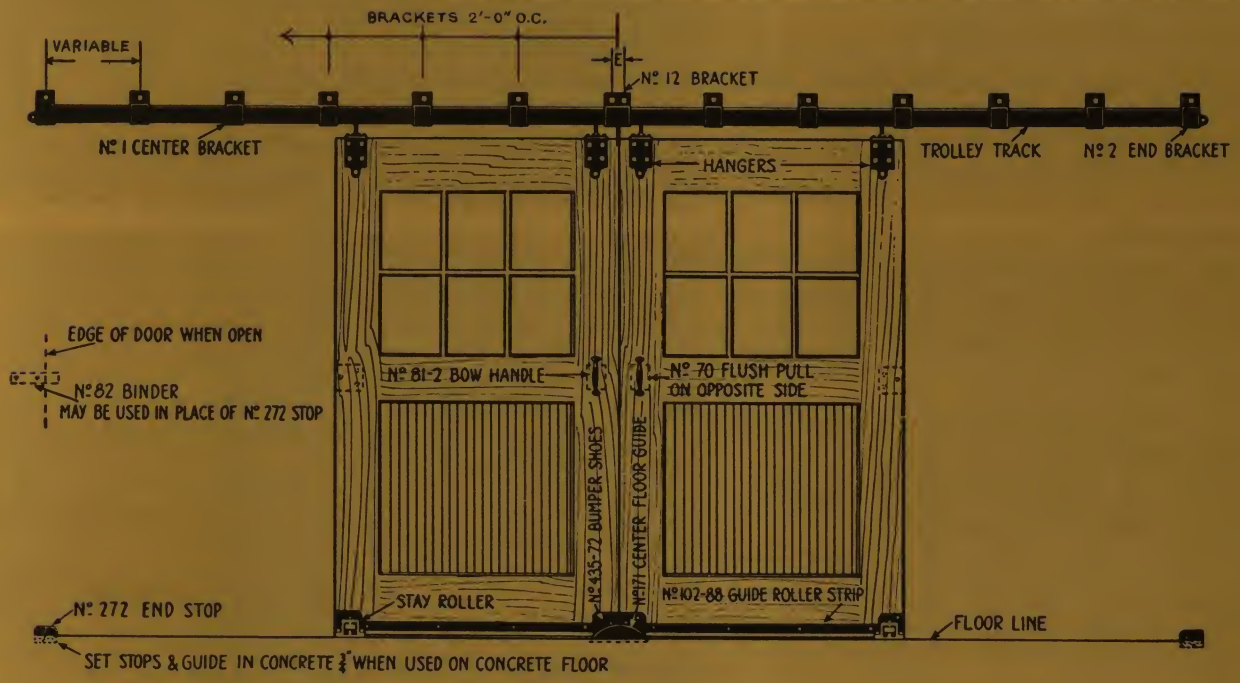

2'-0" CTRS
N° 2 END BRACKET
N° 1 CENTER BRACKET
HANGERS
N° 70 FLUSH PULL ON OPPOSITE SIDE OF DOOR
EDGE OF DOOR WHEN OPEN
N° 82 BINDER MAY BE USED IN PLACE OF N° 272 STOP
N° 81-2 BOW HANDLE
N° 45-77 BUMPER SHOES
N° 272 END STOP
STAY ROLLER
N° 272 END STOP
N° 102-88 GUIDE ROLL STRIP
SET END STOP INTO CONCRETE ¾" WHEN USED WITH CONCRETE
FLOOR LINE

Hardware sets for single sliding door



weight of each door pounds	door thickness inches	hanger type	catalog number of hardware sets: single door	catalog number of hardware sets: double door	diameter of bracket bolt inches	E* bolt hole centers No. 12 bracket inches	B top of opening to center of bracket bolt hole inches
300	1¾-2½	ball-bearing	1020½	2020½	½	2¾	7 1/16
300	1¾-2		1027½-1	2027½-1			
300	2¼-2¾		1027½-2	2027½-2			
400	1¾-2		1028½-1	2028½-1	½	2¾	8 3/16
400	2¼-2¾		1028½-2	2028½-2			
600	1¾-2		1029½-1	2029½-1	⅝	2¾	8¾
600	2¼-2¾		1029½-2	2029½-2			
800	1¾-2		1150½-1	2150½-1	¾	2¾	9
800	2¼-3		1123½-1	2123½-2			
800	2¼-3½		1123½-2	2150½-2			
			1150½-2				
1200	1¾-2		1499- 1	2499- 1	¾	3	10
1200	2¼-3½		1499- 2	2499- 2			
2000	1¾-2¼		1598- 1	2598- 1	¾	3¼	10¾
2000	2½-3¼		1598- 2	2598- 2			
2000	3½-4¼		1598- 3	2598- 3			
2500	1¾-4¼		1888-13	2888-13	¾	—	13 13/16
300	1¾-2½	roller-bearing	1020- 2	2020- 2	½	2¾	7 1/16
300	1¾-2		1025- 1	2025- 1			
300	2¼-2¾		1025- 2	2025- 2			
400	1¾-2		1028- 1	2028- 1	½	2¾	8 3/16
400	2¼-2¾		1028- 2	2028- 2			
600	1¾-2		1029- 1	2029- 1	⅝	2¾	8¾
600	2¼-2¾		1029- 2	2029- 2			
800	1¾-2		1150- 1	2150- 1	¾	2¾	9
800	2¼-3		1121- 1	2121- 2			
800	2¼-3½		1121- 2	2150- 2			
			1150- 2				

NOTE: If hardware is required for STEEL DOORS, give complete description of door.
* Double doors only.



Hardware sets for double sliding doors

industrial swing door hardware

Richards-Wilcox offers a complete line of industrial hardware for swinging doors. Hardware is available for either wood or steel doors, from small garage doors to large roundhouse shop doors. R-W Hardware sets can be furnished for any installation . . . large or small. Richards-Wilcox standard duty industrial hinges and hardware sets are designed and constructed for long lasting service.

R-W No. 1035 and 1045 are surface mounted hinges used for garage, warehouse, factory or other industrial type doors. Available in disc or ball bearing construction.

R-W No. 1036 hinges are mortised pintle type designed for use on large swing doors. Available in disc or ball bearing construction.

R-W No. 1040 is a surface type hinge used with any of the above hinges for swing or swing-fold doors. Available in disc or ball bearing construction.

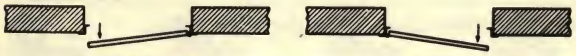
R-W No. 1039 is a universal type hinge for surface or mortised type mounting used for general type applications.

Richards-Wilcox No. 434 heavy duty hinges are designed and constructed for use on large industrial wood or steel doors demanding durable hardware. They can be furnished in a variety of styles to meet any jamb conditions. No. 434 hinges are available in disc or ball bearing construction.

To Specify:

Furnish Richards-Wilcox No. _____ hinges for opening _____ ft. wide, _____ ft. high, door _____ inches thick, weight _____, hand of door is _____, jamb construction is _____.

To determine hand of door



right hand swing left hand swing

industrial slide-fold hardware sets

Richards-Wilcox No. 1035 and 434 hardware sets are also available for slide-fold doors. These sets are of the same high quality used for sliding doors. These hardware sets with R-W doors and operators make up a 100% Richards-Wilcox installation as pictured at the right.

No. 546 wood doors equipped with No. 434 hardware

door panic bolts

The R-W 144 Panic Bolt is underwriter's approved and is designed for use on single swing doors or on the active door of a pair of swing doors. The standard bolt unit is made entirely of malleable iron and steel—rugged, heavy, and designed especially for industrial doors and fire doors.

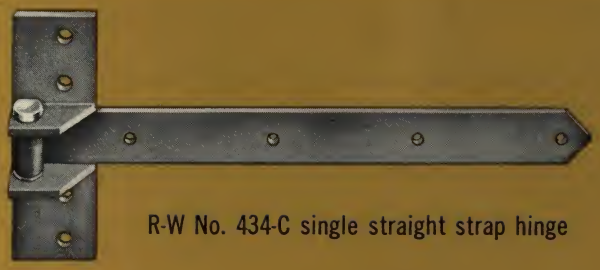
Panic Bolts of bronze construction are available for corrosive and explosive applications.

Bolts are furnished for operation from either side of door. Cylinder locks are available which will lock outer handle but will not interfere with inside operation.

The R-W 244 Panic Bolt is designed for use on one side operation of the inactive door of a pair of swinging doors, or on a single swinging door which is locked at top and bottom. When the 244 Bolt is used on the inactive door of a pair, the 144 Bolt is used on the active door.

No. 144 bolt with outside operating handle

No. 144 bolt with cylinder lock



R-W No. 434-C single straight strap hinge

R-W No. 434-B reverse pad offset hinge

R-W No. 434-J double strap flat hinge

Illustration shows hinge with disc bearings.

All No. 434 hinges are made either DB (disc bearing) like cuts, or BB (ball bearing). Straps are ⅜ x 2½ in., ⅜ x 3 in., ½ x 3 in., or ½ x 4 in., and made in any length. Other types No. 434 hinges are also available.

R-W No. 1035 and No. 1045 offset hinge with surface pintle

No. 1035 straps are 2½ in. wide and from 12 to 48 in. long. No. 1045 straps are 3 in. wide and from 30 to 48 in. long. Regularly furnished with disc bearings, but can be furnished with cadmium plated ball bearing units.

R-W No. 1036 hinge with mortise pintle

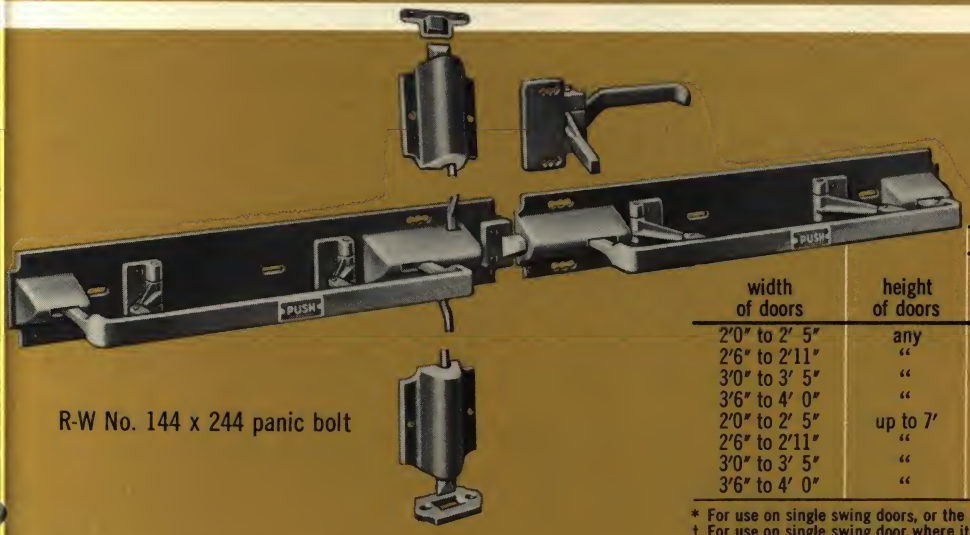
No. 1036 hinges from 10 to 24-in. lengths have straps 2½ in. wide and pintles 6 in. high. 30 and 36-in. lengths have straps 3 in. wide and pintles 7 in. high. Furnished either disc or ball bearings.

R-W No. 1039 reversible pintle hinge

The 10 and 12-in. hinges have plain bearings, and the 18 and 24-in. size have disc bearings. Can be used as a reverse pad hinge or a mortised pintle hinge.

R-W No. 1040 double strap surface hinge

For use on in-opening doors. Each leaf is 15 in. long, 2½ in. high, ¼ in. wrought steel. Furnished either disc or ball bearing as desired.



R-W No. 144 x 244 panic bolt

width of doors	height of doors	catalog number to specify for use on: wood doors or tin clad fire doors	corrugated steel fire doors or steel plate doors	R-W No. 647 fire doors
2′0″ to 2′ 5″	any	*144-24	144-1-24	144-2-24
2′6″ to 2′11″	"	*144-30	144-1-30	144-2-30
3′0″ to 3′ 5″	"	*144-36	144-1-36	144-2-36
3′6″ to 4′ 0″	"	*144-42	144-1-42	144-2-42
2′0″ to 2′ 5″	up to 7′	†244-24	244-1-24	244-2-24
2′6″ to 2′11″	"	†244-30	244-1-30	244-2-30
3′0″ to 3′ 5″	"	†244-36	244-1-36	244-2-36
3′6″ to 4′ 0″	"	†244-40	244-1-40	244-2-40

* For use on single swing doors, or the active door of a pair of swing doors.
† For use on single swing door where it is necessary to lock at top and bottom instead of the side jamb, or the standing door of a pair of swing doors. Both styles made for doors 1⅜ to 2¼″ thick. State thickness when specifying.

electric door and gate operators

Richards-Wilcox offers a complete line of top quality heavy duty electric door operators. They are not merely residential operators that were converted to industrial use but units that are specifically designed to give years and years of trouble-free service under the heavy demand and continuous use of industry. They are designed for heavy traffic and hard use.

R-W operators are designed to increase plant efficiency, employee comfort and safety. Smooth, automatic door operation assures fast, easy movement and hauling between departments . . . saves time involved in normal operation . . . . keeps doors tightly closed . . . saves heat in winter and conditioned air in the summer.

R-W electric operators provide an even, controlled door opening speed for added efficiency and safety. They are designed to give maximum door opening speeds in line with safe operation. Smooth starting and stopping provide for added safety. Doors may be instantly released to be operated manually in case of power failure.

R-W electric door operators are designed to meet all standard current characteristics. Available with standard 115v. and 230v. single phase or 208v., 220v. and 440v. three-phase electrical systems . . . other systems available on special request. We do not recommend the use of Single Phase Systems on motors above ¾ h.p.

Richards-Wilcox operators will open and close swinging . . . sliding . . . folding . . . vertical lift doors and gates. Richards-Wilcox stands ready to engineer electric operators for special applications. R-W Aut-O-Dor operators because of their outstanding quality and dependable operation, have been adapted to all types of openings. We have successfully met challenges to motorize doors, gates, roofs, windows, firewalls, chart-boards, etc. "Whether it swings, slides or folds, R-W can open it—automatically." Richards-Wilcox also offers a wide variety of remote control stations, systems and safety devices. R-W engineers have developed a line of control systems and equipment that is readily adapted to meet every requirement and provide custom door control at a minimum of cost. R-W electric operators are designed and built to fit into today's automation program. Write for catalog No. 260 Remote Control Stations and Systems.

for slide-fold doors

The No. 1500 operator consists of an instantly reversible motor, a precision made speed reduction mechanism with "V" belt and pulleys, a safety friction disc clutch, an emergency release, a fully automatic double acting limit switch and a heavy duty crank and connecting arm assembly. This operator uses the harmonic motion principle of operation that will start gradually with high torque increasing to a rapid speed in the middle of the cycle of travel, then gradually slowing down to the stop position. For detailed specifications write for catalog No. 210.

recommended capacities of No. 1500 AUT-O-DOR operators

	number of doors in opening								
	2 doors		3 doors				4 doors		
	both one way		2 one way 1 other way		3 one way		2 each way		projection of operator on door (in.) †
	1 operator		2 operators		1 operator		2 operators		
horse-power	max. area (sq. ft.)	max. wt. (lbs.)	max. area (sq. ft.)	max. wt. (lbs.)	max. area (sq. ft.)	max. wt. (lbs.)	max. area (sq. ft.)	max. wt. (lbs.)	
¼	100	500	150	750	100	500	200	1000	10
⅓	120	600	180	900	120	600	240	1200	10
*½	180	900	270	1350	180	900	360	1800	12
*¾	250	1260	375	1890	250	1260	500	2520	12
*1	300	1500	450	2250	300	1500	600	3000	12

Larger sizes available upon application.
Headroom required when doors fold one way: 8 in.
Time required to open: 6 to 9 seconds.
† When 3 doors fold one way.
* Heavy duty gear unit.

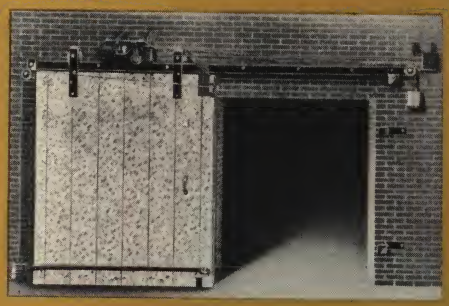
for swinging doors

The No. 1501 operator uses the harmonic motion principle of operation that will start in a gradual manner with high torque increasing to a rapid speed in the middle of the cycle of travel, then gradually slows down to the stop position. Each operator is built into a compact unit consisting of an instantly reversible motor, a precision made speed reduction mechanism with "V" belt and pulleys, a safety friction clutch, an emergency release, a fully automatic double acting limit switch and a heavy duty crank and connecting arm assembly. For complete specifications write for catalog No. 220.

recommended capacities of No. 1501 operators

	single swing door in or out (1 unit)			pair of swing doors in or out (2 units)			projection of operator from door (in.) †
	maximum			maximum			
horse-power	opening width (ft.)	area (sq. ft.)	weight per door (lbs.)	opening width (ft.)	area (sq. ft.)	weight per door (lbs.)	
¼	5	60	300	10	120	600	10
⅓	6	75	400	12	150	800	10
½	8	120	600	16	240	1200	12
¾	10	170	870	20	340	1740	12
1	12	210	1160	24	420	2320	13

Larger sizes available upon application.
Headroom required when operator is mounted: on door, 3 in.; above door, 18 in.
Time required to open door: 5 to 9 seconds.
† It is often possible to cut a pocket in side wall to give necessary clearance.



for sliding doors

No. 1265 for single doors.

No. 1266 for double doors (one operator per pair of doors). These operators consist of a right angle gearhead instantly reversible motor with magnetic brake, a safety disc clutch and a chain driven geared type automatic limit switch all built into one integral unit. Speeds are tailored to the size of the door. A simple releasing feature is supplied in case of power failure. For complete specifications write for catalog No. 210.

recommended capacities of No. 1265 operators

horse-power	max. area per door (sq. ft.)	maximum weight of door (lbs.) door width up to 5′0″ (door speed = 45 fpm)	door width 5′0″ to 8′0″ (door speed = 60 fpm)	door width over 8′0″ (door speed = 90 fpm)
¼	120	750	625	500
⅓	150	900	750	600
½	200	1500	1250	1000
¾	290	2250	1825	1500
1	380	3000	2500	2000
1½	560	4400	3700	3000
2	750	5600	4700	3800
3	1000	8400	7000	5600

Larger sizes or special speeds available upon application.

recommended capacities of No. 1266 operators

horse-power	maximum area per pair of doors (sq. ft.)	maximum weight per pair of doors (lbs.) opening widths up to 10′0″ (door speed = 45 fpm.)	opening widths over 10′0″ (door speed = 60 fpm.)
¼	120	750	625
⅓	150	900	750
½	200	1500	1250
¾	290	2250	1825
1	380	3000	2500
1½	560	4400	3700
2	750	5600	4700
3	1000	8400	7000

Larger sizes or special speeds available upon application.

for vertical-lift doors

No. 1261 operators are used mainly on commercial and industrial doors that receive frequent use.

No. 1262 operators are especially designed for large industrial vertical-lift or craneway doors.

The vertical lift type operators consist of a right angle gearhead instantly reversible motor and magnetic brake, a safety disc clutch and a chain driven geared type automatic limit switch. They are built for positive door control . . . always a positive drive, cable type friction drive is not used. For complete specifications write for catalog No. 230.

recommended capacities of No. 1261 operators

horse-power	maximum area of door (sq. ft.)	maximum weight of door (lbs.)
¼	120	625
⅓	150	750
½	200	1250
¾	270	1850

Standard speed: 60 ft. per min.
Special size or speed available upon application.

for sliding gates

This No. 1295 electric gate operator is the most practical operator for either overhead track or cantilever type gates. Its simplified design adapts to any make of sliding gates. This unit is compact, easy and economical to install. All working parts can be serviced from the ground. The superstructure of other type gate operators is eliminated . . . requires no overhead superstructure. This operator is equipped with an emergency release so the gate can be operated manually. For proper installation the gate should be 2′ wider than the opening; if not possible, as in existing gates, an extension bar can be furnished at a slight extra cost. A weatherproof cover is supplied with each unit. Available in ¼, ⅓, ½, ¾ and 1 h.p. sizes. For complete specifications write for catalog No. 240.

for swinging gates

The No. 1510 electric operator is for single swinging gates or pairs of swinging gates. Each gate is controlled by one operator. This operator opens and closes the gate with a simple crank arm and connecting arm movement eliminating the complicated system of levers found in many other gate operating mechanisms. Sturdy construction assures years of trouble-free service. Extremely easy and simple to install; this operator may be mounted in several ways . . . normally it is mounted to a steel channel upright which is embedded in a concrete base. A weatherproof cover is supplied with each unit. Available in ¼, ⅓, ½, ¾ and 1 h.p. sizes. For complete specifications write for catalog No. 240.

RICHARDS-WILCOX
Manufacturing Company
AURORA—ILLINOIS

branch offices

Albuquerque ..... 11412 Bellamah, N. E.
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Jamaica Plain Dist.
Buffalo 25..... 428 Beach Road
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other Richards-Wilcox products

Folding partitions
Architectural File 22d/Ri

School wardrobes
and wardrobe door hardware
Architectural File 23d/Ri

Overhead conveying systems
Materials handling systems
Plant Engineering File 1a/Ri

Printed in U.S.A.

the automatic ALSTEEL Class "A" FIRE DOOR

ST. LOUIS

FIRE DOORS

ABSOLUTE

FIRE PROTECTION

AT LOWEST COST

INDUSTRIAL DOORS

SLIDING

SWINGING

TELESCOPING

TURNOVER

OVERHEAD

ELEVATOR DOORS

FREIGHT

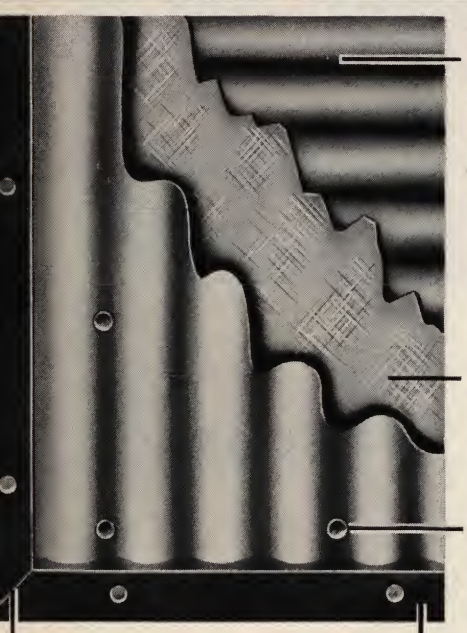
DUMBWAITER

ST. LOUIS FIRE DOOR COMPANY, INC.

Since 1902

ST. LOUIS
FIRE DOOR COMPANY, INC.

INDUSTRIAL DOORS


22 ga. horizontal corrugated galvanized steel sheet
sliding doors 2½" thick
swinging doors 2" thick
heavy asbestos sheet
vertical sheet
steel sheets securely fastened together throughout door panel
heavy steel angle frame
itered and elded corners

Cutaway showing mass of door and detail of construction.

ALSTEEL FIRE DOORS

EFFICIENT FIRE PROTECTION—The corrugated steel sheets, one vertical and the other horizontal, create air spaces between the corrugations; and additionally, the asbestos liner further minimizes heat radiation and flame penetration. The ALSTEEL-DOR, therefore, affords a lifetime of fire protection.

ECONOMICAL—SAVES ON INSURANCE—The cost of the ALSTEEL-DOR is initially less; besides, it returns its initial investment because it needs no replacement, and maintenance is negligible. Furthermore, the insurance companies recognize the ALSTEEL-DOR as an efficient fire protection for which they reduce the insurance premium, resulting in a saving to the user.

Every door is engineered to suit individual conditions. Large doors are made heavier in their component members and are adequately reinforced.

HARDWARE AND PAINTING—ALSTEEL-DORS come complete with all necessary Underwriters' labeled hardware, automatic closing devices and fuse links. Hardware is not applied to the door by us. It is more suitably applied when the door is being installed. Doors are painted in accordance with the Underwriters' specifications.

ERECTION IS SIMPLY ACCOMPLISHED—ALSTEEL-DOR installation labor costs are less because the ALSTEEL-DOR is lighter in weight, is easier to handle and set up.

INDUSTRIAL OR COMMERCIAL USE—The ALSTEEL-DOR is very suitable as a service door to close openings in any industrial or commercial building.

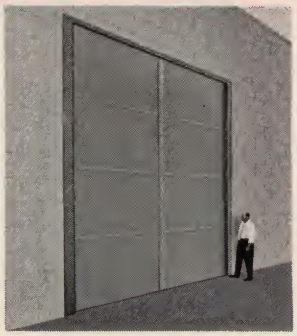
RESULT—The ALSTEEL-DOR is an indestructible fire door. Its corners remain in square. The sheet mass resists impact. The entire construction is fireproof. Its appearance is very pleasing.

UNDERWRITERS' LABEL

Underwriters' Laboratories, Inc.
INSPECTED
FIRE DOOR FOR OPENING IN FIRE WALL
№

CLASS "A" LABELED — UL and FM

ST. LOUIS FIRE DOOR CO., INC.
408 WITHERS STREET
ST. LOUIS 7, MISSOURI



CANOPY

St. Louis manufactures a single type of canopy door. It is a finely built, compact unit that provides excellent medium duty service for openings up to 20 feet wide and 16 feet high. Either tubular or flush double sheet steel panels are available. Used frequently for railroad or truck entrances on piers or warehouses. Similar to overhead, these doors have numerous advantages, such as the minimum projection inside building prevents interference with lights, pipes, etc. on ceiling. Most of door projects outside of building, providing a protective weather canopy, which gives additional working area both inside and out. With this protection, door can remain open during rain.

OVERHEAD

The inclusion of an Overhead door suitable for Industrial use in its regular door categories further shows that St. Louis supplies one of the largest and most complete line of Industrial doors available anywhere. Overhead doors are very economical to buy, but for the majority of Industrial applications other type doors shown here are better and last much longer. Designed for industrial use, the St. Louis Overhead door is made of small steel sections and is adequately reinforced. It will take heavy abuse compared to most of those made for commercial uses.

TURNOVER

St. Louis' uniquely designed two section Turnover door is similar to the Overhead door but overcomes many of its disadvantages in industrial use. Built in 2 sections, its initial movement and its full open position are the same as Overhead. These doors can be made for openings to 30 feet wide and 22 feet high. It has the following advantages over Overhead: There are 2 sections so each can be made heavier and stronger, and when open, door projects into building only half as much. Less ceiling support is required, counterweighting is simpler, operation easier, and mechanism lasts longer under frequent use.

VERTICAL LIFT

These are single section vertical slide doors that slide straight up. Ample head room is needed to accommodate entire door height. St. Louis is particularly noted for the wide range of these doors they manufacture. In addition to the regular sturdy Industrial doors, a light construction, light duty door using fabricated panels is available. Light construction, sectional panels can be made for openings to 15 feet wide. Light construction with tubular steel panels can be made for opening to 25 feet wide. Either counterweights or torsion springs can be furnished for counterbalancing on both the light weight and the regular heavier Industrial doors.

TELESCOPING

Telescoping doors are widely used because they have many advantages. Similar to vertical lift, they are made in 2, 3, or 4 sections, depending on available head room. Sections telescope when door opens, and they all reach the full open position at the same time. They are used where there are clearance and headroom limitations, yet headroom is still enough to handle the door sections. They are excellent when wide unobstructed entrances are wanted, and on high openings, they open much faster. It is easy to make door panels heavier, permitting stronger sturdier, doors. Mechanism is very simple resulting in minimum of maintenance problems.

HANGAR DOORS

SCOTT A.F. BASE, BELLEVILLE, ILLINOIS

Many hangars today are using economical St. Louis doors. Doors consist of horizontal sliding sections, and are of bottom bearing construction with Industrial Rails at bottom. There is only a guide at the top to hold the door in vertical position. This type requires much less maintenance over the years than canopy type construction. They also do not require any heavy support structures, thereby cutting building costs. Thirty-three feet is the maximum height available. Width is not restricted because additional sections can be added.

HORIZONTAL SLIDING

This type door is used more than any other kind for industrial operations. St. Louis manufactures one of the most varied line of slide doors for Industrial and Commercial use in the country. Most combinations of double and single section doors are available, along with numerous special features and designs. Panels can be of sheet steel, insulated steel, tubular steel or metal clad construction. Vision lights, sash, or pass doors may be designed. A complete line of automatic controls has been made to fit all doors. Our engineers know how to design the most economical installations to suit all requirements.

SWINGING

The use of swing doors for industrial application has been limited. St. Louis doors are especially used where a more than average substantial exterior or interior door is desired. They require no side clearance or head room, but can require that considerable floor space be kept clear. St. Louis is one of the few companies providing motor operated swing doors. We specialize in custom design to handle individual conditions. Doors are sold as individual units, but it is preferable to get them with fitted St. Louis pressed steel, structural, or wood metal covered frames. Accordion doors are also manufactured.

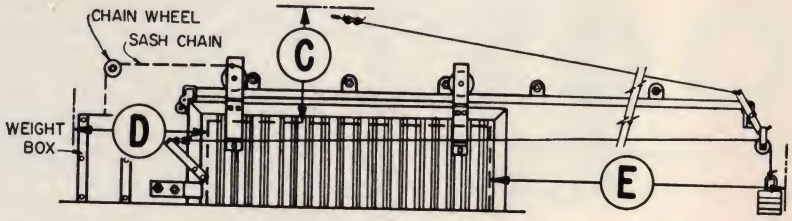
• SEE FREIGHT ELEVATOR and DUMBWAITER DOOR ON PAGE 4

ST. LOUIS

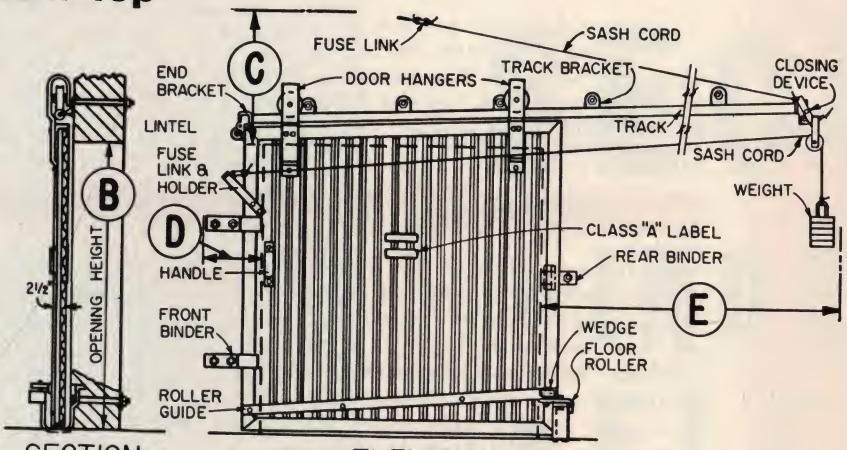
SLIDING & SWINGING AUTOMATIC CLOSING ALSTEEL FIRE DOORS

SINGLE SLIDING DOORS

straight top

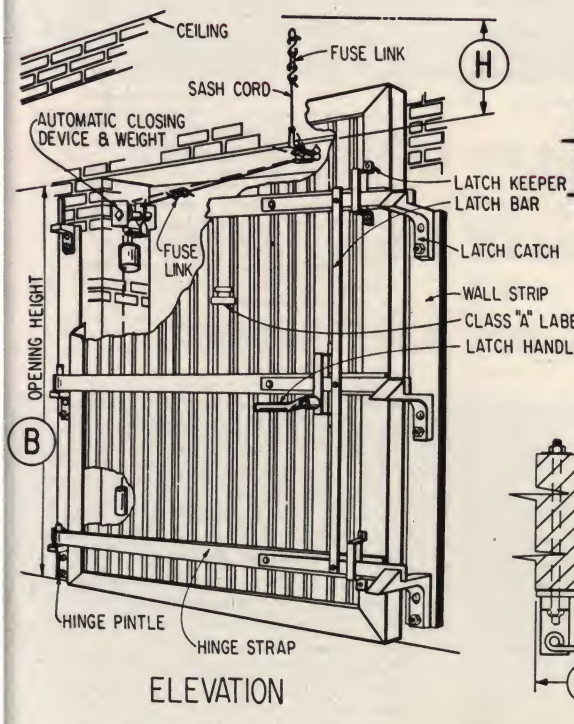


slant top

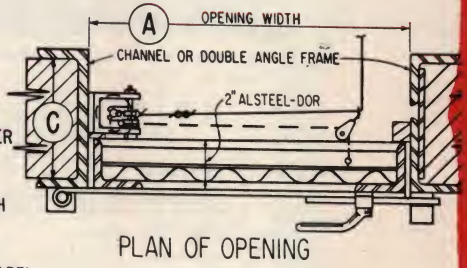


SINGLE SWINGING DOORS

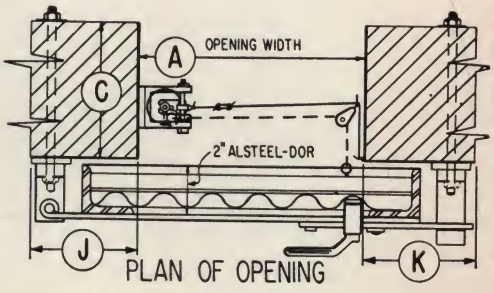
lap



flush



lap



SPACE REQUIREMENTS FOR SLIDING DOORS			
	(A) OPENING WIDTH		(B) OPENING HEIGHT
		STRAIGHT	SLANT
(C)	SINGLE	1'-3"	1'-3½" plus 1½" for each foot of opening width
	PAIRS	1'-3"	1'-3½" plus ¾" for each foot of opening width
(D)	SINGLE	1'-10" If less advise	1'-2" Std. 4" Min.
	PAIRS	One half opening width plus 1'-7"	One half opening width plus 1'-0"
(E)	SINGLE	Opening width plus 1'-4"	Opening width plus 1'-4"
	PAIRS	One half opening width plus 1'-7"	One half opening width plus 1'-0"

SPACE REQUIREMENTS FOR SWINGING DOORS		
(A)	Opening Width	
(B)	Opening Height	
(H)	5" Min.	Lap Type Single and Pairs Only
(J)	7" Min.	
(K)	7" Min.	

SUPPLY THIS DATA

All data based on facing side of wall on which door is to be mounted. How many openings? Are walls existing? (If any plans, give openings or door marks shown.)

- Opening width dimensions
- Opening height dimensions
- Wall thickness
- Wall construction
- Floor construction
- Unobstructed space above lintel? (On slide doors, need for entire door travel)

For slide doors also give unobstructed space beyond both left and right door jamb.

Select desired door arrangement as shown on back page.

Sketch special conditions. Combination of slide and swing may be used on the same opening.

ST. LOUIS

FIRE DOOR COMPANY, INC.

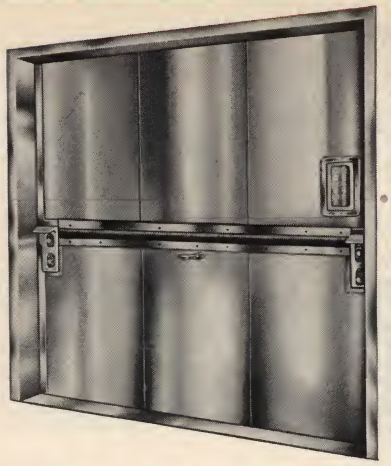
"St. Louis" has been a well-known name in the door industry for several decades. Important door installations have been made in every kind of building from coast to coast. Since 1902 a large variety of Industrial Fire, Freight Elevator and Dumbwaiter Doors have been manufactured. St. Louis engineers have specially designed equipment to meet all kinds of special problems. Maximum fire protection at lowest cost was given users all over the country, when St. Louis developed the "Alsteel" Fire Doors. These economical fire doors with corrugated exteriors and asbestos cores bear the top-rated Class A Underwriters Laboratories Label.

Many years of experience has given St. Louis the background to design and furnish the best construction for both the normal and the unusual conditions.

REPRESENTATIVES

Akron, Ohio—700 Thayer St.	FRanklin	6-9719
Albany, N. Y.—377 Wellington Rd., Delmar		9-4417
Albuquerque, N. M.—718 S. Calisle Blvd., S.E.		5-1824
Alexandria, La.—140 Wheelock		3-7346
Atlanta, Ga.—P.O. Box 7446, Station C	TRinity	4-2464
Billings, Montana—513 North 31st St.		9-1817
Birmingham, Ala.—716 - 8th Court West	ALpin	1-4533
Boston, Mass.—30 Factory, Everett 49, Mass. (also serves Conn., Maine, New Hampshire, R. I., & Vt.)	EV.	7-7272
Butfalo, N. Y.—175 Great Arrow Ave.	BEdford	2362
Charlotte, N. C.—510 W. Fourth St.	EDison	3-5820
Chattanooga, Tenn.—2846 Calhoun Ave.	MAdison	4-3322
Chicago, Ill.—230 N. Canal St.	FRanklin	2-2976
Cleveland, Ohio—1900 Euclid Ave.	CHerry	1-6668
Dallas, Texas—809 Wilson Bldg.	RIverview	2-2306
Davenport, Iowa—P.O. Box 816		2-6294
Denver, Colo.—1863 Wazee St. (also serves Wyoming)	Amherst	6-2475
El Paso, Texas—1600 E. Missouri Ave.	KEystone	2-4941
Fort Smith, Arkansas—423 North 10th St.		2-4449
Fort Wayne, Ind.—2920 Engle Rd.	HArrison	4242
Grand Rapids, Mich.—520 Gladstone, S.E.	GL.	2-4808
Harrisburg, Pa.—310 S. 10th St.	RE.	7-4558
Houston, Texas—2423 Dunstan Rd.		3-2511
Hutchinson, Kansas—528 S. Main St.	MOhawk	3-9111
Indianapolis, Ind.—3353 Central Ave.	WAlnut	4-6263
Jackson, Miss.—182 N. Gallatin St.	FLeetwood	3-8381
Kansas City, Mo.—2826 Main St.	WEstport	1-0092
Knoxville, Tenn.—P.O. Box 2084		5-4997
Lafayette, La.—120 Vine St.	CE.	4-7594
Lexington, Ky.—234 North Upper		5-2984
Los Angeles, Calif.—Box 679, N. Hollywood	PO.	4-7016
Louisville, Ky.—1044 E. Chestnut St.	JUniper	7-8821
Lubbock, Texas—7th Avenue & K	POrter	2-2252
Mattoon, Ill.—3112 Prairie Ave.	ADams	5-5066
Miami, Fla.—1417 Palancia, Coral Gables	MO.	7-8392
Minneapolis, Minn.—2409 Riverside Ave.	FEderal	8-2972
Mobile, Ala.—2504 Old Shell Rd. (also serves Mississippi)	GReenwood	9-4581
Murphysboro, Ill.—401 S. 17th St.		283
New Orleans, La.—816 Howard Ave.	MAgnolia	1910
Okla. City, Okla.—20 N.E. 27th St.	JAckson	8-6365
Omaha, Nebr.—915 S. 15th St.	ATlantic	5160
Orlando, Fla.—38 E. Yale		4-2060
Peoria, Ill.—100 Block MacArthur Highway		3-8547
Phoenix, Ariz.—1040 E. Camelback Rd.	CRestwood	4-3555
Pittsburgh, Pa.—550 McNeilly Rd.	LEhigh	1-3545
Portland, Ore.—2221 N. Albina Ave.	ATlantic	4-2133
Rapid City, S. Dak.—P.O. Box 1486		5932
Richmond, Va.—403 E. Franklin St.		3-2827
St. Petersburg, Fla.—P.O. Box 10969	NOrth	5-4613
Salina, Kansas—128 South 5th	TAylor	7-6230
Salt Lake City, Utah—963 E. 33rd South (also serves Idaho, Nevada & Wyoming)	HUnter	5-9251
San Antonio, Tex.—Box 8356, Laurel Hgts. Sta.	PE.	5-5247
San Francisco, Calif.—325 Fifth St.	SUtter	1-1100
Shreveport, La.—103 E. 60th St.		7-6776
South Bend, Ind.—1612 Lincoln Way West	CEntral	2-8245
Spokane, Wash.—P.O. Box 167	KEystone	1565
Springfield, Mo.—1616 West Phelps		4-1801
Tampa, Fla.—P.O. Box 8006		99-2043
Terre Haute, Ind.—P.O. Box 127	LIncoln	8188
Toledo, Ohio—4070 Detroit Ave.	KIngswood	5454
Tulsa, Okla.—4107A E. 11th St.	WEbster	2-2355
Utica, N. Y.—728 Broad St.		
Waco, Texas—P.O. Box 7368, Triangle Sta.		3-6851
Washington, D. C.—2019 Bunker Hill Rd., N.E. (also serves Maryland)	LAwrence	6-2338
Watertown, N. Y.—P.O. Box 273		2875
Wauwatosa, Wisc.—7700 W. State St.	BLuemound	8-7700
Wichita, Kansas—1250 N. Mosely	AMherst	7-5831

FREIGHT ELEVATOR DOORS & GATES



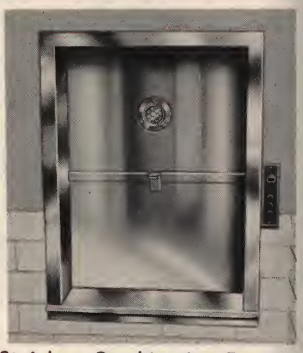
Fireproof, Bi-Parting, Truckable Freight Elevator Door

For over a half century St. Louis has been recognized as one of the major suppliers of Freight Elevator Doors and Gates. Elevator companies in every area have consistently used St. Louis doors. Doors are fireproofed and approved by the Underwriters and the Factory Mutual Laboratories. Doors are of Bi-Parting design and are engineered and constructed to indefinitely withstand even heavily loaded power trucks that pass over them. Doors with Metal Clad panels will withstand severe impact without distortion or damage. Special design is accorded entire door installation commensurate with elevator capacity and trucking load. Most doors and gates should be Motor Operated as they do return the added investment in actual dollar savings. Smooth operating "Anti-slam" operation is provided with enclosed St. Louis controls.

St. Louis furnishes their own improved line of Tamper Proof Electrical mechanical interlocks. Car gates are sturdily constructed of tubular framing amply reinforced, with expanded metal or sheet steel panels used according to particular conditions. Malleable iron gate shoes run in steel guides. St. Louis doors retain easy operation due to careful counterbalancing, completely adjustable shoes, and ample sizing of the double radial ball bearing sheaves.

DUMBWAITER AND CONVEYOR DOORS

For many years St. Louis has manufactured a very complete line of bi-parting vertical sliding and swinging dumbwaiter door units for use with any type dumbwaiter trayveyor, subveyor and conveyor. The units are completely assembled at factory and consist of doors and integral frame trim and sill. Users should know when Underwriters Labeled doors should be used. St. Louis is one of the very few manufacturers that can furnish Underwriters Labeled equipment. Our many installations will show that these units make a fine appearance and are of superior quality. Finishes available are furniture steel, stainless, special paint, or a combination of these.

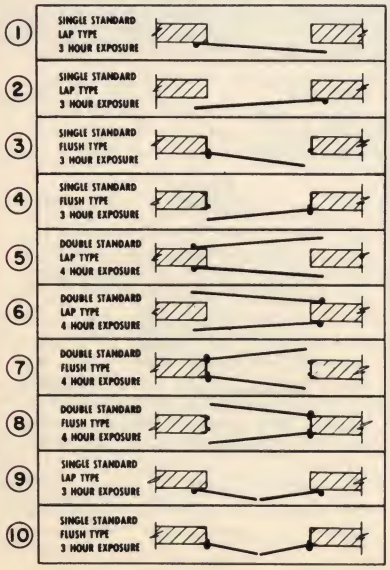


Stainless Combination Frame, Dumbwaiter Door

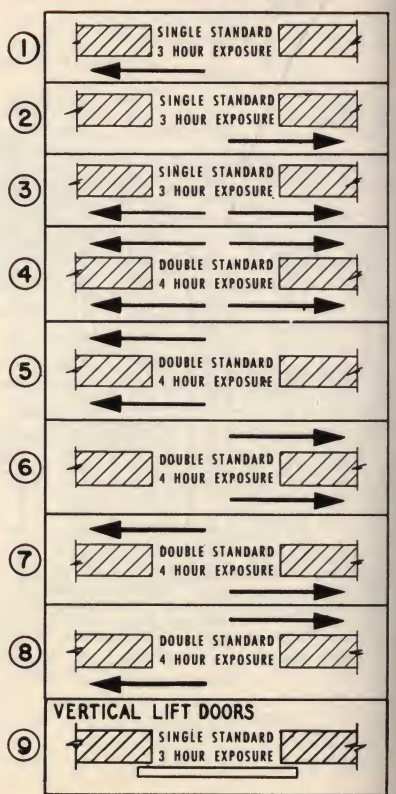
FIRE DOOR ARRANGEMENT DATA

The proper arrangement should be indicated when supplying order data. Arrow indicates direction door slides to open, and side of opening on which door is located.

SWINGING DOORS


1 SINGLE STANDARD LAP TYPE 3 HOUR EXPOSURE
2 SINGLE STANDARD LAP TYPE 3 HOUR EXPOSURE
3 SINGLE STANDARD FLUSH TYPE 3 HOUR EXPOSURE
4 SINGLE STANDARD FLUSH TYPE 3 HOUR EXPOSURE
5 DOUBLE STANDARD LAP TYPE 4 HOUR EXPOSURE
6 DOUBLE STANDARD LAP TYPE 4 HOUR EXPOSURE
7 DOUBLE STANDARD FLUSH TYPE 4 HOUR EXPOSURE
8 DOUBLE STANDARD FLUSH TYPE 4 HOUR EXPOSURE
9 SINGLE STANDARD LAP TYPE 3 HOUR EXPOSURE
10 SINGLE STANDARD FLUSH TYPE 3 HOUR EXPOSURE

SLIDING DOORS

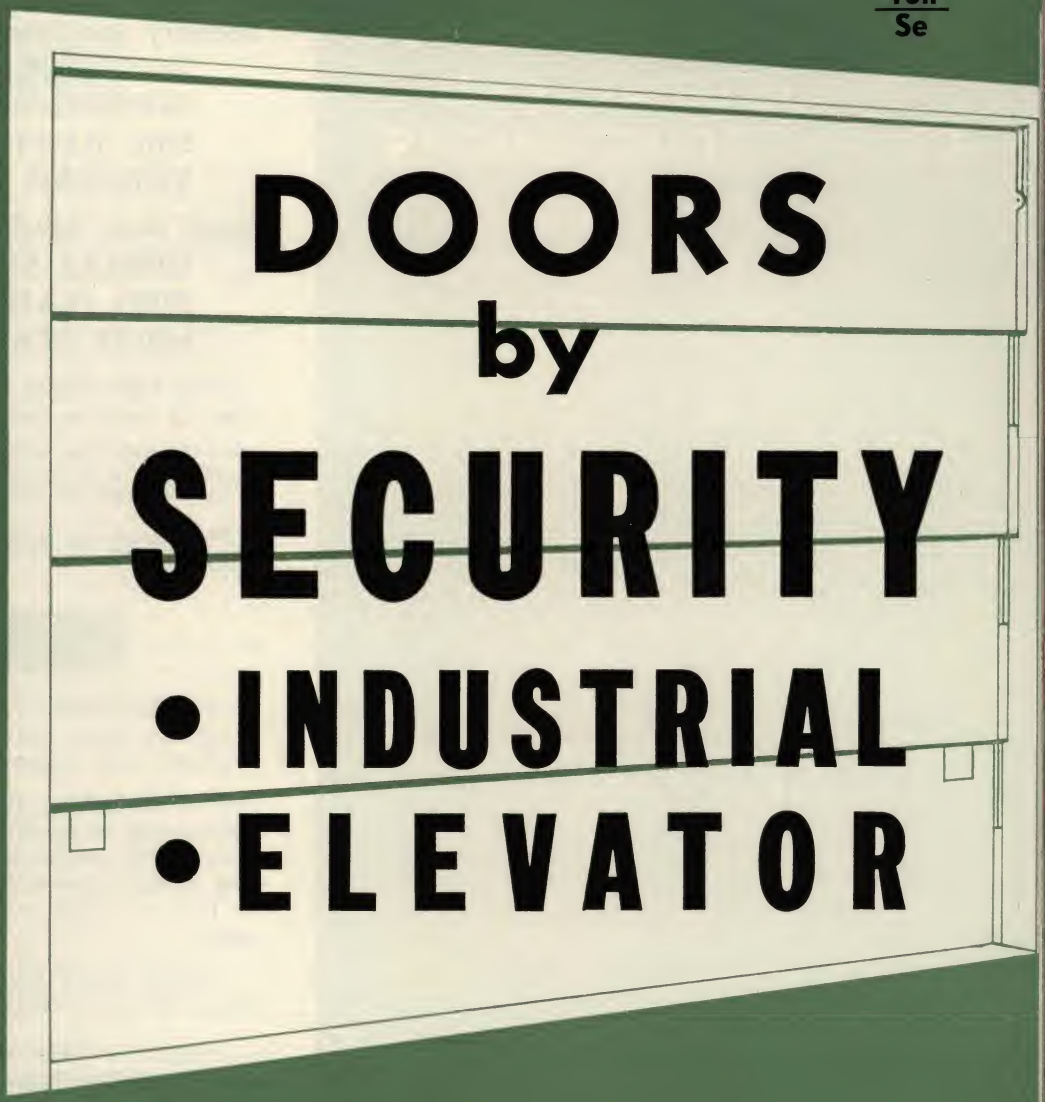

1 SINGLE STANDARD 3 HOUR EXPOSURE
2 SINGLE STANDARD 3 HOUR EXPOSURE
3 SINGLE STANDARD 3 HOUR EXPOSURE
4 DOUBLE STANDARD 4 HOUR EXPOSURE
5 DOUBLE STANDARD 4 HOUR EXPOSURE
6 DOUBLE STANDARD 4 HOUR EXPOSURE
7 DOUBLE STANDARD 4 HOUR EXPOSURE
8 DOUBLE STANDARD 4 HOUR EXPOSURE
VERTICAL LIFT DOORS
9 SINGLE STANDARD 3 HOUR EXPOSURE

16h
Se

SECURITY DOORS
SAFETY
SECURITY FIRE DOOR COMPANY St Louis Mo.
SERVICE SECURITY

DOORS by SECURITY

• INDUSTRIAL
• ELEVATOR



THE AMERICAN INSTITUTE OF ARCHITECTS · ASSOCIATED WITH · THE PRODUCERS' COUNCIL

Members of
PRODUCERS COUNCIL &
CONSTRUCTION SPECIFICATIONS
INSTITUTE

tubular steel construction

steel plate construction

metal clad construction

TELESCOPING DOORS
BI-PARTING DOORS
BI-FOLDING DOORS
SWINGING DOORS
SLIDING DOORS

Our Fortieth Year

SECURITY FIRE DOOR CO.
SAINT LOUIS 15, MISSOURI
1960

AIA FILE No. 17A2

SECURITY
INDUSTRIAL AND COMMERCIAL DOORS

CUSTOM BUILT — SLIDING
FOLDING AND TELESCOPING

WHO IS SECURITY?

ecurity needs no introduction.
recognized leader in the Door Industry for 40 years
ecurity continues to furnish better products year after
ear because of:

- Greater and more Varied Practical experience
- Constant efforts to improve construction
- Largest specialized Engineering Staff

he Security Label always means:

- **Improved design**
- **Better construction**
- **Entire Installation expertly Engineered**

WHY ARE THESE TYPE DOORS USED?

The types of Telescoping Sliding and Folding Doors
nown in this folder are widely used because of more:

- **1. Overall Economy**

These doors are especially suited for modern Auto-
atic Operation and controls. Designed for continuous
eavy service, they do operate at minimum cost and af-
ord many economies over cheaper type doors. Opera-
on is normally quieter.

- **2. Adaptability and Flexibility in Design**

Their greater Flexibility in design and ability to
atisfy various requirements are tremendous advantages.
nlimited use of sash and lights can be made in numer-
us combinations. Doors are easily made to conform to
rchitectural Design of building and adapted to func-
onal requirements.

- **3. Opening Protection**

These type doors allow various constructions that
ive decidedly stronger and longer lasting opening pro-
ection. This includes such features as better insulation
gainst heat, cold and noise, more wind resistance and
etter weatherproofing.

WHY SELECT SECURITY DOORS?

Simply because Security uses Performance rather
han Words to constantly prove that the User will re-
eive maximum Value and Service for his money.

Selection of Security means you get a complete
oor Service from Practical Specialists who will:

- **Thoroughly Design a Proper Installation to suit your particular needs.**
- **Assure the best possible Construction.**
- **Insure the All-Important Correct Installation.**
- **Continue to Stand Behind their Reputation and Equipment.**

- SEE PAGE 8 FOR FREIGHT ELEVATOR DOORS
- SEE PAGE 7 FOR UNI-BILT DUMBWAITER AND PASS WINDOWS

TYPES OF DOORS

Security specializes in these type doors:

BI-FOLDING
VERTICAL SLIDING AND TELESCOPING
SIDE SLIDING
SWINGING (SOME TYPES)

Usual Door Section Construction Is:

TUBULAR STEEL
STEEL PLATE
METAL CLAD

Steel Plate Doors may be furnished with sheets on both sides of door section frames. This gives flush construction on both exterior and interior faces.

Panels may be solid or arranged for glazing.

Pass Doors for pedestrians use may be provided on large doors.

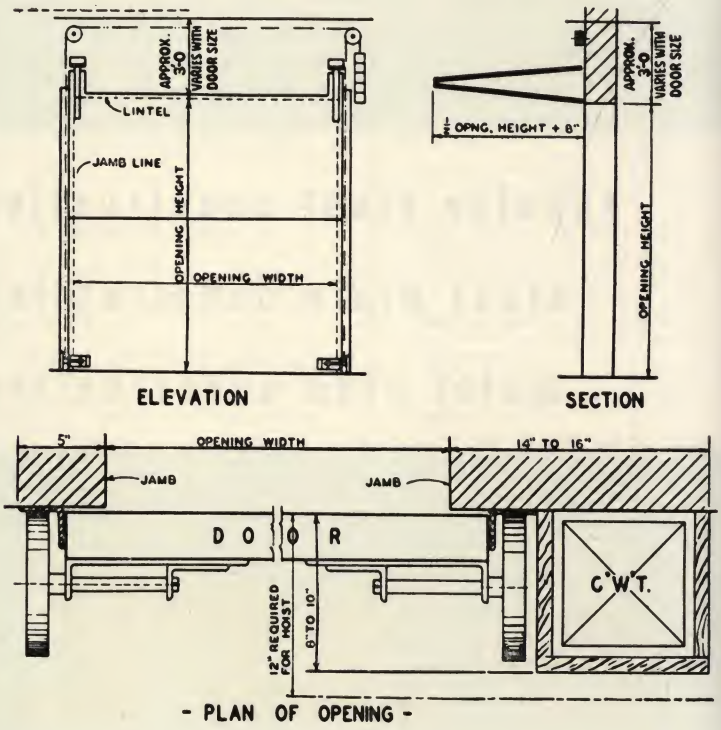
BI-FOLDING DOORS

The Bi-Folding "Horifold" door may be used where headroom does not permit Vertical Sliding Doors and available side space is at a minimum.

The Bi-Folding Door consists of two sections folding horizontally towards the ceiling, being hinged at the top and at the middle, with roller shoes attached to the bottom corners operating in angle guides. Doors eight feet or less in height may be operated manually with hand pulls.

Larger doors are provided with hand chain operated hoists to permit easy raising and lowering of the door.

Upper sections may be arranged for glass and large lower sections may be provided with a Pass Door.



Horifold Door Details

TELESCOPING DOORS

Security Ver-Tel doors are of the vertical telescoping type. They are extensively used in industrial and commercial buildings where maximum protection is desired for the opening, where clearances are limited and headroom above the opening is such as to permit the door sections to slide up.

Their use is desirable where the door operation should clear overhead crane beams, piping and other obstructions.

Doors of the Ver-Tel type may have glass paneling. They may have small vision lights, or entire sections of each leaf paneled for glass.

The lowest section may be provided with a pass door.

DOOR LEAVES OR SECTIONS may be of the following types of construction:

1. Tubular steel stiles and rails.
2. Structural channel frames with flush steel sheets on the exterior face, or with sheets on both faces of the door.
3. Wood core, metal covered panels bolted into angle frames.

Vertical sliding doors may be of the single-section type or may be Ver-Tel type having two, three, or four leaves. Such vertical sliding doors may be installed on the exterior face of the wall with **closure hoods** to provide proper protection and weathering.

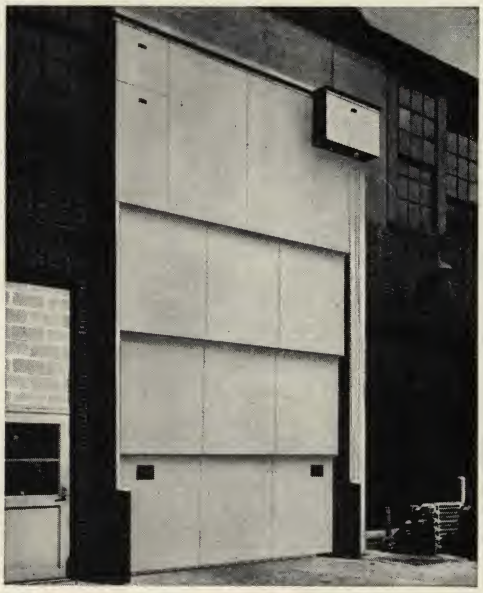
Security Ver-Tel doors are furnished with power operators or hand chain operated hoists. **Power operators** are used where doors are subject to frequent opening and closing.

Architects and engineers have had Security design and develop **special doors** for many types of installations. Security has furnished doors for large X-Ray openings, doors of the sound retardant and self-sealing types.

FOR SPECIAL APPLICATIONS WRITE SECURITY

Ver-Tel Four-Section Door Mounted on Exterior of Wall with Hood Enclosure.

Ver-Tel, Two-Section Tubular Steel Door, Upper Section Glazed, Pass Door in Lower Section.

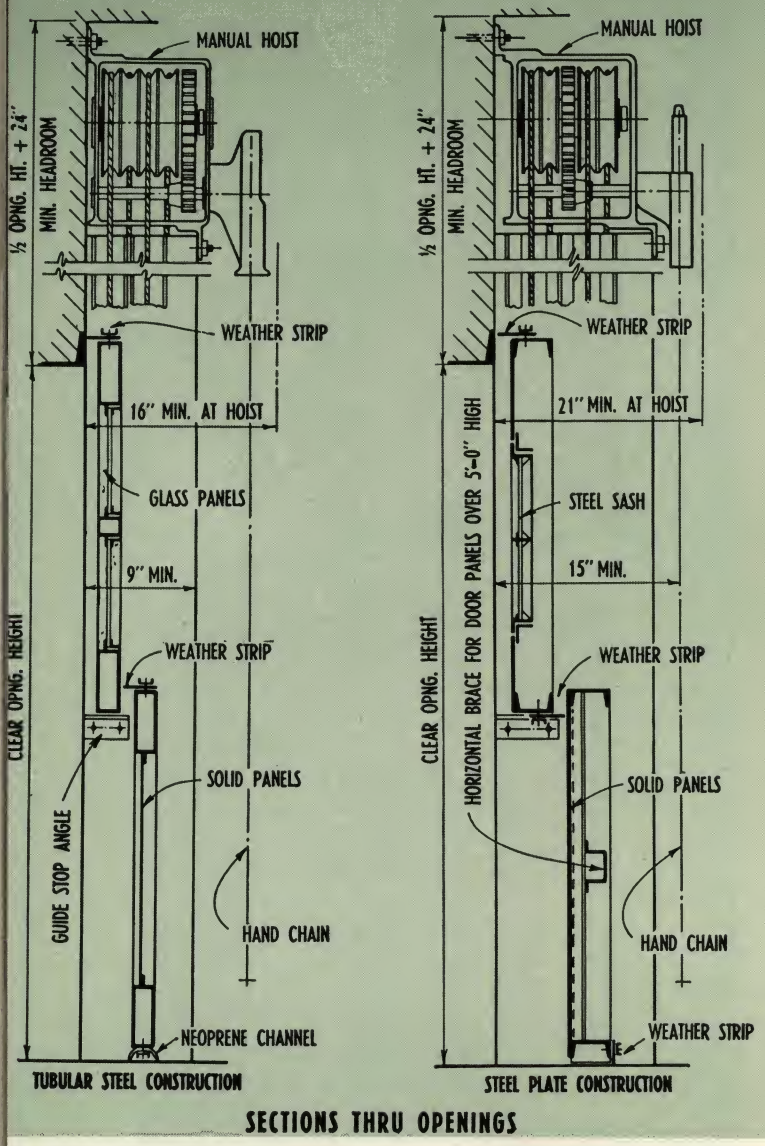


Wagner Electric Company, St. Louis, Mo. Ver-Tel Three-Section Steel Plate Door Mounted on Exterior Face of Wall with Steel Hood Enclosure.

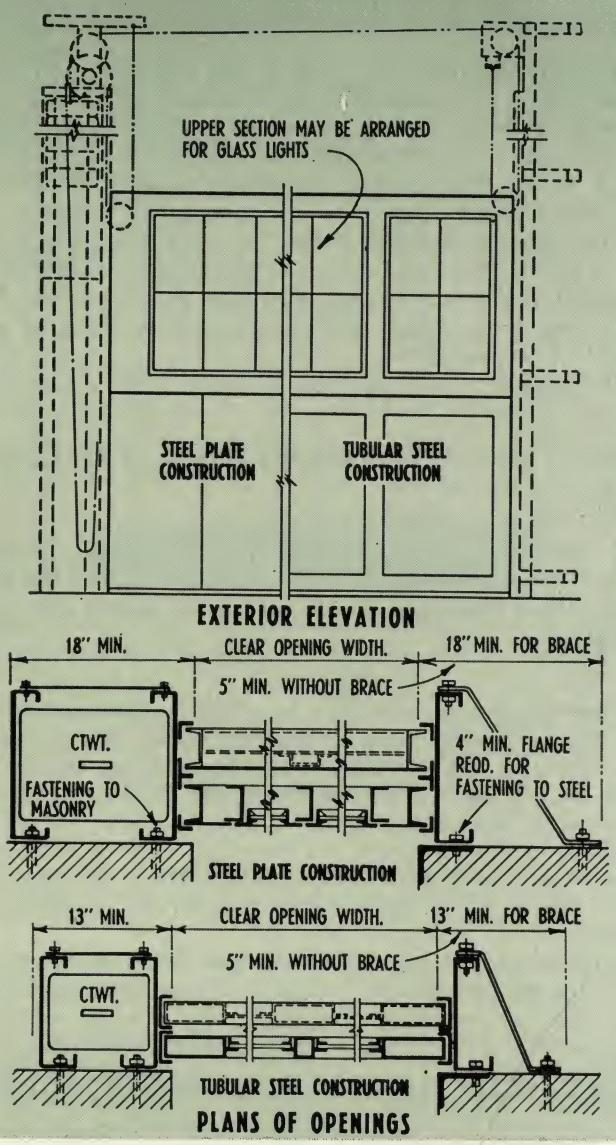
Douglas Aircraft Corporation, Oklahoma City, Oklahoma. Ver-Tel Four-Section Door at Track Opening, Two-Section Door at Loading Dock.

TELESCOPING DOORS—

DETAILS OF 2-SECTION VER-TEL DOORS



SECTIONS THRU OPENINGS



PLANS OF OPENINGS

SPECIFICATIONS FOR VERTEL DOORS

1. SCOPE

Furnish and install all vertical lift doors specified herein as designed and manufactured by the Security Fire Door Co.

2. CONSTRUCTION

All vertical lift doors shown on drawings shall be constructed

(a) Of ..... leaves per opening set one behind the other with travel so arranged that all leaves arrive at the full open position at the same time.

(b) 1. Stiles and rails shall be constructed of formed steel tubing 1¾" x 5" x 16-gauge. (2½" tubes are available for special applications).

2. Stiles and rails shall be formed of structural channels (3" or larger determined by the size of the doors).

(c) All corners and intersections shall be welded and ground smooth on exposed surfaces of door.

(d) Solid door leaves shall be covered with 14-gauge steel sheets welded to the tubular or channel frames.

(e) Leaves arranged for glazing shall be provided with: (1) steel sash inserts arranged for inside putty glazing (2) tubular muntin construction with glazing angles for tubular door construction.

(f) Provide pass door in lower leaf of door where indicated on the drawings. (Dependent on height of door leaves).

(g) Weathering should be provided between door leaves, at head of opening, and at bottom of lower leaf.

(h) Door sections shall be provided with cable or chain hitches and with panel sheaves where doors are compounded.

(i) Door guides shall be made of formed channels or structural shapes, to be bolted to door opening frames and structural framing of the building, and/or to masonry walls.

(j) Counterweight enclosures shall guide the counterweights the full height of their travel and in all cases should be fully enclosed to a height of at least 7'0".

3. OPERATION

(a) Doors shall be hung on 6 x 37 steel cables operating over cast iron sheaves or roller chain over steel sprockets having bronze or ball bearings. These cables or chains shall continue to the counterweight side of the door and pass over the hand chain operated hoist to the counterweights. (Small openings up to 8'0" high may be hand operated without the use of the hoist.)

(b) The ends of cables or chains where attached to the doors or to their dead end hitch shall have turnbuckles or other means for independent adjustment. Hand chains for hoist shall be zinc coated.

(c) Cast iron sectional counterweights shall be provided to evenly balance the door leaves and are to be stacked on a steel weight rod.

4. ELECTRICAL OPERATORS

All vertical lift doors where noted on the drawings, or herein specified, shall be equipped with electric power drives for full automatic operation and shall be controlled from push buttons located adjacent to and inside or outside the door opening, as required.

(a) Electric power drive shall be a factory assembled unit attached directly to the door hoisting mechanism provided under Section 3 above. This unit shall consist of a high starting torque, enclosed gear motor equipped with an integral brake. This unit shall drive the door hoist through a friction clutch. This unit shall also be arranged that in

SPECIFICATIONS—(Continued)

the event of power failure a chain operated clutch will disengage the motor unit and permit manual operation of the door by means of a hand chain which will directly drive the geared hoist. (Emergency operation of the door by hand chain attached to and operating through the door motor gearing will not be permitted.)

(b) Electrical controls to be provided, shall consist of a combination reversing control and fused disconnect switch, and a 3-button momentary contact push button station with open-close-stop buttons. (Additional stations may be located as designated.) Limit switches shall be provided to automatically stop the doors at the fully open and fully closed positions.

(c) Provide a safety Reversing Edge on bottom of door to cause door to stop and reopen should it meet an obstruction while closing.

(d) Wiring to bring the power supply to the door control and all wiring from the control to the motor, limit switches, and push button stations **shall be done by the electrical contractor** in accordance with wiring diagram provided by the door manufacturer.

5. PAINTING

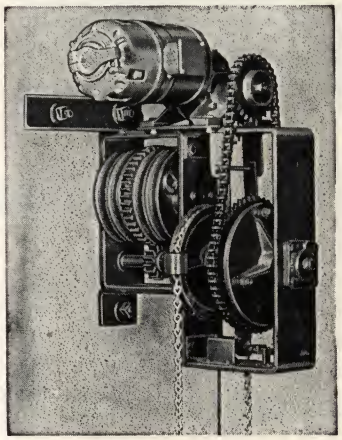
All door leaves, guides, weight enclosures, sheaves, and operator units shall receive one coat of rust inhibiting primer paint. Field painting shall be done by the painting contractor.

6. ERECTION

Erection of the doors complete with the operator equipment shall be done by the door manufacturer or duly authorized representative. Others shall provide opening frames, sills, and structural supports above the opening for the guides and operating equipment where walls are not of sufficient strength to properly support the equipment. Where anchor bolts are to be set in masonry walls to provide fastening for the door equipment, they should be set by others in accordance with diagrams furnished by the door manufacturer.

7. GLAZING

Glass, putty and glazing shall be furnished by the glazing contractor after the doors have been installed, but in time to permit proper balancing of the door leaves.



Compact, powerful, precision made operator with clutch and hand chain for emergency operation.

POWER OPERATORS ARE ECONOMICAL

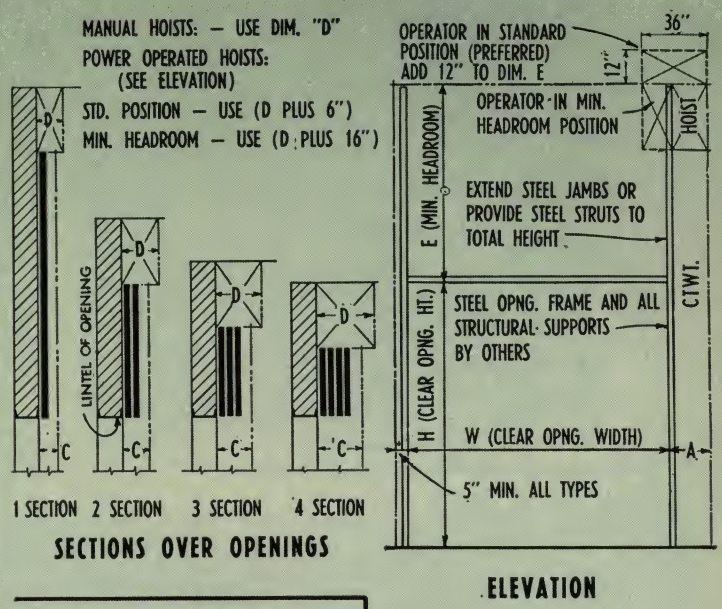
The uniformly controlled automatic operation:

1. Saves time,
2. Greatly cuts maintenance
3. Increases door life,
4. Eliminates accidents.

Security Power Operators are rugged, heavy duty units that are built to conform under constant maximum operating load conditions. They have great reserve power. Important features are immediate emergency operation, in case of power failure, and, as illustrated, safety friction clutch should doors meet an obstruction.

The simple design and easily accessible parts help reduce maintenance costs.

Power Operated 2-Section Door with Pendant Switch Operation. Reversing Edge on Bottom of Door.

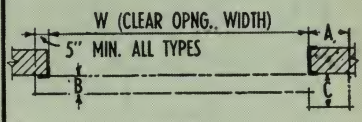

MANUAL HOISTS: — USE DIM. "D"
POWER OPERATED HOISTS: (SEE ELEVATION)
STD. POSITION — USE (D PLUS 6")
MIN. HEADROOM — USE (D PLUS 16")
LINTEL OF OPENING
1 SECTION
2 SECTION
3 SECTION
4 SECTION
OPERATOR IN STANDARD POSITION (PREFERRED) ADD 12" TO DIM. E
36"
12"
OPERATOR IN MIN. HEADROOM POSITION
HOIST
E (MIN. HEADROOM)
EXTEND STEEL JAMBS OR PROVIDE STEEL STRUTS TO TOTAL HEIGHT
CTWT.
H (CLEAR OPNG. HT.)
STEEL OPNG. FRAME AND ALL STRUCTURAL SUPPORTS BY OTHERS
W (CLEAR OPNG. WIDTH)
5" MIN. ALL TYPES

SECTIONS OVER OPENINGS

ELEVATION

1¾" TUBULAR STEEL DOOR CLEARANCES.
14'-0" MAXIMUM CLEAR OPENING WIDTH.

DOOR SECTIONS	A	B	C	D	E
ONE	13"	5"	9"	15"	H+24"
TWO	13"	8"	9"	16"	1/2H+24"
THREE	13"	10"	13"	20"	1/3H+24"
FOUR	16"	13"	15"	23"	1/4H+24"



PLAN

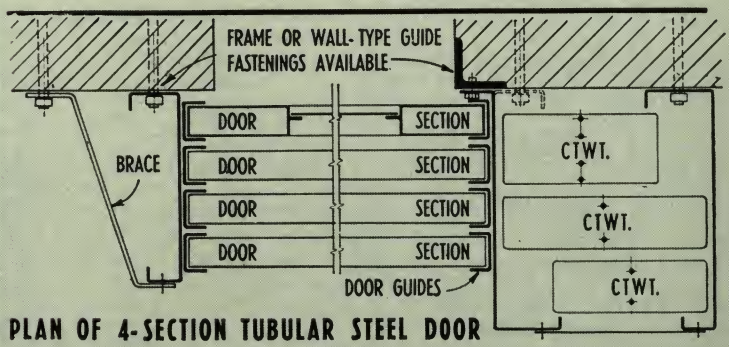
2½" TUBULAR STEEL OR METAL CLAD DOOR CLEARANCES.
16'-0" MAXIMUM CLEAR OPENING WIDTH.

DOOR SECTIONS	A	B	C	D	E
ONE	16"	5"	11"	17"	H+24"
TWO	18"	9"	15"	21"	1/2H+24"
THREE	20"	13"	18"	24"	1/3H+24"
FOUR	22"	16"	23"	29"	1/4H+24"

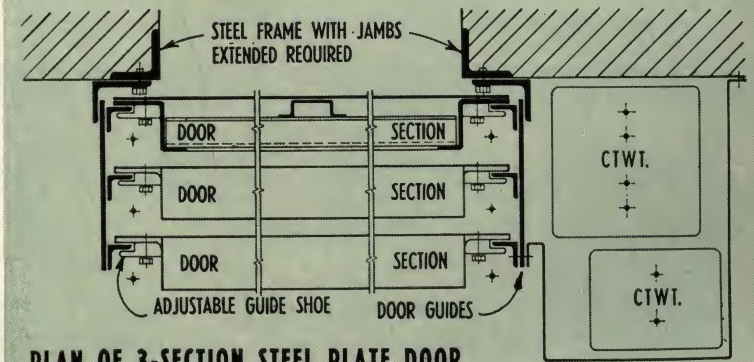
STEEL PLATE DOOR CLEARANCES.
3" THICK FOR OPENINGS UP TO 20'-0" WIDE
4" THICK FOR OPENINGS UP TO 26'-0" WIDE

DOOR SECTIONS	A	B	C	D	E
ONE	18"	7"	15"	21"	H+24"
TWO	18"	12"	15"	21"	1/2H+24"
THREE	22"	18"	24"	30"	1/3H+24"
FOUR	24"	24"	29"	35"	1/4H+24"

WRITE **SECURITY** WHERE CLEARANCES ARE LESS THAN SHOWN IN TABLES OR FOR INFORMATION FOR OPENINGS EXCEEDING 26'-0" WIDE.



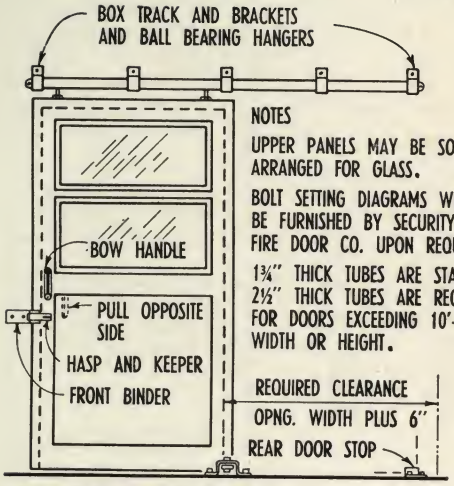
PLAN OF 4-SECTION TUBULAR STEEL DOOR



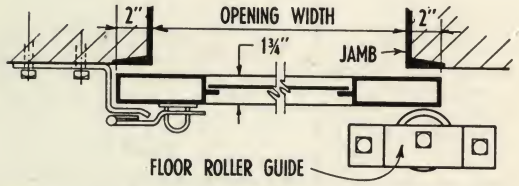
PLAN OF 3-SECTION STEEL PLATE DOOR USING ADJUSTABLE GUIDE SHOES

SLIDING AND SWINGING DOORS

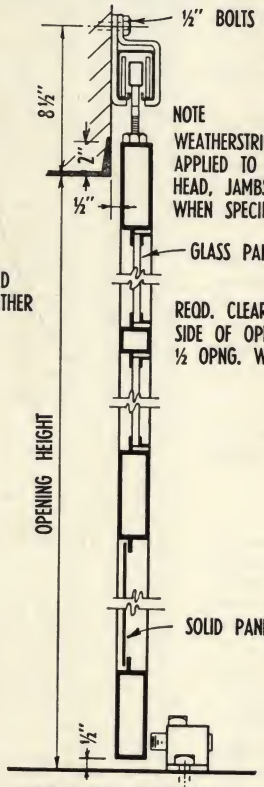
TUBULAR STEEL SLIDE DOORS


BOX TRACK AND BRACKETS AND BALL BEARING HANGERS
NOTES
UPPER PANELS MAY BE SOLID OR ARRANGED FOR GLASS.
BOLT SETTING DIAGRAMS WILL BE FURNISHED BY SECURITY FIRE DOOR CO. UPON REQUEST.
1¾" THICK TUBES ARE STANDARD. 2½" THICK TUBES ARE RECOMMENDED FOR DOORS EXCEEDING 10'-0" IN EITHER WIDTH OR HEIGHT.
BOW HANDLE
PULL OPPOSITE SIDE
HASP AND KEEPER
FRONT BINDER
REQUIRED CLEARANCE
OPNG. WIDTH PLUS 6"
REAR DOOR STOP

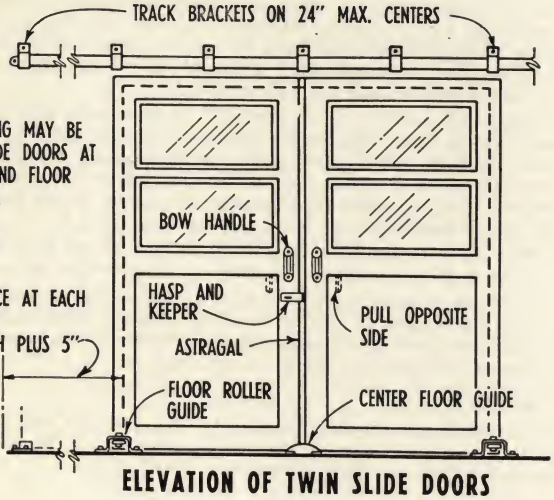
ELEVATION OF SINGLE SLIDE DOOR



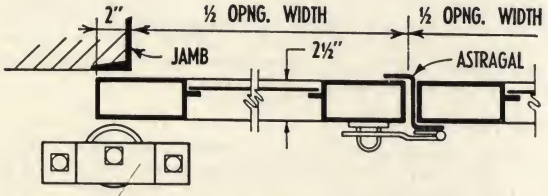
HORIZONTAL SECTION THRU SINGLE SLIDE DOOR USING 1¾" THICK TUBES



VERTICAL SECTION THRU SLIDE DOOR USING 1¾" THICK TUBES

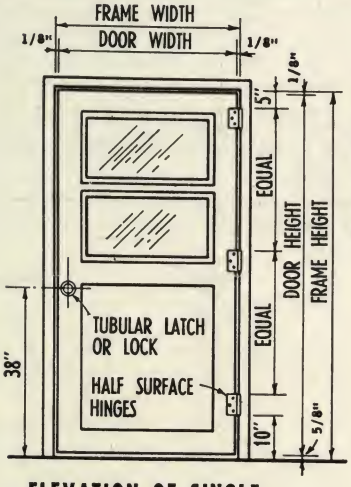


ELEVATION OF TWIN SLIDE DOORS



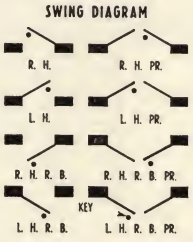
HORIZONTAL SECTION THRU TWIN SLIDE DOORS USING 2½" THICK TUBES

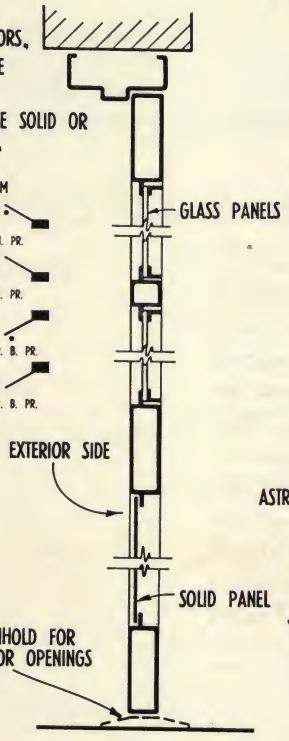
TUBULAR STEEL SWING DOORS



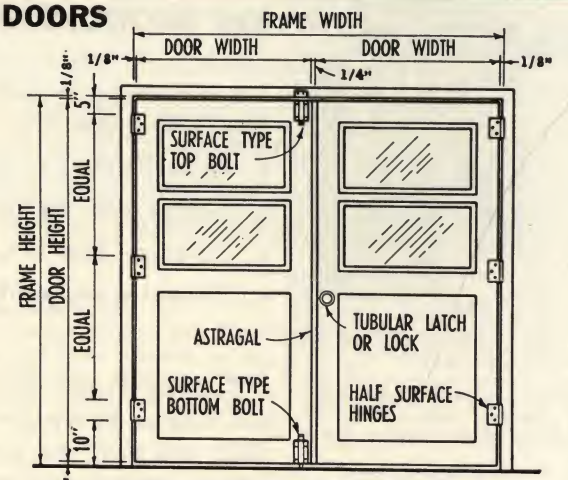
ELEVATION OF SINGLE SWING DOOR

NOTES
SPECIFY HAND OF DOORS.
INDICATE EXTERIOR SIDE OF EXTERIOR OPNGS.
UPPER PANELS MAY BE SOLID OR ARRANGED FOR GLASS.



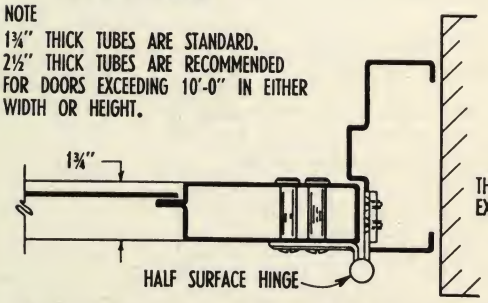


VERTICAL SECTION THRU SWING DOOR USING 1¾" THICK TUBES

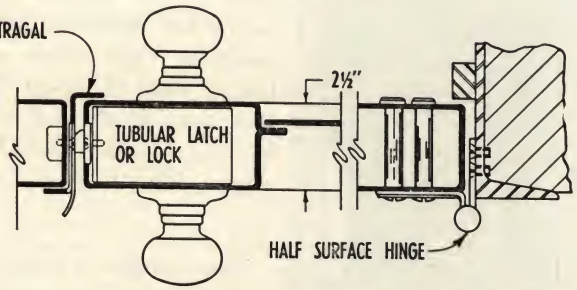


ELEVATION OF TWIN SWING DOORS

NOTE
1¾" THICK TUBES ARE STANDARD. 2½" THICK TUBES ARE RECOMMENDED FOR DOORS EXCEEDING 10'-0" IN EITHER WIDTH OR HEIGHT.



HORIZONTAL SECTION THRU HINGE JAMB USING 1¾" THICK TUBES AND PRESSED METAL FRAME

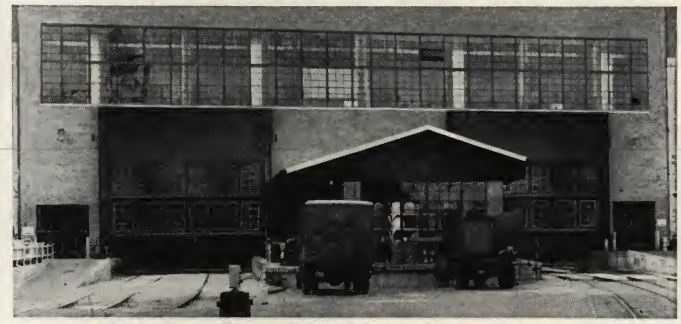


HORIZONTAL SECTION THRU MEETING RAIL AND HINGE JAMB USING 2½" THICK TUBES AND STRUCTURAL STEEL FRAME

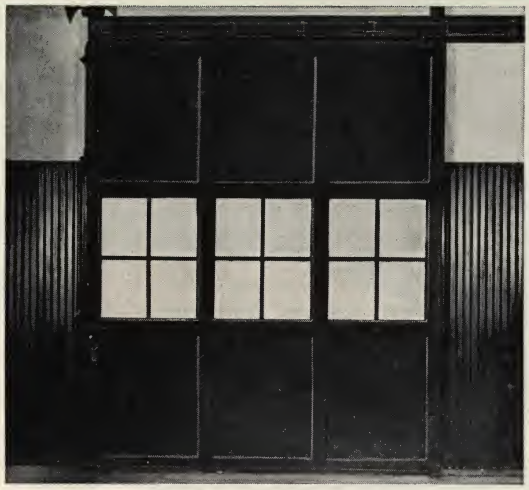
INDUSTRIAL DOOR INSTALLATIONS

Gentile AF Base, Dayton, O.—1 & 2 section
Steel Plate Vert. Slide Doors

Two-Section Steel Plate Vert-Tel Doors



Fisher Body Plant, St. Louis, Mo.—Vert-Tel Doors,
2 Section at R.R. and 3 Section at Dock



Power Operated Horizontal Sliding Door

Tubular Steel Sliding Door

SPECIFICATIONS FOR TUBULAR SLIDING AND SWINGING DOORS

1. SCOPE

Furnish tubular steel doors specified herein as designed and manufactured by the Security Fire Door Co.

2. MATERIAL AND CONSTRUCTION

Stiles and rails shall be constructed of 1 ¾" x 5" x 16-gauge pressed steel tubes. (For door sections exceeding 10' 0" in height or width, it is recommended that 2½" x 5" x 14-gauge steel tubes be used.) Corners shall be reinforced, welded, and ground smooth. Panels shall be made of no less than 14-gauge steel, welded to the stiles and rails. Where panels are arranged for glazing, formed muntins and glazing angles are to be provided for inside glazing.

3. PRESSED STEEL DOOR FRAMES.

(a) Where indicated on the drawings, provide Security standard pressed steel door frames made of 16-gauge steel.

(b) Frames shall be prepared to receive standard hardware and be provided with floor clips and anchors for building into wall.

4. HARDWARE

(a) 1. Each swinging leaf shall be provided with three heavy steel half surface template butt hinges.

2. Each single swing door shall be provided with a Schlage or similar type tubular lock.

3. For pairs of swing doors, one leaf shall be provided with surface mounted top and bottom bolts.

(b) 1. The leaves of sliding doors shall be hung from four wheel ball bearing hangers operating in box type track of adequate size. Also provide roller guides, stops, handles, hasp and staple, and bolts for fastening track brackets and other hardware to wall.

2. All double doors shall be provided with astragals.

5. SHOP PAINTING

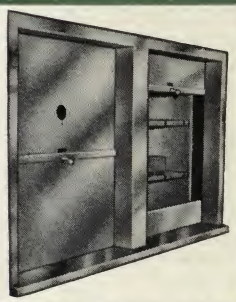
All doors and frames furnished by Security Fire Door Co. shall be given one coat of rust-inhibiting paint at the factory.

6. GLAZING

Glass and glazing shall be furnished by the glazing contractor.

WHERE STRUCTURAL FRAMES ARE REQUIRED, THESE SHALL BE PROVIDED BY THE CONTRACTOR FURNISHING THE IRON WORK.

UNI-BILT DOORS for DUMBWAITERS, CONVEYORS and PASS WINDOWS



DUMBWAITER DOOR

See Sweets Architectural File for Full Information or Write Factory.

The construction and design of integral, factory-assembled, combination frame and door units for use with Dumbwaiters, Automatic Conveyors, Trayveyors, Package lifts etc., or as Pass-thru or Service Windows has become very specialized. The make and details of the door equipment are frequently specified.

Security has long excelled in this particular field. As one of the largest suppliers of these units, Security has furnished doors, frames and operators for all makes of dumbwaiters, conveyors etc. A large group of specialists have developed many innovations and refinements.

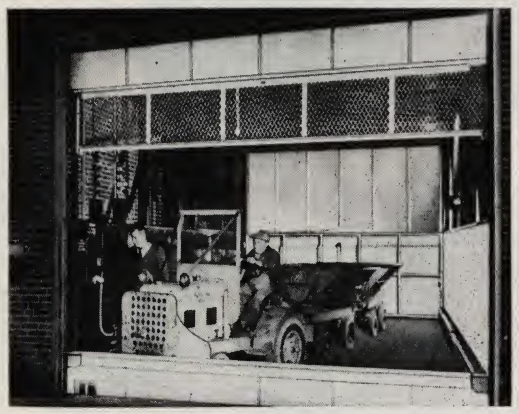
Regular Custom-engineering combined with Security's great quantity standardized manufacture allows the designer to satisfy their individual designs at a lower cost. Security's custom-engineering department can offer many suggestions and possibilities. Security experts design their equipment to satisfy all the building and functional material handling considerations. **This assures that proper equipment will be used, which will give the best operation, last the longest and be almost maintenance free.** Remember, that units are built in the wall and later cost of repairs or alterations can be prohibitive.

PASS WINDOW

SECURITY Freight Elevator Doors and Operators

See Sweets Architectural File for Complete Information or Write for Freight Elevator Door Catalog

Most elevator companies use freight elevator doors from various manufacturers with their elevators. Many architects and engineers will give careful consideration to the freight elevator door specifications because they know it makes quite a difference what make and type of door, gates, frames, sills, and operator equipment is used. It is most important because the door equipment is attached to the elevator shaft and becomes a permanent part of the building. Thru the years, the installation of inadequate or wrong kind of door equipment can affect, not only the elevator operation, but also the elevator shaft and the actual functioning of the material handling system. The entire operation of the building can thus be impaired, and the owner and user may be saddled with many unnecessary costs over the years.



Power Operated Bi-Parting Truckable Sill Freight Elevator Doors and Gates

Nationally operating companies that have many buildings, and who have used various makes of equipment, today often request the various elevator companies to use Security freight door equipment. The leading elevator companies use Security doors, especially when they know the owner wants equipment that will do a better job and will hold-up better over the years.

Security is the specialist in Freight Elevator Doors. In their 40 years they have accumulated more practical experience due to their policy of installing most of their own equipment. They know **thorough installation** is vital to keep correct operation thru the years. Security pioneered many of the developments that have become the accepted standard.

Freight elevator shafts should be enclosed fire proof structures with **Underwriters' Labeled Doors** as a minimum requirement. Openings must have **metal sills** and meet certain framing requirements. Counterbalanced Bi-Parting doors with **truckable sills** are accepted today as the best construction. If necessary, Security can also furnish other kinds, and regularly designs special equipment to meet every kind of problem.

Metal Clad Doors have been used in the majority of installations. They are unquestionably recommended because of unsurpassed, proven ability over many years to withstand the roughest treatment for the longest time. They can withstand much more shock damage, are lighter, quieter, more rigid, and stronger, besides providing many insulation properties. Steel plate doors are recommended for certain applications. Security makes every kind of panel construction and can satisfy all requirements.

Power Operated Doors can be considered a necessity both in existing and new elevators — because of the large savings possible. Time saving and increased efficiency are just 2 of many "cost-saving" advantages. Among others are lower labor costs, (in several ways), increased load capacity and handling ability, equipment lasts longer, door maintenance costs are cut, safety is greatly increased and insurance rates reduced, fatigue factors are eliminated, and greater utility is possible.

CONSULT SECURITY REPRESENTATIVES IN ALL PRINCIPAL CITIES

ATLANTA 18, GA.	696 Anton Ave., N.W.	TR. 4-3804
BALTIMORE 18, MD.	2326 N. Charles St.	CH. 3-2277
BIRMINGHAM 3, ALA.	724 Stallings Bldg.	54-8473
BUFFALO, N. Y.		
CAMBRIDGE 38, MASS.	87 Fawcett Street	UN. 4-6510
TORONTO, ONTARIO, CANADA,	1395 Freeport Drive P.O. Box 379, Erindale Post Office	AT. 9-4468
CHARLOTTE 3, N. C.	938 Berkeley Ave.	ED. 2-4280
CHICAGO 13, ILL.	1325 W. Belmont Ave.	EA. 7-7977
CINCINNATI 36, O.	3922 E. Galbraith Rd.	TW. 1-7900
CLEVELAND 15, O.	2063 E. Fourth St.	PR. 1-2746
COLUMBUS 8, O.	1026 W. Goodale Blvd.	AX. 4-3791
DALLAS 22, TEX.	3136 Routh Street	RI. 7-0671
DAYTON 3, O.	2800 E. Third St.	CL. 3-1178
DENVER 20, COLO.	1645 Ivanhoe St.	FL. 5-1994
DES MOINES 11, IOWA	1405 - 29th St.	CR. 7-7168
DETROIT 21, MICH.	10130 W. McNichols Rd.	DI. 1-9390
FORT WORTH, TEX.	2831 Crockett St.	FA. 1030
GRAND RAPIDS, MICH.	229 Westmont Dr., N.W.	GL. 8-2267
GREENVILLE, S. C.	P.O. Box 144	2-1303
HOUSTON 24, TEX.	1525 N. Post Oak Rd.	UN. 4-4451
INDIANAPOLIS 22, IND.	1314 W. Washington St.	ME. 2-8503
JACKSONVILLE, FLA	221 E. 8th St.	EL. 4-7843
JERSEY CITY 2, N. J.	188 Railroad Ave.	HE. 2-1400
KANSAS CITY 24, MO.	5321 E. 9th St.	CH. 1-2111
LOS ANGELES 43, CALIF.	3123 W. Vernon Ave.	AX. 2-0779
LOUISVILLE 4, KY.	1044 E. Chestnut St.	JU. 7-8821
MEMPHIS 1, TENN.	677 N. Main St.	JA. 6-8414
MILWAUKEE 2, WIS.	1715 N. Water St.	BR. 1-3380
MINNEAPOLIS 6, MINN.	2629 - 30th Ave., S.	PA. 1-5031
NEW ORLEANS 16, LA.	Audubon Bldg.	JA. 5-8587
NEW YORK 18, N. Y.	(For address - See Jersey City)	LO. 3-4111
NORFOLK 8, VA.	1073 W. 38th St.	MA. 7-9091
OKLAHOMA CITY 18, OKLA.	3011 Paseo	JA. 5-6616
OMAHA 10, NEBR.	2300 Block, N. 18th St.	AT. 4586
PHILADELPHIA 25, PA.	1215 Frankford Ave.	RE. 9-3377
PITTSBURGH, PA.		
PORTLAND 14, ORE.	814 S. E. Market St.	BE. 2-4146
ROCHESTER 8, N. Y.	135 Spring St.	BA. 5-2945
SALT LAKE CITY 11, UTAH	34 E. Ninth South St.	EL. 5-5397
SAN FRANCISCO 5, CALIF.	55 New Montgomery St.	DO. 2-4438
SEATTLE 15, WASH.	6206 Roosevelt Way	LA. 3-7700
SHREVEPORT, LA.	1730 Claiborne Ave.	7-0521
SPOKANE 1, WASH.	612 Peyton Bldg.	MA. 4-4453
SYRACUSE 10, N. Y.	1718 Erie Blvd., E.	GR. 2-3306
TOLEDO 2, OHIO	1118 Madison Ave.	CH. 3-7129
TULSA 1, OKLA.	1805 E. Haskell Pl.	LU. 2-8204
WASHINGTON 6, D. C.	810 - 18th St., N.W.	ST. 3-4411

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SECURITY FIRE DOOR CO.

3028 LAMBDIN ST. LOUIS 15, MO. JEfferson 3-5700

MAGNE-GRIP ELECTRIC OPERATOR

As in most other fields, manual operation of freight elevator doors is rapidly being replaced by Power Operation. Power Operation saves so much money in so many ways. Progressive management and engineering should investigate the comparative economical conversion available now from Security. Security is the company that should be consulted when investigating the possibilities on Bi-Parting Doors.

Security's development of the remarkable Magne-Grip car type operator to complement their outstanding Uni-Motor Door type operator has made it possible for Security to provide the most economical, and the best possible operation when adapting to Power Operation.

A FEW COMPANIES USING SECURITY DOORS

Dayton Power & Light, Dayton, O.
Western Electric*
Memphis Light, Gas & Water Div., Memphis, Tenn.
Boeing Airplane Development Center, Seattle, Wash.
N.A.C.A. Shop & Test Chamber, Cleveland, Ohio
Kaiser Aluminum, Dayton, Ohio
General Motors*
Douglas Aircraft, Okla. City, Ok.
General Electric Tube Works, Tell City, Ind.
Owen Illinois Glass Co.*
Standard Oil Co., Cleveland, O.
Studebaker Corp., Pasadena, Cal.
U.S. Navy Base, Gulfport, Miss.
Consolidate Vultee, Fort Worth, Texas
Pennsylvania Railroad*
Wagner Electric Co.*
Allis-Chalmers Mfg. Co.*
Cudahy Packing, Los Angeles
Atomic Energy Comm., Elza, Tenn.
ACF Industries, Huntington, W.V.
Crown-Zellerback Paper, Los Angeles, Cal.
Broad Street Power Station, Seattle Wash.
Reynolds Tobacco Co., Winston-Salem, N. C.
Dearborn Chemical Co., Lake Zurich, Ill.
Caterpillar Tractor, York, Pa.
Grace Chemical, Memphis, Tenn.
Universal Carloading Corp., Cleveland, Ohio
Johns-Manville Co., Waukegan, Ill.
E. I. Du Pont, Carneys Point, N.J.
Youngstown Steel, Youngstown, O.
McDonnell Aircraft, St. Louis, Mo.
Kroger Grocery & Baking Co.*
Firestone Textiles, Gastonia, N.C.
Mobile & Ohio Railroad Co.*
F. W. Woolworth*
Pullman Standard Car Co. Michigan City, Ind.
GLF Soil Preparation, Albany, N. Y.
Graybar Electric Co.*
Coca-Cola Co.*
Fairchild Air Force Base, Galena, Wash.
Crane Co., Chicago, Ill.
American Hoist & Derrick Co., St. Paul, Minn.

*Various Installations

1960 EDITION

16h
Tr

Steel TRUSCON Doors

INDUSTRIAL TYPES

REPUBLIC STEEL CORPORATION, TRUSCON DIVISION, Youngstown 1, Ohio

TRUSCON INDUSTRIAL STEEL DOORS—SERIES 31

Truscon Series 31 steel doors and hardware are designed and constructed for economical production and to withstand hard usage. They are well adapted for the constant service required of doors in factories, warehouses, depots, garages, service stations, etc.

The stiles and rails are made from 16 gauge steel tube 5″ x 1¾″. Corners are welded and ground smooth.

The six leaves shown below can be furnished as single or double doors to swing or slide. Glass is held in place by continuous glazing angles. Note that warehouse types are indicated by a star-★.

Doors are prepared for specially designed, extra heavy Truscon hardware, see pages 4 and 5. Door closers, Panic Exit devices, push-pull handles, louvers and ball bearing hinges can also be furnished when specified. Hardware is shipped unattached.

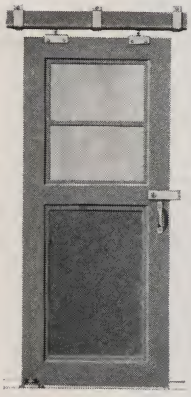
The heavy pressed steel door frames for swing doors are reinforced at hinge points. They are shipped knocked-down.

Door leaves up to a maximum size of 7′ x 12′ to be bonderized and primed with one coat of light gray oven baked enamel. All others to be given one coat of standard gray metallic primer air dried.

Double Swing

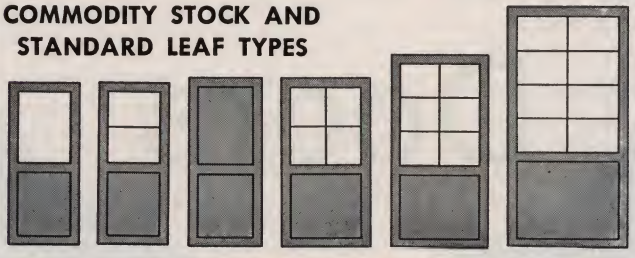
Single Swing

Double Slide



Single Slide

COMMODITY STOCK AND STANDARD LEAF TYPES



SINGLE SWING				DOUBLE SWING				SINGLE SLIDE				DOUBLE SLIDE			
2868	G 1	★G 2	★M	5468	G 1	★G 2	★M	.....	....	....	....	.....	....	....	....
2870	G 1	★G 2	★M	.....	....	....	....	.....	....	....	....	.....	....	....	....
3070	G 1	★G 2	★M	6070	G 1	★G 2	★M	3070	G 1	G 2	M	6070	G 1	G 2	M
3470	G 1	★G 2	★M	.....	....	....	....	.....	....	....	....	.....	....	....	....
3870	G 1	★G 4	★M	7470	G 1	★G 4	★M	.....	....	....	....	.....	....	....	....
4080	....	★G 6	★M	8080	....	★G 6	★M	4080	....	G 6	....	8080	....	G 6	....
50-100	....	★G 8	....	100-100	....	★G 8	....	50-100	....	G 8	....	100-100	....	G 8	....

★ Denotes stock type swing doors — prepared for both mortise locks and lever latch hardware. Types 3070, 3870, and 6070 also available from warehouse with provision for Panic Exit hardware sets marked with ★ on page 5. All other swing doors and all slide doors are standard units, available from factory only. Frames for stock doors are also available from warehouse, prepared to receive locksets P-3500, P-3638, and lever latch P-6564, and, except for types 50-100 and 100-100, for stock Panic Exit hardware marked with ★ on page 5. Frames requiring preparation for all other locksets are available from factory only.

OPENING DIMENSIONS AND GLASS SIZES

DOOR NUMBER	DOOR SIZE		SWING DOOR OPENING DIM.		SWING DOOR *MASONRY OPG. DIM.		SLIDE DOOR OPENING DIM.		GLASS SIZES
	Width	Height	Width	Height	Width	Height	Width	Height	
Single Doors									
2868	2′- 7⅛″	6′- 7¼″	2′-8″	6′-8″	3′-0⅛″	6′-10¼″	....	....	21⅜″ x 16″
2870	2′- 7⅛″	6′-11¼″	2′-8″	7′-0″	3′-0⅛″	7′- 2¼″	....	....	21⅜″ x 18″
3070	2′-11⅛″	6′-11¼″	3′-0″	7′-0″	3′-4⅛″	7′- 2¼″	2′-8″	6′-10″	25⅜″ x 18″
3470	3′- 3⅛″	6′-11¼″	3′-4″	7′-0″	3′-8⅛″	7′- 2¼″	....	....	29⅜″ x 18″
3870	3′- 7⅛″	6′-11¼″	3′-8″	7′-0″	4′-0⅛″	7′- 2¼″	....	....	16⅜″ x 18″
4080	3′-11⅛″	7′-11¼″	4′-0″	8′-0″	4′-4⅛″	8′- 2¼″	3′-8″	7′-10″	18⅜″ x 15⅞″
50-100	4′-11⅛″	9′-11¼″	5′-0″	10′-0″	5′-4⅛″	10′- 2¼″	4′-8″	9′-10″	24⅜″ x 15⅞″
Double Doors									
5468	5′- 3⅛″	6′- 7¼″	5′-4″	6′-8″	5′-8⅛″	6′-10¼″	....	....	21⅜″ x 16″
6070	5′-11⅛″	6′-11¼″	6′-0″	7′-0″	6′-4⅛″	7′- 2¼″	5′-8″	6′-10″	25⅜″ x 18″
7470	7′- 3⅛″	6′-11¼″	7′ 4″	7′-0″	7′-8⅛″	7′- 2¼″	....	....	16⅜″ x 18″
8080	7′-11⅛″	7′-11¼″	8′-0″	8′-0″	8′-4⅛″	8′- 2¼″	7′-8″	7′-10″	18⅜′ x 15⅞″
100-100	9′-11⅛″	9′-11¼″	10′-0″	10′-0″	10′-4⅛″	10′- 2¼″	9′-8″	9′-10″	24⅜″ x 15⅞″

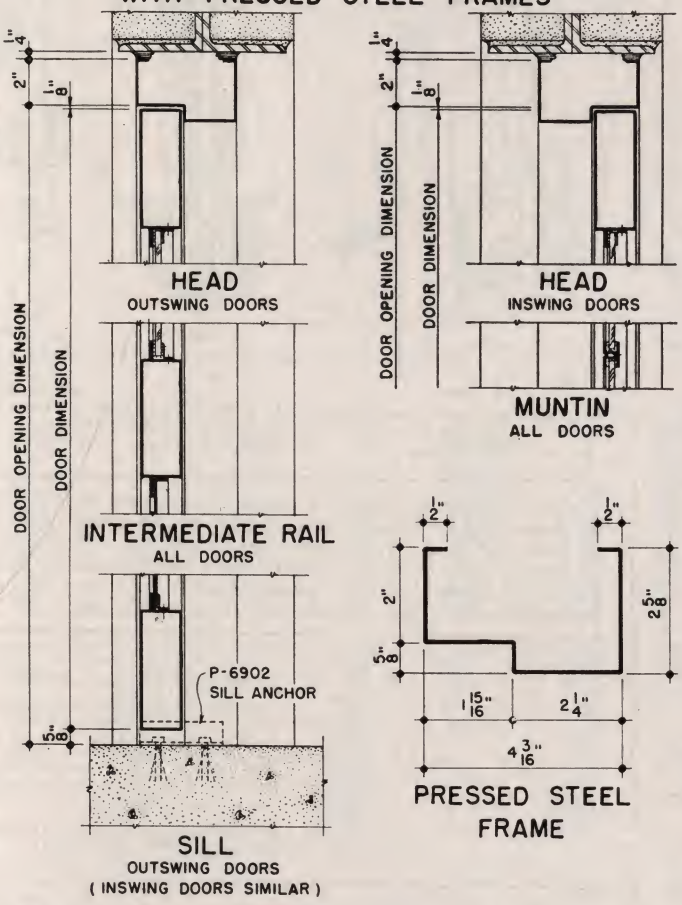
* Masonry opening dimensions listed for swing doors are based upon the use of Truscon Standard pressed steel door frames.

Copyright Republic Steel Corporation, Truscon Division, Youngstown, Ohio, January, 1960

TRUSCON INDUSTRIAL STEEL DOORS—SERIES 31

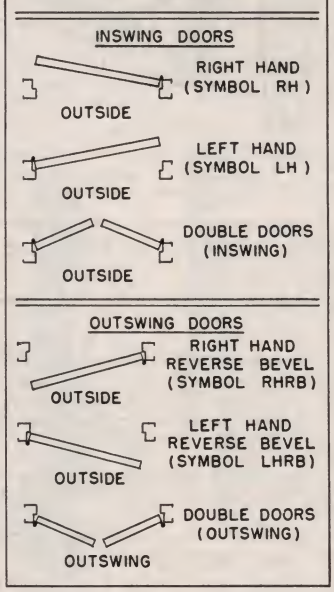
STANDARD DETAILS AND SPECIFICATIONS

SWING DOORS WITH PRESSED STEEL FRAMES



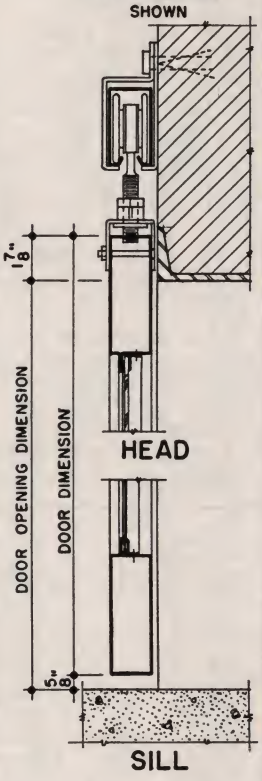
- HAND AND SWING OF DOORS IS DETERMINED AS VIEWED FROM THE OUTSIDE. REFER TO DIAGRAM BELOW.
- RIGHT HAND LEAF OF A DOUBLE DOOR IS THE ACTIVE LEAF.
- INDICATE WHETHER SLIDE DOORS SLIDE ON INSIDE OR OUTSIDE OF BUILDING AND TO RIGHT OR LEFT AS VIEWED FROM THE OUTSIDE.
- DOUBLE SLIDE DOORS SLIDE APART.

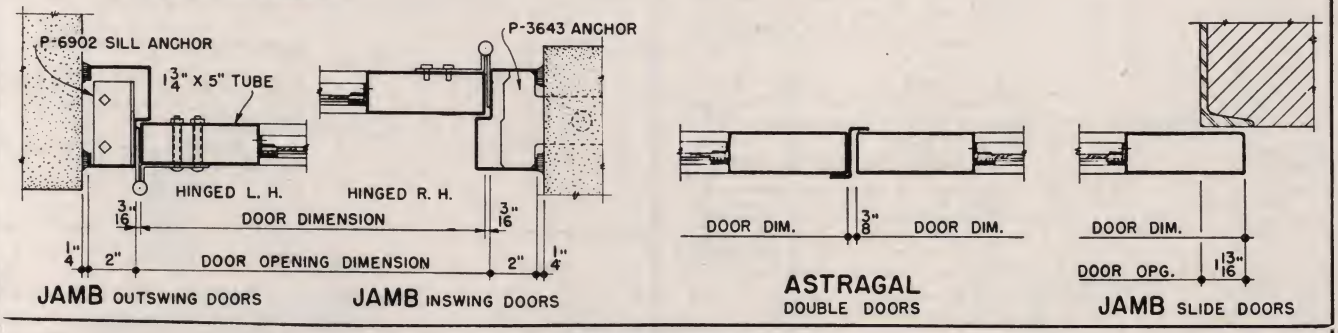
HAND AND SWING OF DOORS



SLIDE DOORS

OUTSIDE INSTALLATION SHOWN





SPECIFICATIONS

1. Material and Construction—Stiles and rails shall be constructed of 5" x 1¾" 16 gauge pressed steel tube with lock seam. Corners shall be of welded construction with all joints face welded and ground smooth. Glass panel muntins, designed for inside glazing with steel strips and bed putty, shall be securely and neatly welded to rails and stiles and at cross joints. (Upper portion of the door will be fitted with solid steel panel when specified.) The lower portion of the door shall be equipped with steel panels, not less than 16 gauge in thickness, bedded in mastic and secured to the stiles and rails with continuous steel angles and screws.

2. Pressed Steel Door Frames—(a). All Series 31 swing doors, where so indicated or specified, shall be provided with Truscon standard pressed steel door frames made of 14 gauge steel.

(b). Frames shall be prepared to receive standard hardware, provided with anchors for building into masonry.

3. Hardware—(a). Each swinging leaf shall be provided with three heavy steel half surface template butt hinges. (b). All swing doors shall be equipped with Truscon mortise cylinder lock or Truscon lever latch with padlock brackets. Cylinder lock to be equipped with latch bolt operated by knobs, and dead bolt operated by thumb turn from inside and by key from outside. (Other locksets, as described on hardware page, will be furnished when so specified.) (c). On double swing doors one leaf shall be equipped with foot bolt and spring top bolt. (d). Sliding leaves shall be hung from four wheel roller-bearing trolleys and shall be provided with guides, handles, stops, and hasp and staples. (e). All double doors shall be provided with astragals.

4. Shop Finish—Door leaves up to a maximum size of 7' x 12' shall be bonderized and primed with one coat of light gray baked on enamel. All others shall be given one coat of standard gray metallic primer air dried.

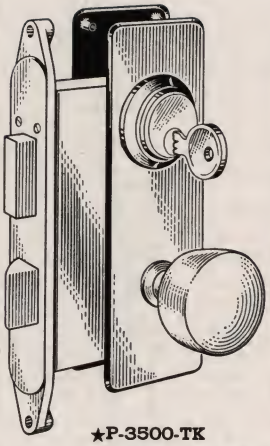
NOTE: We reserve the right to amend specifications and details, without notice, in the interest of product improvement.

TRUSCON INDUSTRIAL STEEL DOORS — SERIES 31

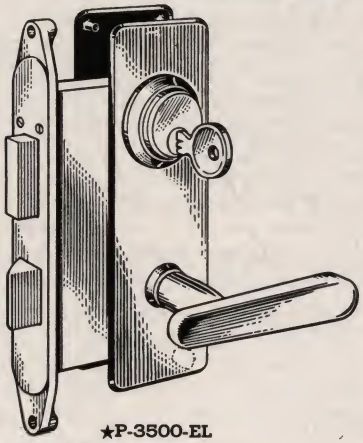
STANDARD HARDWARE

★ Indicates Warehouse Items

† Indicates Factory Stock Items



★P-3500-TK

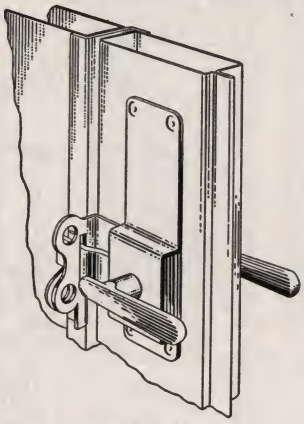


★P-3500-EL

Mortise Locks with cylinder, for swing doors

Bronze Knobs and Escutcheons, U. S. 10 finish

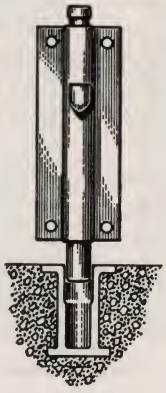
Iron Lever Handles and Escutcheons black finish



★P-6564

Iron Lever Latch Hardware for swing doors

(Padlock brackets can be applied on hinge side only)



★P-2993

8″ Foot Bolt for double swing doors

★P-2994

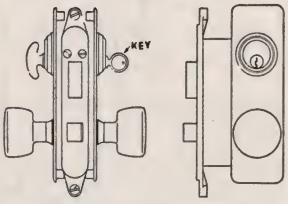
8″ Chain Bolt for double swing doors

U. S. Gov't Specification FFH-111a

Foot bolt F-1023B — 8″

Chain bolt F-1023A — 8″

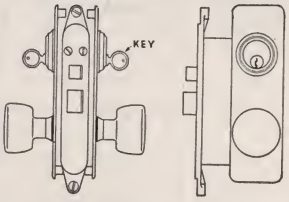
All locksets with suffix "TK" have bronze knobs and escutcheons, U.S. 10 finish.



★ Set P-3500-TK; Gov't No. 86B

Latch bolt by knob from either side. Dead bolt by key from outside and thumb turn from inside. Reversible. Also available with cylinders both sides (Gov't No. 86C).

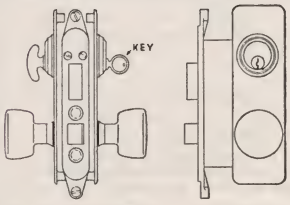
★ (**Set P-3500-EL** — Iron lever handles and escutcheons, black finish.)



Set P-3606-TK; Gov't No. 86G

Latch bolt by knob from either side except when outer knob locked by stop works controlled by inside cylinder. When outer knob locked, latch bolt by key outside. When door closes, auxiliary bolt deadlocks latch bolt. When specified, inside cylinder by master key only. Not reversible.

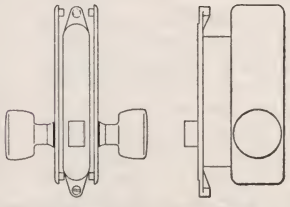
(**Set P-3606-EL** — Iron lever handles and escutcheons, black finish.)



Set P-3638-TK; Gov't No. 86A

Latch bolt by knob from either side, except when outer knob is locked by stop in face. When outer knob is locked, latch bolt by key from outside. Dead bolt by key from outside and thumb turn from inside. Not reversible.

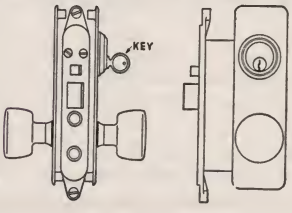
(**Set P-3638-EL** — Iron lever handles and escutcheons, black finish.)



† Set P-6542-TK; Gov't No. 86N

Latch bolt by knob from either side. Reversible.

(**Set P-6542-EL** — Iron lever handles and escutcheons, black finish.)

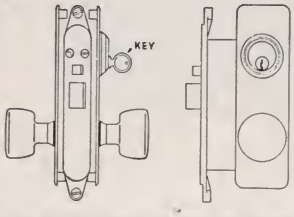


† Set P-6593-TK; Gov't No. 86E

Latch bolt by knob from either side, and from inside at all times. Outer knob is locked by stop in face. When outer knob locked, latch bolt by key from outside. When door is closed, auxiliary bolt deadlocks latch bolt against end pressure. Not reversible.

(**Set P-6593-EL** — Iron lever handles and escutcheons, black finish.)

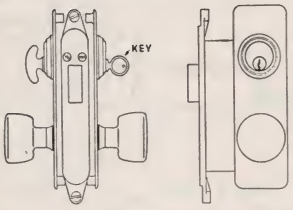
Series 31 Swing Doors are prepared to receive all locksets shown (Set P-6816 requires drilling one additional hole in field, $\frac{9}{16}$″ Dia.). Warehouse stock frames are prepared to receive only P-3500, P-3638, and P-6816 locksets, and P-6564 lever latch hardware. Frames requiring other lockset preparation are available from factory only.



† Set P-6595-TK; Gov't No. 86J

Latch bolt by key from outside and by knob from inside at all times. Latch bolt by knob from outside, except when locked by key. Cylinder controls stop works. When door is closed auxiliary bolt shall deadlock the latch bolt against end pressure. Not reversible.

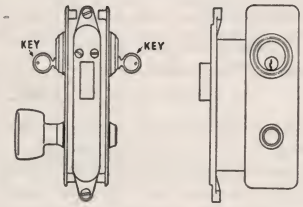
(**Set P-6595-EL** — Iron lever handles and escutcheons, black finish.)



Set P-6612-TK; Gov't No. 86P

Dead bolt by key from one side and by thumb turn from other side. Fixed knobs on both sides. Recommended for use with door closer.

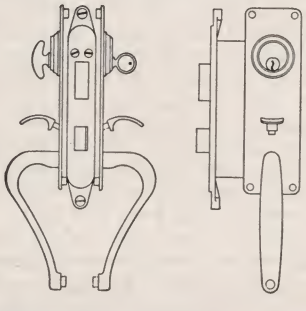
(**Set P-6612-EL** — Iron lever handles and escutcheons, black finish.)



† Set P-6614-TK; Gov't No. 86T

Dead bolt by key from either side. Fixed knob on hinge side only. Recommended for use with door closer.

(**Set P-6614-EL** — Iron lever handle and escutcheons, black finish.)



Set P-6816; Gov't No. 123A*

Latch bolt by thumb piece from either side at all times. Dead bolt by key from outside and by thumb turn inside. (Illustrated.)

* Gov't No. 123A requires cylinders both sides, and lock will be so furnished when specified.

TRUSCON INDUSTRIAL STEEL DOORS—SERIES 31

NOTES: (a) All bronze hardware has U. S. 10 finish. (b) †Denotes factory stock items. (c) Panic Exit hardware marked with star ★ is available from warehouse for door types 3070, 3870, and 6070. All other hardware marked with star ★ is available from warehouse. Doors and frames requiring hardware NOT marked with star ★ must be shipped from factory.

BRONZE PANIC EXIT DEVICES FOR DOUBLE SWING DOORS

★No. 5400 x 2510 — INSIDE CONTROL

No. 5400 — INSIDE CONTROL

★No. 5433 x 2513 With Cylinder — INSIDE AND OUTSIDE CONTROL

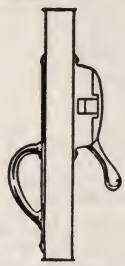
No. 5422 x 2512 No Cylinder — INSIDE AND OUTSIDE CONTROL

BRONZE PANIC EXIT DEVICES FOR SINGLE SWING DOORS

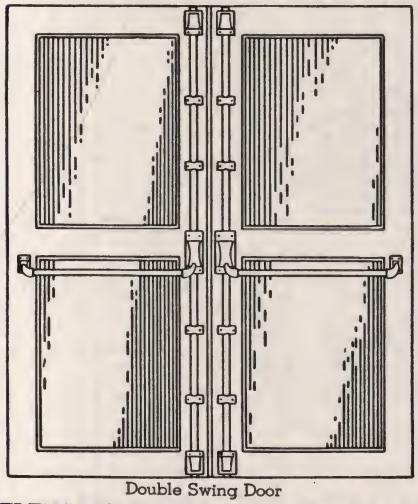
★No. 5333 x 2513 With Cylinder — INSIDE AND OUTSIDE CONTROL

No. 5322 x 2512 No Cylinder — INSIDE AND OUTSIDE CONTROL

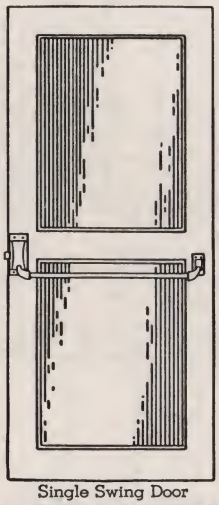
No. 5311 x 2511 With Cylinder — INSIDE AND OUTSIDE CONTROL



No. 5300 x 2510 — INSIDE CONTROL

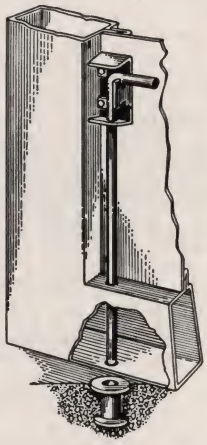


Double Swing Door

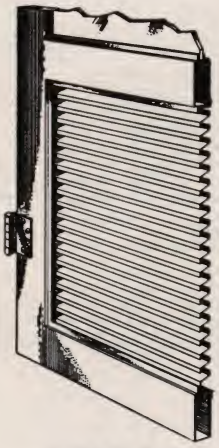


Single Swing Door

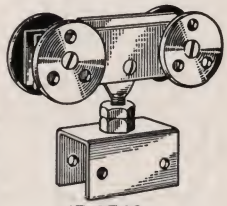
ELEVATIONS OF DOORS WITH PANIC EXIT HARDWARE



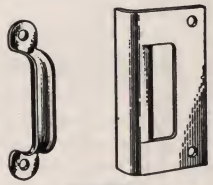
†P-3517
Cane Bolt for slide doors



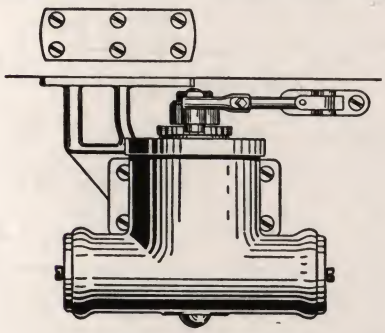
★STANDARD LOUVER FIXED TYPE



†P-3540
Trolley Assembly for slide doors

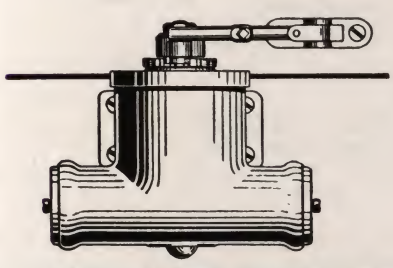


†P-3527
Handle and Pull Assembly for slide doors



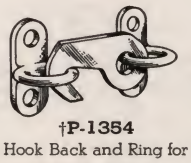
Door Closers P-3534 with soffit bracket for Outswing Doors

★DOOR CLOSERS (Above and Below)
Iron, with painted finish
U. S. Gov't No. FFH-121c, Type 3001 and 3002



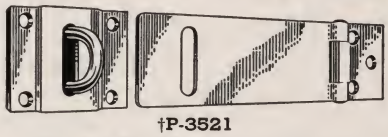
Door Closers P-3535 for Inswing Doors

PUSH AND PULL HANDLES
Cast Bronze
★ For Stock Doors, BP-6537, 2½" x 8". Front filler plate P-6537-3 included. Fits standard lock preparation.
On special order, P-3706, 3" x 12". Requires special preparation of door.

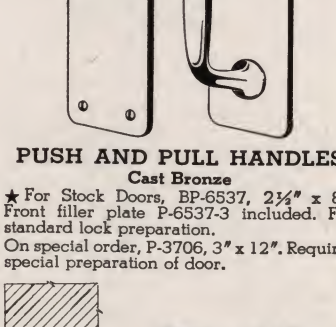


†P-1354
Hook Back and Ring for swing doors

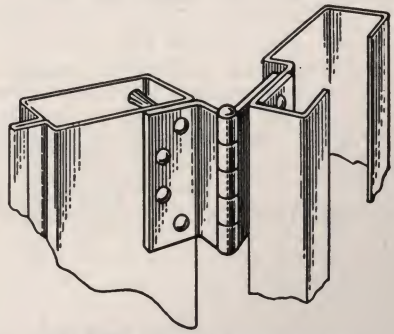
†P-3539
Roller Guide for slide doors



†P-3521
Hasp and Staple Assembly for slide doors



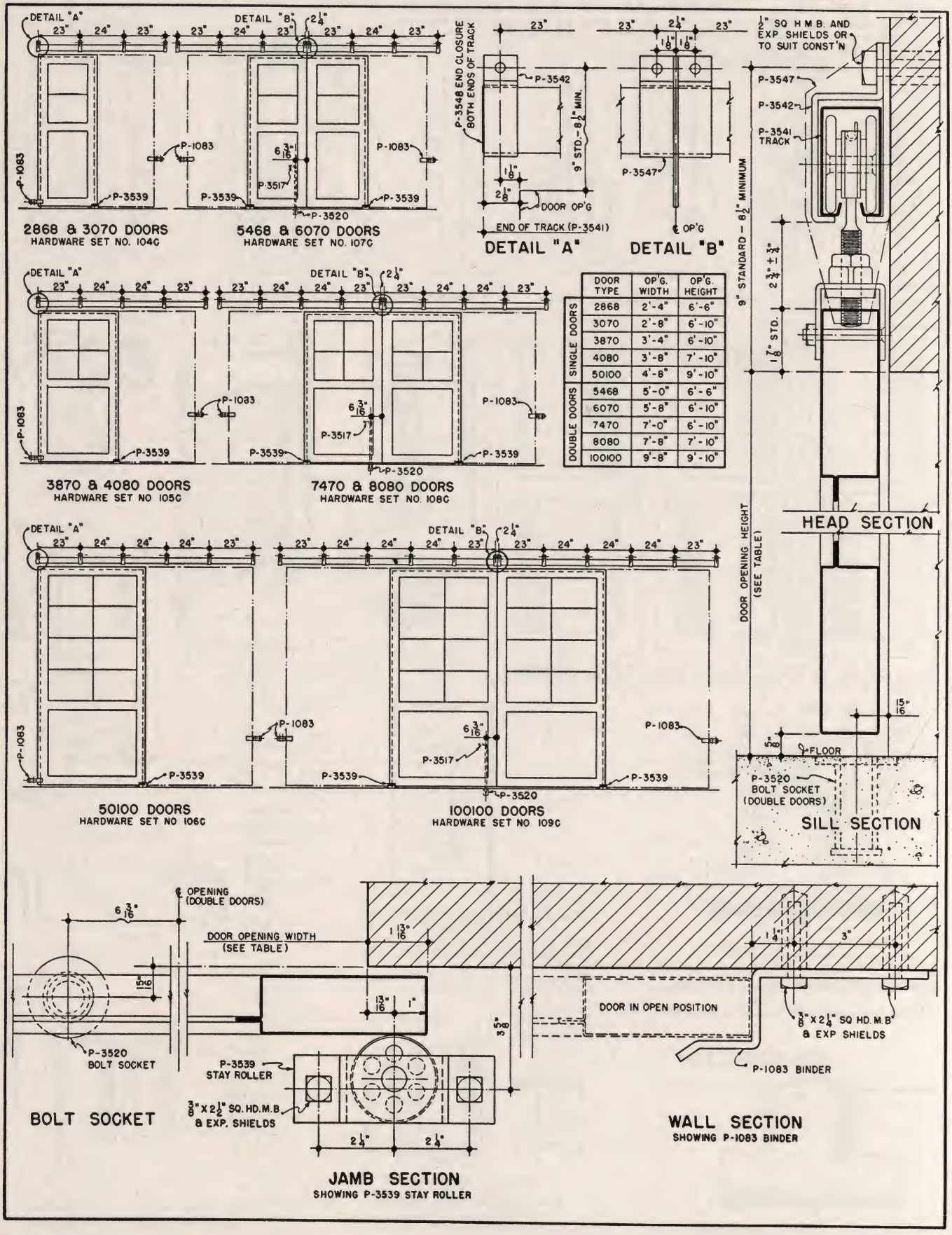
HALF SURFACE BALL BEARING HINGE
†P-3572, Steel or Bronze
U. S. Gov't No. FFH-116b, Type 2080½P



★P-2996—Hinge for outswing doors
★P-3618—Hinge for inswing doors

TRUSCON INDUSTRIAL STEEL DOORS—SERIES 31

INSTALLATION DETAILS — SLIDE DOORS



	DOOR TYPE	OP'G. WIDTH	OP'G. HEIGHT
SINGLE DOORS	2868	2'-4"	6'-6"
	3070	2'-8"	6'-10"
	3870	3'-4"	6'-10"
	4080	3'-8"	7'-10"
	50100	4'-8"	9'-10"
DOUBLE DOORS	5468	5'-0"	6'-6"
	6070	5'-8"	6'-10"
	7470	7'-0"	6'-10"
	8080	7'-8"	7'-10"
	100100	9'-8"	9'-10"

TRUSCON TWO-SECTION LIGHT TUBE TURNOVER DOORS

Designed for rapid operation, Truscon Two-Section Turnover Doors are effective barriers to infiltration of cold air and resultant heat loss in industrial buildings of all types.

These weathertight steel doors, of unusually heavy construction, have two leaves, counterweighted in any position in the complete "door cycle" from fully closed to fully open. This permits easy manual control at all times.

When the door opens, the bottom leaf slides upward vertically until it lies parallel to and behind the top leaf. Then both leaves move together, **turning over,** so that their outside surfaces are upward when they reach the horizontal position.

An important advantage is the reduced clearance required inside the building for opening and closing these doors. This design affords minimum interior clearance at any point in the door cycle.

SPECIFICATIONS

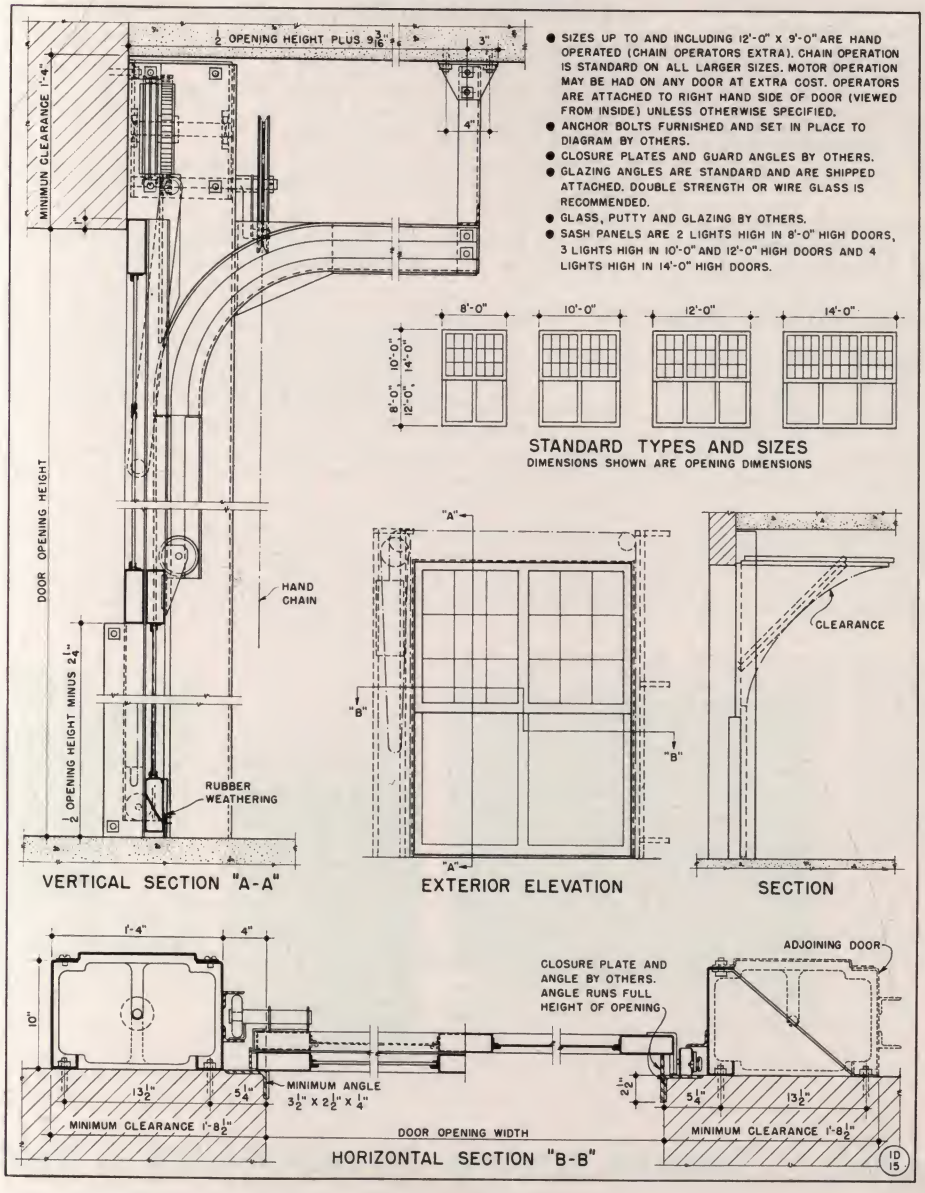
1. Scope of Work — The work to be included shall consist of furnishing the material necessary to complete all Two-Section Turnover Doors.

2. General — (a) All turnover doors shown on the drawings shall be of the tubular design as manufactured by Republic Steel Corporation, Truscon Division, Youngstown, Ohio. (Maximum opening dimensions for tubular design is 14′ x 14′.)

(b) Each door shall be composed of a top and bottom leaf of equal dimensions.

(c) The bottom leaf shall be arranged to slide vertically upward until it is directly opposite and behind the top leaf. Both leaves then act together, turning over in such a manner that in their "full open" position, they lie horizontally directly behind the door header.

TUBULAR DESIGN


½ OPENING HEIGHT PLUS 9 3/16"
3"
4"
MINIMUM CLEARANCE 1'-4"
DOOR OPENING HEIGHT
½ OPENING HEIGHT MINUS 2¼"
HAND CHAIN
RUBBER WEATHERING
VERTICAL SECTION "A-A"
"A"
"B"
EXTERIOR ELEVATION
CLEARANCE
SECTION
8'-0"
10'-0"
12'-0"
14'-0"
STANDARD TYPES AND SIZES
DIMENSIONS SHOWN ARE OPENING DIMENSIONS
● SIZES UP TO AND INCLUDING 12'-0" X 9'-0" ARE HAND OPERATED (CHAIN OPERATORS EXTRA). CHAIN OPERATION IS STANDARD ON ALL LARGER SIZES. MOTOR OPERATION MAY BE HAD ON ANY DOOR AT EXTRA COST. OPERATORS ARE ATTACHED TO RIGHT HAND SIDE OF DOOR (VIEWED FROM INSIDE) UNLESS OTHERWISE SPECIFIED.
● ANCHOR BOLTS FURNISHED AND SET IN PLACE TO DIAGRAM BY OTHERS.
● CLOSURE PLATES AND GUARD ANGLES BY OTHERS.
● GLAZING ANGLES ARE STANDARD AND ARE SHIPPED ATTACHED. DOUBLE STRENGTH OR WIRE GLASS IS RECOMMENDED.
● GLASS, PUTTY AND GLAZING BY OTHERS.
● SASH PANELS ARE 2 LIGHTS HIGH IN 8'-0" HIGH DOORS, 3 LIGHTS HIGH IN 10'-0" AND 12'-0" HIGH DOORS AND 4 LIGHTS HIGH IN 14'-0" HIGH DOORS.
1'-4"
4"
10"
CLOSURE PLATE AND ANGLE BY OTHERS. ANGLE RUNS FULL HEIGHT OF OPENING
ADJOINING DOOR
MINIMUM ANGLE 3½" X 2½" X ¼"
MINIMUM CLEARANCE 1'-8½"
DOOR OPENING WIDTH
HORIZONTAL SECTION "B-B"
10 15

(d) In its closed position, the top leaf shall be suspended by a link mechanism at each jamb designed to give this leaf a definite connection to the building structure. It shall further be held against the door header by spring acting bolts.

(e) The opening mechanism shall be so designed, that the leaves are perfectly balanced by the counterweights in any operating position.

3. Material — (a) All frame members, sheets, sash sections, guides and counterweight enclosures shall be of hot-rolled new billet steel of the gauges and sizes shown on the drawings or hereafter called for in these specifications.

4. Construction — (a) The stiles and rails shall be constructed of cold formed 1¾″ x 5″ x 16 gauge steel tubing.

(b) All corners and intersections shall be welded and ground smooth on exposed surfaces of the door. Welds must develop the full strength of the section.

(c) The lower leaf of the door shall be fitted with 14 gauge commercial grade steel sheets. These sheets shall be set in mastic, and shall be held in place by continuous steel retaining angles.

(d) The upper leaf of the door shall be fitted with steel sash furnished with continuous inside metal glazing strips.

(e) The jamb plates which bolt to the inside face of the door opening shall be pressed steel channel shapes 10″ deep and not less than ⅛″ in thickness. The door leaves, guides, and operating mechanism are all supported from these jamb plates. The end counterweight enclosure shall be the same channel shape as the jamb plates and extend to the same height. The front cover of the counterweight enclosure shall be 16 gauge metal and 7′-0″ high. The outside weather plates below the bottom leaf at each jamb are part of the door frame and are to be furnished with it by the structural steel contractor.

(*Specifications continued on next page*)

SPECIFICATIONS (Continued)

5. Hardware and Operators — (a) Tubular Rail Doors up to and including 12'-0" in width and 9'-0" in height are to be manually operated by handles and a pull-down chain on the bottom leaf. Tubular Rail Doors over above dimensions are to be mechanically operated by a continuous zinc coated hand chain, located inside the building at either jamb of the opening. The ratio of the travel between hand chain and the door shall not exceed 6 to 1 and the pull on the hand chain must not exceed 25 lbs.

(b) The top corners of the bottom leaf shall be fitted with adjustable 4" diameter rollers mounted on anti-friction bearings. The bottom corners shall be fitted with graphite bronze-bushed steel rollers attached by a rolled steel bracket fastened to the leaf. One 6-strand 37 wire plough-steel cable, or equal, shall be attached to each of these brackets and run continuously over cast iron sheaves mounted on ball bearings to the counterweight. At the counterweight the cables shall return around a double grooved ball-bearing sheave to an upper suspension point, where independent adjustment shall be provided for each cable. The sectional counterweights shall be of cast iron with clean regular surfaces and weighing not more than 50 lbs. per section. They shall pile true on a center rod.

(c) The operator unit above the counterweights shall consist of a welded steel frame which bolts directly to the jamb plate. This frame shall support V-grooved cable sheaves of size not less than recommended by cable manufacturers. The cable sheaves shall be operated through a gear reducing unit to a hand chain wheel. All hand chain operated units shall also be equipped with the necessary provisions for electrification.

(d) Doors shall be locked by a throw bolt on the inside of the bottom leaf.

6. Electrical Operators — (a) All turnover doors, when noted on the drawings, shall be fitted with electric power drives of the fully automatic type, controlled from one or more pushbutton stations.

(b) These electric operators shall consist of a factory assembled unit attaching directly to the standard door operator as specified under Paragraph 5, Section (c). The electric motor shall be of the high starting torque, induction type, vertically mounted, with the right angle reducing gear built integral with the motor frame. The motor shall further be equipped with a multiple disc, built-in brake, acting on the motor shaft to stop and hold the door in any position when the current is off. Motor is also equipped with emergency hand chain operator.

(c) The doors shall be controlled by a 3-button momentary contact pushbutton station (marked "open-close-stop") mounted inside the building and at one jamb of the opening. Additional push-button control stations may be had at extra cost. The doors shall be automatically stopped in their fully open or fully closed positions by means of lever operated snap-type limit switches. Motor reversing control shall consist of a high quality combination reversing starter and throwout switch. The door manufacturer will assemble and wire the complete unit in the shop before shipment to the job. The general wiring contractor shall furnish and bring the main supply wires to a point adjacent to the motor equipment and complete the wiring in accordance with wiring diagram in the control cabinet.

(d) Electric operator is equipped for *either* 220 or 440 volt 3 phase 60 cycle current supply.

7. Shop Finish — (a) Before shipment all leaves, guides, and the weight boxes shall be given a coat of gray metallic primer paint. The machinery shall be painted with one coat of gray enamel. No field painting is included under this specification.

8. Erection — (a) The erection of the door and operating equipment is to be in strict accordance with instructions furnished by door manufacturer.

(b) The building contractor shall furnish and set the anchor bolts necessary to install the door in accordance with the diagram furnished by the door manufacturer.

9. Glazing — (a) The glass, putty, and glazing are to be furnished by the glazing contractor after the door has been completely erected.

NOTE: We reserve the right to amend specifications and details, without notice, in the interest of product improvement.

OTHER TRUSCON INDUSTRIAL STEEL DOORS

For detailed information, consult nearest Truscon district office.

Accordion Doors — Series 500LT and 500HT — Manual or electrical operation. Design: three to six leaves. In fully open position, door leaves clear jambs and permit complete use of clear door opening. Maximum leaf size 4' x 12', permits door openings up to 24' x 12' in 6-leaf design. Can be furnished for openings up to 30' x 22' in 6-leaf design.

Swing and Slide Doors — Series 100 — For use in larger than normal openings requiring swing or slide doors subject to constant and heavy service. All hardware is extra heavy.

Single-Section Light Tube Vertical Lift Doors (Not illustrated) — Manual or electrical operation. Door leaf rises vertically and completely clears door opening. Perfectly balanced by counterweights in any position. Maximum opening dimensions 14' x 14'.

Two-Section Light Tube Vertical Lift Doors — Similar in operation to single section door. Bottom leaf sets behind plane of top leaf and moves simultaneously with it but at twice the speed. Maximum opening dimensions 14' x 14', but requires less head room than single section door.

Industrial Canopy Doors — Series 800LT — Hand operation only. Maximum size 10' x 10'. Perfectly balanced in any position by counterweights. Only 8½" clearance required at the head. Sturdy and simple operating hardware assures easy operation and long life.

Industrial Slide Door

Industrial Canopy Door

Two-Section Vertical Lift Door

Accordion Steel Door

Industrial Swing Door

REPUBLIC STEEL CORPORATION • TRUSCON DIVISION • YOUNGSTOWN 1, OHIO

Warehouses and Sales Offices in All Principal Cities

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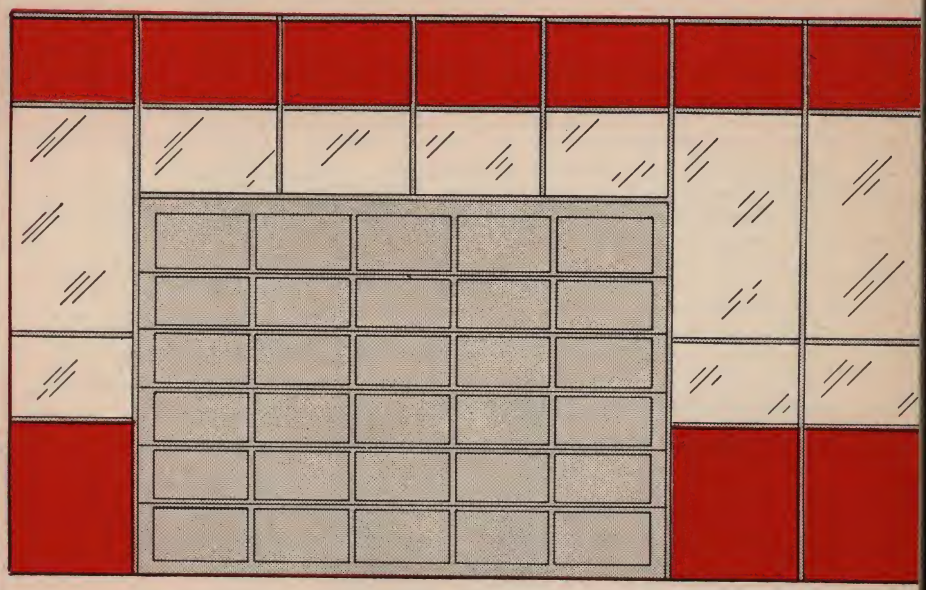
ARM-R-LITE
aluminum
OVERHEAD DOORS



STRONGER SECTIONS–
LIGHTER DOOR–
CORROSION RESISTANT–
ALWAYS ATTRACTIVE

ARM-R-LITE DOOR MFG. CO., INC.

ARM-R-LITE ALUMINUM OVERHEAD DOORS

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INTRODUCTION

The ARM-R-Lite ALUMINUM DOOR was designed with three factors in mind—APPEARANCE—STRENGTH—and DURABILITY.

APPEARANCE—The ARM-R-LITE ALUMINUM DOOR'S natural beauty blends in with the design of the many modern prestige buildings being erected today. Aluminum itself is highly attractive and needs no special adornment for many applications.

STRENGTH—A low modulus of elasticity gives ALUMINUM extra ability to resist impact without deforming permanently. This plus our special methods of fabrication have produced a door with maximum freedom from warpage and sagging so common in wood doors.

DURABILITY—ALUMINUM DOORS need no protection. Their natural resistance to corrosion guarantees a lifetime installation with little or no maintenance. The splitting, checking, peeling and rot that deteriorates wood doors can not happen here.

FEATURES

Lengths of extruded hollow aluminum shapes are fabricated by a special heli-arc welding process to produce the framework of the section. The joints where the extruded lengths meet then are as strong or stronger than the extruded material itself. The constant vibration and jarring of operation can never loosen these solid one piece sections as is the case where fabrication is accomplished with bolts and nuts or screws.

All welds are ground smooth and the entire sections polished, producing an attractive satin finished surface that deters dust and dirt accumulation. A chemical solution with excellent corrosion, abrasion and water resistant qualities is applied to provide a protective coating. A specially developed lacquer is then sprayed on to preserve this beautiful finish.

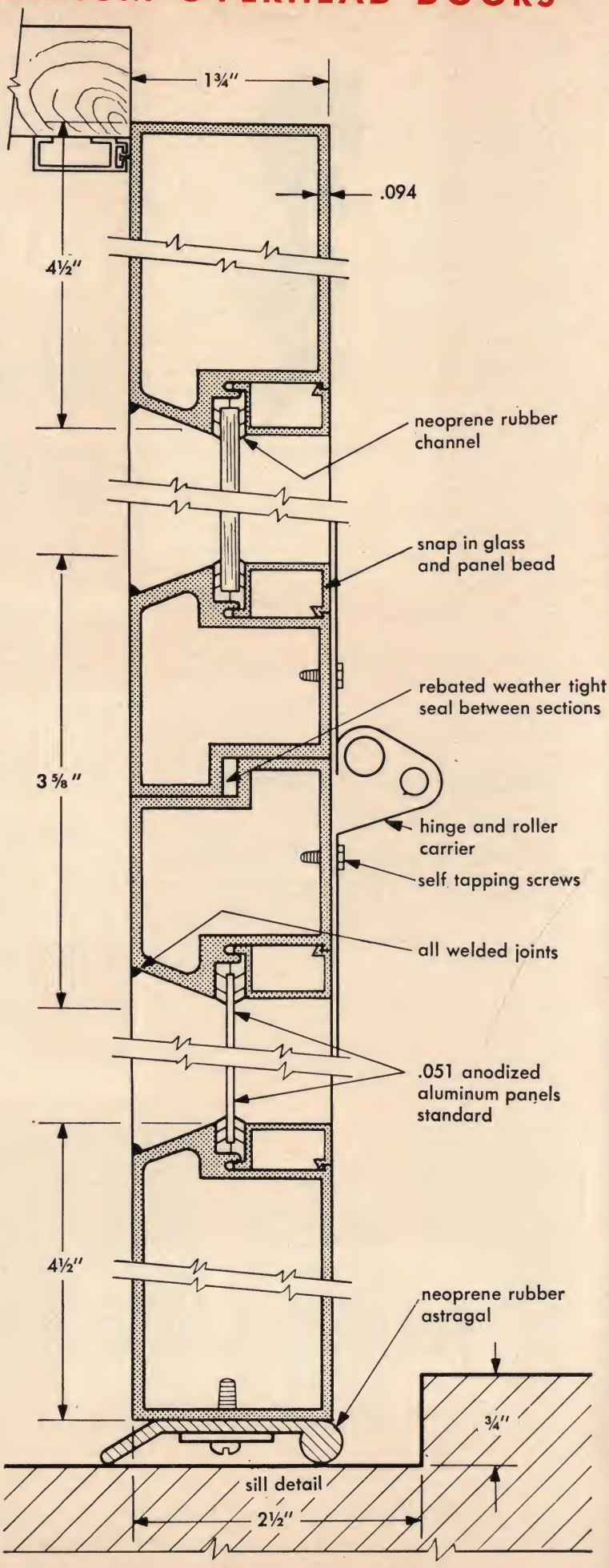
Meeting rails are so formed as to produce a rebated weather tight joint between sections.

Aluminum panels are set in a neoprene rubber channel which seals the panel in the frame making it weather tight and rattle free. Glass panes are also set in a neoprene rubber channel that seals and cushions it against breakage from shock. They are held in place by an aluminum snap in molding which allows for easy removing and replacing of panel or glass. A clean exterior surface, free from bolt heads is accomplished on most doors by self-tapping screws which hold the hardware in place Where engineering demands, a minimum of thru bolts are used.

Where installations require a maximum of light and vision the AL-LITE door has been designed. This model offers a narrow line frame, all glass door excellent for use on service stations, auto showrooms and drive in establishments.

SALES, INSTALLATION AND SERVICE

Sales, installation and service is provided by long established franchised distributors selected for their stability, diligence and integrity. These are people who take pride in their accomplishments and back our conviction, a satisfied customer is our first consideration.



AL-LITE MODELS — —

SIZES — up to 12'-6" wide & 12'-6" high

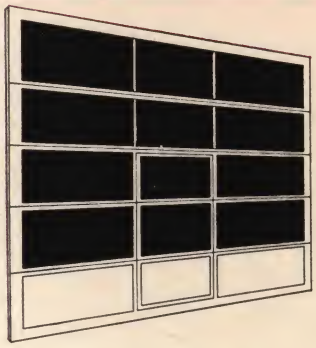
STOCK SERVICE STATIONS DESIGNS

MODEL A-302
all sections glazed
sizes up to 10'-0" w. x 10'-0"h.

MODEL A-403
all sections glazed
sizes up to 12'-0" w. x 10'-7"h.

MODEL A-503
all sections glazed
sizes up to 12'-6" w. x 11'-0"h.

MODEL A-503A
paneled bottom section
top 4 sections glazed
sizes up to 12'-6" w. x 10'-6"h.



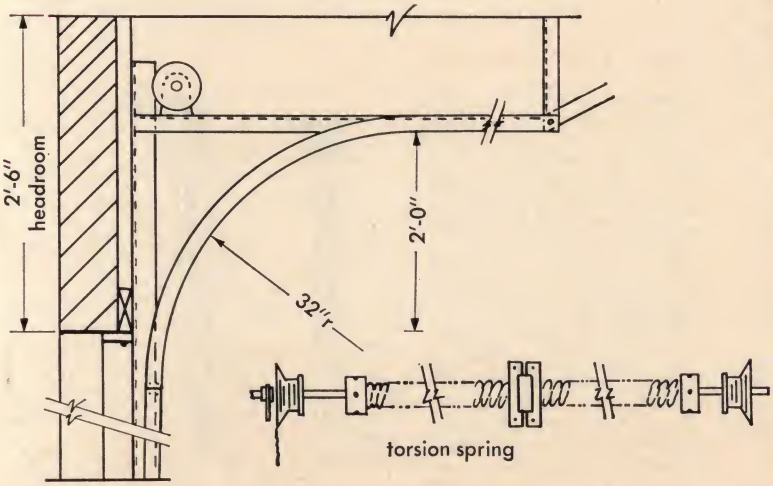
PASS DOOR

Five and six section Al-Lite model Doors can be equipped with pedestrian doors in the lower three sections for convenient access without the need for constantly opening the parent door.

All pedestrian doors are built with a rebated weatherseal completely around door (See Page 4). Six heavy duty spring loaded hinges assure a self closing action.

32" RADIUS TRACK

Standard on service station models. Allows the large sections to glide smoothly around the sweeping curve. Provides life clearance required to raise door above service area greasing racks.



ARM-R-LITE DOORS

FOR

- SERVICE STATIONS
- CAR WASHES
- FIRE HOUSES

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SPECIFICATIONS—AL-LITE DOOR

Aluminum sectional overhead doors shall be by Arm-R-Lite Door Manufacturing Company, West Orange, New Jersey. and constructed of extruded aluminum shapes of 6063-T 5 Alloy with a wall thickness of not less than .094 to produce a finished door of 1¾" thickness. All joints to be heli-arc welded, and welds ground smooth and the entire door surface polished to produce a grained #180 Finish. Metal is then to be bonderized and receive one coat of Methacrylate Lacquer.

Muntins—Narrowline H Type.

Panels—to be .051, anodized sheet.

Track—2" x .093 galvanized, with full vertical and horizontal angle mounting. (32" Radius which provides two foot of lift is standard for service station models. All models can be provided with standard or lift clearance track. Please Specify.)

Hardware—12 gauge plated.

Rollers—Heavy duty full ball bearing with hardened inner and outer race.

Counter Balance—Torsion springs. cast aluminum drums, air craft cable.

Locking Device—Arrangement #1 or #4.

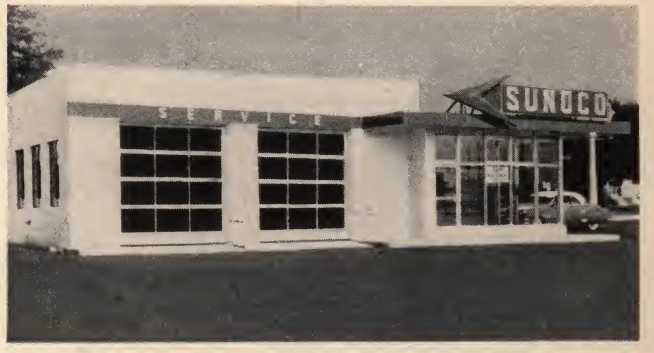
Glazing—Doors to be factory glazed with $\frac{3}{16}$" Arm-R-Clad Tempered Glass set in continuous neoprene channel and held in place by snap-in glazing bead for easy removal.

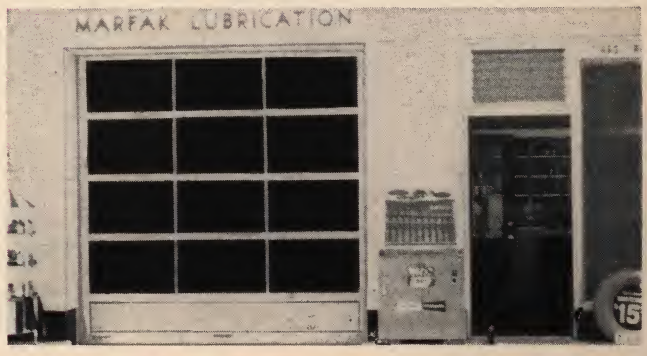
Stops—Furnish ¾" x 2½" "Positive Seal" door stops.

Astragal—Bottom of door to have neoprene rubber astragal fastened to door with an aluminum bar and self tapping screws.

ALTERNATE SPECIFICATIONS

Double strength glass can be used for glazing in place of $\frac{3}{16}$" Arm-R-Clad. Extension springs in place of Torsion on standard lift track only.

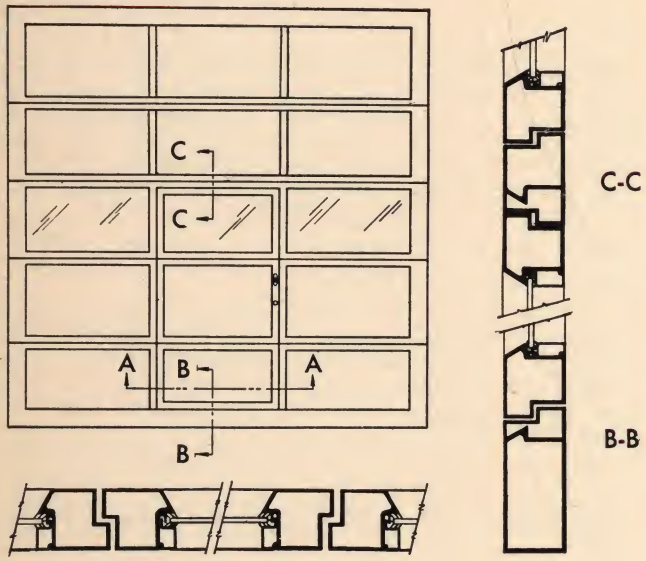




ARM-R-LITE ALUMIMUM OVERHEAD DOORS

FEATURES

PASS DOORS



SECTION A-A

Any size Arm-R-Lite door can be furnished with a pass door for convenient pedestrian access. This eliminates need for constantly operating the parent door.

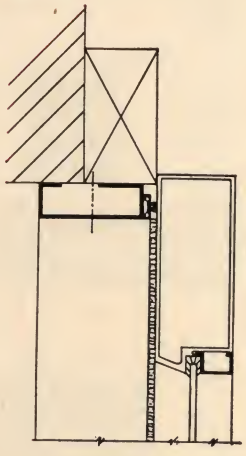
The normal width of a pass door is between 2'-6" and 3'-6" wide. It is usually located one panel in from the right or left side of the door.

A rebated weatherseal completely around the door affords protection against the elements. Six heavy duty, surface mounted, spring loaded hinges assure accurate alignment and self closing. An aluminum key in knob lock set with interior latch, provides access from either side and securely locks door.

When the parent door is over 15'-1½" wide, a center support track is required.

THE "POSITIVE SEAL" DOOR STOP

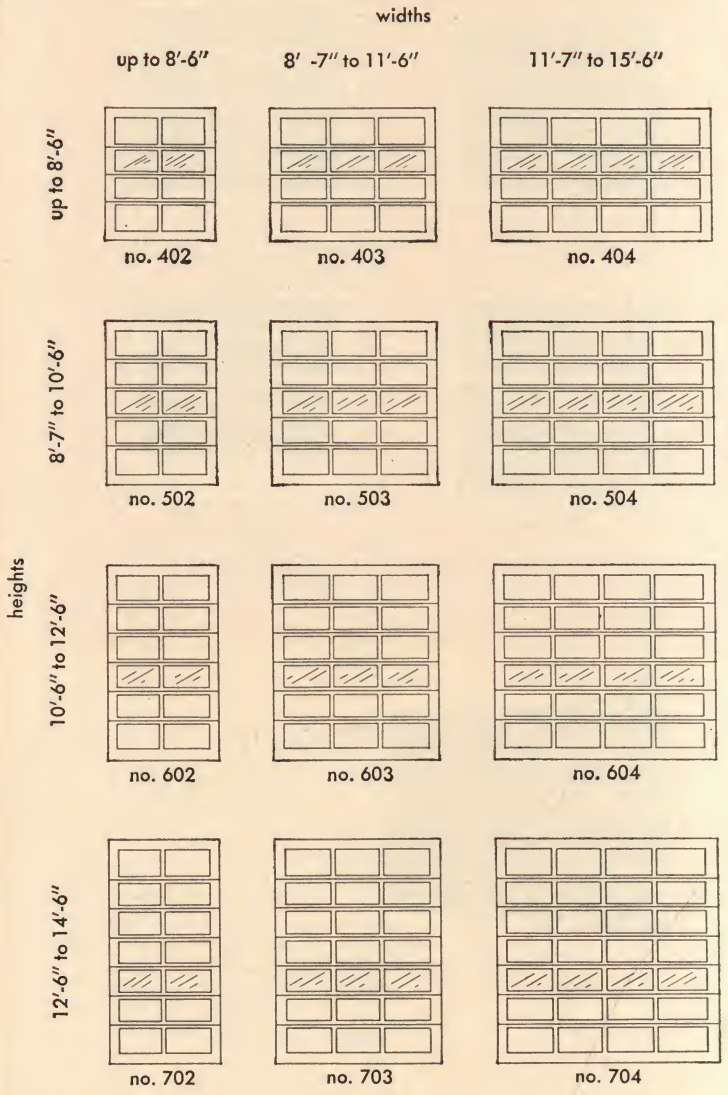
Arm-R-Lite engineering has designed the "Positive Seal" door stop to work in unison with the closing action of the Arm-R-Tite track to provide an absolutely tight weatherseal around the door and still allow it to work perfectly free while in motion.



This extruded aluminum stop is slotted on the side that butts against the door to receive a $\frac{5}{16}$" thick Schlegel Wovenpile Weatherstrip. This weatherseal, composed of millions of flexible fibers, and given even greater resiliency by treatment with Dow-Corning Silicone provides positive protection against wind, rain, snow, dust and dirt. The woven pile stops drafts. Unaffected by temperature changes, it gives to let the moving door operate easily; then springs back at once to hold and seal.

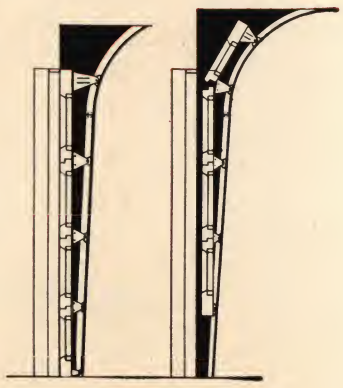
Further, the woven pile weatherseal provide a cushion between rigid surfaces that otherwise would bang and scrape or rattle on windy days. The moving door rides easily on dense pile fabric. Laboratory tests show that hundreds of thousands of opening and closing actions cause no appreciable wear. The earliest installations, now more than 25 years old are still in excellent working condition.

STANDARD SECTION AND



THE ARM-R-TITE TRACK

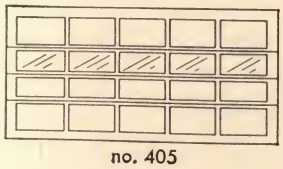
Starting from the floor the inclined vertical tracks pitch away from the jamb at the rate of ¼" per door section. The end hinges with roller sleeves of progressively graduated height guide the decending door tightly against the door stop. When opening, the door is guided up and away from the door stop. This opening and closing action of the Arm-R-Tite track in conjunction with Arm-R-Lite's specially designed "Positive Seal Stop" ends the search for a tight fitting easily operating door.



PANEL DESIGN CHART

widths

15′-7″ to 19′-6″ | 19′-7″ to 22′-0″



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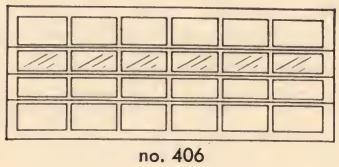

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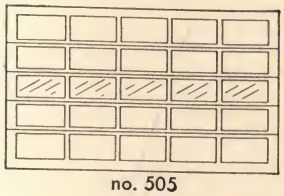

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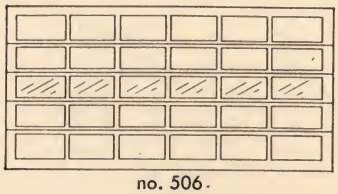

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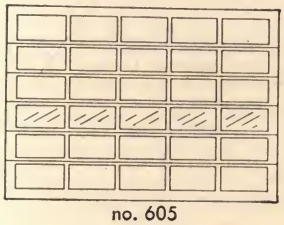

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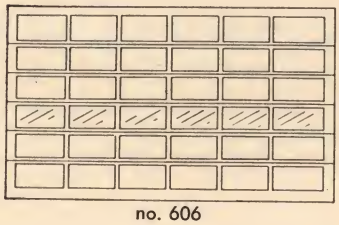

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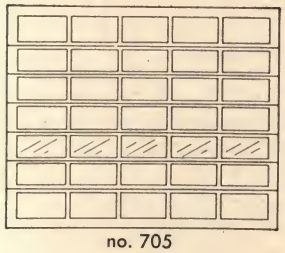

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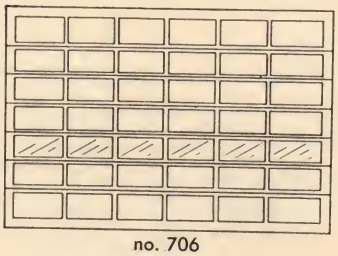

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SECTIONS AND PANEL ARRANGEMENTS

The design chart at the left illustrates the various standard door models. This chart indicates a certain number of sections and panels for a door falling in any specified height and width classification. Thus from on hand inventory, we can then fabricate at an economical price, doors unequalled in appearance, strength and durability.

Not to discourage individuality, Arm-R-Lite will make any custom designed door with as many or as few panels and sections as specified.

Custom doors up to 36′0″ wide and 20′0″ high can be made to order.

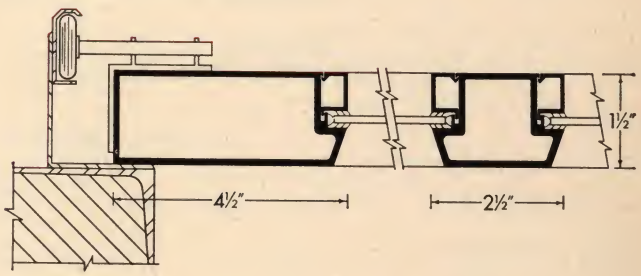
GLASS AND PANELS

Glass and panels are wrapped in a continuous neoprene rubber channel, then inserted in the frame and held in place by a snap-in aluminum bead. This snap-in bead allows for easy on the job replacement of a damaged panel or a broken light of glass by anyone.

One section of double strength glass (as indicated in the section and panel chart), is standard on all industrial doors, although any door can be provided with as many glass sections as required or with all sections paneled. Any thickness glass up to and including ¼″ can be used. Caution should be taken however in the placement of glass sections (with glass over ⅛″ thick) due to the weight differences of the aluminum panels and the glass. Improper placement makes necessary special spring engineering. For example: Where two sections of ¼″ thick glass are required in a six section door place the glass sections in the center of the door or the third and fourth sections which will produce an evenly balanced door. Do not place them in the fifth and top sections if possible since a top heavy door will result.

Anodized aluminum sheet of .051 thickness is the standard panel used for industrial doors. On special order sections can also be prepared to receive aluminum sheet up to .125 thickness, fiberglass, porcelain, Arm-R-Ply or similar materials in thicknesses thru ¼″.

SECTION CONSTRUCTION

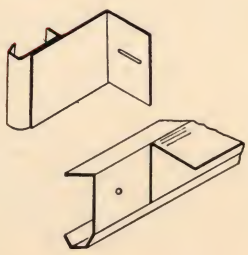


End and intermediate stiles are contour milled to form a precise fit with rails. Joining is then accomplished by heli-arch welding to produce a most rigid frame of maximum strength. All welds are ground smooth and polished. Top and bottom rails and end stiles, all EXTRA LARGE, measure a full 4½″. Intermediate Stiles are 2½″. Intermediate Rails are 3⅝″ per pair. This truly is a door designed to stand the rigors of daily commercial and industrial use.

TRACK AND TRACK REINFORCING

All 2″ track is .093 Thick.

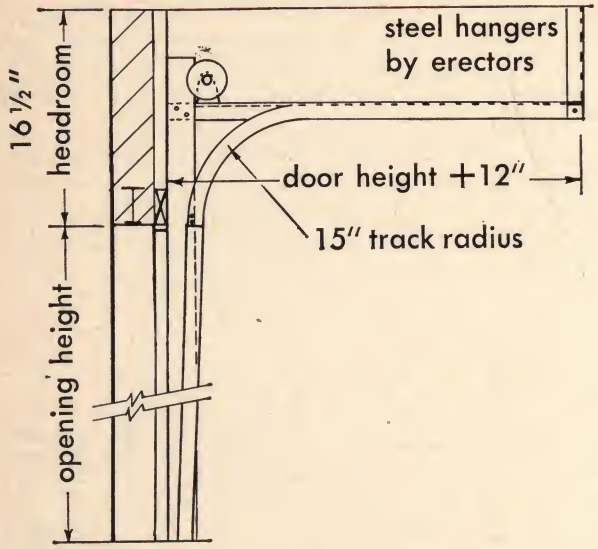
All 3″ track is .125 Thick.



As standard and at no increased cost all Arm-R-Tite track is furnished with continuous angle reinforcing on both the vertical and horizontal track. When specifying the track, always specify continuous angle reinforced and give the particular reinforcing required by the size door to be used. Vertical tracks mounted on flimsy brackets soon become wobbly, out of line and insecure. The door then no longer operates with 100% efficiency.

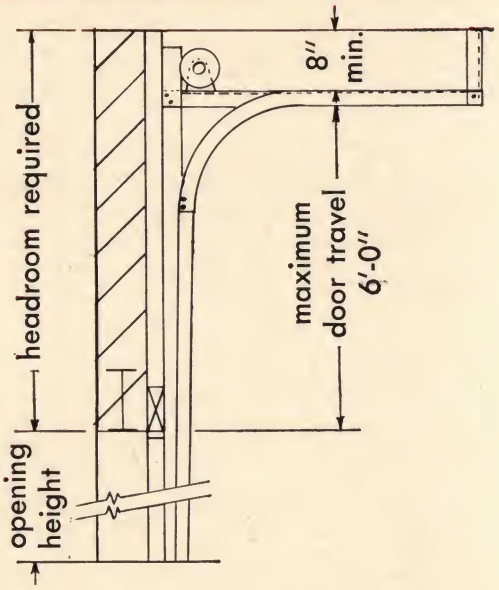
TRACK AND FRAME DETAILS

STANDARD 15" RADIUS



Supplied on all doors except where special equipment and/or requirements dictate otherwise. Special attention should be given to track clearance requirements during preliminary stages of building layout. Sufficient headroom, sideroom and backroom must be allowed for the door track and any special equipment requiring additional space. See track schedule page 7.
Torsion or extension type springs can be used with standard radius track. Torsion springs are preferred.

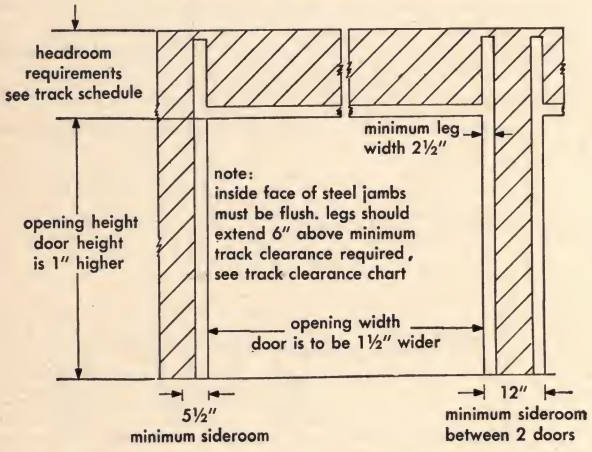
LIFT CLEARANCE TRACK

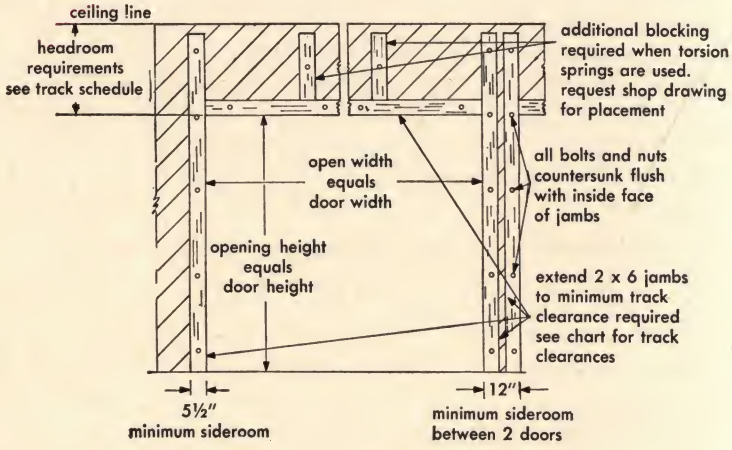


This type of track can be supplied to raise the door up to a maximum height of 6 ft. above lintel. Recommended where extra storage space or the use of fork lift trucks and etc. require additional room under the door in the open position. This type track is always supplied with torsion spring equipment to assure balanced operation. In preparing opening for this type track be sure jamb legs extend to ceiling height or 6" further than the height door is to be raised to.

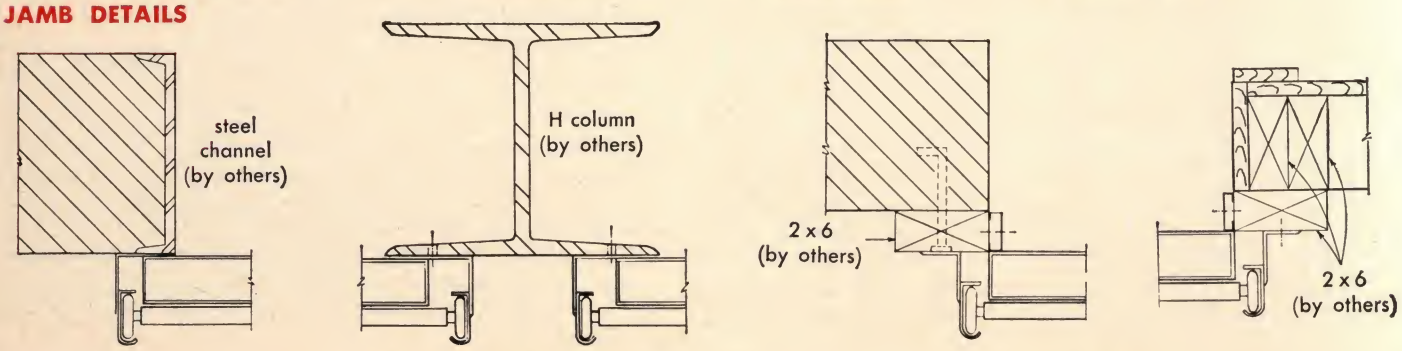
OPENING PREPARATION (by others)

One of the most important items which can affect the proper operation of a door is the preparation of the opening. An improperly prepared opening often results in the most precision engineered door operating poorly. Proper jamb preparation is an absolute necessity if a good working door is to be obtained.


headroom requirements see track schedule
minimum leg width 2½"
note:
inside face of steel jambs must be flush. legs should extend 6" above minimum track clearance required, see track clearance chart
opening height door height is 1" higher
opening width door is to be 1½" wider
5½" minimum sideroom
12" minimum sideroom between 2 doors


ceiling line
headroom requirements see track schedule
additional blocking required when torsion springs are used. request shop drawing for placement
open width equals door width
all bolts and nuts countersunk flush with inside face of jambs
opening height equals door height
extend 2 x 6 jambs to minimum track clearance required see chart for track clearances
5½" minimum sideroom
12" minimum sideroom between 2 doors

JAMB DETAILS



TRACK SCHEDULE

The track schedule below is provided to assist in the proper selection of the size track and angle reinforcing to be used in relation to the door size. Specify track according to track number in column 3.

door size width	height	track no.	track size	vertical mounting wood jambs	vertical mounting steel jambs	type of angle reinforcement on horizontals	standard track radius	headroom required	side room required
to 12′-2″	10′-6″	2 L	2″	1½x3½x12GA	2½x2½x12GA	2 x2 x13GA	15″	16½″	5½″
to 20′-2″	10′-6″	2 M	2″	1½x3½x11GA	2½x2½x11GA	2 x2 x11GA	15″	16½″	5½″
to 24′-2″	10′-6″	2 H	2″	1½x3½x10GA	2½x3½x11GA	2½x2½x⅜6	15″	16½″	5½″
to 12′-2″	12′-6″	2 M	2″	1½x3½x11GA	2½x2½x11GA	2 x2 x11GA	15″	16½″	5½″
to 20′-2″	12′-6″	2 H	2″	1½x3½x10GA	2½x3½x11GA	2½x2½x11GA	15″	16½″	5½″
to 24′-2″	12′-6″	3 M	3″	1½x3½x11GA	3 x3 x10GA	2½x2½x⅜6	15″	17½″	6½″
to 12′-2″	14′-6″	2 M	2″	1½x3½x11GA	2½x2½x11GA	2 x2 x11GA	15″	16½″	5½″
to 18′-2″	14′-6″	2 H	2″	1½x3½x11GA	2½x2½x11GA	2½x2½x11GA	15″	16½″	5½″
to 24′-2″	14′-6″	3 H	3″	2½x3½x11GA	3 x3 x10GA	2½x2½x⅜6	15″	17½″	6½″

Note: Headroom and sideroom measurements shown are for standard installations. Additional equipment may require more room. Check special equipment pages for details.

METHODS OF OPERATION

CHAIN HOIST

The use of this manually operated 3 to 1 reduction gear unit is dictated by the size and weight of the door. Normally all doors over 14′0″ wide 13′0″ high should be equipped with a chain hoist.

The chain hoist unit is mounted on one of the vertical tracks and operates the door by means of a ½″ pitch endless roller chain connecting a sprocket on the chain hoist unit with a sprocket on the Torsion Spring Shaft, or in the case of extension springs, with a sprocket on the cross header shaft which is provided.

The Chain Hoist is then operated from the floor by an endless cadmium plated hand chain.

additional space requirements

Sideroom	Headroom
4″ on Chain Hoist Side Only	8″

ELECTRIC OPERATORS

Model LC—For commercial and light industrial doors up to 16′-2″ Wide and 14′-1″ High. Equipped with ⅓ or ½ H.P. Motors. Three button control station.

Model HDC—Heavy duty industrial type for doors up to 36′ wide and 16′ high. Equipped with ⅓, ½ or ¾ H.P. motor. Solenoid brake, and built in emergency chain hoist. Three button control station.

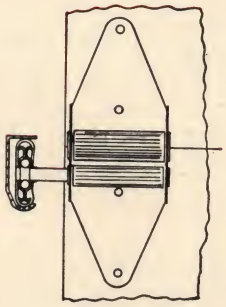
STANDARD HARDWARE

HINGES AND ROLLERS

Arm-R-Lite heavy duty zinc plated 12 gauge hinge leafs connected by oversize tubes assure a large bearing area and easy pivoting.

On most doors the hinges are securely fastened to the frame with ¼″ x 20 Hex head self tapping screws which give tremendous holding power leaving the exterior beauty of the door unmarred by unsightly bolts. Only on extremely large doors, where engineering demands, are a limited number of thru bolts used.

Full ball bearing rollers with large balls of chrome steel ride on case hardened inner and outer races assuring long life and operating ease.



LIFT CABLES

Each door is raised and lowered by seven strand-nineteen wire galvanized steel aircraft type cables of a diameter properly selected according to the door weight plus a large safety factor.

SPECIAL REINFORCING

Arm-R-Lite doors up to 14′1½″ wide do not require reinforcing against deflection in the open position except in special instances. The inherent strength of the all welded tubular frame together with the elasticity of aluminum provides an exceptionally rigid door which will always retain its straightness.

Doors over 14′1½″ wide are additionally reinforced with 16 gauge galvanized steel U shaped struts. On doors 22′2″ wide and over these struts are used in conjunction with a center support track.

COUNTER BALANCE

Torsion springs—Made of heavy duty oil tempered steel wire individually designed for the weight of the door and mounted on a continuous ball bearing cross header shaft with cable drums of cast aluminum or steel. Can be used with any track arrangement except low headroom.

Extension springs—Matched springs of heavy duty oil tempered wire individually designed for the weight of the door offer close accuracy at a reduced cost. Steel aircraft cables ride on heavy duty ball bearing sheaves. Recommended for use with standard 15″ radius track only.

CENTER SUPPORT TRACK

Doors 16′-0″ wide and wider with pass doors and all doors 22′-0″ wide and wider are supplied with a center support track. Doors with center track require 6″ additional headroom.

LOCKING DEVICES

Arrangement #1 Manually operated-torsion spring door: Throw bolt type, with five pin cylinder lock, mounted on the end stile of door.

Arrangement #2 Manually operated-extension spring door: Cremone type with heavy lock bars engaging both tracks. Equipped with five pin cylinder lock and back latch. Two keys provided.

Arrangement #3 Chain hoist operated doors: Special bracket for locking in hand chain is mounted on track or door jamb. No other locking arrangement required.

Arrangement #4 Service station doors: Throw bolt type, mounted on end stile of door, engages track. Can be locked or opened from inside only.

Motor operated doors: Electric operator automatically locks door in the closed position. No other locking arrangement required.

ARM-R-LITE ALUMINUM OVERHEAD DOORS

SPECIFICATIONS—Commercial and Industrial Doors

Supply aluminum sectional overhead doors as indicated on plans complete with all necessary hardware, track, operating mechanism and etc. as manufactured by the Arm-R-Lite Door Mfg. Co. 1-5 White St., W. Orange, N. J. and installed by their authorized distributor.

Aluminum sections: Shall be 1¾" thick and constructed of 6063-T 5 Alloy. Stiles and rails to be hollow extruded shapes with an .094 wall thickness. Bottom and top rails and end stiles to be 4½" wide, center stiles 2½" wide and meeting rails 3⅝" wide per pair. Meeting rails shall be designed to form a rebated weather joint. All stiles and rails shall be accurately joined and all joints heli-arc welded with deep penetration. Welds to be ground smooth and entire inner and outer door surfaces to be polished to a 180 grit finish.

Finish: All exposed surfaces to receive an Irilac #1000 bath followed by one coat of clear Methracrylate Lacquer.

Panels: .051 gauge anodized panels set in a continuous neoprene gasket and held in place by a snap-in type bead with no visible means of fastening.

Glass: Sections as indicated on the plans shall be factory glazed with ..... type glass. Glass to be set in a continuous neoprene gasket and held in place by a snap-in bead for easy removal.

Door stop: Provide ¾" x 2½" "Positive Seal" Aluminum door stop for outside of door, the side butting against door to be equipped with a woven pile weatherstrip.

Track: To be Arm-R-Tite No. ..... track with vertical tracks mounted on continuous ..... angles, and horizontal tracks reinforced with continuous ..... angles.

Hardware: Hinges are stamped steel, 12 gauge, with plated finish. Rollers and sheaves are full floating ball bearing with case hardened inner and outer races. Cables are 7 strand 19 wire galvanized steel aircraft type designed to carry the weight of the door plus a large safety factor.

Springs: Twin helical wound oil tempered torsion type springs individually designed to counterbalance the weight of the door.

Locking Device to be arrangement No. .....

Reinforcing: Doors over 14'-2" wide to be reinforced with steel U type struts.

Shop drawings: Before performance of work under this contract complete shop drawings in quadruplicate shall be submitted to the architect for approval and verification of dimensions by installing agency.

Astragal: Bottom of door to have neoprene rubber astragal fastened to door with an aluminum bar and self tapping screws.

Alternate specifications

Extension Springs instead of Torsion Springs.

Additional specifications

Chain Hoist ..... Page 7.
Electric Operator ..... Page 7.
Lift Clearance ..... Page 6.
Pass Doors ..... Page 3 & 4.

ARM-R-LITE REPRESENTATIVES

ARKANSAS
Little Rock—Overdoors, Inc.
3019 Asher St.
MO 6-9048

CAROLINAS
Greensboro, N.C.—Beaman Engineering Co.,
1046 Westside Drive
Broadway 4-1771

CONNECTICUT
Hartford—Thompson Overhead Door Co.,
880 W. Boulevard
Adams 3-8614

FLORIDA
Miami—Beaman Engineering Co.,
Box 38-502 Little River Station
Plaza 1-2722

GEORGIA
Chamblee—Beaman Engineering Co.,
3149 Carroll Avenue, P.O. Box 213
Glendale 7-4455

MARYLAND
Baltimore—Beaman Engineering Co.,
532 Rosehill Terrace, P.O. Box 564
Hopkins 7-8900

MASSACHUSETTS
Hingham—Door Engineering Co. Inc.,
292 Lincoln Street, Route 3A
Riverview 9-3046

Methuen—The Builders Garage Door Co.,
476 Lowell Street
Murdock 2-2887

Wilbraham—Daniele Overhead Door Co. Inc.
LY 6-3930

NEW JERSEY
West Orange—Vindour Associates,
716 Eagle Rock Avenue
Orange 7-1531

NEW YORK
Buffalo—Adams Door Company,
1035 Englewood Avenue, Kenmore 23
Riverside 8203

Syracuse—C. H. Foster, Inc.
3420-22 Burnet Ave.

Utica—Cussworth Door & Window Company,
Horatio St., Aerterial
RE 3-4637

NEW YORK CITY
Brooklyn—Christie & Sons, 2015 Utica Avenue
Cloverdale 2-6078

OHIO
Cleveland—Atlantic Door Company,
4220 East 146th St.
Ludlow 1-3700

OKLAHOMA
Lawton—Overdoors, Inc.
209 Euclid
EL 3-6658

Oklahoma City—Overdoors, Inc.
1819-30 N. W. 5th St.
Central 2-6767 - 2-6536

Tulsa—Overdoors, Inc.
403 So. Rockford St.
DI 3-3051

PENNSYLVANIA
Erie—Comstock Bldg. Products Company,
5612 E. Lake Road
Erie 8-3178

Harrisburg—Doors, Inc., 4250 Chambers Hill Road
Jordon 4-2057

Langhorne—Vindour Associates,
2624 Arrowhead Drive
SKyline 7-5155

New Castle—C. & D. Supply Co.

Pittsburgh—Better Bilt Supply, Inc.,
3614 Boulevard of Allies
Museum 1-6520

VIRGINIA
Norfolk—Door Engineering Corp.
700 Front Street

Richmond—Beaman Engineering Company,
2517 Grenoble St.
P. O. Box 4651-Ridge Branch

WASHINGTON, D.C.
Beaman Engineering Co.
532 Rose Hill Terr. Baltimore, MD.
Hopkins 7-8900

ARM-R-LITE DOOR MFG. CO., INC.
1-5 WHITE ST., WEST ORANGE, N. J.
Phone REdwood 1-2929

FOUR GREAT LINES OF . . .

16i
A1

ATLAS "Quieteez"

OVERHEAD DOORS

with lifetime gliding, weathertite **"Dynaseal"**

plus **OUTSTANDING ELECTRIC OPERATORS**

ATLAS "Dynaseal" DOORS
STRENGTH
DEPENDABILITY

ATLAS OVERHEAD DOOR CO.

DIVISION OF

INDUSTRIAL CORPORATION OF AMERICA

". . . . . a size and style for every purse and purpose"

Leading architects, engineers, builders and critical users specify ATLAS Overhead Doors and Electric Operators with confidence, for many good reasons.

They know, for example, that ATLAS custom quality and engineering excellence assures unfailing dependability, harmonizing functional beauty and long lasting satisfaction. That single doors can be furnished from the smallest residence garage size up to 36 feet wide and up to 20 feet high with all types of auxiliary equipment to suit any objective. That the four great lines of standard and made-to-order doors conform to the type of duty and budgetary requirement of each application. That each ATLAS Overhead Door and Electric Operator is designed, engineered, tested, and produced by skilled specialists at the modern coordinated ATLAS production center at Quakertown, Bucks County, Pennsylvania (Delaware Valley, U. S. A.).

Although built to the highest standards, ATLAS Overhead Doors and Electric Operators cost little or no more than other makes. First cost is usually the last cost, resulting in savings year after year. You get unexcelled ATLAS custom quality materials and workmanship; the smooth, easy quiet of "Quieteez" action; lifetime gliding, weathertite "Dynaseal" and individually engineered counterbalancing whether you specify the slimline ARGOSY, a quality door for modest budgets; the deluxe SPARTAN, designed to excel all 1⅜" doors; the extra-duty CHAMPION, popular 1¾" A.L.S. "standard of quality" winner, or the unmatched made-to-order IMPERIAL, distinguished special feature line which is truly in a class by itself.

Each leads its field in styling, in quality, in safety and in operating ease. Each is factory guaranteed against defects in workmanship and materials for a full year. Each may be automatically operated, when desired, with one of the outstanding ATLAS Electric Operators described herein.

construction features

WOODWORK

MATERIAL: Clear, kiln dried Douglas Fir and Sitka Spruce is carefully selected for the stiles and rails of ATLAS Overhead Doors because of the high strength, light weight and natural resistance of these woods to all kinds of weather. The panels are of ¼" exterior grade Douglas Fir plywood or ¼" Argoseal, the new everlasting plastic-bonded wood fibre board (except IMPERIAL Doors which are made with ⅜" thick plywood or ⅜" thick Argoseal). Argoseal is the color of natural wood and takes and holds paint better than most materials. It is guaranteed for life against delamination, checking or grain raise, the most frequent complaints against other panel materials, but is not recommended for flush doors. Raised panels (plain or carved) are made of ¾" thick clear, kiln dried solid lumber or ⅜" Argoseal. Sections are sanded smooth and glass sections fitted with wood glass moulding, cut and mitered to exact size.

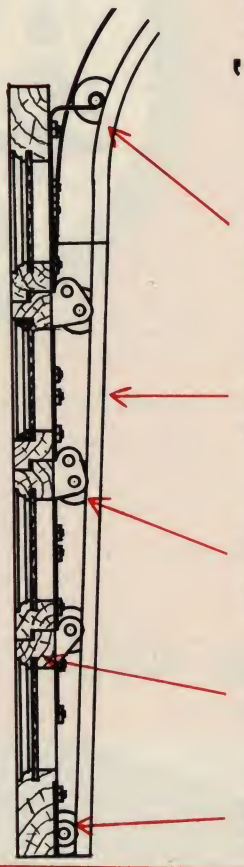
MORTISE AND TENON JOINTS: Every ATLAS Overhead Door is stronger and more durable because the stiles and rails are held together by waterproof glued, steel dowel pinned mortise and tenon joints, the strongest known.

HARDWARE

MATERIAL: ATLAS weathertite "Dynaseal" hardware is made of heavy gauge prime steel designed and reinforced to suit the size and weight of the door it is to be used with and factory finished with sprayed aluminum or galvanized. Steel reinforcing struts are included with all two-car residential garage doors and with all made-to-order doors more than 12'3" wide. The size and number of struts furnished is consistent with the door width and overall size.

COUNTERBALANCE: Helically wound, oil tempered extension springs are standard with all ATLAS Overhead Doors but torsion springs will be furnished when specified. Both work equally well in most normal installations. Torsion springs, however, are the best choice for doors with more than 24" of high lift, for vertical lift doors, for very wide, low doors (such as 18' x 7'), and in cases where headroom above lintel is ample but is not at the rear of horizontal tracks. Torsion springs should not be used with chain hoist equipment or side mounted electric operators (such as ATLAS "Gearmotor" or "Torque Hoist" models) unless headroom is at least the minimum stated for "chain hoist doors with torsion springs". Extension springs are easiest to adjust, easiest to replace and have longer life expectancy.

What is ATLAS "Dynaseal"?



"Dynaseal" ball bearing rollers glide freely and float laterally to compensate for building settling and maintain proper alignment of door.

"Dynaseal" Vertical tracks slope away from the jambs from the sill upwards to take door away from stops or jambs for friction-free, quiet, and easy opening.

"Dynaseal" combination hinge-roller carriers are offset to match slope of track to take door snug against stops at sides and top for weathertite fit when closed.

"Dynaseal" ship-lap joints between sections keep wind, rain, and weather out.

"Dynaseal" bottom fixtures allow door to drop ⅜" below floor line (if rebated) for weathertite-ness at bottom.

BEARINGS: To insure smooth, easy action, all track rollers and sheave-pulleys are fully ball bearing of seamless steel, except on largest commercial doors, when heavy cast iron sheave-pulleys with high-load pressed-in ball bearings are supplied (and excepting torsion spring doors, which have high-load ball bearing supported cross-head shaft and cable drums instead of sheave-pulleys).

HINGES and BRACKETS: Heavy gauge steel hinges and top and bottom corner brackets supplied with all ATLAS Overhead Doors are designed to provide from 3 to 5 times the strength and durability required for the particular door weight.

LOCKING DEVICE: A cremone locking device with ¾" wide steel bars running the width of the door and engaging in the tracks, controlled by cast aluminum turn handles on both sides of door, stopped by a 5-pin full size cylinder lock is standard with all ATLAS Overhead Doors, except doors with built-in wicket door and doors with all sections prepared for glass which are supplied with ATLAS "automatic self latch" consisting of two spring-loaded bolts, on either side of door, actuated by a cable running to each, and excepting chain hoist equipped doors which have a locking finger for the hand chain attached to the track, and excepting electric operated doors which are locked by the electric operator itself.

SPECIAL EQUIPMENT is available with CHAMPION and IMPERIAL made-to-order doors and is described on commercial data pages. Also special design doors for service stations.

ELECTRIC OPERATORS are available for all ATLAS and other makes of Overhead, Vertical Lift and Rolling Steel Doors.

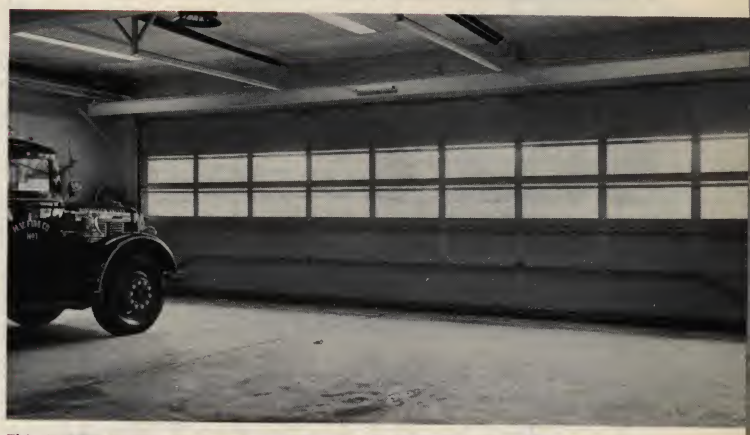
ATLAS custom quality OVERHEAD DOORS

FOR COMMERCE AND INDUSTRY

Every Atlas COMMERCIAL or INDUSTRIAL overhead door is made-to-order to be certain it will be "right" for its objective and to provide individuality, smart appearance, smooth, quiet, easy operation with unmatched security and protection, within budgetary requirements.

With four great lines to pick from . . . each made in both the "Traditional" and the "Modern" styling with choice of panels (plywood, Argoseal or solid raised panels) and choice of counterbalance (extension or torsion springs) . . . it's an easy matter to select the door which best suits your purse and purpose.

If price is primary and the size is not large, ARGOSY will fill the bill. If you need a door with extra stamina and longer life or such optional features as high lift, wicket door, chain hoist or reverse angle mounted tracks for steel jamb attachment, consider the CHAMPION, popular priced "standard of quality" winner, which equals or excels the industry's best. If, however, you require a door that's truly outstanding, only the distinguished IMPERIAL will do. Priced slightly higher than other doors, it's made from oversize lumber with 50% thicker panels and tenons. It may also be ordered made of special woods and special construction and with any special features or equipment made by ATLAS. Choice No. 4 is the SPARTAN, which is intended primarily for those residence garages which require a 1⅜" made-to-order door. This excellent door, however, can also be successfully used in light commercial applications.



This IMPERIAL "Modern" door is 36 ft. wide x 10 ft. high with extra heavy duty hardware, 3" track, double center tracks, 4 pairs of extension springs arranged to lift the door from 4 points, 1 H.P. "Gearmotor" electric operator with brake and auxiliary chain hoist.

4 brands—each in two stylings . . . . . construction data/brands

ARGOSY

Made-to-order in any size to 145 sq. ft. area, (maximum of 6 sections) not more than 16 ft. wide or 12'6" high in 1¾" A.L.S. thickness, this slimline quality door for modest budgets has sturdy mortise and tenon joints with 5¼" bottom rail; 3½" top rail, end and center stiles; 3" intermediate rails and 2½" intermediate stiles. The ATLAS "Dynaseal" hardware is standard gauge with embossed hinges. Flush-one-side construction is optional. Low headroom track available with these doors when required but no wicket doors or other special equipment except electric operators.

SPARTAN

Made-to-order in any size to 145 sq. ft. in area (maximum of 6 sections), not more than 18 ft. wide or 12'6" high in 1⅜" thickness. The 5¼" bottom rail; 4½" intermediate rails; 3½" top rail, end, center and intermediate stiles (except "Traditional" model which has 2½" intermediate stiles) are blind mortise and tenon jointed, waterproof glued and steel dowel pinned under hydraulic pressure. The hardware is extra gauge ATLAS "Dynaseal". Optional equipment: low headroom roller arms, low headroom track. No wicket doors or other special equipment except electric operators.

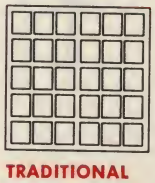
CHAMPION

Made-to-order in any size to 240 sq. ft. in area, not more than 20 ft. wide, in 1¾" A.L.S. thickness. The bottom rail is 5¼" (7½" if door has built-in wicket door or if it is 16 ft. wide or wider and more than 170 sq. ft. in area); 4½" intermediate rails; 5¼" top rail; 5¼" end stiles (7½" if door is 170 sq. ft. in area or over); center stiles 5¼"; intermediate stiles 2½" on "Traditional" doors; intermediate and center stiles 3½" on "Modern" doors;—blind mortise and tenon jointed, waterproof glued and steel dowel pinned under hydraulic pressure. The ATLAS weathertite "Dynaseal" hardware is heavy gauge prime formed steel designed and reinforced to suit the size and weight of each door. These doors can be supplied with built-in wicket door, flush construction, solid staved sections, high lift, vertical lift, chain hoist, center track, 3" track, removable post for between doors, automatic fire house door release, metal covered sections and all other optional auxiliary equipment.

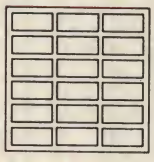
IMPERIAL

Made-to-order in any size to 36 ft. wide in 1¾" and 2¼" full thickness from special oversize Douglas Fir or Sitka Spruce, and from other species when required. Width of stiles and rails is same as CHAMPION (above) or wider, unless otherwise specified. They are blind mortise and tenon jointed, of course, with ⅜" panels and tenons for greater strength than all other doors. The ATLAS "Dynaseal" hardware is best heavy duty type with 2" track of .093" rolled steel up to 250 sq. ft. in area and extra heavy duty with 3" track of .125" rolled steel over 250 sq. ft., designed and reinforced to suit the size and weight of each door. Every type of optional equipment, including all items mentioned for CHAMPION doors above, plus horizontal or vertical batten construction, WIDELITE construction with narrow steel reinforced intermediate rails and clear plastic or aluminum muntins, etc. will be supplied with IMPERIAL doors when specified.

STYLINGS



TRADITIONAL



MODERN

Panels Per Section:	Traditional	Modern
Less than 7'6" wide	4	2
7'6" to 11'6" wide	6	3
11'7" to 15'6" wide	8	4
15'7" to 19'6" wide	10	5
19'7" to 24'6" wide	12	6

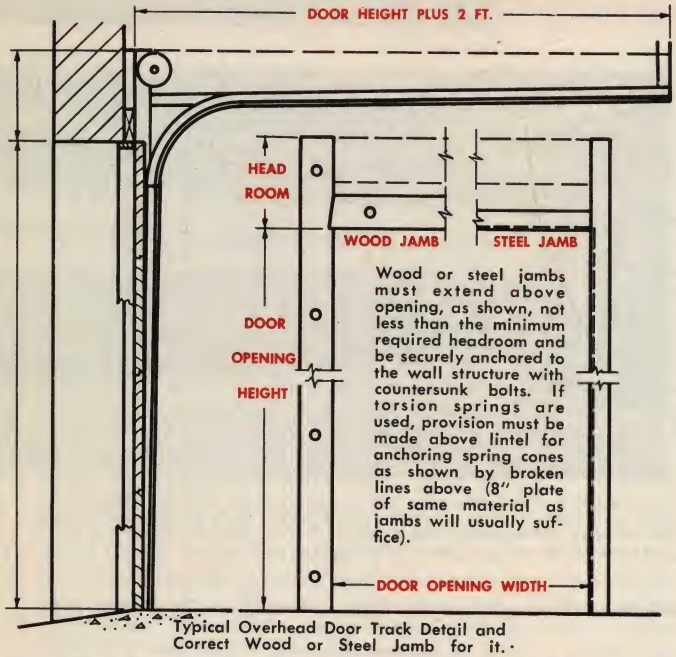
Sections Per Door:	Traditional	Modern
Less than 6'3" high	3	4
6'3" to 8'7" high	4	5
8'8" to 10'7" high	5	6
10'8" to 12'7" high	6	7
12'8" to 14'7" high	7	8

glass and glazing

Any, all or no sections will be prepared for glass as specified. We strongly urge, however, that double strength clear or other ⅛" thick glass only be used. Lighter glass is not durable and heavier glass such as ¼" plate, ¼" obscure or clear wire glass will unbalance the door and make it less easy to operate and may necessitate extra reinforcement to prevent sag when open.

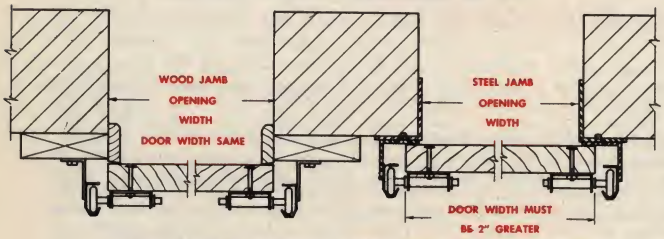
what to specify

You can be sure you'll get exactly the kind of door you want if you specify as follows: 1. The make: ATLAS; 2. The brand: ARGOSY, SPARTAN, CHAMPION or IMPERIAL; 3. The model: Traditional, Modern or Special (any non-standard panel arrangement, flush, batten or other design); 4. The door size (width first, height second and thickness third); 5. The opening size (width first, height second); 6. Kind of jambs: wood or steel; 7. Kind of panels in door: ¼" Argoseal or plywood (⅜" in IMPERIAL only), raised panels; 8. Kind of springs: Extension or Torsion; 9. Section(s) for glass: (Bottom section is always number one. Third section is eye level in "Traditional" doors, fourth section is eye level in "Modern" doors); 10. Kind of glass: Double strength clear, double strength obscure, other; 11. Kind of operation: Manual (push up by hand), chain hoist, electric; 12. Special features: Low headroom (the type), high lift (the clearance required), 3" track, center track, automatic fire door release, removable post between two or more doors, vertical lift, Type A, B, or C astragal, wicket door, Atlasealer (anti-rot anti-termite) treatment, prime coat of white lead-in-oils, etc.

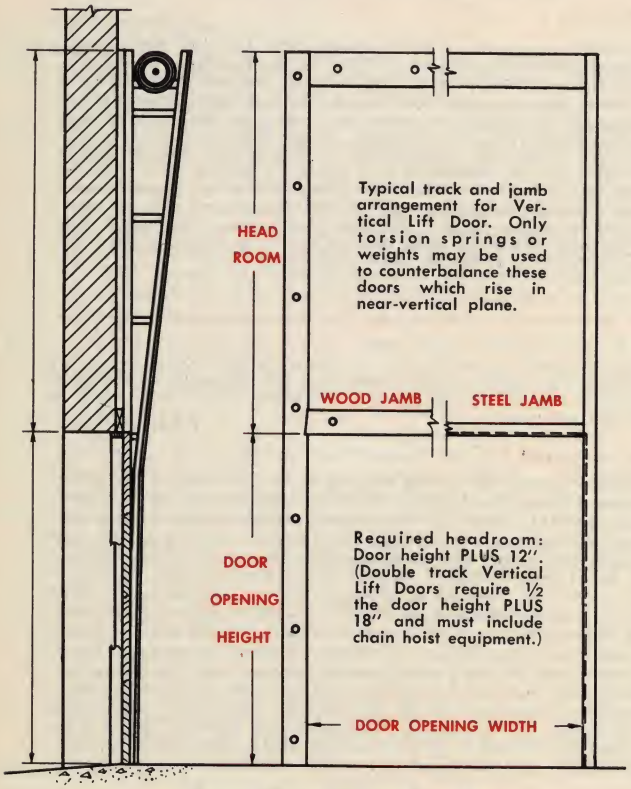


Wood or steel jambs must extend above opening, as shown, not less than the minimum required headroom and be securely anchored to the wall structure with countersunk bolts. If torsion springs are used, provision must be made above lintel for anchoring spring cones as shown by broken lines above (8" plate of same material as jambs will usually suffice).

Typical Overhead Door Track Detail and Correct Wood or Steel Jamb for it.



Typical wood and typical steel jamb arrangement. Door size should be same as finished opening size if WOOD jambs are used. Door size MUST be 2" wider and 1" higher than opening size if STEEL jambs are used.



Typical track and jamb arrangement for Vertical Lift Door. Only torsion springs or weights may be used to counterbalance these doors which rise in near-vertical plane.

Required headroom: Door height PLUS 12". (Double track Vertical Lift Doors require ½ the door height PLUS 18" and must include chain hoist equipment.)

Typical Vertical Lift Door Track Detail and Correct Wood or Steel Jamb for it.

minimum clearance

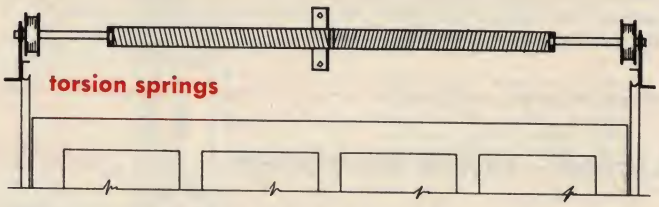
NOTE: Provide extra headroom and/or sideroom as stated on electric operator page if door will have such equipment.

MINIMUM HEADROOM 2" TRACK (ADD 1½" IF 3" TRACK USED)		4 Section Doors Only	5 Section Doors Only	6 Section Doors Only	7 Section Doors Only
Use FOR EXTENSION SPRING DOORS ONLY	Standard Hardware	14"	15"	16"	17"
	Single Track Low HR.†	9"	10"	11"	12"
	Double Track Low HR.*	7"	8"	9"	10"
	Standard Chain Hoist	20"	22"	24"	26"
	Single Track LHR Ch.Hst.	16"	17"	18"	19"
	Double Track LHR Ch.Hst.*	11"	12"	13"	14"
FOR TORSION SPRING DOORS ONLY	Standard Hardware	14"	15"	16"	17"
	Single Track Low HR.†	12"	13"	14"	15"
	Single Track Low HR.*†	10"	11"	12"	13"
	Double Track Low HR.**	7"	8"	9"	10"
	Standard Chain Hoist	20"	22"	24"	26"

*Outside Lift; **Outside Lift with Drums at Rear of Tracks.
†This type Low Headroom Hardware not available in 3" Track.

SIDEROOM: All doors to chain hoist size: 3½" on each side. Chain hoist doors require 7" on operating side (11" if disengaging chain hoist), 4½" on other side. If steel jambs, add 1" to above. If 3" track, add 1½" more.

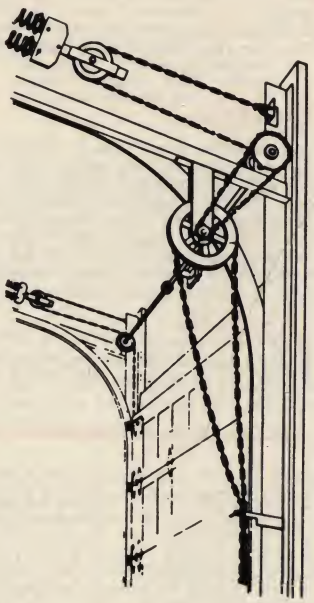
OPTIONAL EQUIPMENT

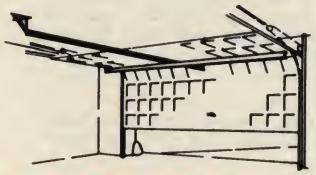


Optional equipment with all ATLAS made-to-order overhead doors; standard equipment with all vertical lift doors; recommended equipment with all high lift doors. Mounted on a continuous shaft with a grooved cable drum on each end, they must raise and lower both sides of door evenly. "Lightning Lift" and "Torque Lift" Electric Operators are the best choice when torsion springs are used (except Vertical Lift and High Lift Doors which require "Gearmotor" or "Torque Hoist" operators).

chain hoist

Fully ball bearing heavy duty chain hoists with 4 to 1 ratio enable even the largest ATLAS DOORS to operate as fast and easily as those of moderate size. Recommended for use with all doors 17 ft. wide or wider; 13 ft. high or higher or 160 sq. ft. or more. Auxiliary Chain Hoist with disengaging mechanism should be specified if door will also be electric motor operated.



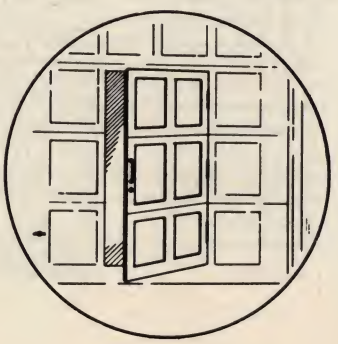


center track and girder

Recommended equipment for all ATLAS Overhead Doors 20 ft. wide and wider. Required equipment with all doors over 24 ft. wide (15 ft. wide and wider if door is built with wicket door) to distribute door weight and prevent sag when open. Includes special rollers attached along vertical center line of door which run onto a 3" horizontal steel I beam supported by a 6" transverse junior beam. REQUIRED HEADROOM: Not less than 20" (total). SIDEROOM: Not less than 6" on each side (total).

wicket door

A small pass door can be built into any size CHAMPION or IMPERIAL Door when required. ATLAS Wicket Doors are made to open out only (for safety) and are fitted with three very heavy spring hinges to assure self closing. A separate cylinder lock provides access with security. Approximate size: 2'6" wide 5'3" high. NOTE: Center track and girder is required with Wicket Door if parent door is 15 ft. wide or wider.



ATLAS custom quality OVERHEAD DOORS

FOR SERVICE STATIONS

Today's service stations are vastly superior to those of a few years ago and so too are today's ATLAS Overhead Doors for Service Stations. These fine doors combine the inherent natural advantages of structurally strong, clear, kiln dried Douglas Fir, grain selected for maximum durability, with sturdy mortise and tenon joints, waterproof glued and steel dowel pinned under hydraulic pressure with further strengthening, when needed, by husky concealed steel bars. Thus, plastic, aluminum or narrow wood muntins may be safely used in these doors without the glass breakage problems encountered in other doors.

All ATLAS Overhead Doors for Service Stations are made-to-order in choice of CHAMPION and IMPERIAL Specifications. The CHAMPION equals or excels all other make overhead doors but the IMPERIAL soon justifies its small extra cost because of its greater ability to stand the very rough treatment most service station doors get.

Oil company designers and construction engineers have very definite styling and construction requirements for the doors for each service station. We are always glad to cooperate with them in putting their ideas into substance and invite them to call on us toward this end. Matching fixed panels and matching "walk-in" doors and transoms will be included, when specified.

Special design door for Mobil Service Stations with 10" bottom rail, narrow, steel reinforced intermediate rails and aluminum muntins, all sections glazed, matching "walk-in" door and transom and vertical fixed panel.

HIGH LIFT EQUIPMENT

Required with most service station doors (and with many other commercial and industrial doors, too) to take the door higher than normal when open. There are two general types of high lift equipment . . . standard and made-to-order.

Standard high lift uses larger radii to take the door 12", 18", or 24" above top of door opening when open. Extension spring counterbalance is standard. Torsion springs are optional.

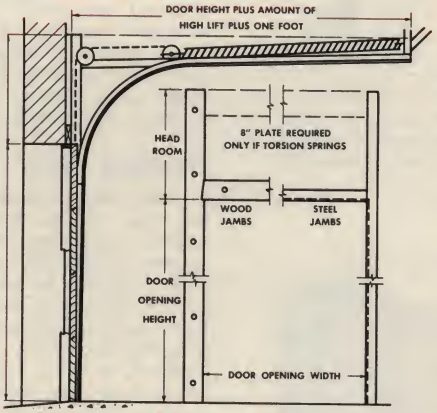
Made-to-order high lift, as the name implies, will be made any specified height up to ⅔ of door height but not over 8 ft. of high lift. Extension springs are standard, torsion springs optional, up to 24" of high lift. Torsion springs are standard if more than 24" of high lift.

what to specify

(For Service Station Doors Only.)

You can be sure to get exactly the kind of Service Station door you want if you specify as follows: 1. The make: ATLAS; 2. The brand: CHAMPION or IMPERIAL; 3. The model: name of oil company; number of panels wide; number of sections high; flush or solid staved bottom section and its height if either are required; narrow steel reinforced intermediate rails, if required; plastic, aluminum or wood intermediate muntins and their width; any other design features; 4. The door size: width first, height second and thickness third; 5. The opening size: width first, height second; 6. Kind of jambs: wood or steel; 7. Kind of panels in door, if any: Plywood or Argoseal; 8. Kind of springs: Extension or torsion; 9. Section(s) for glass: (Bottom section is always number one); 10. Kind of glass: Double strength clear, etc.; 11. Kind of operation: Manual (push up by hand), chain hoist, electric; 12. Special features: Low headroom, high lift (standard or made-to-order and the amount), type A, B or C astragal, wicket door, Atlasealer (anti-rot, anti-termite) treatment, prime coat of white lead-in-oils, etc.

standard high lift



minimum clearance

(High lift doors only.)

HEADROOM: 12" PLUS the amount of high lift. (If necessary, doors up to 120 sq. ft. in area can be made to operate in 8" PLUS the amount of high lift). When chain hoists and/or side mount electric operators are used with 24" or higher high lift doors or with vertical lift doors with torsion springs, headroom requirement is also 12" PLUS the amount of high lift. If "Gearmotor" or "Torque Hoist" electric operator will be mounted above crosshead shaft, add the amount indicated on electric operator page.

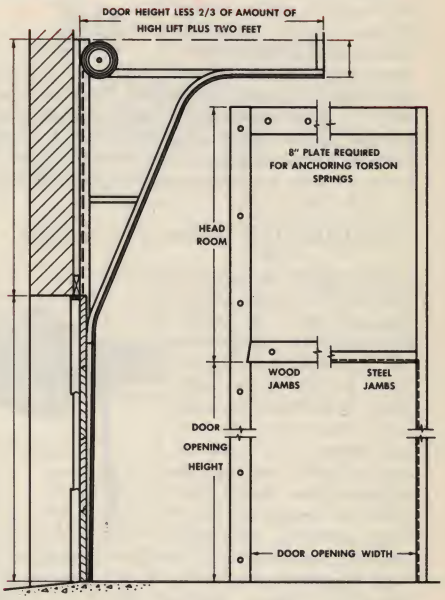
SIDEROOM: Same as for standard doors.

astragal weatherstrips

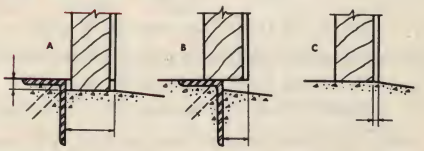
"A" is plain moulded rubber attached to bottom of door with large head nails. "B" is the same rubber attached to bottom of door with 1" x ⅛" steel strip and countersunk wood screws. "B" also available of moulded Neoprene oil resistant rubber with aluminum mounting strip. Protruding lip of "A" and "B" astragal should be toward exterior of building.

"C" is same as "B" except it turns under door.

made-to-order high lift



sill details



"A" allows door to go below the inside floor level for less "under door" draft. It must be kept cleaned out always or it loses its advantage. Vertical face of angle should be set 2¼" back from inside face of jamb.

"B" allows door to come down on top of inside floor level and is least likely to be affected by dirt accumulations and ice. Vertical face of angle should be set 1" back from inside face of jamb.

"C" provides no rebate but is very satisfactory if floor slopes downward from outside face of door. The line on the right hand side of each drawing is the inside face of jamb.

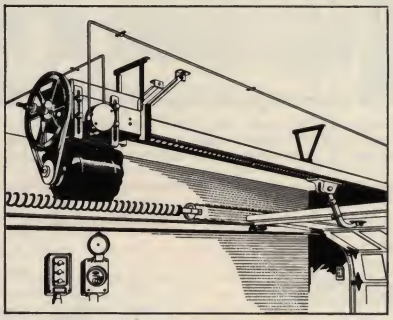
ATLAS automatic ELECTRIC OPERATORS

FOR COMMERCIAL AND INDUSTRIAL DOORS

ATLAS "Drawbar" ELECTRIC OPERATORS

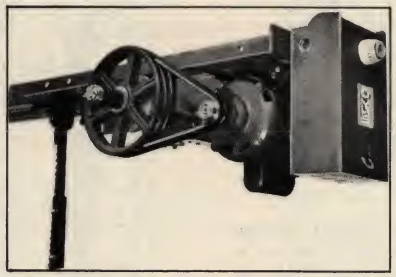
These husky operators lift the door by a "drawbar" attached to the center of the top section of the door. They require no auxiliary equipment, but when used with a chain hoist it should be of the disengaging type. Momentary Contact models include one 3-button (up-down-stop) inside control; Constant Contact models include one 2-button (up-down) inside control. For use with all extension and torsion spring overhead doors but not with High Lift or Vertical Lift Doors.

"LIGHTNING LIFT" Silent Spiral Shaft Type



These rugged, fully ball bearing precision design operators are the finest, quietest, and most durable "drawbar" type made. Designed for dependable service even in continuous use, they feature silent spiral shaft drive; long life, grease packed Power Lift block of special steel; safety friction clutch; magnetic reversing contactor with mechanical interlock and overload protection; easy-adjust limit switches; ATLAS Floating Bearings for positive protection against misalignment and excessive wear. Normal speed 1½ ft. door travel per second. Optional equipment includes solenoid brake and ATLAS Safety Control which shuts off power if door encounters obstruction when closing.

"TORQUE LIFT" Roller Chain Type



These sturdy all purpose operators were designed primarily for use where headroom is limited but are suitable for almost any normal overhead door. Featuring all-welded steel construction, the roller chain drive runs in heavy double tracks, with safety friction clutch, limit switches, magnetic reversing contactor with mechanical interlock and overload protection. Double V-belt drive on ½ H.P.; gear reduction on ¾ H.P. models. Normal speed 1 ft. door travel per second. Optional equipment includes solenoid brake and provision for radio control.

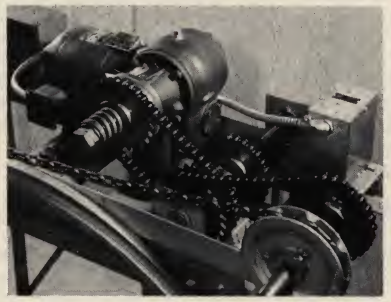
H.P. MAXIMUM OVERHEAD DOOR SIZE

¼	Up to 128 sq. ft.; not over 18 ft. wide or 10 ft. high
⅓	Up to 175 sq. ft.; not over 20 ft. wide or 14 ft. high
½	Up to 250 sq. ft.; not over 20 ft. wide or 15 ft. high
¾	Up to 375 sq. ft.; not over 30 ft. wide or 16 ft. high

ATLAS "Jackshaft" ELECTRIC OPERATORS

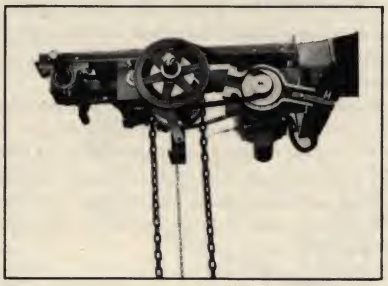
These powerful operators lift the door by turning the crosshead shaft of chain hoist equipped overhead doors or the torsion spring shaft of high lift, vertical lift or rolling steel doors. An auxiliary chain hoist can be built in when required. Momentary Contact models include one 3-button (up-down-stop) inside control; Constant Contact models include one 2-button (up-down) inside control. They mount at either side of door or above the crosshead shaft at the center. Normal speed ¾ ft. of door travel per second.

"GEARMOTOR" Enclosed Reduction Gear Type



The toughest and most durable door operators made today. Designed for unusual and "brute" jobs, they feature 48 to 1 reduction with gears enclosed in oil, large area safety friction clutch, self contained rotary limit switches, heavy duty magnetic contactor with mechanical interlock and over-load protection. Optional equipment includes electrical disc brake, ATLAS Safety Control which shuts off power if door encounters obstruction while closing, explosion proof components, J.I.C. equipment.

"TORQUE HOIST" V-Belt, Gear and Roller Chain Type



A lower priced, competitive line of side-mount operators for long trouble-free service with such quality features as safety friction clutch, gear driven limit switches, magnetic reversing relay with mechanical interlock, motor overload and low voltage protection, solenoid brake to prevent coast and to securely lock door.

H.P. MAXIMUM WOOD—MAXIMUM STEEL DOOR SIZE

¼	Up to 140 sq. ft.;	Up to 100 sq. ft.
⅓	Up to 195 sq. ft.;	Up to 140 sq. ft.
½	Up to 275 sq. ft.;	Up to 195 sq. ft.
¾	Up to 425 sq. ft.;	Up to 300 sq. ft.

minimum clearances

"Lightning Lift" models require 9"; "Torque Lift" models require 3" above top of door rise when opening, 5 ft. more than door height into building. "Gearmotor" and "Torque Hoist" models require 24" total sideroom on operator side of door. If mounted above crosshead shaft, 15" extra headroom is required but no extra sideroom.

what to specify

You can be sure you'll get exactly the kind of electric operator you want if you specify as follows: 1. The make: ATLAS; 2. The brand: "Lightning Lift" heavy duty spiral shaft type with self contained limit switches and floating shaft bearings / "Torque Lift" roller chain type with double tracks and adjustable limit switches / "Gearmotor" extra heavy duty side mount type with 48 to 1 geared reduction, with the gears immersed in an oil bath and with self-timing rotary limit switches / "Torque Hoist" side mount type with V-belt, gear and roller chain reduction, adjustable limit switches; 3. The model: Constant Contact or Momentary Contact; 4. The capacity: Horsepower of motor; 5. Electrical characteristics: Voltage, cycles and phase, A.C.; 6. Features: (the following are included in all ATLAS Commercial Operators) safety friction clutch, heavy duty magnetic reversing relay with mechanical interlock and overload protection; 7. The quantity of control stations for each operator and the type (interior or exterior push buttons, key switches, celiing pull switches); 8. Special Equipment ATLAS Safety Control ("Lightning Lift" and "Gearmotor" only), Chain Hoist disengaging device ("Gearmotor" and "Torque Hoist" only), Radio Control ("Torque Lift" and "Torque Hoist" only), Explosion proof motor and controls ("Gearmotor" only).

ATLAS OVERHEAD DOOR CO. DIVISION
INDUSTRIAL CORPORATION OF AMERICA QUAKERTOWN, PENNSYLVANIA

ATLAS *custom quality* OVERHEAD DOORS

FOR RESIDENTIAL GARAGES

Harmony is beauty . . . and the beauty of the stock designs in the three series below is durably functional. So, whether you elect to use one of these attractive designs as is, with the new everlasting ¼" Argoseal panels (which cannot check or delaminate); or with ¼" Douglas Fir exterior plywood panels (with or without decorative appliques); or with special plain or carved raised panels . . . or a special made-to-order design of your own—if it's made by ATLAS you can be sure of enduring custom quality that will keep its good appearance year after year. Equally important, the hardware will be ATLAS "Quieteez", with the "Dynaseal" principle, to glide your door smoothly, quietly, easily, regardless of the weather.

Note available stock sizes below each design. Top section prepared for glass is standard with all three section doors and with all four section doors 6'6" high. Third section open for glass is standard with all four section doors 7', 7'6", and 8' high. Fourth section open for glass is standard with all five section doors.

The SPARTAN "Lancer" two-car size. Fourth section prepared for glass is standard but can also be supplied as shown. The CHAMPION "Ranchome" would be similar in appearance.

models, styling and sizes

the ARGOSY

This quality slimline 1⅜" door for modest budgets has sturdy mortise and tenon joints with 5¼" bottom rail, 3½" top rail, end, and center stiles; 3" intermediate rails and 2½" intermediate stiles; standard gauge hardware with embossed hinges and extension spring counterbalance.

the SPARTAN

This perfectly proportioned deluxe line is designed to excel all 1⅜" doors. The 5¼" bottom rail; 4½" intermediate rails; 3½" top rail, end, intermediate and center stiles (except "Conquerer" models which have 2½" intermediate stiles) are blind mortise and tenon jointed, waterproof glued and steel dowel pinned under hydraulic pressure. The hardware is extra gauge steel with heavy hinges and extension spring counterbalance. Torsion springs and/or raised panels available when specified.

the CHAMPION

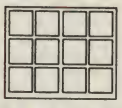
This popular, 1¾" A.L.S. extra-duty lifetime door is a "Champion" indeed. Bottom and top rails are 5¼"; intermediate rails 4½"; end and center stiles are 5¼"; intermediate stiles 2½" (except "Ranchrome" which are 3½"); all blind mortise and tenon jointed, waterproof glued and steel dowel pinned under hydraulic pressure.

The hardware is of extra gauge steel with heavy duty hinges and other parts. Extension spring counterbalance is standard. Torsion Springs and/or raised panels available when specified.

SPECIAL PANELS and APPLIQUES

These and many other attractive appliques and mouldings are available for attaching to any door to suit your design objective. Raised panels, plain or with designs carved as shown can be specified in any combination in SPARTAN and CHAMPION doors. You can have your chosen design duplicated in every panel of your door or in only a few of the panels, with the others plain raised panels. The design will stand out dramatically if painted a contrasting color or a more subtle effect may be achieved by painting the door a single pastel color or two mildly contrasting colors.

SOUTH SHORE



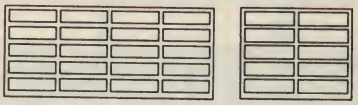
8' x 6'6" & 7'
9' x 6'6" & 7'

NORTH WOODS

15' x 6'6" & 7'
16' x 6'6" & 7'

8' x 6'6" & 7'
9' x 6'6" & 7'

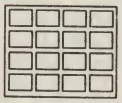
WESTWARD HO



15' x 6'6" & 7'
16' x 6'6" & 7'

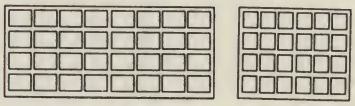
8' x 6'6" & 7'
9' x 6'6" & 7'

REGENCY



8' x 6'6" & 7'
9' x 6'6" & 7'

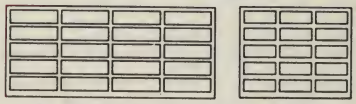
CONQUERER



15' x 6'6" & 7'
16' x 6'6" & 7'

8' x 6'6", 7', 7'6" & 8'
9' x 6'6" & 7'

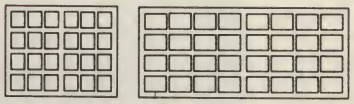
LANCER



15' x 6'6" & 7'
16' x 6'6" & 7'

8' x 6'6" & 7'
9' x 6'6" & 7'

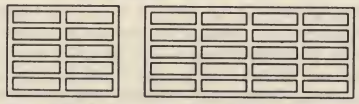
COLONIAL



8' x 6'6", 7', 7'6" & 8'
9' x 6'6" & 7'
10' x 6'6" & 7'

15' x 6'6" & 7'
16' x 6'6" & 7'
18' x 6'6" & 7'

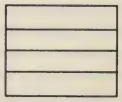
RANCHOME



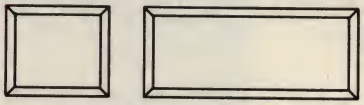
8' x 6'6" & 7'
9' x 6'6" & 7'
10' x 6'6" & 7'

15' x 6'6" & 7'
16' x 6'6" & 7'
18' x 6'6" & 7'

FLUSH



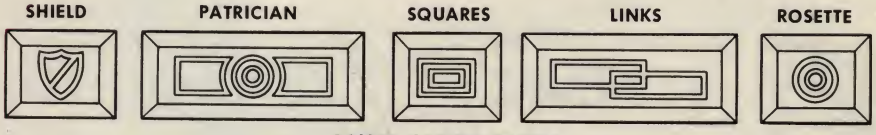
AVAILABLE IN SAME SIZES AS RANCHOME



PLAIN RAISED PANELS

ROUND SQUARE and DIAMOND SHAPE APPLIQUES

SHIELD **PATRICIAN** **SQUARES** **LINKS** **ROSETTE**



RAISED CARVED PANELS

MINIMUM REQUIREMENTS

HEADROOM: 13½" minimum required above height of door for standard hardware, but 16" headroom permits best operation and provides room for an ATLAS Electric Operator if desired. By adding Low Headroom Roller Arms, door can be installed in 11¾" headroom OR special track can be specified to allow door to be installed in 9" of headroom (10½" if torsion springs) or, with special double track, in 3½" of headroom. NOTE: Allow 2½" more headroom if ATLAS Electric Operator is to be added. Keep in mind that it is better to have a lower door with greater headroom than the reverse, for easiest operation.

SIDEROOM: 3½" minimum required on each side, 7½" between doors.

for electric operators and radio controls for Residential Doors see over ▶

ATLAS automatic ELECTRIC OPERATORS

FOR RESIDENTIAL GARAGES

ATLAS "Rador" ELECTRIC OPERATORS

There's luxury, step-saving convenience and a new security for you when you ATLAS "Rador" control the operation of your garage door . . . and the garage lighting, too . . . from your car, from your house, or from other convenient locations. Yes, ATLAS "Rador" Electric Operators bring you the thrill and protection of dependable automatic operation. It's just like having your own personal, invisible, 24 hour a day doorman . . . ready, at the touch of a button, to obey your commands.

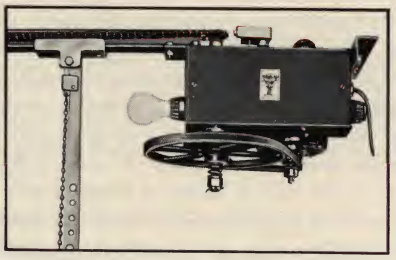
These durable operators are the crowning achievement of many years patient research and are a delight to own. At surprisingly low cost, they save you from weather exposure and getting wet from rain or snow. They light up the garage area to help you avoid accidents and provide prowler protection, too. They give you a snug, comfortable feeling of justified well-being. They're the essence of gracious, modern living.

All ATLAS models offer you these advantages and all are wired for operation on 110 Volts, 60 cycles, single phase AC and have safe, low voltage operated relays, the same as your dial telephone and your thermostatically controlled furnace. Keyed disconnect device is available to permit opening the door manually from the outside in the event of power failure. Extra inside and outside push button and key switch controls may be added as desired. Plus:

ATLAS "Rador" Radio Control

Consists of a small radio receiver which can be plugged into any of the operators described on this page. One or more matched transmitters, when mounted under the hood of any car (or other 6 or 12 volt battery equipped vehicle) completes the equipment needed for remote operation of the door and lights. A wide choice of frequencies prevents your unit operating or being operated by a nearby unit. ATLAS "Rador" units are the type approved by the Federal Communications Commission. Optional equipment includes transistorized portable hand transmitter which can be carried anywhere and a 110 Volt radio transmitter which can be plugged into any 110 Volt receptacle in your house for operating the door where wiring from garage to house is undesirable.

the ARGOSY

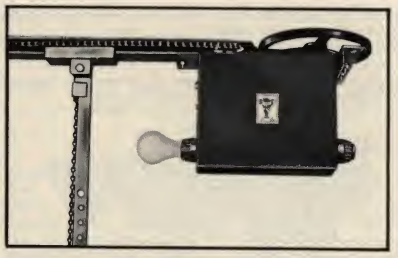


This quality electric operator for modest budgets is exceptionally quiet in operation. Featuring positive roller chain drive, safety friction clutch, adjustable limit switches, built-in automatic light, fuse protection, quick disconnect tow bar to permit hand operation of door in the event of power failure; this fine unit automatically locks the door when closed and includes one 1-button inside control station of the low voltage type. The high torque motor and approved electrical components are completely isolated from the operator frame for maximum safety.

Model AMA-7: For doors to 16 ft. wide, not over 7 ft. high.

Model AMA-8: For doors to 16 ft. wide, not over 8 ft. high.

the SPARTAN



This superior extra duty electric operator is America's finest for residential garage doors and has enough reserve power to give dependable service, even in light commercial duty. Featuring double reduction for added power and an instinctive sensing device which automatically reverses door travel, causing door to return to the fully open position with the power off if the door encounters an obstruction while closing; it also has quiet, positive roller chain drive, adjustable limit switches, built-in automatic light, quick disconnect tow bar to permit hand operation in event of power failure.

The unique sensing device is mechanical rather than electrical and assures full motor power at all times with extreme sensitivity. This is quite important, particularly in bad weather or when snow or ice prevail.

The Spartan Electric Operator automatically locks the door when closed. Its high torque motor is protected with an indicating manual reset type circuit breaker. It and all of the approved electrical components and circuits are fully isolated from the operator frame for complete safety. One 1-button low voltage inside control is included with each operator.

Model AMS-7: For doors to 18 ft. wide, not over 7 ft. high.

Model AMS-8: For doors to 18 ft. wide, not over 8 ft. high.

ATLAS OVERHEAD DOOR CO.

DIVISION OF

INDUSTRIAL CORPORATION OF AMERICA

QUAKERTOWN, PENNSYLVANIA

A.I.A. File No. 16-D

THE MARK OF QUALITY

BARBER COLMAN

Barber-Colman
cam action
OVERdoors

commercial

industrial

service station

residential

OVERdoor DIVISION of BARBER-COLMAN COMPANY • ROCKFORD, ILLINOIS

A.I.A. File No. 16-D

THE MARK OF QUALITY

BARBER COLMAN

the company

Founded in 1900 for the purpose of building textile machinery, Barber-Colman Company today manufactures products far reaching in their importance to commercial, industrial, and individual users. Today, Barber-Colman products include not only textile machinery, but machine tools, automatic controls, air distribution products, small motors, molded products, industrial instruments, overhead type doors, and electric operators.

Barber-Colman means engineering

Barber-Colman resarch and engineering facilities have been applied to the overhead type door and operator field since 1924 when Barber-Colman engineers first radio controlled a garage door from an automobile. In 1930 Barber-Colman developed Cam Action, an improved opening and closing mechanism for overhead type doors, and have produced a complete line of OVERdoors, Electric Operators, and Radio Controls ever since. Barber-Colman engineers have constantly pioneered improvements in overhead type doors and electric operators. A recent development, the Weather-King door section, possesses remarkable insulation qualities and excellent resistance to weathering.

Cam Action Closing

Cam Action for overhead type doors was developed and patented by Barber-Colman engineers in 1930 as a solution to the problem of making a door close tightly enough to retain heat in a building and still operate easily.

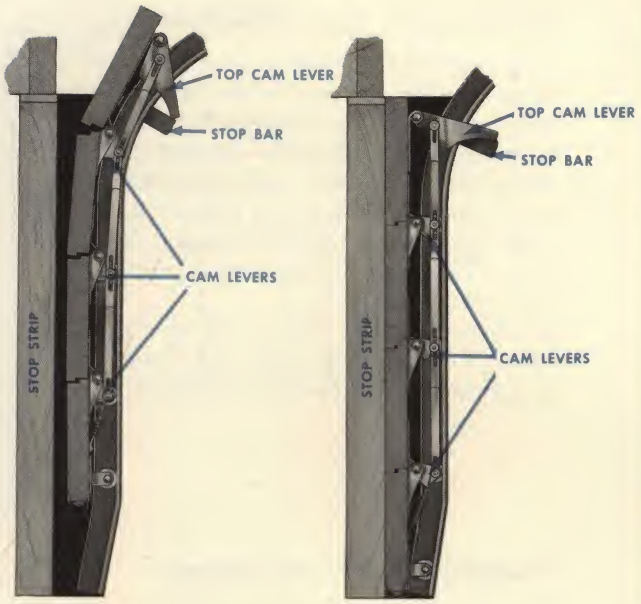
The main advantage of the cam system is that the door is BOTH weathertight AND easy working — easy opening because the door *instantly* moves back from stop strips — weathertight closing because the door is held tight against stops. Even if the door jamb is irregular, Cam Action can be set (by changing the length of the links) to close the door snugly at all joints. Height of door sections for a given door need not be the same to effect a uniform closing. The adjustment can be easily changed after the door installation is completed.

Any door can EITHER close weathertight OR operate easily — but only a door with Cam Action does BOTH! A wedge movement door does *not* move *rapidly* back from the stops; therefore, if a wedge track door is tight when closed — it drags against the stops on opening and closing. If the wedge door has space to operate freely, that same space lets in outside air when the door is closed. If the building is not to be heated and the combination of weathertight closing and easy operating is not so important, the wedge action arrangement is satisfactory. The Model 33 is the economy OVERdoor, recommended if wedge closing is acceptable.

Barber-Colman

cam action

OVERdoors



HOW CAM ACTION WORKS

OPENING

Turning latch handle releases Cam Levers and entire door immediately moves back 3/8", then rolls up easily with minimum friction, no sticking or binding.

CLOSING

Door rolls down easily with 3/8" clearance — when door is almost down, Stop Bar on track engages Top Cam Lever, linked to other Cam Levers, pushing entire door forward and pressing door tight against stop strips.

Barber-Colman means service

From preliminary plans to final installation, Barber-Colman engineering service assures architect and client of quality equipment designed for the particular application! Your Barber-Colman representative analyzes building requirements and co-ordinates product design with product application — his complete service includes sales contact, field engineering, liaison with factory engineering, installation, and maintenance. Barber-Colman responsibility starts with the need for doors and lasts the lifetime of the installation.

Some idea of the wide variety of applications of Barber-Colman OVERdoor equipment can be gained from this catalog. Whether your job calls for small hand operated residential doors or large electrically operated industrial doors, the Barber-Colman organization stands ready to fill the need. A specification for Barber-Colman means quality equipment backed by more than thirty years of research, engineering, and production experience.

Barber-Colman guarantees satisfaction

OVERdoors and Electric Operators carry a standard one year guarantee on all parts. Radio Control equipment is guaranteed for 90 days. WEATHER-KING panels and WEATHER-KING flush facings carry a lifetime guarantee not to split, splinter, delaminate, or crack due to natural conditions of weathering or exposure.

Barber-Colman representatives guarantee that the equipment which they sell installed will be maintained in operative condition without expense to the owner for a period of one year (90 days for Radio Control), except in case of accidental damage.

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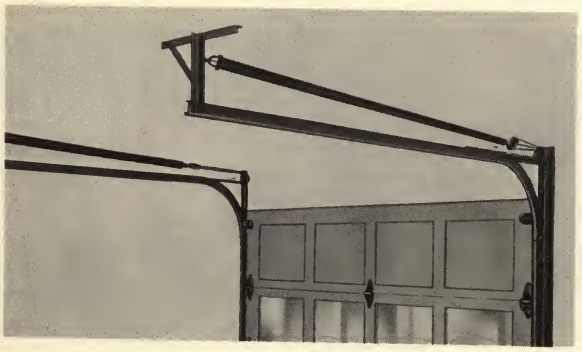
springs tailored to each door

twin torsion

Standard on commercial and industrial doors over 18′-2″ wide or over 10′-6″ high. Spring on each side of door insures equal support, and allows easy adjustment to keep door in perfect balance. Cable drums are heavy cast 6″ diameter with roller bearings. Engineered for safety with steel shaft through entire length of spring assembly.

continuous shaft

Operate efficiently on smaller doors and furnished only on doors thru 18′-2″ wide and thru 10′-6″ high. Two springs used on doors over 10′-2″ wide. Cable drums are heavy cast 4½″ diameter. Engineered for safety with steel shaft mounted on ball bearings, extending entire width of door.



extension

Heavy steel spring wire with ball bearing cable sheaves to reduce friction. Wire through springs for safety. Springs offer close accuracy in design and rugged, durable service at reduced cost.

continuous track bracket

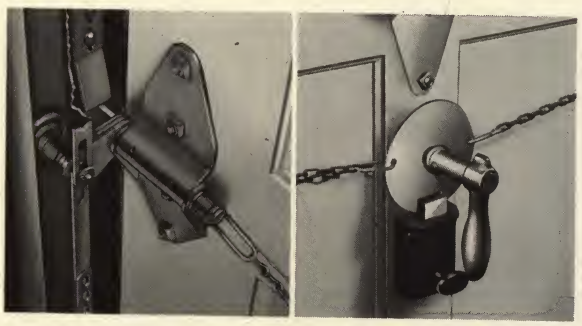
Solid, one-piece vertical track supports are furnished as standard on all Cam Action OVERdoors. The vertical track is sheet steel, rolled to a special form and spot welded to continuous angle brackets. When bolted to jamb, angle bracket reinforces the track against damage and offers solid, rigid, support throughout the full opening height of the door. The angle bracket also shields and protects the spring cable.

Horizontal tracks are reinforced by angle iron braces welded to the track and securely bolted to the continuous vertical track bracket.

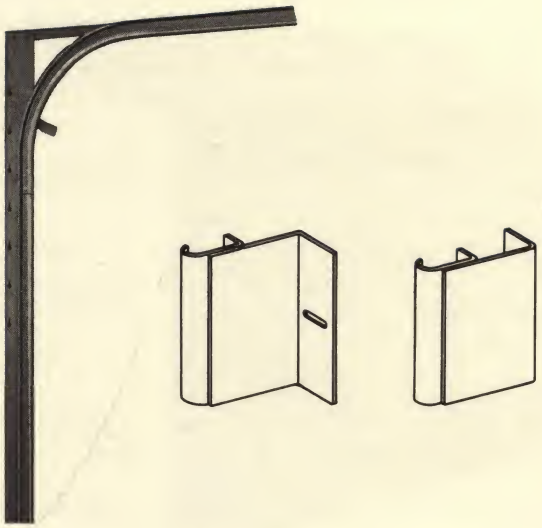
hinges • small hardware

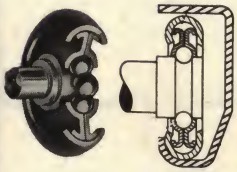
Rugged 13 gauge steel hinge halves connected by oversize tubes provide large bearing area. All small hardware zinc plated after fabrication to resist rust and corrosion. Extra care has gone into the design of all parts — extra care that assures complete satisfaction for the owner.

automatic latching and night lock



Spring loaded bolts automatically latch at both sides when door closes — unlatch by turning palm fitting door handle. Full size 5-pin cylinder lock with automatic night lock equipped with stop arrangement for holding out of engagement with door handle as desired.



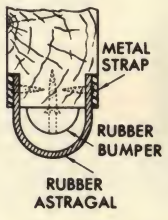


ball bearing rollers

To insure endurance and operating ease, rollers are ball bearing with a large shaft, large balls, and a large diameter ball race. Races are case hardened and balls are of specially hardened chrome steel. A one-piece steel tire formed around outside insures a rigid assembly.

rubber astragal

"U" shaped rubber astragal seals door at floor to help keep out rain and prevent freezing. Rubber bumpers inside astragal, cushion bottom of door. Made of special fabric reinforced high grade rubber and easily replaced if required. Less expensive extruded rubber nail-on type also available. Threshold should be designed to drain water away from door. Threshold footing should extend below frost line.



pass door

Pass doors are available with panel, flush, or steel sections not over 16′-6″ wide, not under 9′ high. Pass door is normally 3 sections high. Recommended width 24″, maximum width 30″.
As an added safety feature, an interlocking switch is recommended on electrically operated OVERdoors equipped with a pass door. This switch prevents opening the OVERdoor when the pass door is open.

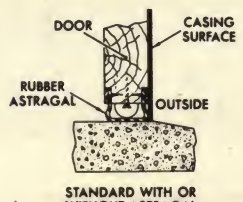
fire station door release

The Fire Station Door Release is applicable only to Cam Action OVERdoors No. 50-02 and 50-03. The regular side latching arrangement is replaced by a latch at the top of the door. When the latch is released from a pull rope or chain (from cab of fire truck) extra tension on the springs pulls the door open rapidly. The top latch can also be released from the door handle. A brake in the horizontal track stops the door smoothly in the open position.
Cam Action is an important reason why the Fire Station Release gives satisfactory, dependable service. Cam Action provides instant clearance from the stops insuring fast, easy opening even when wood shrinks or swells.

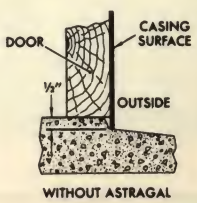
steel sections

Steel Sections are used where fire or security are extreme problems. Sections are 16 gauge flush design or 20 gauge fluted design galvanized steel with edges formed for weatherproof joint. All surfaces bonderized against rust (1.25 oz. of zinc per sq. ft.) and specially treated for paint adhesion. Sections designed to withstand wind pressure of 20 pounds per sq. ft.
Any or all sections open for glazing. Glass set in steel frame with rubber mounting cushion to reduce shock. 3/16″ crystal sheet glass recommended for 16 gauge sections, double strength glass for 20 gauge sections.

threshold arrangements



STANDARD WITH OR WITHOUT ASTRAGAL



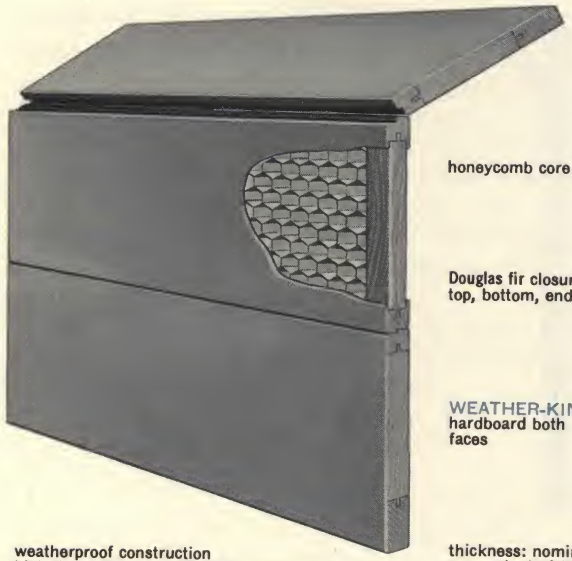
WITHOUT ASTRAGAL

WEATHER-KING flush sections

Developed by Barber-Colman Company, the WEATHER-KING flush section is the newest and best method of construction available for flush overhead type doors. Guaranteed weatherproof, WEATHER-KING flush sections have a "U" factor of .259 — twice the insulation value of a 12″ poured concrete wall. Top, bottom, and end closures are select Douglas Fir. Honeycomb core is phenolic resin impregnated against moisture and decay. WEATHER-KING flush sections are especially recommended for use with Cam Action for a perfect combination — weathertight, weatherproof, and easy working. Window inserts open for glass available in any sections. Factory primed unless otherwise specified.

lifetime guarantee

Facing guaranteed in writing not to split, splinter, delaminate, or crack due to natural conditions of weathering or exposure. If WEATHER-KING flush sections should fail in this way, Barber-Colman Company will replace section or entire door at its expense.



honeycomb core

Douglas fir closures top, bottom, ends

WEATHER-KING hardboard both faces

weatherproof construction
high thermal insulating value
strength with light weight
fire resistance
vermin and decay resistance
modern design—door may be *individualized.*

thickness: nominal 1¾″ or nominal 1⅜″.

WEATHER-KING panel sections

Introduced to the overhead type door industry by Barber-Colman Company, WEATHER-KING panels combine the advantages of plywood and metal without the disadvantages of either. WEATHER-KING panels are guaranteed to withstand all natural conditions of weathering and exposure. Rails and stiles are select Douglas Fir. Available in any size or design, WEATHER-KING panel sections are applicable for every residential, commercial, and industrial need.

Rails and stiles nominal 1¾″ thick, select Douglas Fir. Joints mortise and tenon glued, and steel pinned from inside. Nominal ¼″ thick WEATHER-KING panels standard. Required stop strips furnished. Sections sanded ready for paint. Any or all sections may be open for glazing.

lifetime guarantee

Panels guaranteed in writing not to split, splinter, delaminate, or crack due to natural conditions of weathering or exposure. If WEATHER-KING panel sections should fail in this way, Barber-Colman Company will replace section or entire door at its expense.

thickness: nominal 1¾″ or nominal 1⅜″.

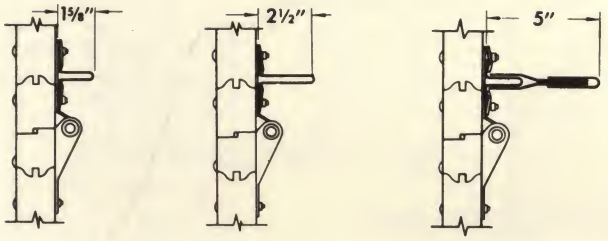
WEATHER-KING hardboard panels nominal ¼″ thick

rails and stiles of cured Douglas fir mortise and tenon joints, glued, steel pinned from inside

WEATHER-KING flush sections

door height	no./sec.
up thru 8'6"	4
8'7" thru 10'6"	5
10'7" thru 12'6"	6
12'7" thru 14'6"	7
14'7" thru 16'6"	8
16'7" thru 18'6"	9

door width	hinges /break
up thru 9'6"	3
9'7" thru 14'6"	4
14'7" thru 18'6"	5
18'7" thru 22'6"	6
22'7" thru 26'6"	7
26'7" thru 28'2"	8



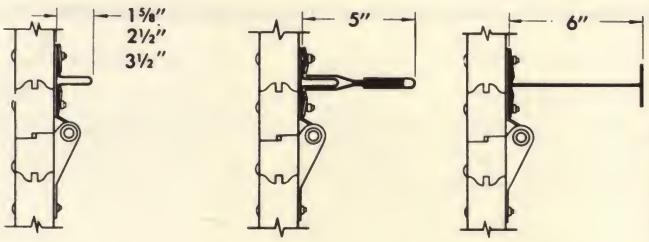
reinforcing

The correct number, size, and style of reinforcing struts are furnished with each door. Placement of the struts depends upon the size of the door and are correctly installed by trained door specialists at the time the door is installed.

WEATHER-KING panel sections

door height	no./sec.
up thru 8'6"	4
8'7" thru 10'6"	5
10'7" thru 12'6"	6
12'7" thru 14'6"	7
14'7" thru 16'6"	8
16'7" thru 18'6"	9

door width	panels	hinges /break
up thru 9'6"	4	3
9'7" thru 14'6"	6	4
14'7" thru 18'6"	8	5
18'7" thru 22'6"	10	6
22'7" thru 26'6"	12	7
26'7" thru 28'2"	14	8



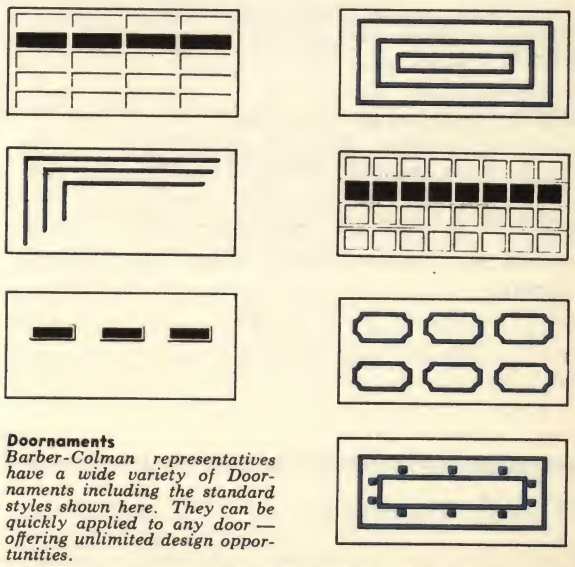
reinforcing

The correct number, size, and style of reinforcing struts are furnished with each door. Placement of the struts depends upon the size of the door and are correctly installed by trained door specialists at the time the door is installed.

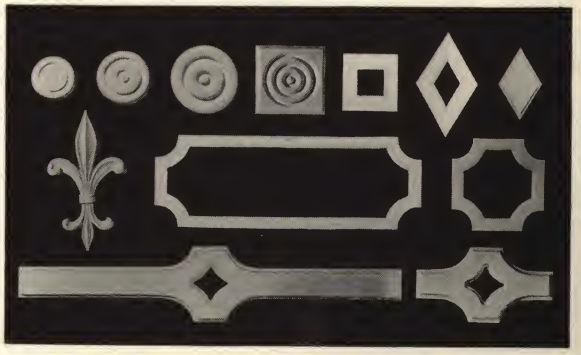
Individualized doors

Barber-Colman OVERdoors are furnished in a wide variety of designs to complement any type of home whether it be ranch, colonial, modern, or provincial. A broad selection of panel and flush designs offers real individuality, especially when *Door*naments and moulding are used to add extra personality and style.

Flush doors offer the greatest possibilities for "main entrance" styling — either to blend and conform with the architecture of the home or to create a striking effect as an accent in the overall design. Barber-Colman design facilities make custom-designed garage doors available at only slightly more than the cost of standard doors. Architects have achieved an amazing variety of attractive door designs by using Doornaments, molding, paint, and window inserts. The drawings below indicate only a few of the unlimited design possibilities.



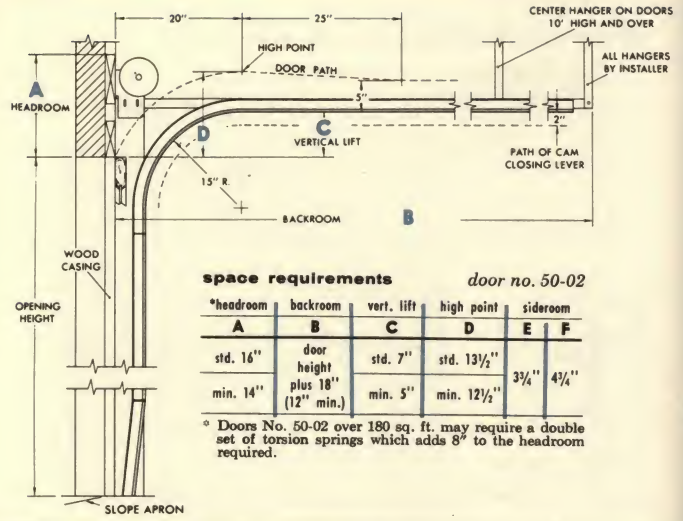
Doornaments
Barber-Colman representatives have a wide variety of Doornaments including the standard styles shown here. They can be quickly applied to any door — offering unlimited design opportunities.



2″ track standard *cam action*

DOOR	SPRINGS	max. DOOR AREA	max. WIDTH	max. HEIGHT
50-02	torsion	265 sq. ft.	20'-2"	20'-1"

Door No. 50-02 is the basic Barber-Colman Cam Action OVERdoor with sturdy hardware designed for residential and most commercial-industrial applications, from small dock doors to large railway doors. When combined with Weather-King Flush Sections, Cam Action OVERdoors provide a weathertight seal, high insulation and easy operation. Most standard sizes carried in stock by representatives.



space requirements *door no. 50-02*

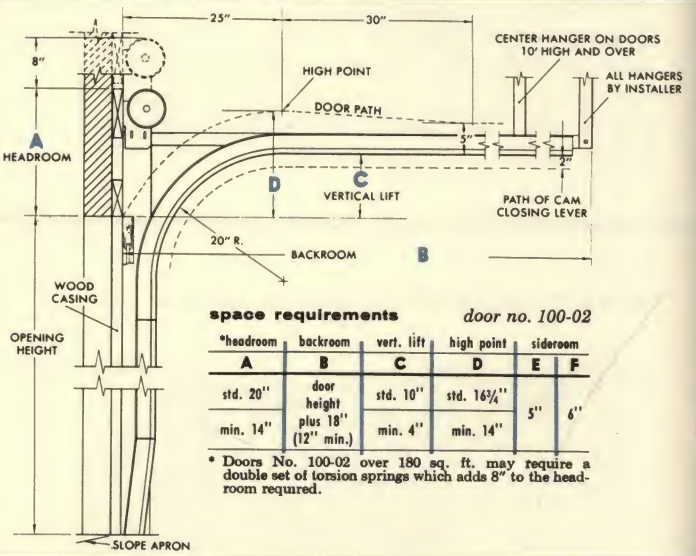
*headroom A	backroom B	vert. lift C	high point D	sideroom E	sideroom F
std. 16″	door height plus 18″ (12″ min.)	std. 7″	std. 13½″	3¾″	4¾″
min. 14″		min. 5″	min. 12½″		

* Doors No. 50-02 over 180 sq. ft. may require a double set of torsion springs which adds 8″ to the headroom required.

3″ track standard *cam action*

DOOR	SPRINGS	max. DOOR AREA	max. WIDTH	max. HEIGHT
100-02	torsion	400 sq. ft.	28'-2"	21'-7"

Door No. 100-02 is an extra heavy duty Cam Action OVERdoor specially engineered for extremely large openings. This OVERdoor has large 3″ diameter rollers, extra heavy gauge track and hinges. It is ideal for applications where heavy sections are required and constant operation is a factor.



space requirements *door no. 100-02*

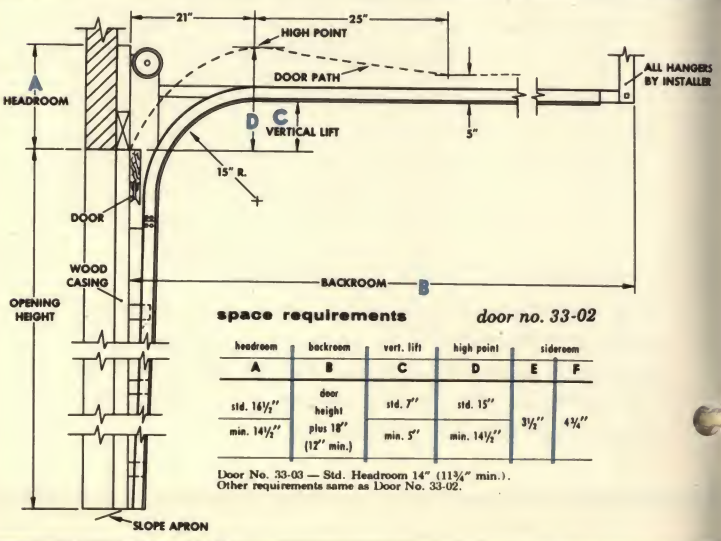
*headroom A	backroom B	vert. lift C	high point D	sideroom E	sideroom F
std. 20″	door height plus 18″ (12″ min.)	std. 10″	std. 16¼″	5″	6″
min. 14″		min. 4″	min. 14″		

* Doors No. 100-02 over 180 sq. ft. may require a double set of torsion springs which adds 8″ to the headroom required.

2″ track standard *wedge closing*

DOOR	SPRINGS	max. DOOR AREA	max. WIDTH	max. HEIGHT
33-02	torsion	265 sq. ft.	20'-2"	20'-1"
33-03	extension	112 sq. ft.	16'-0"	7'-0"

Door No. 33-02 is the Barber-Colman economy model. This wedge closing OVERdoor has every Barber-Colman quality feature except Cam Action and is intended primarily for residential and light commercial-industrial applications. Door No. 33-03 is identical in construction except extension springs are furnished instead of torsion. Wedge closing is satisfactory if the combination of weathertight closing and easy operation is not so important.



space requirements *door no. 33-02*

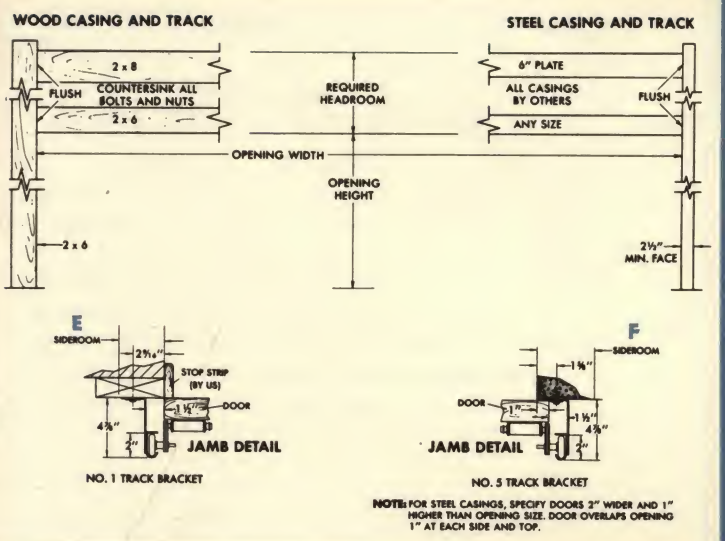
headroom A	backroom B	vert. lift C	high point D	sideroom E	sideroom F
std. 16½″	door height plus 18″ (12″ min.)	std. 7″	std. 15″	3½″	4¼″
min. 14½″		min. 5″	min. 14½″		

Door No. 33-03 — Std. Headroom 14″ (11¾″ min.). Other requirements same as Door No. 33-02.

Barber-Colman

cam action

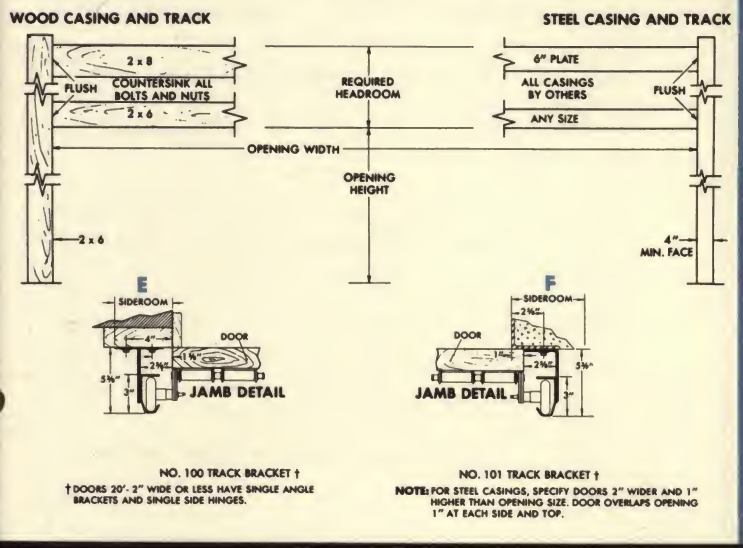
OVERdoors



specification

Doors shall be Standard Cam Action OVERdoor No. 50-02 with WEATHER-KING flush (or panel) sections as manufactured by Barber-Colman Company, and shall be of a size and design shown on the plans. They shall have torsion spring counterbalancing, latching type lock, and continuous vertical track brackets. Door openings shall be cased by others. Doors shall be installed by the local representative of Barber-Colman OVERdoors.

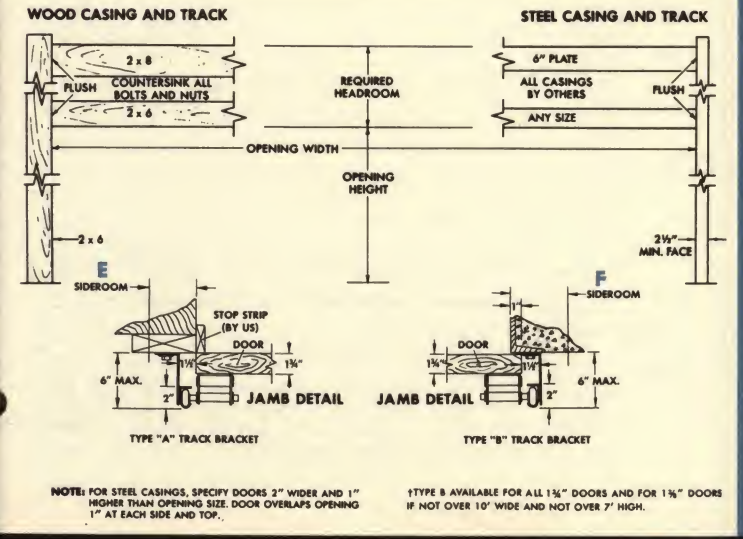
OPTIONAL: Rubber astragal in form of upright "U" on bottom of door for full width. Toxic treatment of panel sections before delivery.



specification

Doors shall be Standard Cam Action OVERdoors No. 100-02 with WEATHER-KING flush (or panel) sections as manufactured by Barber-Colman Company, and shall be of a size and design as shown on the plans. They shall have torsion spring counterbalancing, latching type lock, and 3" track with continuous vertical brackets. Door openings shall be cased by others. Doors shall be installed by the local representative of Barber-Colman OVERdoors.

OPTIONAL: Rubber astragal in form of upright "U" on bottom of door for full width. Toxic treatment of panel sections before delivery.



specification

Doors shall be Standard Wedge Action OVERdoors No. 33-02 with WEATHER-KING flush (or panel) sections as manufactured by Barber-Colman Company, and shall be of a size and design shown on the plans. They shall have torsion springs counterbalancing and latching type lock. Door openings shall be cased by others. Doors shall be installed by the local representative of Barber-Colman OVERdoors.

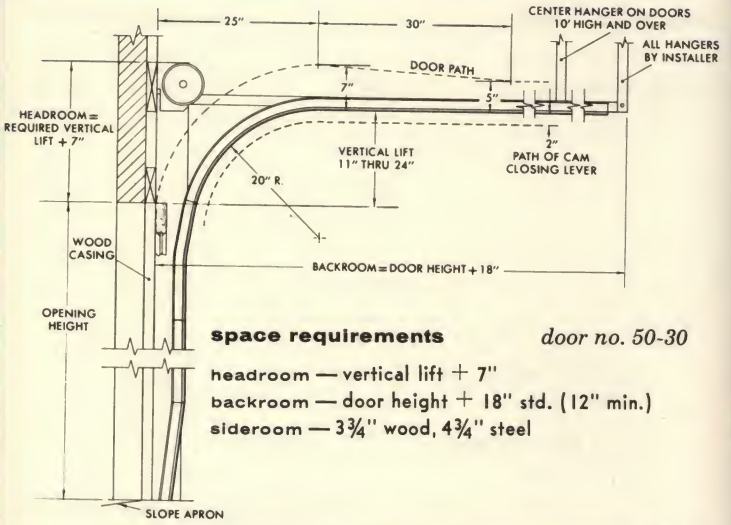
OPTIONAL: Rubber astragal on bottom of door for full width. Toxic treatment of panel sections before delivery.

small lift

cam and wedge

DOOR	SPRINGS	VERT. LIFT	max. WIDTH	max. HEIGHT
50-30	torsion	11" thru 24"	10'-6"	12'-6"
33-30	torsion	11" thru 24"	10'-6"	12'-6"

Door No. 50-30 provides up to 24″ of vertical lift over the door height allowing clearance for greasing lifts, fork lift trucks, and other such equipment. Door No. 33-30 is identical in construction except Wedge Closing is furnished instead of Cam Action and intermittent instead of continuous track brackets. If required door height exceeds the above limits, Dummy Section Doors 50-46 or 33-46 may be substituted. With this arrangement, additional vertical clearance is obtained by adding dummy sections to the top of the door.



space requirements *door no. 50-30*

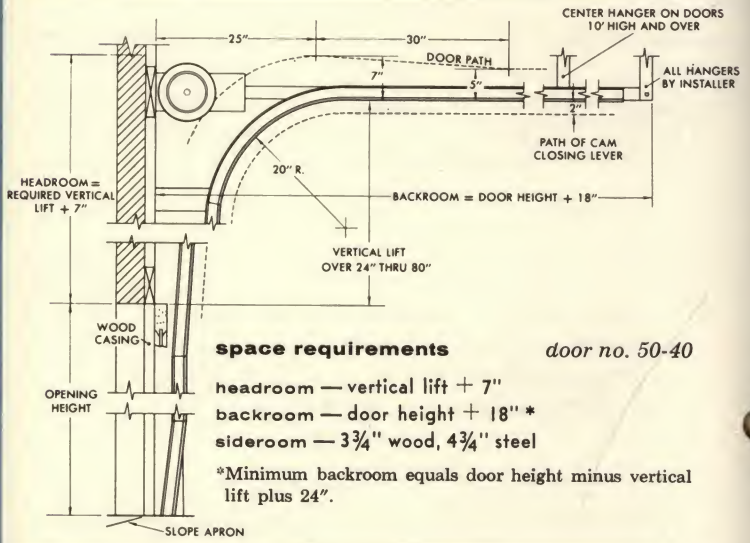
headroom — vertical lift + 7"
backroom — door height + 18" std. (12" min.)
sideroom — 3¾" wood, 4¾" steel

high lift

cam and wedge

DOOR	SPRINGS	max. DOOR AREA	max. WIDTH	max. HEIGHT
50-40	torsion	265 sq. ft.	20'-2"	16'-1"
33-40	torsion	265 sq. ft.	20'-2"	16'-1"

Door No. 50-40 provides up to 80″ of vertical lift over the door height allowing clearance for greasing lifts, pipes, fork lift trucks, traveling cranes, and other such equipment. Door No. 33-40 is identical in construction except Wedge Closing is furnished instead of Cam Action and intermittent instead of continuous track brackets. If required door height exceeds 16′1″, or if vertical lift exceeds 80″, Dummy Section Doors 50-46 or 33-46 may be substituted. This increases total door height to clear obstructions and permits use of standard drawbar ,electric operation.



space requirements *door no. 50-40*

headroom — vertical lift + 7"
backroom — door height + 18" *
sideroom — 3¾" wood, 4¾" steel

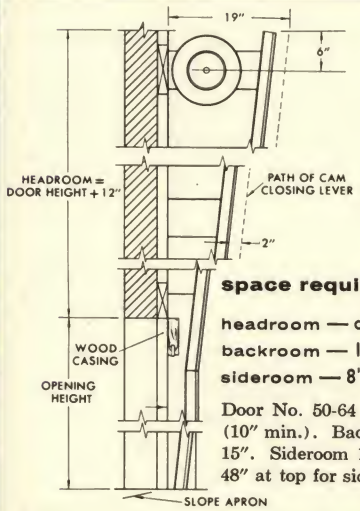
*Minimum backroom equals door height minus vertical lift plus 24".

full vertical

cam and wedge

DOOR	COUNTER-BALANCE	max. DOOR AREA	max. WIDTH	max. HEIGHT
50-60	torsion spring	200 sq. ft.	16'-2"	12'-3"
33-60	torsion spring	200 sq. ft.	16'-2"	12'-3"
50-64	weight	265 sq. ft.	18'-2"	20'-1"

Doors 50-60 and 33-60 operate vertically and require only 19″ of backroom. Where larger doors are required, Full Vertical Cam Action Door No. 50-64 is suggested. Door No. 50-64 operates vertically, requires only 8″ backroom, except top 10″ which requires 15″, must be electrically operated. Doors 50-60 and 33-60 are identical in construction except Door No. 50-60 has Cam Action Closing and continuous track bracket. Full Vertical Weight Counterbalanced Door No. 50-64 is available with Cam Action Closing only.



space requirements *door no. 50-60*

headroom — door height + 12" (8" min.)
backroom — 19"
sideroom — 8" wood, 7½" steel

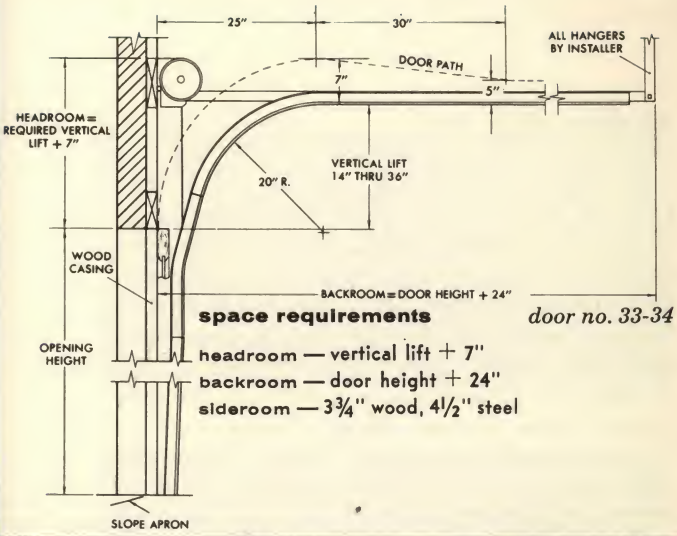
Door No. 50-64 — Std. headroom door height plus 15″ (10″ min.). Backroom 8″ except top 10″ which requires 15″. Sideroom 15″ weight guard side, 2¾″ other side, 48″ at top for side mounted operator.

Barber-Colman
cam action
OVERdoors

service station
wedge closing

DOOR	SPRINGS	VERT. LIFT	max. WIDTH	max. HEIGHT
33-34	torsion	14" thru 36"	10'-6"	10'-6"

Door No. 33-34 is a wedge closing OVERdoor designed for service stations and other applications where vertical clearance is required and wedge closing is acceptable. This door provides up to 36″ of vertical lift to provide clearance for greasing lifts and wash racks. Section designs are available to meet any service station requirement.



space requirements *door no. 33-34*

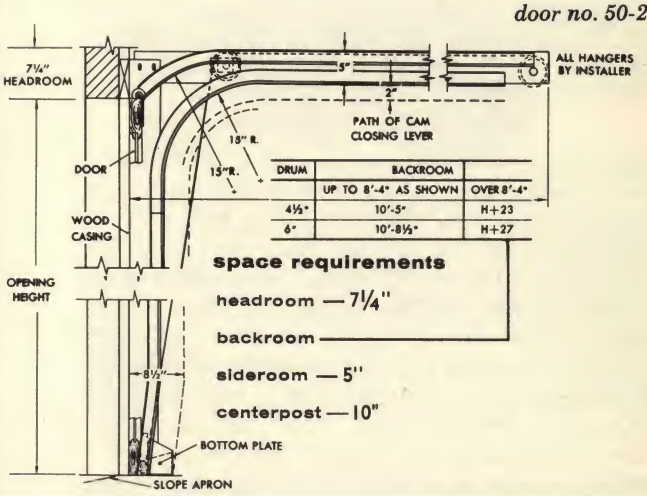
headroom — vertical lift + 7"
backroom — door height + 24"
sideroom — 3¾" wood, 4½" steel

low headroom
cam and wedge

DOOR	SPRINGS	max. DOOR AREA	max. WIDTH	max. HEIGHT
50-22	torsion	160 sq. ft.	18'-2"	12'-1"
33-22	torsion	160 sq. ft.	18'-2"	12'-1"

Doors 50-22 and 33-22 are designed for installations where minimum headroom is available. Both doors are identical in construction except Door No. 50-22 has Cam Action Closing and continuous track brackets. Doors will clear the opening in the open position, but do not operate quite as smoothly as standard arrangements.

door no. 50-22



DRUM	BACKROOM	
	UP TO 8'-4" AS SHOWN	OVER 8'-4"
4½"	10'-5"	H+23
6"	10'-8½"	H+27

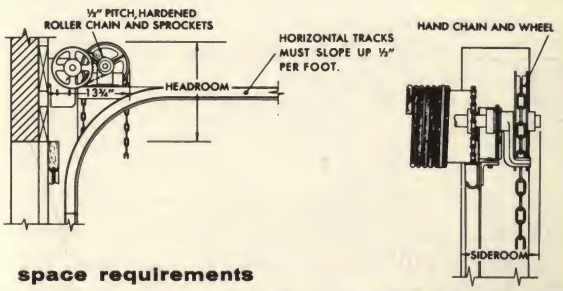
space requirements

headroom — 7¼"
backroom
sideroom — 5"
centerpost — 10"

chain hoist
spring drive

The Spring Drive Chain Hoist is installed with original door installations and is recommended for easier operation of OVERdoors which exceed 12′-6″ high or 200 sq. ft. area.

The cable winding drums are driven through a ball bearing mounted cross shaft, sprocket and chain linkage. This arrangement exerts a positive pulling force on the door when opening. The door moves 4″ for every foot of chain travel. On doors with a double set of springs, the lower set is driven by the chain hoist. The hand chain drive may be mounted on either the right or left hand side. For locking, a hook is furnished to fasten the chain to the track bracket.



space requirements

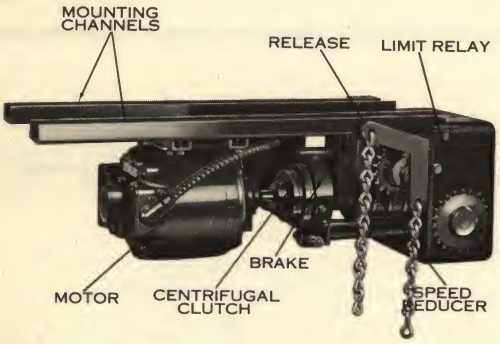
DOOR		50-02	100-02	50-40	50-60
headroom		19"	23"	door headroom	
backroom		door backroom			
side-	wood	6½"	7¾"	6"	6"
room	steel	7½"	8¾"	7"	7"

May also be used on Doors 33-02, 33-40, and 33-60.

models MR, MC

arrangement no. 1

The Model MR (shown below) for commercial-industrial overhead type doors is usually controlled by momentary contact of a three-button (Open-Close-Stop) switch, and has a magnetic brake that stops the door accurately and locks it in any position that it stops. The clutch is of the centrifugal type which allows the motor to come up to speed before taking on the driving load. If the door meets an obstruction the clutch slips. A simple release permits manual operation in case of power failure. A thermal circuit breaker provides protection in case of overload.



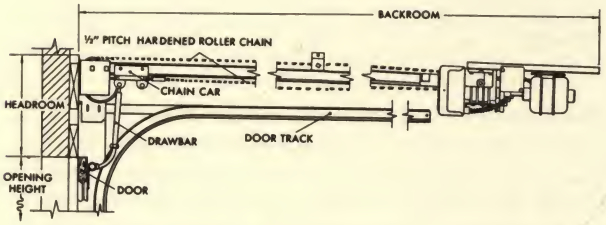
The Model MC is identical to the Model MR except for the control. Controlled from a two-button switch, the Model MC provides maximum protection where considerable traffic moves through the door. Short contact of "Open" button opens door. Attendant must hold "Close" button during entire closing stroke; merely releasing the "Close" button reverses the door and sends it back open automatically.

Furnished for 110 volt, 60 cycle, single phase A.C., and for 220 or 440 volt, 60 or 50 cycle, three phase A.C. Motors for 25 cycle also available. Motor sizes ¼ h.p. to ½ h.p. for standard weight doors up to 400 sq. ft. in area.

specification

Door operators shall be Model MR (or MC) as manufactured by Barber-Colman Company. They shall have G.E. or Westinghouse (or equal) instantly-reversing motors, centrifugal clutch, worm gear speed reducer, magnetic brake, limit switch, thermal circuit breaker, and release for manual operation. Control shall be by switches located as shown on plans.

(Include in electrical specification) Provide power outlet and install thermal circuit breaker and control station (both furnished) next to door as shown on plans. Do all wiring from power source through circuit breaker to operator and to control stations in accordance with wiring diagram furnished by Barber-Colman representative.



space requirements

DOOR	OPERATOR HEADROOM	OPERATOR BACKROOM
50-02, 100-02, 33-02	door high point plus 3¾"	door headroom plus 5'2"
50-22, 33-22	door headroom	
50-30, 33-34	door headroom plus 3"	
50-46, 33-46	door headroom	

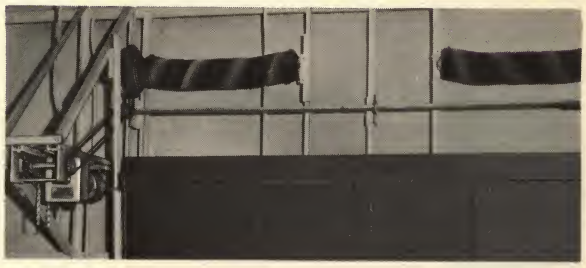
models LR, LC

arrangement no. 7

The Model LR is a modified Model MR operator engineered for commercial and light industrial overhead type doors up to 19'2" wide and not over 240 sq. ft. area. Standard control is from three-button (Open-Close-Stop) switch. The Model LC is identical to the Model LR except the control is from a two-button switch of the type used on the Model MC. Low voltage to the control station is standard. Standard motors are ⅓ h.p., 110 volt, single phase A.C. or ⅓ h.p., 220 volt, three-phase A.C.

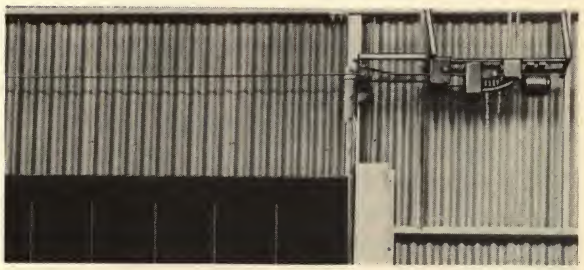
full vertical - spring *arrangement no. 5*

Model MR only for operation of Doors 50-60 and 33-60. Operator controls door by driving cable drums. Sizes ¼ h.p. and ⅓ h.p. Backroom = 36″ from face of door. Sideroom = 16½″ from door opening. Door headroom sufficient.



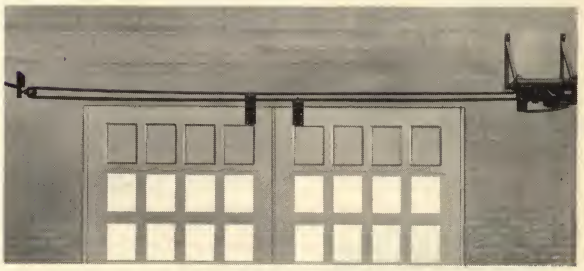
full vertical - weight *arrangement no. 6*

Model MR only for operation of Door No. 50-64. Electric operation of weight counterbalanced doors is highly important to reduce breakage due to slamming. Sizes ¼ h.p. to ½ h.p. for standard weight doors up to 265 sq. ft. Backroom = 15″ from face of door. Sideroom = 48″ from door opening. Headroom = 15″ above top of door in open position.



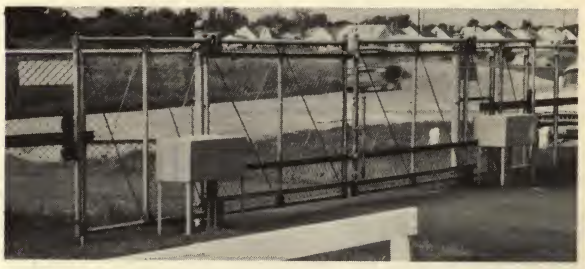
sliding door *arrangement no. 8*

Models MR and MC for one-leaf sliding and two-leaf sliding abutting doors. Sizes ¼ h.p. to ½ h.p. for standard weight doors up to 400 sq. ft., openings not over 20′ wide. Backroom = 13″ from face of door. Sideroom = 44″ from door opening. Headroom = 7″ from top of door.



sliding gate *arrangement no. 9*

Models MR and MC for sliding gates. One operator required for each leaf. Sizes ¼ h.p. to ½ h.p. for standard weight gates up thru 30 ft. wide, 7 ft. high. Backroom = 19″ from gate mesh. Height = 37″ from concrete base set at ground level. Operator sideroom = 50″ from opening. Gate travel clearance = width of leaf plus 30″.



steel rolling door *arrangement no. 11*

Models MR and MC for steel rolling doors. Location of operator and driving arrangement can be altered to suit conditions of job. Sizes ¼ h.p. to ½ h.p. Maximum door size varies with conditions. Backroom = 60″ from door face. Sideroom = door sideroom plus 16″. Door headroom sufficient.

controls

3 button switch

models MR, LR

Open-Close-Stop momentary contact switch, furnished as standard on Models MR and LR Operators. Normally operates on same voltage as operator motor. Any number of additional switches can be installed.

safety control

models MC, LC

Safety control furnished as standard on Models MC, LC, operator. Requires only momentary contact of "Open" button. "Close" button must be held until door is completely closed. Door automatically reverses if "Close" button is released. Any number of additional switches can be installed.

ratchet relay

models MR, LR

Normally open, single contact, self-restoring switch. Furnished as standard on Models MR, LR, operators, equipped with Ratchet Relay Control. One switch opens, closes, and reverses the door. Any number of additional switches can be installed.

radio control

model B

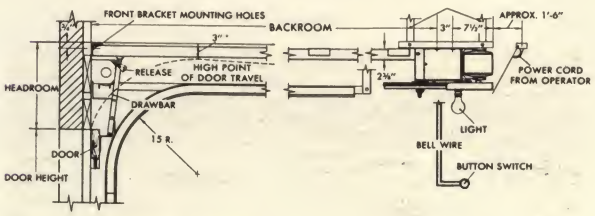
Barber-Colman Company invented and developed Radio Controls for garage doors in 1924. The latest design is a straight electronic type. It is a compact unit, easy to install and engineered for rugged, dependable duty. Commercial applications include service and delivery truck, ambulance, police and fire vehicles.

Control consists of a radio transmitter mounted on each vehicle and a receiving set on the operator. When the control button is pressed, a radio signal is sent out by the transmitting set, which consists of a high carrier frequency and a lower modulating frequency. This signal is picked up by the receiving set where it is analyzed. If it is the matching signal and of sufficient duration, the door opens if closed, closes if open, and reverses if closing or opening. Normal range is about 75 feet. The standard receiver is for use on 110 volt A.C. 60 or 50 cycle — preferably 60 cycle.

residential operator *model J*

The Model J is a simplified residential door operator designed for maximum safety and convenience. It is applicable to standard overhead-type doors up to 133 sq. ft., not to exceed 19′ wide and 8′6″ high. For standard one-piece upward acting doors of both the track type and the pivot-receding type not to exceed 16′ wide and 7′ high. The operator is equipped with an adjustable spring loaded clutch. If the door meets an obstruction, the clutch slips, stopping door — operator

shuts off. A touch on control button reverses door — operator automatically resets itself. A light on the operator goes on when the door is opened and stays on until door is closed. A button switch and low voltage wire are provided for inside installation. Radio Control is normally used for outside control, but an outside key switch is available.
In case of power failure, operator draw bar can be easily disconnected for manual operation.
The motor is ¼ h.p. instantly reversing, permanent capacitor type, 115 volt, 60 cycle, single phase A.C. A built in thermal circuit breaker protects motor in case of overloading.



space requirements

door	operator headroom
50-02, 33-02	add 3" to door high point
50-22, 33-22	add 3" to headroom

backroom — doors thru 7' high — 9'-2¾"
7'-1" thru 8'-6" — 10'-8¾"

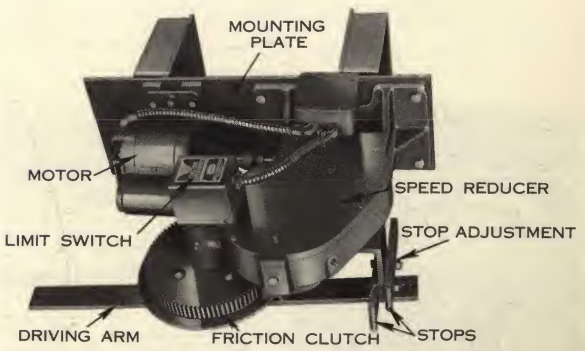
swinging door operator *models VR and VC*

The Model VR operator is a heavy duty unit for 1, 2, 3, and 4 leaf inward swinging doors and for 1 leaf outward swinging doors. The Model VR is normally controlled by a 3 button (Open-Close-Stop) momentary contact switch. Any number of additional switches may be installed. To assure safety, an adjustable friction clutch is provided in the drive between the slow speed shaft and driving arms. The clutch will slip when the normal driving load is exceeded by more than a reasonable amount.

The Model VC is identical to the Model VR except for the control. Controlled from a two-button switch, the Model VC provides maximum protection where considerable traffic moves through the door. Short contact of "Open" button opens door. Attendant must hold "Close" button during entire closing stroke; merely releasing the "Close" button reverses the door and sends it back open automatically.

The operators are installed alike on 2-3 and 4 leaf inward swinging doors. Application to 1 leaf outward or inward swinging doors is somewhat different and requires but one driving arm.

Instantly reversing, the motors are furnished for 110 volt, 60 cycle, single phase A.C., and for 220 or 440 volts, 60 or 50 cycle, three phase A.C. Motors for 25 cycle available at extra cost.



Barber-Colman

cam action

OVERdoors

ALABAMA
Birmingham—The Conarc Co., Inc.
Montgomery—The Morton Sales Co., Inc. (Chattanooga)

ARIZONA
Phoenix—Laing-Garrett Construction Spec.

ARKANSAS
(Tulsa)

CALIFORNIA
Fresno—Healey & Popovich
Los Angeles—Barcol OVERdoors of Los Angeles
San Diego—Vinyard Overhead Garage Door Co.
San Francisco—R. A. Parker Co.

COLORADO
Denver—C. A. Crosta, Inc.

CONNECTICUT
Clinton—Middlesex Overhead Door Co.
Torrington—Vincent Colucci
Waterbury—J. E. Smith & Co.
(Framingham, Tarrytown)

DELAWARE
(Philadelphia)

DISTRICT OF COLUMBIA
Washington, D.C. (Bethesda, Md.)—W. M. Schoenfelder

FLORIDA
Bradenton (Palmetto)—Barcol OVERdoors of W. Fla.
Jacksonville—Builders Products Co.
Miami—Barcol OVERdoors of Miami
Tallahassee—Simpson-McCord Co.
West Palm Beach—Harold Gordon

GEORGIA
Atlanta—Industrial Equipment Co.
Augusta—Maner Bldrs. Supply Co., Inc.
(Chattanooga, Jacksonville, Tallahassee)

IDAHO
Boise—Wholesalers, Inc.
(Butte, Salt Lake City, Spokane)

ILLINOIS
Chicago—E. H. Kietzman Co.
Crystal Lake—Scotty's Barber-Colman OVERdoors
Decatur—Barcol OVERdoors of Decatur
DeKalb—Barcol OVERdoors of DeKalb
Elgin—Keegan Bros. Mfg. Co.
Freeport—Barcol OVERdoors of Freeport
Moline—Builders Sales & Service Co.
Ottawa—Fred Scherer, Inc.
Peoria—Russell E. Kauffman
Rockford—Barber-Colman Company
Sheffield—Sheffield Doors, Inc.
Springfield—Allied Builders Supply Co.
Wyanet—Barber-Colman OVERdoor Sales Co.
(Dubuque, Evansville, Ind., St. Louis)

INDIANA
Evansville—Barcol OVERdoors of Evansville
Fort Wayne—Roethele Bldg. Materials, Inc.
Indianapolis—McComb Window & Door Co.
South Bend—Barber-Colman OVERdoors of South Bend
(Chicago, Cincinnati, Louisville)

IOWA
Cedar Rapids—Kelleys, Inc.
Des Moines—Barber-Colman Company
Dubuque—Barcol OVERdoors of Dubuque
Ft. Dodge—Barber-Colman OVERdoors of Ft. Dodge
Sioux City—Fonda F. Rock Co.
(Moline, Sioux Falls, S.D.)

KANSAS
Hutchinson—Supply Service, Inc.
Wichita—Supply Service, Inc.
(Kansas City, St. Joseph)

KENTUCKY
Lexington—E. H. Straus Co.
Louisville—Barcol OVERdoors of Louisville
(Cincinnati, Evansville, Huntington)

LOUISIANA
Baton-Rouge—Reynolds Bldg. Material Co.
New Orleans—J. T. Mann & Co.

MAINE
Caribou—H. A. Briggs & Son
Portland—Overdoors Installation Co.

MARYLAND
Cumberland—Buchanan Lumber Co.
(Washington, D.C., Winchester, Va.)

MASSACHUSETTS
Danvers—Riley Door & Window Co.
Framingham—Barber-Colman Company
Lenox—Berkshire Screen Co.
Taunton—Barcol OVERdoors of Taunton
Ware—A. J. Madigan
Worcester—J. R. Richards Co.

MICHIGAN
Adrian—Adrian Home Improvement Co.
Albion—Leon Claucherty & Son
Battle Creek—Barber-Colman OVERdoors of Battle Creek
Bay City—Laurence Smith
Detroit—Barber-Colman Company
Flint—Kelly Concrete, Inc.
Grand Rapids—Barcol OVERdoors of Grand Rapids
Jackson—Barber-Colman OVERdoors of Jackson
Kalamazoo—Barcol OVERdoors of Kalamazoo
Lansing—C. H. Rider & Son
Lapeer—McCormick Bldg. Supply Corp.
Milford—Barber-Colman OVERdoors of Milford
Mt. Clemens—Bill Carter Supplier
Novi—Barber-Colman OVERdoors of Novi
Owosso—West Side Lumber
Pontiac—D & M Bldg. Service
Port Huron—Barber-Colman OVERdoors of Port Huron
Saginaw—See Bay City
Ypsilanti—Building Specialties & Equipment Co.
(South Bend, Toledo, Green Bay, Wausau, Wis.)

MINNESOTA
Alexandria—Alexandria Lbr. Co.
Austin—Austin Allied Aluminum Co.
Benson—McCarthy Lumber Co.
Detroit Lakes—Wilcox Lumber Co.
Duluth—Barcol OVERdoors of Duluth
Fairmont—Christensen Lumber & Millworks, Inc.
Hastings—J. Fred Scholl
Lake Elmo—Bernard Friedrich
Minneapolis—Barber-Colman Company
Owatonna—Haberman Woodworking & Supplies
Plato—Pinske Lumber & Supply Co.
St. Cloud—St. Cloud Metal Window Co., Inc.
Thief River Falls—Prichard Bros. Co.

MISSISSIPPI
(New Orleans)

MISSOURI
Columbia—Barcol OVERdoors of Central Missouri
Kansas City—Barber-Colman Company
St. Joseph—Barcol OVERdoors of St. Joseph
St. Louis—Barcol OVERdoors of St. Louis

MONTANA
Billings—Billings Sash & Door Co.
Butte—Practical Builders Supply Co.
Great Falls—Northwest Steel. Inc.

NEBRASKA
Hastings—The Gellatly Co.
(Denver, St. Joseph, Sioux City)

NEVADA
(Boise, Salt Lake City)

NEW HAMPSHIRE
Keene—Keene Garage Door Co.
Laconia—Barber-Colman OVERdoors of Laconia

NEW JERSEY
Highland Park—Rutgers Overdoor & Operator Co.
Paterson (Westwood)—Harold R. Shuttleworth
Wyckoff—R. C. Ward
(Philadelphia)

NEW MEXICO
Albuquerque—Sandberg Sales Co.
Roswell—Builders Block & Stone Co., Inc.

NEW YORK
Albany—Edward P. Jennings, Jr.
Buffalo—Barber-Colman Company
Floral Park, L.I.—Eugene J. Constantin
Huntington, L.I.—Wilfrid Constantin
Lakewood—Lakewood Supply Co.
New York City—Barber-Colman Company
Olean—George Goranson
Poughkeepsie—Barcol OVERdoors of Poughkeepsie
Rochester—Myron W. Greene
South Wales—Luss Utility Shop
Syracuse—B. R. Johnson & Son
Tarrytown—Charles Margotta & Co.
Utica—E. J. Macner Sales Co.
(Paterson (Westwood) N.J.)

NORTH CAROLINA
Charlotte—Maxson-Betts Co.
Raleigh—Delph Hardware & Specialties Co.
Winston-Salem—Long Building Specialties Co.
(Roanoke, Va.)

NORTH DAKOTA
Fargo—Dakota Sash & Door Co.
(Aberdeen, S.D.)

OHIO
Canton—Barcol OVERdoors of Canton
Cincinnati—Barcol OVERdoors of Cincinnati
Cleveland—Barber-Colman Company
Elyria—H. H. Wellert
Columbus—J. L. Hughes Electric Co.
Lima—Lima Lumber Company
Toledo—D. A. Valo Associates
Youngstown—Briggs-Jones, Inc.
(Ft. Wayne, Ind., Huntington, Parkersburg, Wheeling, W. Va.)

OKLAHOMA
Tulsa—Barcol OVERdoors of Tulsa
(Amarillo)

OREGON
Portland—Pella Sales Co.
(Boise, Spokane)

PENNSYLVANIA
Bradford—A. Miller & Sons Lumber Co.
Brookville—Wm. H. Fleming, Jr.
Clarion—Rhea Lumber Company
Johnstown (Holsopple)—Joe Miller & Son
Kittanning—Harold C. Graham
Philadelphia—Herbert G. Pitts
Pittsburgh—Barber-Colman Company
Uniontown—Hankins-Paulson Co.
(Buffalo, Paterson (Westwood))

RHODE ISLAND
Providence (Centerdale)—Chapman-King Co.

SOUTH CAROLINA
Columbia—Allied Specialties Sales
Greenville—Weeks Manufacturing Co.
(Augusta, Ga., Charlotte, N.C.)

SOUTH DAKOTA
Aberdeen—Dakota Sash & Door Co.
Huron—Huron Sash & Door Co.
Sioux Falls—Barcol OVERdoors of Sioux Falls
(Sioux City, Ia.)

TENNESSEE
Bristol—Milton B. Abercrombie
Chattanooga—Barcol OVERdoors of Chattanooga
Knoxville—Standard Glass Co., Inc.
Nashville—Crawford Sales Co.

TEXAS
Amarillo—Panhandle Engineers & Contractors
Lubbock—Sterling Building Materials

UTAH
Salt Lake City—Building Specialties Corp.

VERMONT
(Framingham, Mass.)

VIRGINIA
Richmond—Sash, Door & Glass Corp.
Roanoke (Salem)—Charles E. Via, Jr., Inc.
Winchester—Barcol OVERdoors of Winchester
(Bristol, Tenn., Washington, D.C.)

WASHINGTON
Seattle—Barcol OVERdoors of Seattle
Spokane—Spokane Sash & Door Co.
(Portland)

WEST VIRGINIA
Charleston—Ira F. Kuhn Co.
Clarksburg—Hartland Planing Mill Co.
Huntington—Minter Homes Corp.
Morgantown—General Woodworking Co.
Parkersburg—Wilson Bros.
Wheeling—H. L. Seabright Co.

WISCONSIN
Eau Claire—The Spencer Corp.
Green Bay—Northern Metal & Roofing Co.
Janesville—Barber-Colman OVERdoors of Rock Co.
LaCrosse—Barcol OVERdoors of LaCrosse
Menomonie—Hanson Construction Co.
Madison—Paul M. Treichel Co.
Milwaukee—J. F. Cook Co.
Oshkosh—Barcol OVERdoors of Oshkosh
Sheboygan—Barcol OVERdoors of Sheboygan
Wausau—Barcol OVERdoors of Wausau
(Dubuque, Ia., Duluth, Minneapolis, Rockford, Ill.)

WYOMING
(Billings, Denver, Salt Lake City)

CANADA
Calgary—A. B. Cushing Mills, Ltd.
Edmonton—Barcol OVERdoors of Edmonton
Montreal—Barcol OVERdoors of Montreal
Toronto (Weston)—Preston Steel Products
Vancouver—Top Flite Overhead Door Co.
Winnipeg—Floline Co. of Canada

MARITIME PROVINCES
Dartmouth—J. M. McDougall & Sons, Ltd.

THE MARK OF QUALITY

BARBER COLMAN

BARBER-COLMAN Company

ROCKFORD • ILLINOIS

DISTRIBUTOR

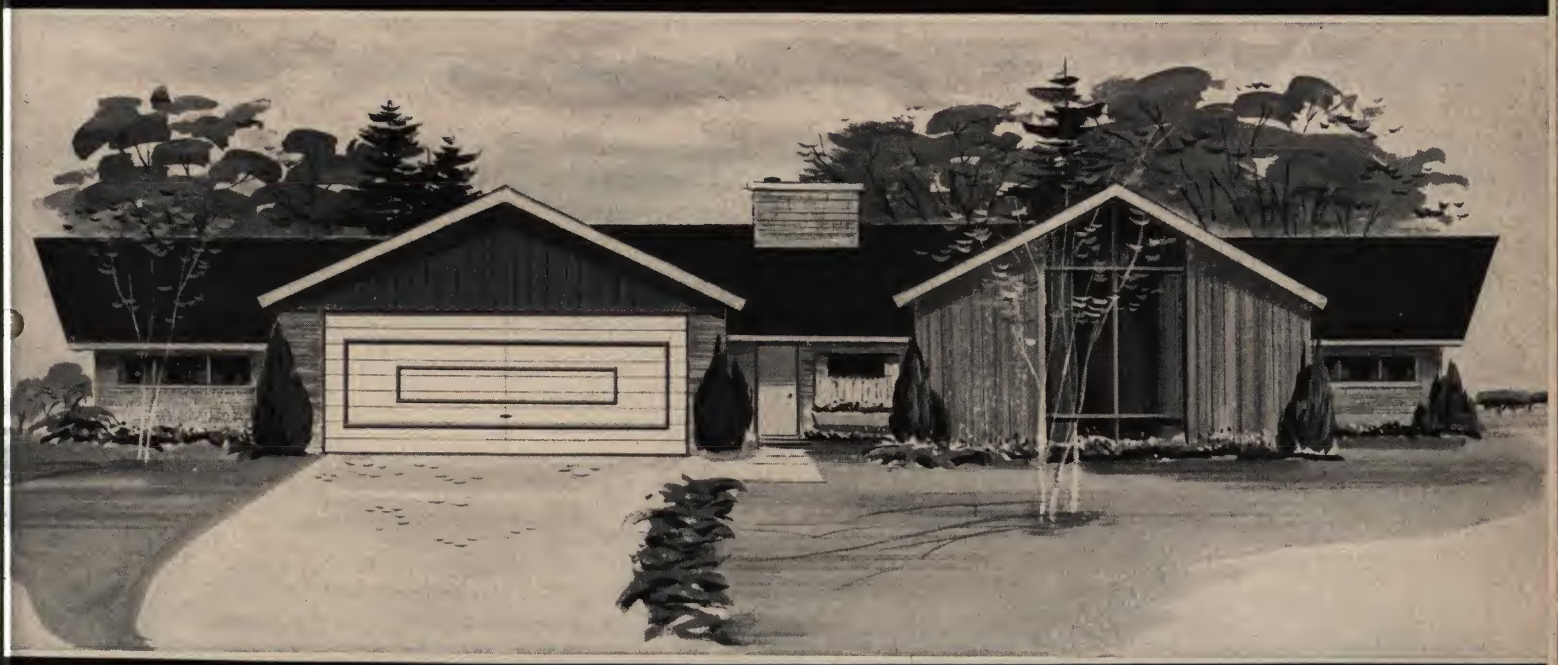
Berry

GARAGE DOORS

SECTIONAL DOORS FOR
RESIDENTIAL AND COMMERCIAL APPLICATION

ONE-PIECE DOORS FOR
RESIDENTIAL APPLICATION

CUSTRIM ACCESSORIES



Berry

DOOR CORPORATION • BIRMINGHAM, MICHIGAN

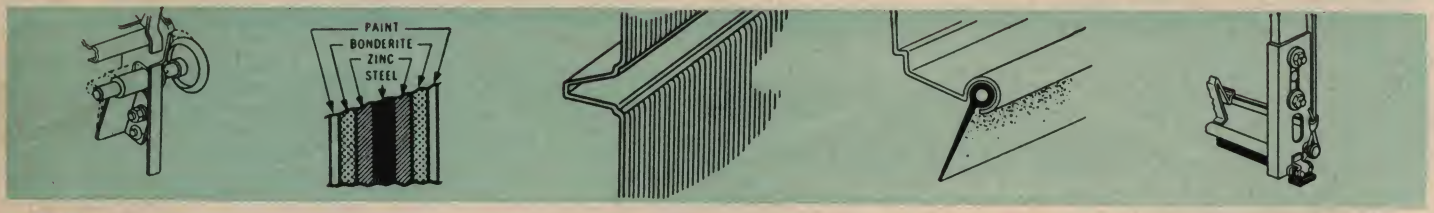
leading manufacturer of residential garage doors

MODEL 4B

sectional . . . rugged, handsome, easygoing

Just a nudge lifts this rugged, easygoing Berry Sectional up, over and out of the way . . . slides it into hideaway position smoothly, quietly. What's more, the door is Paintlok steel . . . won't swell or shrink, check, peel or rust. All parts are backed by the industry's only full five-year guarantee. Its amazingly low price . . . with all its advantages . . . distinguishes this sectional door from any other. Easy, low-cost installation makes it ideal both for modernization and for new construction, too.

Berry FOUR-SECTION DOOR gives you these exceptional features . . .



Tapered track, adjustable rollers

Door closes easily . . . without binding or friction . . . fits tightly to jamb when closed.

Paintlok steel

Zinc electroplated, Bonderite treated, factory prime painted on *both sides*, this door won't check, peel or rust—even in Florida salt air.

Rigidized face panels

Deep horizontal grooves and closely spaced vertical pattern create striking appearance . . . increase strength without adding weight . . . deaden sound.

Vinyl bottom weatherstrip

Made of durable, nonporous plastic, factory-installed bottom weatherstrip won't crack . . . won't freeze to ice or snow.

Leveling brackets

Simple bracket adjustment compensates for variance in floor level.

Full-width unlatching mechanism

No need to squeeze behind the car to reach the inside latch! Door can be opened from any spot along its entire width.

Two-position automatic latches

Door latches automatically on *both sides* . . . locks even if floor level changes or if door is not fully closed.

Metal stops

Furnished as standard equipment, this side weatherstripping makes the Berry Door package complete—ready for installation.

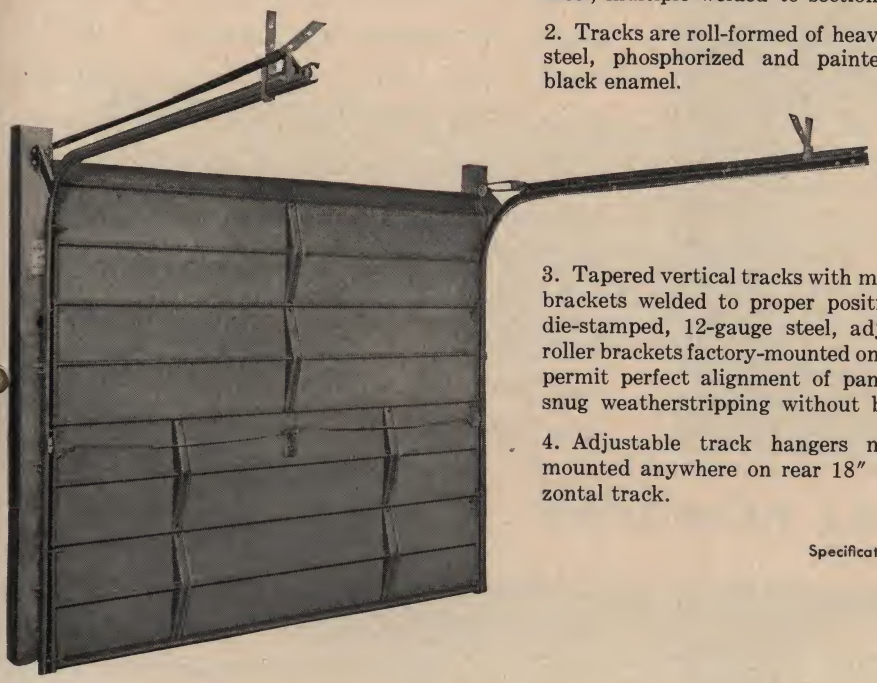
Continuous hinge

Hinges run full width of door . . . hold panels in perfect alignment at all times.

Nylon sheaves and rollers

Sheaves and rollers are of new nylon formula for long life, smooth, quiet operation. Rollers are locked into V-track by unique protective lips.

SPECIFICATIONS



1. Sections are 24-gauge roll-formed zinc electroplated steel. End members are 16-gauge, die-stamped zinc electroplated steel, multiple welded to sections.

2. Tracks are roll-formed of heavy gauge steel, phosphorized and painted with black enamel.

3. Tapered vertical tracks with mounting brackets welded to proper position and die-stamped, 12-gauge steel, adjustable roller brackets factory-mounted on panels, permit perfect alignment of panels and snug weatherstripping without binding.

4. Adjustable track hangers may be mounted anywhere on rear 18″ of horizontal track.

5. Automotive "T" type handle is center mounted.

6. Two-position latches engage automatically whenever door is closed.

7. Adjustable brackets on bottom section level panels even when floor is not level.

8. Door panels are completely prime painted on both front and back.

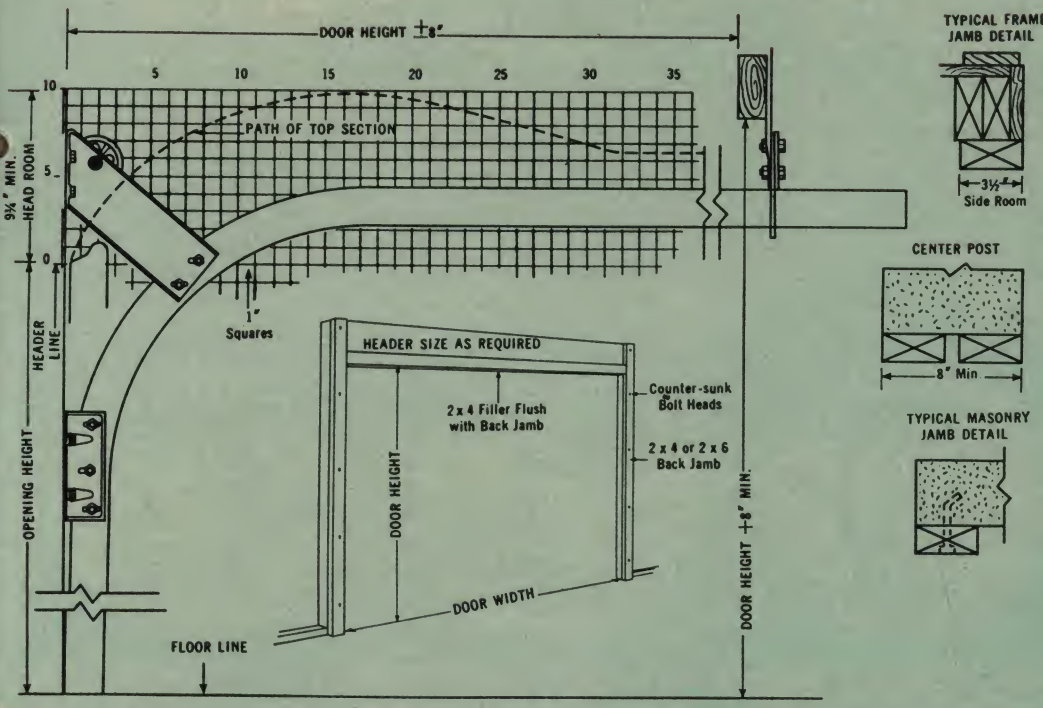
9. All weatherstripping furnished. Bottom weatherseal of flexible vinyl won't freeze to ice or snow; side and top weatherseals of zinc electroplated steel.

10. All bearing points factory-lubricated with long-life moly-grease.

11. Cables are 7 x 7 preformed, corrosion resistant, aircraft type, $\frac{3}{32}$″ dia. x 920 lbs. tensile strength for doors to 10′-0″ in width; $\frac{1}{8}$″ dia. x 1,700 lbs. tensile strength for doors over 10′-0″ in width.

12. Springs are oil tempered steel wire, with low initial tension for long life.

Specifications subject to change without notice.



FRAMING INSTRUCTIONS

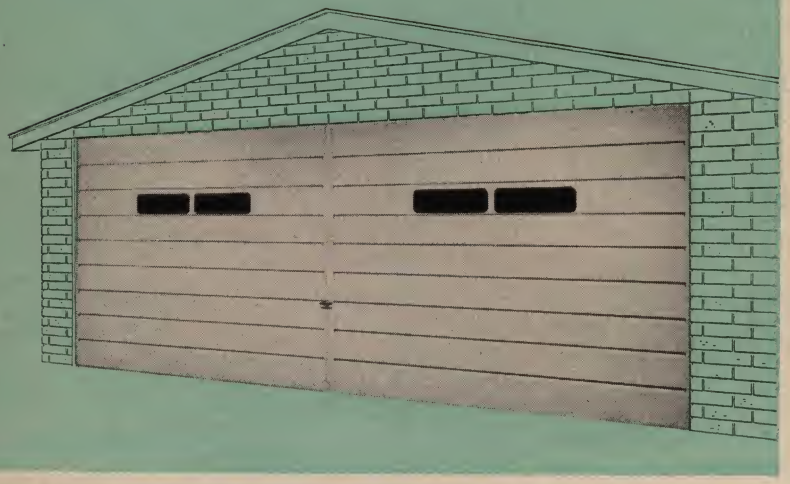
Standard head room, 9¾″ . . . with low head room attachment, 3½″. Minimum side room, 3½″. Minimum center post 8″ for multiple installations.

Openings should be square and plumb to exact door size. "Bucks" or "Back Jambs" for mounting vertical tracks must be flat and square.

SIZES TO FIT FINISHED OPENINGS

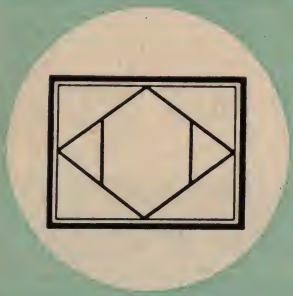
8′0″ x 6′6″	8′0″ x 7′0″
8′0″ x 8′0″	9′0″ x 6′6″
9′0″ x 7′0″	9′0″ x 8′0″
10′0″ x 7′0″	10′0″ x 8′0″
10′0″ x 6′6″	12′0″ x 8′0″
12′0″ x 7′0″	14′0″ x 7′0″
15′0″ x 7′0″	16′0″ x 6′6″
16′0″ x 7′0″	17′0″ x 7′0″
18′0″ x 7′0″	

DETROITER... lifts with a nudge



This one-piece door is *easygoing* . . . operates smoothly, quietly. Face and frame are durable Paintlok steel . . . won't swell, shrink, check, peel or rust. Like all Berry Doors, the Detroiter is fully guaranteed for five years—a guarantee unmatched by any other garage door manufacturer. And all this at a highly competitive price! The Detroiter installs easily, quickly . . . is ideal both for modernization and new construction. Window lites and trim optional.

the Detroiter quality features



Climate-proof weatherseal

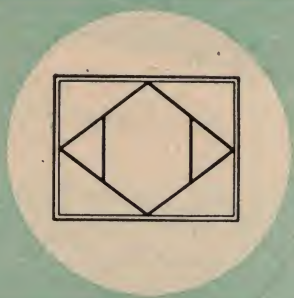
Steel side weather stripping extends from top to bottom. Bottom strip of nonporous plastic won't crack or freeze.

Adjustable track hangers

Hangers can be placed at any point along rear 18″ of track, assuring speedy installation, lower labor and material costs.

Paintlok steel

Face and frame are zinc electroplated, Bonderite treated, prime-painted, both sides . . . won't check, peel, rust.



Diagonal grid design

Special frame adds rigidity and strength . . . assures trouble-free service. Face and frame are series-welded at stress points.

Rugged lifting arm

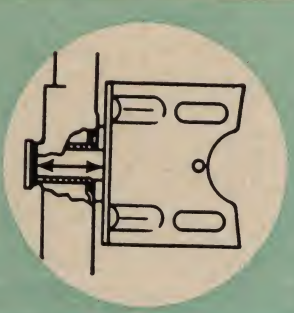
Arm forms box type frame which distributes pull of lifting spring over large bearing area . . . eliminates binding.

Nylon rollers, safety-lock track

Rollers are of nylon for durability, quiet operation . . . are locked into V-track by unique protective lips.

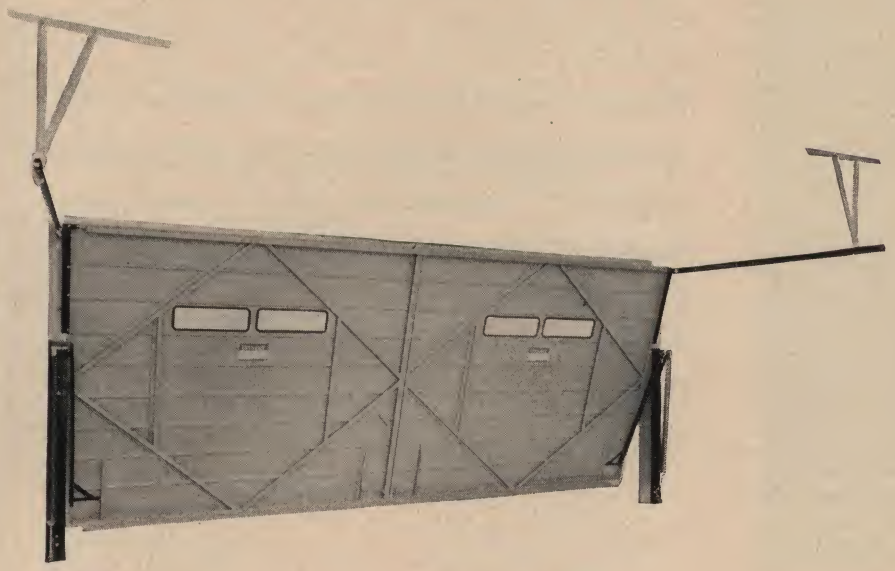
Stabilizing arms

Arms make door extremely rigid . . . end sidesway . . . assure longer life and easier operation.



Large bearings

Bearing runs full width of lifting arm . . . distributes load over large area . . . prevents binding and wear.



SPECIFICATIONS

Door panels are die-formed of zinc electroplated, bonderized steel—factory prime painted on both sides. ½″ deep "V" reinforcing grooves run full width of each panel. Side, top and bottom frame members are 2¼″ deep, series welded to facing. Diamond grid back bracing and vertical bracing riveted to facing.

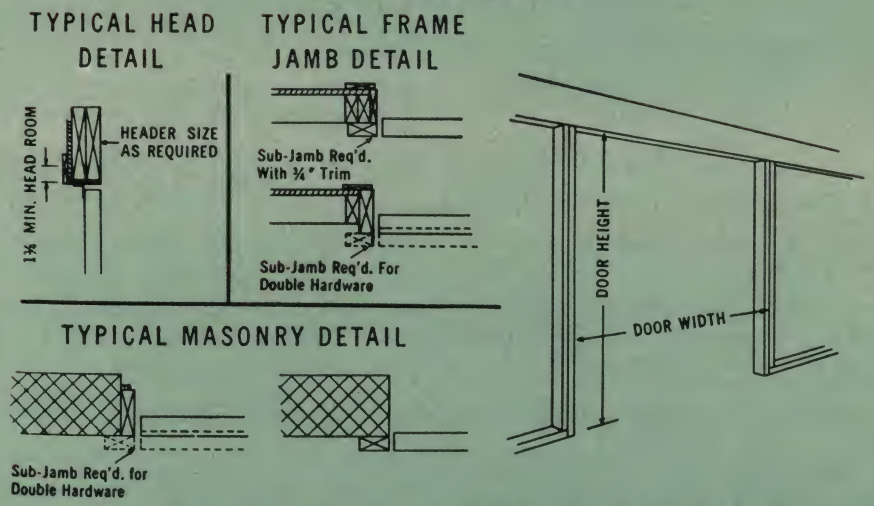
Equipped with automotive type lock handle, door latches automatically on both sides when closed. Tough, quiet nylon rollers run in roll-formed steel track of safety-lock design.

Box type lifting arms, full width bearings and patented anti-sway braces hold door in true arc when operated.

Complete weatherstripping, vinyl plastic bottom weatherseal, all nails, bolts, screws and miscellaneous hardware necessary for installation furnished with doors.

Specifications Subject to Change without notice.

FRAMING INSTRUCTIONS

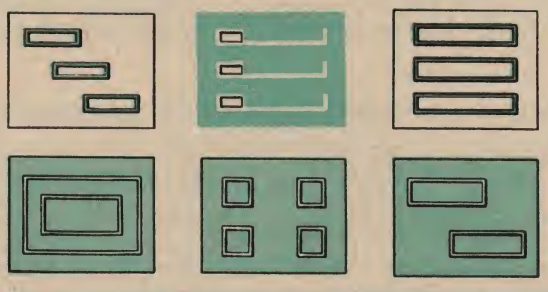


Opening should be plumb and square to exact door size. Minimum headroom: 1¾″. Minimum sideroom: 1¾″ for single door; 3½″ for double door. 8″ minimum center post for multiple installations.

SIZES TO FIT THESE FINISHED OPENINGS

7′6″ x 7′0″	15′0″ x 7′0″
8′0″ x 6′6″	16′0″ x 6′6″
8′0″ x 6′8″	16′0″ x 6′8″
8′0″ x 7′0″	16′0″ x 7′0″
8′6″ x 7′0″	17′0″ x 7′0″
9′0″ x 6′6″	18′0″ x 6′6″
9′0″ x 6′8″	18′0″ x 6′8″
9′0″ x 7′0″	18′0″ x 7′0″

Other sizes quoted on request

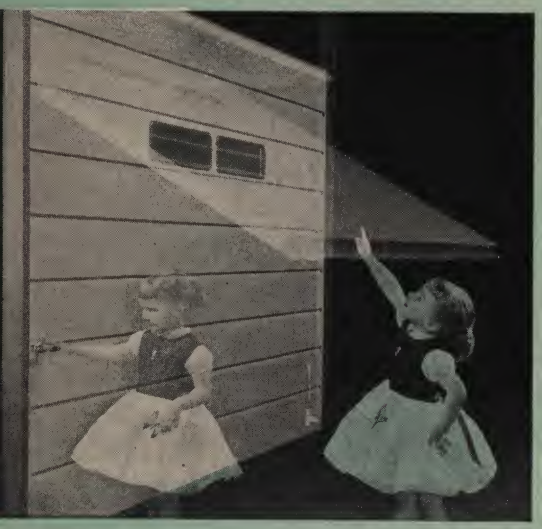


CUSTRIM MOLDING

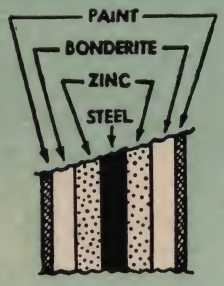
mounts easily, inexpensively on the Berry Detroiter . . . turns the standard door into a distinctive custom model. Do it yourself!

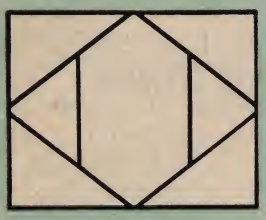
Berry DOOR CORPORATION

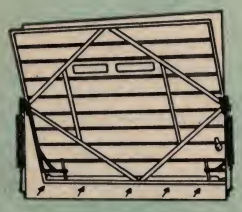
SUBURBAN ...receding track or canopy type factory assembled hardware



Factory assembled hardware and the many quality features of this one-piece door are the reasons for its popularity. It's the easiest door on the market to install, and operation is simple, quiet, and so easy that even a child can open a double door. Made of Paintlok steel, these doors won't swell or shrink, peel, check or warp.







MANUFACTURING MATERIALS

The face and framework of the door are made of rugged, high-grade sheet steel which is Electro Zinc-plated, Bonderite* Treated and factory painted. Zinc-plating guards door against rust. Bonderite Treatment (a chemical bath), places a phosphate airtight coating over the Zinc plate. The heavy prime coats of attractive gray paint, which every Berry Door receives at the factory, stick to this phosphate base like glue and will not chip, peel, or crack.

**Product of Parker Rust-Proof Co.*

RESULT: The triple layer of Zinc, Bonderite, and Paint give you a door that is fully rust-resistant and will give years of trouble-free service under any climatic conditions found in the United States or Canada.

EXCLUSIVE DIAGONAL GRID DESIGN

Modern engineering practice recognizes the diagonal grid, with its two supporting Z members, as the strongest possible method of reinforcement. It is natural, then, that this design should be employed in America's finest garage door, the new Berry All-Steel Garage Door. Furthermore, the diagonal grid and supporting Z members are firmly and forever attached to the grooved panel by ELECTRO WELDING and RIVETING. Multiple welds are placed at all stress points, so that every part of the new Berry Door helps support every other part.

RESULT: The lightest and stiffest one-piece all-steel garage door ever offered to the American public.

REVOLUTIONARY STABILIZING ARM

On each side of the Berry Door is a Stabilizing Arm. These arms make the door so rigid that all sidesway has been eliminated! Furthermore—these arms are fully adjustable so door can be easily and quickly centered in the opening—AND . . . once centered it will never, never rub on the garage door jamb!

RESULT: A steel garage door that has no sidesway . . . that's rigid as a brick wall . . . that boasts a sound solid feel to it you won't find in any other one-piece door . . . regardless of make or price!

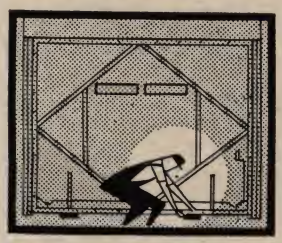
EXCLUSIVE AUXILIARY LIFTING ARM—E-Z SPRING TENSION ADJUSTMENT This Auxiliary Lifting Arm forms a box type frame (see diagram) which distributes the pull of the lifting spring over a large bearing area—5 times more bearing area than is provided on any other garage door! This feature absolutely eliminates the possibility of binding at the main pivot bearing. A simple twist of a single nut on each side of door regulates tension of powerful lifting springs.

RESULT: Larger pivot bearing naturally wears longer, gives smoother action, a more rigid door, and adds years of trouble-free operation to every Berry Door. Door tension can be easily adjusted by owner.

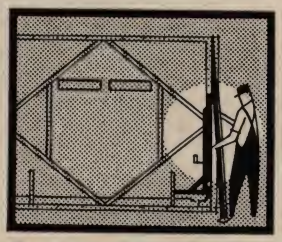
specifications

Door panels are die-formed of zinc electroplated, bonderized steel—factory prime-painted on both sides. $\frac{3}{16}$" deep reinforcing grooves run full width of panels. Side, top and bottom frame members are 2¼" deep, series welded to facing. Diamond grid back bracing riveted to facing at all contact points.
Optional window lites are rubber mounted . . . leakproof and rattle-proof.
Equipped with automotive type lock handle and solid steel latch rods, door latches automatically on both sides when closed.
Factory assembled and greased hardware cuts installation to a minimum.
Box type lifting arms, large bearings and patented anti-sway device holds door in true arc when operated. Tough, quiet nylon rollers run in roll-formed steel track of safety-lock design.
Complete weatherstripping, vinyl plastic bottom weatherseal, adjustable track hangers, all nails, bolts, screws and miscellaneous hardware necessary for complete installation furnished with doors.
Specifications Subject to Change without Notice.

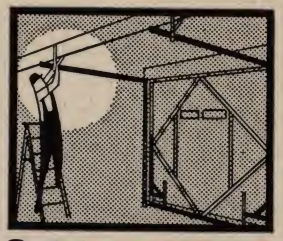
installation procedure



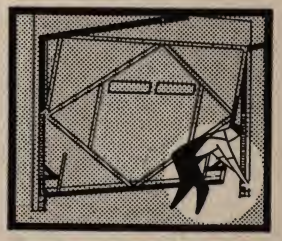
1. Block door in center of opening. Allow ½" clearance on top, bottom and both sides.



2. Fasten hardware to door and jamb. (It's pre-assembled into right and left sections.)



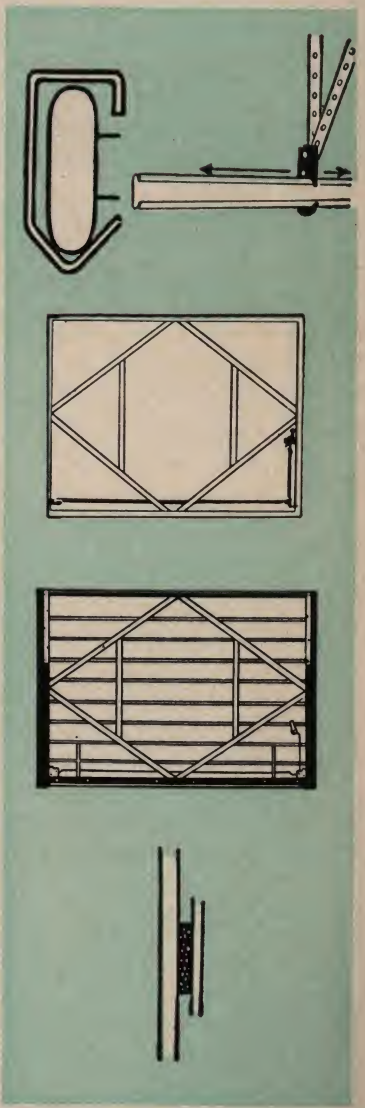
3. Swing tracks into position. Attach adjustable hangers to supporting cross members.



4. Open door, connect springs, attach weatherstrips. Make final adjustments. The job's done!

"SAFETY-LOCK" V-TRACK NYLON ROLLERS ADJUSTABLE TRACK HANGER. Tracks are hinged to weatherstrip and are a part of the factory assembled hardware. This automatically places track in perfect alignment and top of track has overhanging lip that locks nylon roller in the track. Nylon roller assures quiet, easy operation. Adjustable track hanger can be placed at any point along rear one-third of track. Entire length of hanger strap is perforated. Can be nailed at any desired point.

RESULT: Hinged tracks and adjustable track hanger make installation amazingly fast and simple. Nylon rollers let door operate with scarcely a whisper.



FACTORY INSTALLED ADJUSTABLE LATCHING MECHANISM

This new latch locks door on both sides and is adjustable three ways! Steel rods are used instead of troublesome chains or cables. Rods operate noiselessly in rubber grommets. Entire mechanism, except the handle, is factory installed for right hand operation. The lock is triple plated for lasting beauty and service.

RESULT: Greater security and safety. Door operates more quietly. Installation is speeded. Steel rods will never wear out or break.

EXCLUSIVE WEATHERSEAL SYSTEM

New side jamb weatherstrip extends from top to bottom and is made of same heavy gauge metal as the track. Bottom weatherseal is fully adjustable and has a contact edge made of special plastic material that will not freeze to snow or ice. All doors are also equipped with a top weatherstrip.

RESULT: This continuous weatherstripping seals out snow, dust, drafts and rain.

EXCLUSIVE SOUND DEADENERS

Thick sponge rubber insulation blocks are placed at intervals between framing and door. These sponge rubber inserts stop sound waves from vibrating between the framing and the door. Another silencing feature is the nylon roller which operates on the track in almost absolute silence.

RESULT: A steel door that operates so quietly you can scarcely hear it whisper!

Berry DOOR CORPORATION

BERRY GARAGE DOORS

The Home of Berry Doors

This modern plant was designed for the exclusive production of Berry Garage Doors. Manufacturing and engineering facilities are co-ordinated under this one roof to bring you quality products at a competitive price.

Berry Doors outsell them all because they're packed with features that mean easier installation, smoother operation, minimum maintenance and longer service life.

5 Year Warranty

Berry Doors are guaranteed free of defects in material and workmanship. This warranty covers all parts and components for five full years after original installation.

Berry
DOOR CORPORATION

2400 East Lincoln Road • Birmingham, Michigan
In Canada • Berry Door Co., Ltd. • Wingham, Ontario

Form 197—Printed in U.S.A.

CONTINENTAL

commercial and industrial
OVERHEAD TYPE DOORS

Chevrolet Division of General Motors Corporation, Doraville, Georgia

nu-steel

aluminized steel

aluminum coador*

stainless steel

*Registered Trade Mark

FOR
factories
warehouses
freight depots
airplane hangars
elevator hatchways
service stations
fire stations
truck bodies
partitions
garages
docks

A.I.A. File No. 16-D

CONTINENTAL NU-STEEL METAL PRODUCTS CO.
1248 SOUTH ASHLAND AVENUE, CHICAGO 8, ILLINOIS

- NU-STEEL DOORS
  - ALUMINIZED STEEL DOORS
    - COADOR* ALUMINUM DOORS
      - STAINLESS STEEL DOORS

The Continental Nu-Steel Door is one of the most versatile of its kind on the market today. It is available in a wide range of gauge thicknesses for any industrial and commercial use, and can be manufactured in almost any size desired.

STANDARD OVERHEAD DOORS

Overhead doors are of flush design on the exterior and paneled on the interior by formed vertical Stiles welded to the door sections; making doors rigid. All doors are manufactured of the same gauge thickness throughout entire construction. Nu-Steel overhead doors are available in 16 ga. galvanized steel.
"COADOR"* aluminum overhead doors are constructed of 0.125 ga. aluminum throughout; 3003-H14 or 5005-H14 temper.

STAINLESS STEEL DOORS ALSO AVAILABLE

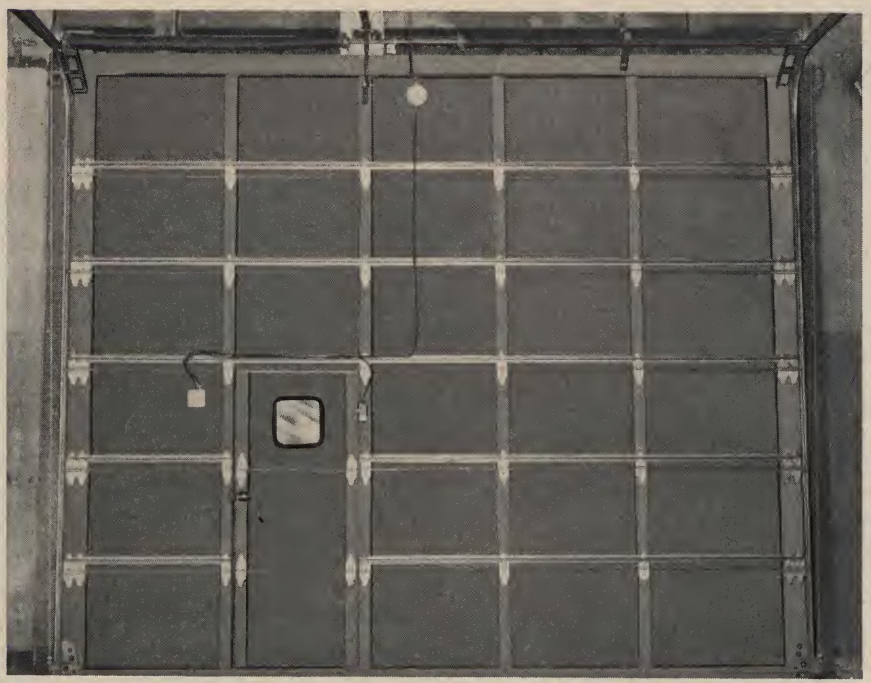
HOLLOW METAL DOORS

These overhead doors are of flush design on both sides. The inside of doors are reinforced by formed stiles and rails welded to the interior. All voids in the sections have fiber glass insulation making doors fire proof and weather resistant. Hollow metal overhead doors made of 18 ga. galvanized steel throughout door construction.
"COADOR"* Aluminum overhead doors are constructed of .090 ga. aluminum throughout.
Refer to Drawings on Page 3.

"CONQUISTADOR"

A Nu-Steel economy over head door for commercial and light industrial purposes. Available in 16 or 20 gauge galvanized steel flush exterior design. Write for details.

"COADOR"* ALUMINUM FLUSH EXTERIOR DOORS



"EL CAPITAN" FLUSH EXTERIOR DESIGN WITH BUILT-IN PASS DOOR. interior view

*Registered Trade Mark

CONTINENTAL METAL DOORS

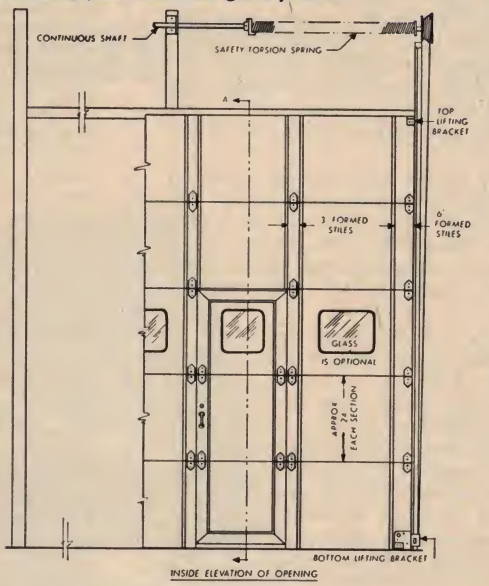
overhead type

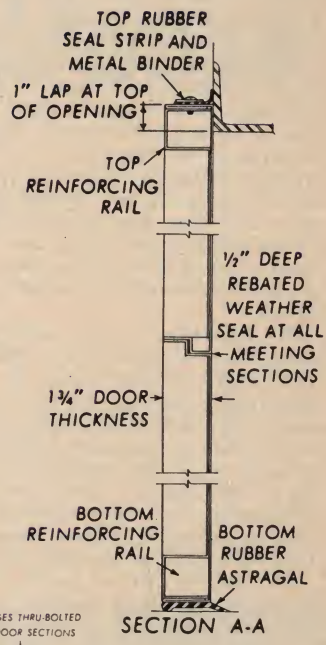
"CHAMPION" exterior view

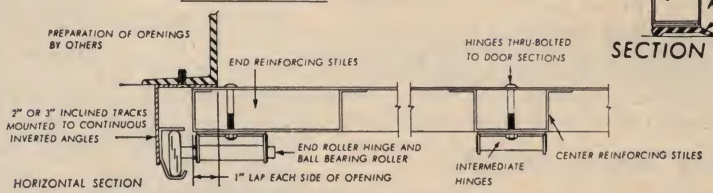
"CHAMPION" interior view

STANDARD METAL CONSTRUCTION

showing pass door and glass panels

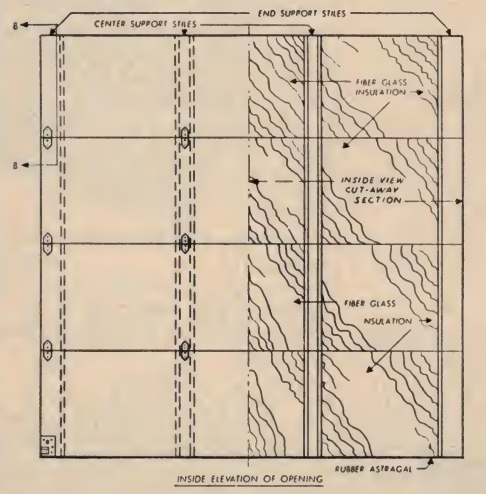


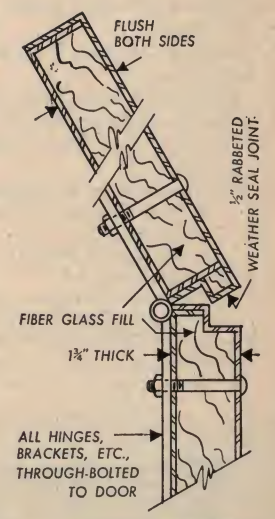

TOP RUBBER SEAL STRIP AND METAL BINDER
1" LAP AT TOP OF OPENING
TOP REINFORCING RAIL
½" DEEP REBATED WEATHER SEAL AT ALL MEETING SECTIONS
1¾" DOOR THICKNESS
BOTTOM REINFORCING RAIL
BOTTOM RUBBER ASTRAGAL
SECTION A-A

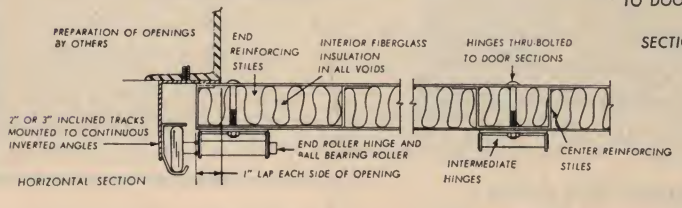

PREPARATION OF OPENINGS BY OTHERS
END REINFORCING STILES
HINGES THRU-BOLTED TO DOOR SECTIONS
2" OR 3" INCLINED TRACKS MOUNTED TO CONTINUOUS INVERTED ANGLES
END ROLLER HINGE AND BALL BEARING ROLLER
INTERMEDIATE HINGES
CENTER REINFORCING STILES
1" LAP EACH SIDE OF OPENING
HORIZONTAL SECTION

HOLLOW METAL CONSTRUCTION

flush on both sides






PREPARATION OF OPENINGS BY OTHERS
END REINFORCING STILES
INTERIOR FIBERGLASS INSULATION IN ALL VOIDS
HINGES THRU-BOLTED TO DOOR SECTIONS
2" OR 3" INCLINED TRACKS MOUNTED TO CONTINUOUS INVERTED ANGLES
END ROLLER HINGE AND BALL BEARING ROLLER
INTERMEDIATE HINGES
CENTER REINFORCING STILES
1" LAP EACH SIDE OF OPENING
HORIZONTAL SECTION

CONTINENTAL NU-STEEL OVERHEAD DOORS

ARCHITECT'S SPECIFICATIONS

STANDARD METAL CONSTRUCTION:

Sectional Metal Upward Acting Doors shall be as manufactured by the CONTINENTAL NU-STEEL METAL PRODUCTS CO., Chicago 8, Illinois and of the sizes and design as shown on the plans.

Sections, reinforcing stiles, and rails shall be of the same heavy duty galvanized steel throughout the entire door construction. Thickness of Metal shall be 16 gauge. (Other gauges available on request.)

Sections shall have a formed ½" deep rebated weather seal joint to give doors an interlocking seal at all meeting sections. Bottoms and tops of all doors shall have a flat reinforced formation for proper mounting of weather seals.

Vertical reinforcing stiles shall be formed wing channels welded to the interior of the door sections on not more than 48" centers. All doors shall come supplied with a continuous reinforcing rail welded to the bottom section of the door. Doors 10'0" wide and over and all doors which shall be trolley draw bar motor operated shall be additionally supplied with a continuous reinforcing rail in the top door section.

After fabrication all door sections shall be chemically treated for paint adhesion and given one shop coat of manufacturers standard metallic primer before leaving the shop.

Doors shall be supplied with continuous molded rubber astragals on the bottom edge of doors and top edge shall have a continuous rubber seal strip to take up irregularities of the door header. (Alternate—adjustable top metal seal strip can be supplied if requested.) All doors lap the openings by 1" each side and with inclined taper seal tracks give the doors a tight seal against the jambs in closing.

Industrial Coador* aluminum overhead doors shall be of same construction of 0.125 in aluminum thru-out: 3003-H14 temper. For doors which shall be anodized specify 5005-H14 temper.

Metal Overhead Doors available in aluminized steel or stainless steel. Write for details.

Hardware: Shall be sectional overhead type with torsion spring counter-balance of continuous solid shafts. Inclined vertical tracks shall be mounted to continuous heavy duty inverted angles for erection to steel jambs. Horizontal tracks shall also have reinforcing angles. All hardware shall have galvanized finish. All hinges and brackets shall be thru-bolted to the door sections. Doors shall be run on full race ball-bearing rollers at all sections. Doors up to and including 170 sq ft of area and not over 16' wide shall have 2" track. Doors over 170 sq ft of area to be 3" heavy duty track.

Sectional overhead doors 14'0" wide and over shall be equipped with suitable horizontal truss bars at each section to prevent doors from sagging when open.

HOLLOW METAL CONSTRUCTION:

Nu-Steel "De-Luxe" Hollow Metal doors shall be of 18 ga galvanized steel throughout entire construction. Sections shall be of flush design on both sides with vertical reinforcing stiles and horizontal rails welded to the interior of the sections. All interior voids shall be filled with type PF-612 fiberglass board or equal for maximum insulation and sound deadening qualities. All hollow metal doors under 140 sq ft of area to have stndard duty 2" track; all doors over 140 sq ft of area to have heavy duty 3" tracks.

Industrial Coador* shall be of same construction as above except material to be 0.090 in aluminum thru-out construction.

OPTIONAL ACCESSORIES:

Glass: Shall be of the type called for in the plans, one glass lite per panel width of the door sections. Any number of sections may be open for glass. In standard constructed doors glass to be mounted in self sealing rubber window molding—See page 3. In hollow metal doors glass is set in with removable metal window moldings. Glass and glazing by others.

Pass Door: Shall be an integral part of the door as shown on Page 3. Access door shall be in the bottom three sections of the door.

Chain Hoists: Doors over 12'0" in height or over 150 sq ft shall be supplied with manual lift chain hoists.

Power Operators: Shall be trolley draw bar type for standard lift and low lift doors. Doors with highlift or vertical lift hardware shall have jackshaft type operators. Operators shall be 110, 220 or 440 Volt; single or 3 phase, 60 cyc operation. Door size determines the H.P. required. Write for details.

*Registered Trade Mark

NOTABLE INSTALLATIONS

CALIFORNIA
Port Hueneme—U.S. Navy
Van Nuys—Chevrolet Div. G.M.C.

CUBA
Havana—Swift & Company

FLORIDA
Sarasota—"Armco" Steel Buildings

GEORGIA
Albany—U.S. Marine Corp Supply Center
Atlanta—Chevrolet Div. G.M.C.
Atlanta Major Supply Depot

ILLINOIS
Chicago—Armour & Company
City of Chicago Dept. of Streets & Electricity
Cook County Hospital
Ill. Central R.R.
Midland Warehouse, Inc.
National Container Corp.
Decatur—Decatur Water Works
Galesburg—Chicago, Burlington & Quincy R.R.
Lemont—Argonne National Laboratories
Skokie—Wells Manufacturing Co.
Springfield—Central Ill. Public Service Co.

INDIANA
Bedford—Indiana Limestone Co.

KANSAS
Topeka—Goodyear Tire & Rubber Co.

LOUISIANA
New Orleans—U.S. Post Office

MASSACHUSETTS
Boston—Reception & Detention Building
Canton—Canton High School
Hyannis—U.S. Army Reserve Armory
Taunton—Taunton State Hospital

MICHIGAN
Birmingham—Holy Name Parish High School

MINNESOTA
Blackdog—Northern States Power Co.
Duluth—U.S. Air Force Base
Waseca—Birds Eye Div. General Foods Corp.

NEBRASKA
Lincoln—Air Force Base

NEW MEXICO
Albuquerque—Kirkland AFB Sandia Base

NORTH DAKOTA
Riverdale—Garrison River Dam & Reservoir

OHIO
Cleveland—Cleveland Hopkins Airport

PENNSYLVANIA
Morgantown—Bethlehem Steel Co.
Pittston—Celotex Corporation
Uniontown—Bortz Building
Waynesburg—Texas Eastern Transmission

TEXAS
Austin—Bergstrom A.F.B.
Big Spring—Webb A.F.B.
San Antonio—South Side Distribution Center
Texarkana—U.S. Federal Prison
Victoria—Central Light & Power Co.

VIRGINIA
Roanoke—Times World Building

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Chicago 8, Illinois
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With

DELCO-MATIC garage door operators

Crawford industrial door operators

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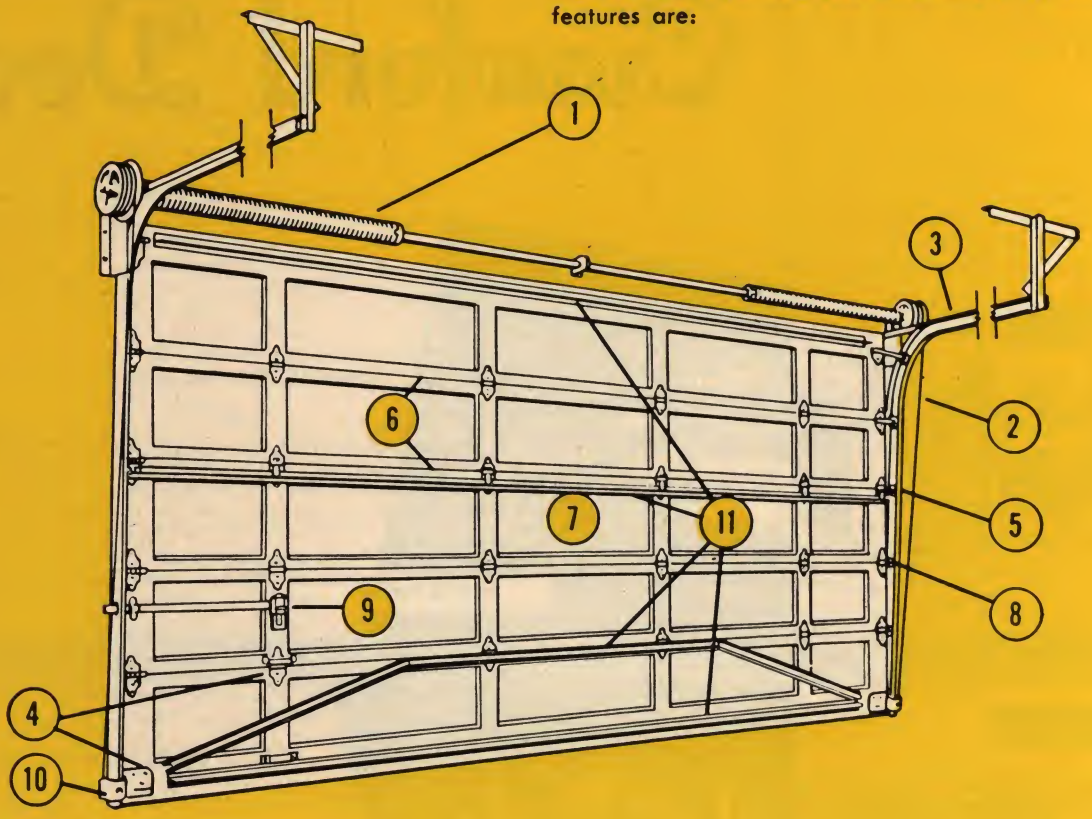
CRAWFORD DOOR COMPANY

Main Plant: 230-20263 HOOVER ROAD, DETROIT 5, MICHIGAN

Crawford Doors

Are sold, warranted, and serviced exclusively by Crawford Door Sales Companies, (see back cover). Typical Crawford features are:



Recently Introduced Products and Features

industrial

- Improved Pass Doors for Industrial Doors.
- New Improved Aluminum Muntins.
- New Line of Heavy Duty Industrial Motor Operators.
- New Extruded Aluminum Doors.

residential

- New Low Headroom Hardware.
- Improved Flush Panel Garage Door.
- Carved Hardboard Panels.
- Thriftmaster one-piece economy door.

additional information

Can we supply you with additional information? The services of Crawford's Consultation Service are at your disposal.

Too, Crawford has available the new 1960 "Sixty Second Door Selector," a revision of Crawford's famous Architect's Manual which details the complete Crawford line.

Handsomely bound in a 3-ring cover, this up-to-date manual is available from your local Crawford distributor. Or you may write us direct at the Crawford factory and we will see that your nearest Crawford representative personally delivers one of these manuals to you. Write Crawford Door Company, 230-20263 Hoover Road, Detroit 5, Michigan.

Crawford Engineering and Controlled Manufacture of ALL Door Components in Crawford's OWN Plants, Assures Precision-Integrated Operation.

1. Coated safety torsion springs mounted on one-piece continuous steel shaft.
2. Self-lubricated, quiet, aero-type cable . . . three times the life of ordinary cable.
3. Zinc-coated, rust-resistant track.
4. No sag, no warp Marvel-Weld rail construction.
5. New smooth action long life rollers (nylon optional) . . . precision engineered brackets.
6. Eased edges, overlapping section joints . . . weather-tight, no binding from paint.
7. Smooth, single-ply, weather-resistant Marvel-Life panels . . . WARRANTED FOR LIFE. Plywood panels available.
8. Heavy duty hinges for positive section alignment, added structural rigidity.
9. Conveniently located, damage-proof latch.
10. Bottom corner bracket with flange mortised under door to take all lifting load.
11. Full-length horizontal and diagonal U-bar braces.

Any Crawford Residential Door is easily converted to push-button automatic operation from your car by installing General Motors Delco-matic Garage Door Operator. No special attachments required.

famous CRAWFORD firsts

Many improvements and refinements in wood and hardware have been made through the years.

1. First SAFETY TORSION SPRING mechanism standard on Marvel-Lift models at no extra cost.
2. First AERO-TYPE CABLES spun from 56 rustless steel strands, self-lubricated, with eleven times the strength required to lift and support the door.
3. First CABLE DRUMS on BOTH ends of full-width shaft for balanced lift.
4. First GROOVED CABLE DRUMS for perfect cable winding.
5. First INNER-OUTER RACE BALL BEARING ROLLERS with 13 hardened, plated steel balls; finest roller in the industry.
6. First BIG SILENT-RUNNING NYLON ROLLERS, practically wear-proof.
7. CRADLE-TYPE BOTTOM BRACKETS with inset lifting flange; no lifting strain on bolts.
8. ZIN-COTE RUSTPROOF PLATING on small parts; extra oil coating on larger parts to protect metal.
9. First MAGI-COTE WOOD SEAL AND PRESERVATIVE (optional) to protect wood fibers and finish.
10. First DO-IT-YOURSELF CUSTOMIZED DESIGN PACKAGE available with every door to let you do your own door decorating.
11. FULL WIDTH, NO-SAG STEEL TRUSSES on two-car doors.
12. Written 12-MONTH DISTRIBUTOR WARRANTY on installation.

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industrial-commercial doors

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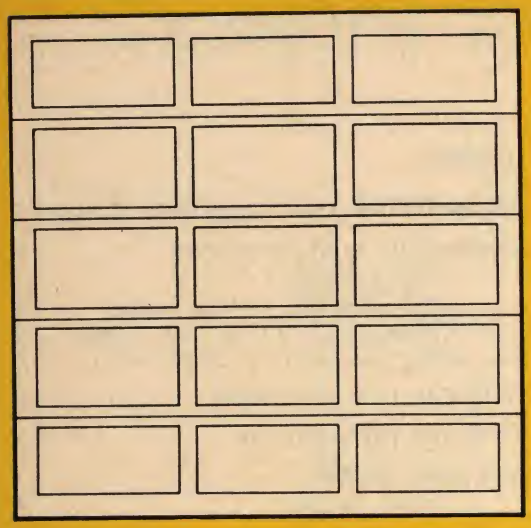
SMALL AND MEDIUM SIZE MARVEL-LIFT DOORS

WIDTH (Small Size): 8'0" to 12'0". MAX. HEIGHT: 16'0"
(Medium Size): 12'1" to 22'0". TRACK: 2"
THICKNESS: 1¾"

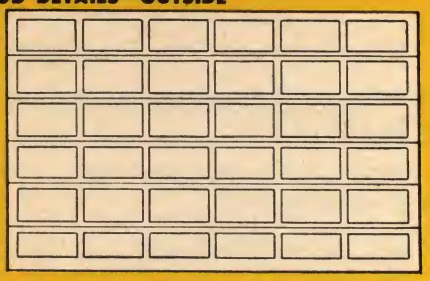
WOOD DETAILS—OUTSIDE



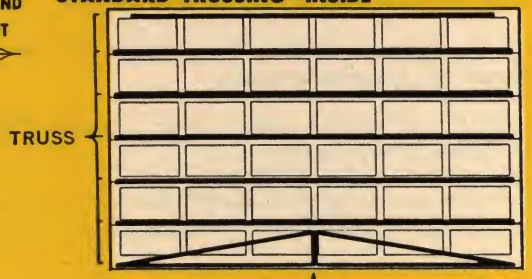
TYPICAL SMALL SIZE
10' x 10' SECTION AND
PANEL ARRANGEMENT

TYPICAL MEDIUM SIZE
20' x 10' SECTION AND
PANEL ARRANGEMENT

WOOD DETAILS—OUTSIDE



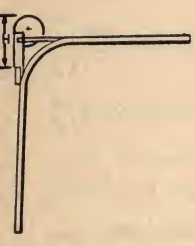
STANDARD TRUSSING—INSIDE



Vertical truss on doors 16'1" thru 22'2"-wide.

LOW LIFT OPERATION—54 SERIES: For small and medium size doors, permits the door to be raised just clear of the opening.

model 54A
conventional hardware



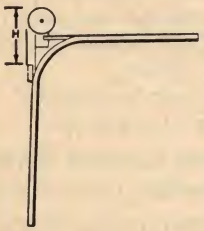
Small Size

WOOD CASING:
8'0" to 12'0" wide
16'0" max. height
STEEL JAMBS:
8'0" to 12'2" wide
16'1" max. height

Medium Size

WOOD CASING:
12'1" to 22'0" wide
16'0" max. height
STEEL JAMBS:
12'3" to 22'2" wide
16'1" max. height

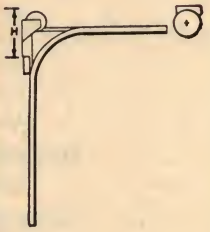
model 54B
minimum sideroom hardware



WOOD CASING:
8'0" to 12'0" wide
16'0" max. height
STEEL JAMBS:
8'0" to 12'2" wide
16'1" max. height

WOOD CASING:
12'1" to 22'0" wide
16'0" max. height
STEEL JAMBS:
12'3" to 22'2" wide
16'1" max. height

model 54C
minimum headroom hardware



WOOD CASING:
8'0" to 12'0" wide
16'0" max. height
STEEL JAMBS:
8'0" to 12'2" wide
16'1" max. height

WOOD CASING:
12'1" to 22'0" wide
16'0" max. height
STEEL JAMBS:
12'3" to 22'2" wide
16'1" max. height

DETAILS APPLY TO SMALL,

MINIMUM SIDEROOM

models	MINIMUM FOR WOOD CASING		MINIMUM FOR STEEL JAMBS	
	sideroom	center post	sideroom	center post
54A, 55A	6"	12"	7"	14"
54B, 54C, 55B, 55C	4½"	9"	3"	6"
64A, 65A	6½"	13"	8"	16"
64B, 64C, 65B, 65C	6"	12"	4½"	9"

IMPORTANT: For bracket or regular mounting on wood jambs, these figures will suffice. For reverse angle mounting on steel jambs remember to add 1" to height, 2" to width of door.

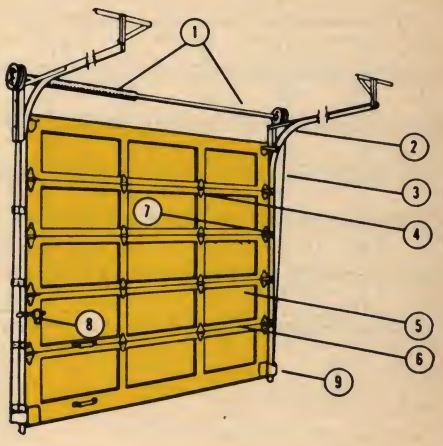
SECTION AND PANEL SCHEDULE

SECTIONS			PANELS		
door height	standard no. of sections	optional no. of sections	door width	standard no. of panels	optional no. of panels
up thru 8'6"	4	3, 5	8'0"	2	1,2,3,4,5,6
8'7" thru 10'6"	5	4, 6	8'1" thru 11'11"	3	1,2,3,4,5,6,7,8,9,10
10'7" thru 12'6"	6	5, 7	12'0" thru 14'11"	4	3,5,6,7,8
12'7" thru 14'6"	7	6, 8	15'0" thru 16'0"	5	3,4,6,7,8,9,10
14'7" thru 16'6"	8	7, 9	16'1" thru 22'0"	6	4,8,10,12
16'7" thru 18'0"	9	8, 10	22'1" thru 24'0"	8	4,6,10,12,14,16
			24'1" thru 30'0"	10	8,12,14,16,18,20

Panel arrangement options also available with narrow line (thin line) stiles for service station and similar installations. Flush sections also available for entire door or for flush bottom section only. Option of unequal panel arrangement is also available.

door features

1. Oil-tempered safety torsion springs mounted on one-piece continuous steel shaft.
2. Zinc-coated rust-resistant track.
3. Self-lubricated, 42 strand cable.
4. Heavy duty test hinges for positive section alignment, added structural rigidity.
5. Damage-resistant, weatherproof Marvel-Life panels guaranteed for life of door (plywood optional).
6. Eased edge, overlapping section joints . . . weather-tight, no binding from paint.
7. Smooth action ball bearing rollers . . . precision engineered brackets.
8. Damage proof lock.
9. Heavy duty bottom corner bracket.



MEDIUM AND LARGE SIZE MARVEL-LIFT DOORS

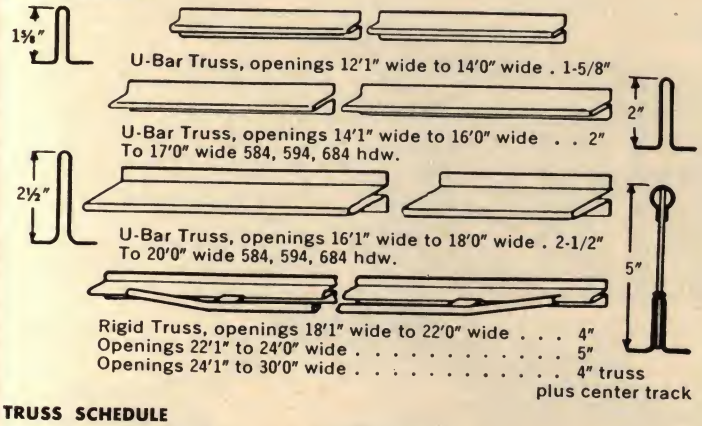
MINIMUM HEADROOM

model	door height‡	H** headroom
54A	up thru 9'1"	14" (13")
	9'2" thru 13'1"	14½" (13")
	13'2" thru 14'0"	15½" (14")
	14'1" thru 16'0"	15½"
54B	up thru 9'1"	15"
	9'2" thru 13'1"	16½"
	13'2" thru 16'0"	18"
54C	up thru 16'0"	14"
64A	up thru 9'1"	20"
	9'2" thru 13'1"	21"
	13'2" thru 18'1"	22"
64B	up thru 9'1"	20"
	9'2" thru 13'1"	22"
	13'2" thru 18'1"	24"
64C	up thru 9'1"	15½"
	9'2" thru 13'1"	17"
	13'2" thru 18'1"	19"

model	door height	C clearance	H maximum high lift
55A	up thru 12'0"	6" (8½")	84"
	12'1" thru 16'0"	7" (8½")	84"
55B	up thru 12'0"	7" (8½")	84"
55C	up thru 16'0"	5½" (8½")	84"
65A	up thru 12'1"	13"	84"
	12'2" thru 16'1"	14"	84"
65B	up thru 12'1"	14"	84"
65C	up thru 12'1"	9"	84"
	over 12'1"	11"	84"

‡ add 1" for steel jambs. Add 5" in amount of headroom required for center track—standard on all doors over 24'3" wide.
** see page 18 for special low headroom hardware when required.

TRUSS DETAILS



U-Bar Truss, openings 12'1" wide to 14'0" wide . 1-5/8"

U-Bar Truss, openings 14'1" wide to 16'0" wide . . 2"
To 17'0" wide 584, 594, 684 hdw.

U-Bar Truss, openings 16'1" wide to 18'0" wide . 2-1/2"
To 20'0" wide 584, 594, 684 hdw.

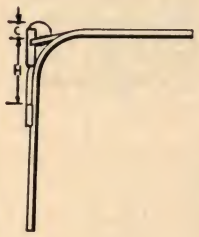
Rigid Truss, openings 18'1" wide to 22'0" wide . . . 4"
Openings 22'1" to 24'0" wide . . . . . 5"
Openings 24'1" to 30'0" wide . . . . . 4" truss
plus center track

TRUSS SCHEDULE

REGULAR ANGLE OR BRACKET MOUNTING DOOR HEIGHT	REVERSE ANGLE MOUNTING DOOR HEIGHT	NO. OF TRUSSES
up thru 8'6"	up thru 8'7"	3
8'7" thru 10'6"	8'8" thru 10'7"	5
10'7" thru 12'6"	10'8" thru 12'7"	6
12'7" thru 14'6"	12'8" thru 14'7"	7
14'7" thru 16'6"	14'8" thru 16'7"	8
16'7" thru 18'0"	16'8" thru 18'1"	9

HIGH LIFT OPERATION—55 SERIES: For small and medium size doors, permits the door to rise vertically some distance before leveling into a horizontal position.

model 55A standard high-lift hardware



Small Size

WOOD CASING:
12'1" to 22'0" wide
16'0" max. height

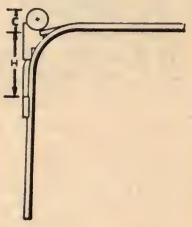
STEEL JAMBS:
12'3" to 22'2" wide
16'1" max. height

Medium Size

WOOD CASING:
12'1" to 22'0" wide
16'0" max. height

STEEL JAMBS:
12'3" to 22'2" wide
16'1" max. height

model 55B minimum sideroom high-lift hardware



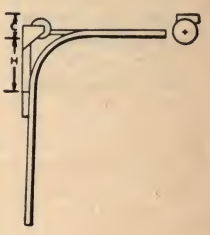
WOOD CASING:
12'1" to 22'0" wide
12'0" max. height

STEEL JAMBS:
12'3" to 22'2" wide
12'1" max. height

WOOD CASING:
12'1" to 22'0" wide
12'0" max. height

STEEL JAMBS:
12'3" to 22'2" wide
12'1" max. height

model 55C special high-lift hardware



WOOD CASING:
12'1" to 22'0" wide
16'0" max. height

STEEL JAMBS:
12'3" to 22'2" wide
16'1" max. height

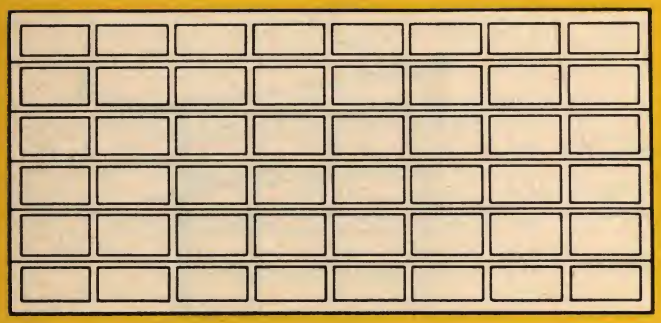
WOOD CASING:
12'1" to 22'0" wide
16'0" max. height

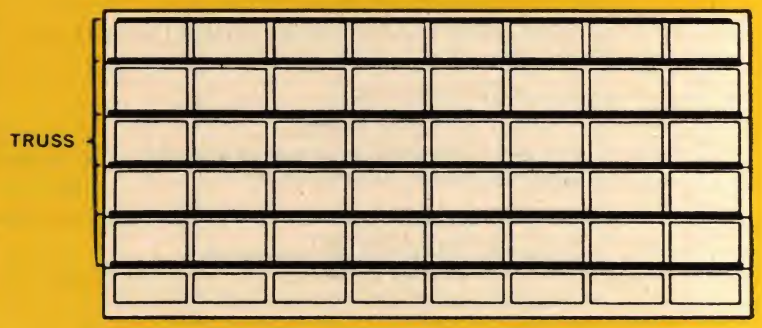
STEEL JAMBS:
12'3" to 22'2" wide
16'1" max. height

ARGE SIZE MARVEL-LIFT DOORS

WIDTH: 22'1" to 30'0"
THICKNESS: 1¾"

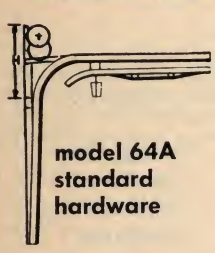
MAX. HEIGHT: 18'0"
TRACK: 3"





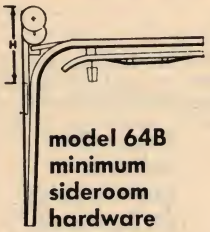
LOW LIFT OPERATION—64 SERIES

Center cable standard on all doors over 22'0" wide. Center track assembly standard on all doors over 24'3" wide.



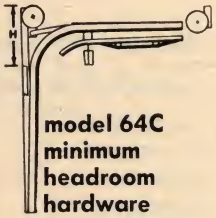
model 64A
standard hardware

WOOD CASING:
22'1" to 30'0" wide
18'0" max. height
STEEL JAMBS:
22'3" to 30'3" wide
18'1" max. height



model 64B
minimum sideroom hardware

WOOD CASING:
22'1" to 30'0" wide
18'0" max. height
STEEL JAMBS:
22'3" to 30'3" wide
18'1" max. height

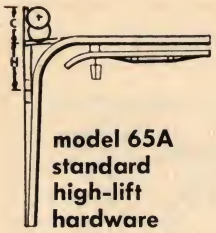


model 64C
minimum headroom hardware

WOOD CASING:
22'1" to 30'0" wide
18'0" max. height
STEEL JAMBS:
22'3" to 30'3" wide
18'1" max. height

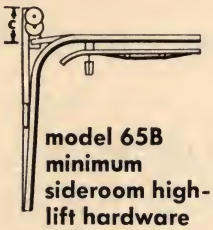
HIGH LIFT OPERATION—65 SERIES

Highlift—13" thru 84". Reduced by 13" if center track required.



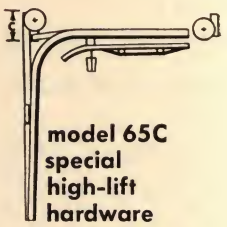
model 65A
standard high-lift hardware

WOOD CASING:
22'1" to 30'0" wide
18'0" max. height
STEEL JAMBS:
22'3" to 30'3" wide
18'1" max. height



model 65B
minimum sideroom high-lift hardware

WOOD CASING:
22'1" to 30'0" wide
12'0" max. height
STEEL JAMBS:
22'3" to 30'3" wide
12'1" max. height



model 65C
special high-lift hardware

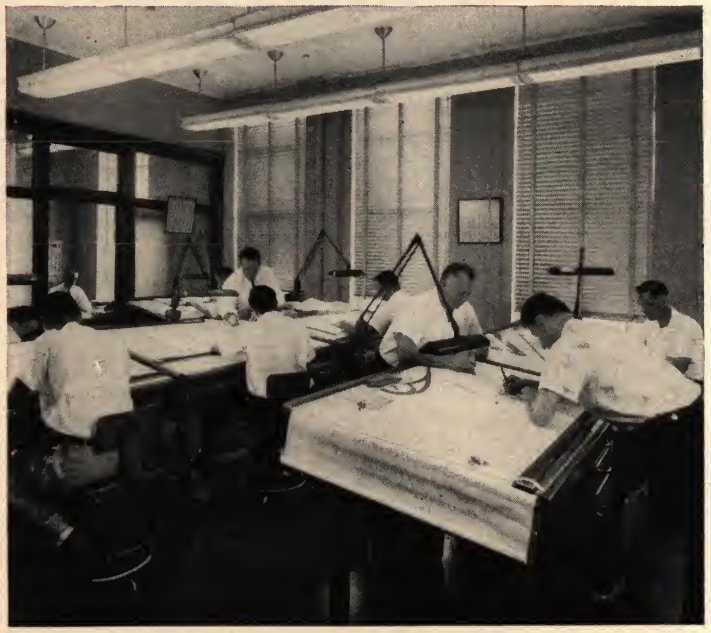
WOOD CASING:
22'1" to 30'0" wide
18'0" max. height
STEEL JAMBS:
22'3" to 30'3" wide
18'1" max. height

consultation service

We believe that Crawford door buyers are entitled to a competent consulting service, to help in choosing the perfect "job-tailored" door for each individual installation. Certainly the experience of the Crawford distributive organization in supplying, installing and servicing nearly half-a-million doors must be worth something to architects, engineers, contractors, builders, and maintenance personnel.

Special designs can be made for doors requiring openings and tracks installed in unusual structural situations. Tracks can be fabricated to follow roof slopes.

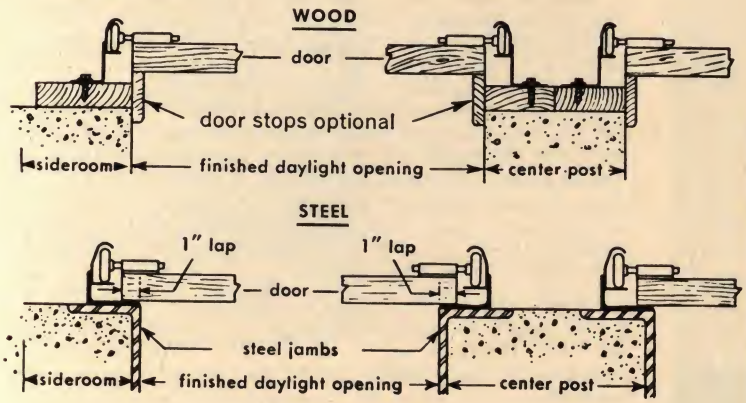
We know that it has proved its value many times, and so we invite you to use it. It's free, of course. Write your nearest distributor (see list on back cover).

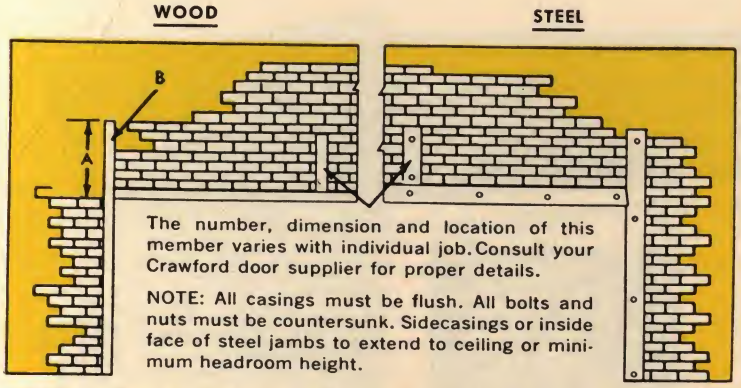


opening preparation

NOTE: For minimum headroom and sideroom dimensions see hardware details listed on pages 4, 5, 6 and 7.

JAMB DETAILS





The number, dimension and location of this member varies with individual job. Consult your Crawford door supplier for proper details.

NOTE: All casings must be flush. All bolts and nuts must be countersunk. Sidecasings or inside face of steel jambs to extend to ceiling or minimum headroom height.

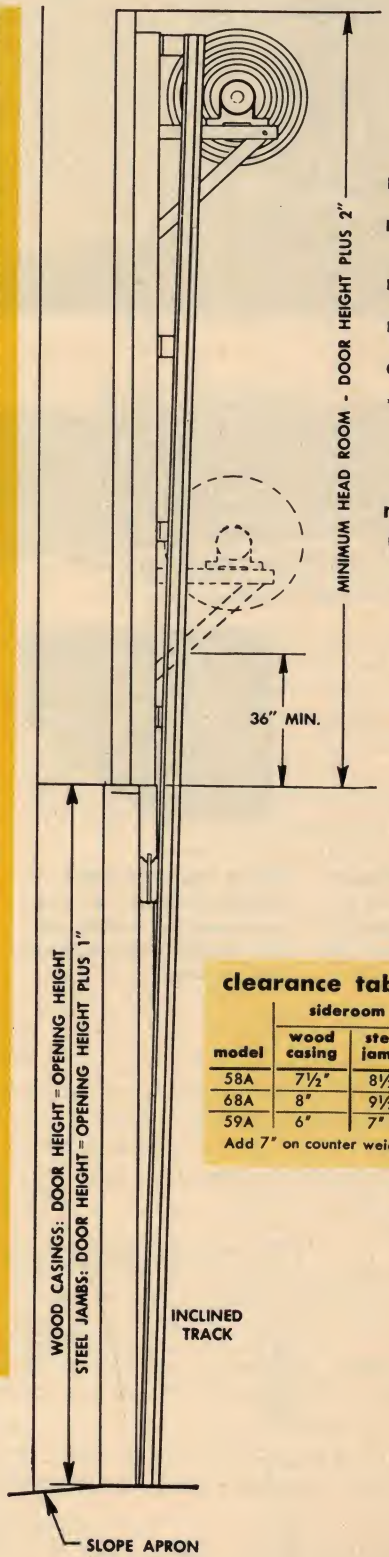
A 14" minimum for 2" track, 15" minimum for 3" track
B 2-1/2" minimum angle for 2" track, 3-1/2" minimum angle for 3" track

SPECIFICATIONS FOR COMMERCIAL-INDUSTRIAL DOORS

WOOD—Stiles and rails shall be of Douglas Fir or Western Hemlock, dowelled, steel-pinned and waterproof glued with rabbeted joints. Panels of Marvel-Life hardboard or ¼" plywood optional. Doors to be completely sanded ready for paint. Magi-Cote protective treatment or prime coat optional. Any or all sections may be left open for glass.

HARDWARE—To include: safety torsion springs on a continuous shaft full width of door, rust proofed aero-type cables; rollers having ball bearings in hardened raceways with one-piece tire rim; bottom corner bracket mortised under door with bolts through both end stiles and bottom rails; hinges bolted through stiles and rails . . . Medium size doors over 12'1" wide shall be additionally reinforced with suitable horizontal trusses. Doors over 16'1" wide shall have suitable vertical truss, except where door weight requires a center cable (for truss details and schedule see pages 4-5). Doors thru 20'0" wide, not requiring center cable because of weight, shall have suitable vertical truss.

vertical lift doors


MINIMUM HEAD ROOM - DOOR HEIGHT PLUS 2"
36" MIN.
WOOD CASINGS: DOOR HEIGHT = OPENING HEIGHT
STEEL JAMBS: DOOR HEIGHT = OPENING HEIGHT PLUS 1"
INCLINED TRACK
SLOPE APRON

model 58A—2" track
model 68A—3" track

maximum width—22'2"
maximum height—14'1"*
doors—1 ¾" thick

*15'1" if motor operated

model 59A—2" track
(counterweighted door)

clearance table

model	sideroom		center post		lap (side)	lap (top)
	wood casing	steel jambs	wood casing	steel jambs		
58A	7½"	8½"	15"	17"	1"	1"
68A	8"	9½"	16"	19"	1½"	1"
59A	6"	7"	12"	14"	11"	1"

Add 7" on counter weight box side

ALL-STEEL TORSION SPRING DOORS

The door is a series of sections built up as follows: All sections are constructed of 6" deep ribbed roll formed pans of 20 ga. (.036) steel. These pans are welded to 13 ga. (.089) steel end channels and to 16 ga. (.062) steel box type center reinforcing members. The bottom section only has a 13 ga. (.089) channel running full width of door as shown below. Pans are 20 gauge (.036") steel. End channels are 13 gauge (.089") steel, and box sections are 16 gauge (.062") steel hat-sections, welded to pans. Bottom channel of bottom section is 13 gauge steel.

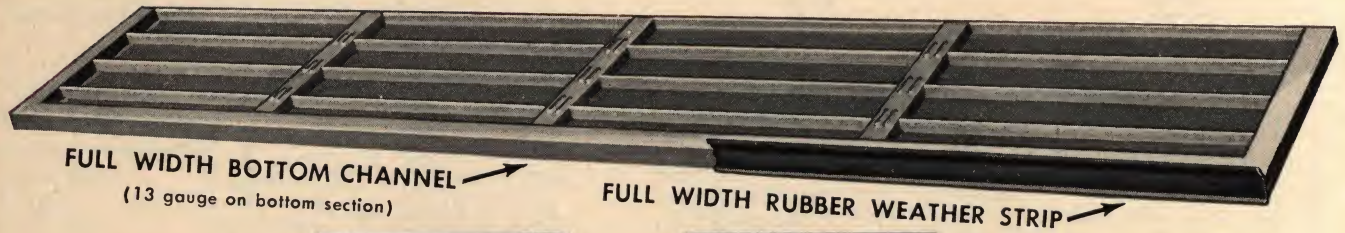
Smooth, easy operation is assured by the Crawford Torsion Spring Mechanism and mounted on a single, full-width shaft so that the door can be opened or closed from either side with perfectly smooth operation and no jamming or binding.

Torsion Springs mounted on the shaft are adjustable to the exact "lift" required to counterbalance individual door-weight.

All hardware is heavy duty throughout and is stoutly fastened. All operating strains are confined to the hardware; none are transmitted to the door or to the wall.

ALL-STEEL MARVEL-LIFT DOORS are available in any width up to 24'3". Heights range from 7'1" to 18'1" in 6" steps, that is, 7'1", 7'7," 8'1", and so on.

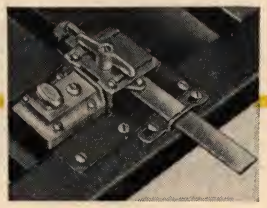
Installation is neat, compact, simple. Service and parts are always available.



FULL WIDTH BOTTOM CHANNEL
(13 gauge on bottom section)

FULL WIDTH RUBBER WEATHER STRIP

BALL BEARING STEEL ROLLERS, case hardened, with solid steel tire around outside of bearings and raceways for long wear.



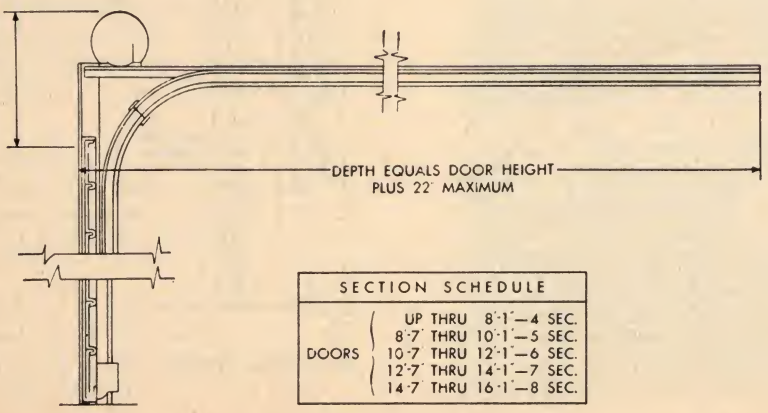
GOOD CYLINDER LOCK with two keys. Sturdy lock bar mechanism engages track for positive locking. Chrome plated lock handles.

CRADLE TYPE BOTTOM CORNER BRACKET has a stout flange which is set under the bottom of the door and takes all lifting load on both sides. No load on the fastenings.

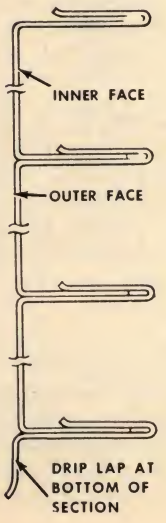
TORSION SPRING MECHANISM showing Dual Torsion Springs, Full-width, One-piece Shaft, Ball Bearing Mounted.

BOX-TYPE PANEL CONSTRUCTION is shown in diagram below. Each section has Drip Lap at the bottom to shut out rain, wind, dust. Heavy rubber weather-seal strip top and bottom of door.

Minimum headroom and sideroom for steel doors matches minimum dimensions scheduled for wood door sizes as scheduled—pages 4, 5 and 6. Hardware series types as noted also applies to steel door sizes as scheduled.



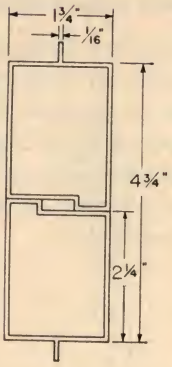
SECTION SCHEDULE	
DOORS	UP THRU 8'-1"—4 SEC.
	8'-7" THRU 10'-1"—5 SEC.
	10'-7" THRU 12'-1"—6 SEC.
	12'-7" THRU 14'-1"—7 SEC.
	14'-7" THRU 16'-1"—8 SEC.



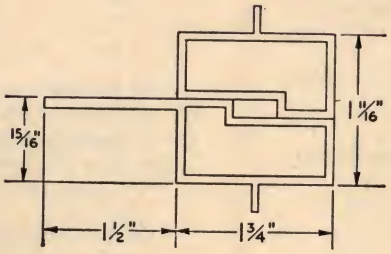
MARVEL-LITE ALUMINUM DOORS

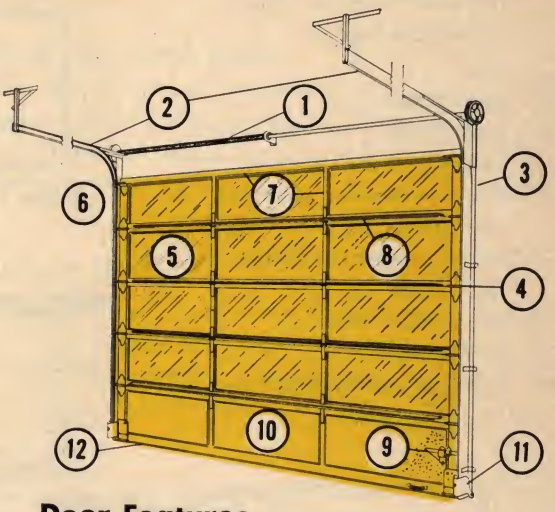
all steel torsion spring
marvel-lite aluminum

MARVEL-LITE STANDARD
(with kick panels added in bottom section)



MARVEL-LITE NARROWLINE





Door Features

1. Oil-tempered safety torsion spring mounted on one-piece continuous, full-width steel shaft.
2. Zinc-coated, rust-resistant track.
3. Self-lubricated, 42 strand cable.
4. Riveted, heavy duty strap hinges.
5. Seamless, super-strong heliarc welded joints.
6. Smooth action ball-bearing rollers... precision engineered brackets.
7. High strength hollow extruded aluminum stiles and rails.
8. Integral extruded reinforcing strut on narrowline door.
9. Damage-proof end stile lock.
10. Removable, single or double, leather grained finish kick panels.
11. Heavy duty, weight-lifting corner brackets.
12. All-weather rubber astragal.

SPECIFICATIONS

SIZES

STANDARD—8' to 12' widths—7' to 16' heights (2" track)
NARROWLINE—8' to 14' widths—7' to 16' heights (2" track)

SECTIONS

4 sections for 7' high doors up to 8 sections for 16' high doors.

PANEL ARRANGEMENTS

DOOR WIDTHS	STOCK	OPTIONAL
Thru 9'6"	3	2, 4
9'7" thru 10'6"	3	4
10'7" thru 11'6"	4	3, 5
11'7" thru 14'0"	4	5, 6

STILES and RAILS

Door thickness 1¾". Heliarc welded joints. Top rails, bottom rails, end stiles 2½".

Center stiles: narrowline ¾"; standard 2½". Meeting rails: narrowline 1 11/16"; standard 4¾".

PANELS

Double aluminum panels .040" thick each, bottom section with remaining sections open for single or double strength glass on narrowline.

All sections open on standard. Single or double kick panels optional.

FINISH

Belt sanded 6063T-5 aluminum stiles and rails. Leather grained finish on kick panels. Anodizing optional extra.

HARDWARE

Attaching hardware rust-resistant plated. Available with Vanguard, or Marvel-Lift industrial hardware.

LOCK

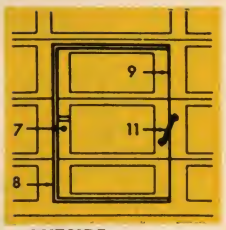
5-tumbler cylinder type. Nationally known make, right side location standard on all narrowline doors.

OPERATION

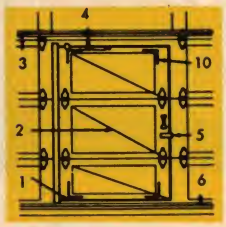
Manual with safety torsion spring. Or, electric . . . Crawford Mainline industrial operator recommended.

pass doors

1. threshold strip ⅛″ steel
2. turnbuckle braces
3. truss
4. door check
5. night latch
6. truss
7. five pin tumbler lock mechanism
8. metal weatherstripping ⅛″ steel
9. continuous hinge
10. corner irons
11. bommer spring alternate to door check



OUTSIDE



INSIDE

All doors 13′1″ thru 20′1″ wide with pass door have center track. Additional 5″ headroom required over standard model 54A, or 64A. All doors 15′7″ thru 20′0″ wide with pass door have center cable power unit and center track. Additional 10″ headroom required over standard model 54A, or 64A.

Standard pass doors 3 sections high. A 4-section pass door available for doors 5 or more sections high.

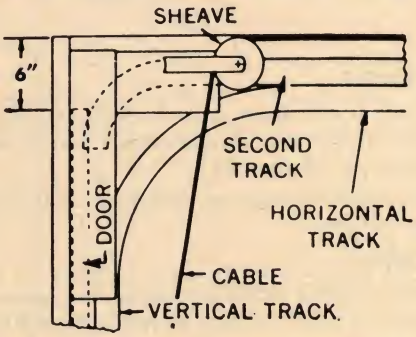
NOTE: Standard pass doors swing out. Only one pass door per sectional door possible.

special low headroom hardware

For larger doors 8″ hdrm. required for this type hdwe.

For those jobs where the available headroom is less than the minimum standard headroom.

Add one inch headroom to specifications above for steel jamb installation.



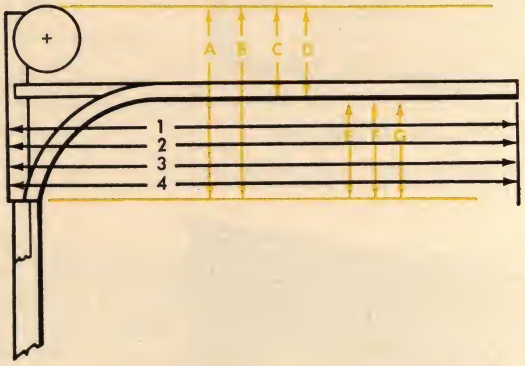
SERIES 53A
(for small and medium size doors)
minimum headroom—6″ or 8″ wood
maximum width—18′
maximum height—16′
size limitation—150 sq ft. and/or 600 lbs. weight

SERIES 63A
(for large size doors)
minimum headroom—9″ wood, 10″ steel jambs
maximum width—22′
maximum height—18′
Adaptable to all doors thru 22′ wide x 18′ high not requiring center track or cable because of weight.

removable mullions

for 2 or more doors in single opening

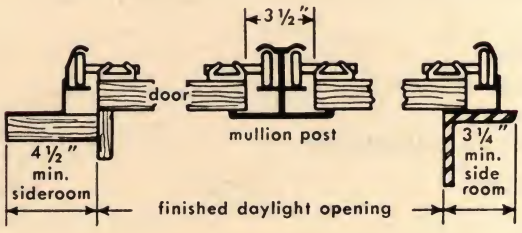
Crawford removable mullions are of extruded aluminum, extremely light and can be handled easily without the aid of mechanical equipment. Unlimited number of doors may be put in one opening. Regular traffic may be handled with ease through smaller doors. Then mullions may be removed to afford use of full opening width when needed.



for 74B and 74C doors up thru 20′0″** wide, 16′0″* high
for 75B doors up thru 20′0″** wide, 12′0″* high
for 75C doors up thru 20′0″** wide, 16′0″* high

A 74B (min. headroom): up thru 9′1″ high—19½″*; 9′2″ thru 13′1″—21½″*; 13′2″ thru 16′1″ high—24″*.
B 74C (min. headroom): up thru 9′1″ high—20″*; 9′1″ high thru 16′1″ high 20″*.
C 75B—up thru 12′1″—7″
D 75C—up thru 16′1″—5½″
E 74B—13¼″
F 74C—13″
G 75B and 75C—High Lift 84″ max. (18′ max. clearance)
1 74B—Door height plus 16″.
2 74C—Door height plus 28″.
3 75B—Door height minus High Lift plus 26″.
4 75C—Door height minus High Lift plus 38″.***

* Add 1″ for steel jambs; ** Add 2″ for steel jambs.
*** These figures include 12″ for power unit in rear.



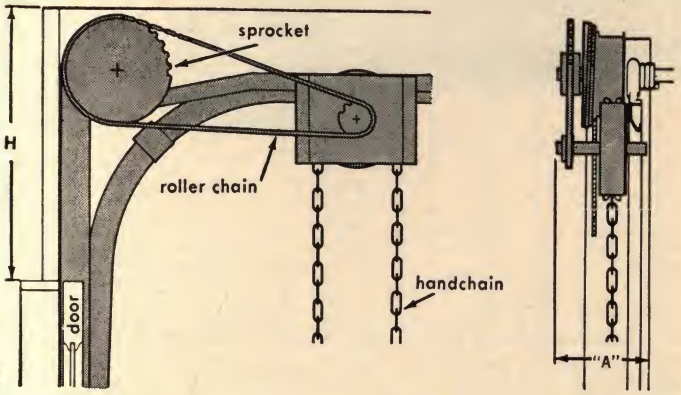
spring bumpers

Are available where it is desired to prevent shock to the structure. These shock absorbers are available in either:

A—Leaf Spring Type or B—Coil Spring Type

chain hoists

SIDE MOUNTED (4 to 1 ratio) for model 55A, 55B, 65A, 65B, 58A and 68A doors



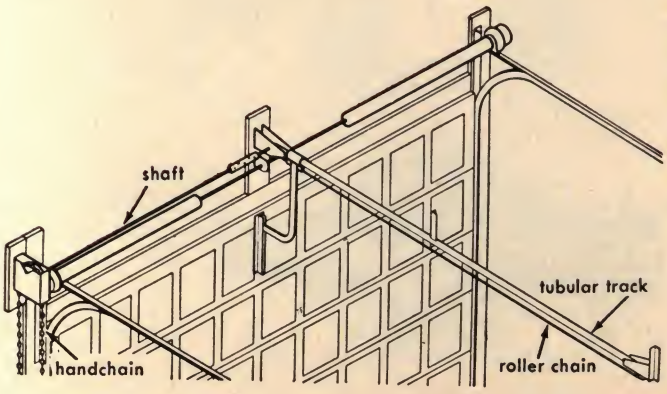
"A" sideroom required (on hoist side)—
55A—8", 55B—6½", 58A—9½", 65A—8½", 65B—7", 68A—10"
Note: add 1" for reverse angle 2" track; add 1½" for reverse angle 3" track. Additional headroom required for reverse angle mounting—1".

trolley type (3 to 1 ratio)

for all doors except Vertical Lift and High Lift

models	54A	64A	54B	64B
Additional Headroom—add	5½	5½	5½	5½
Additional Sideroom Reg.	5	5	2½	1½
Hoist Side— Add Rev.	5	5	5	4½

Note: Depth is door height plus 48".



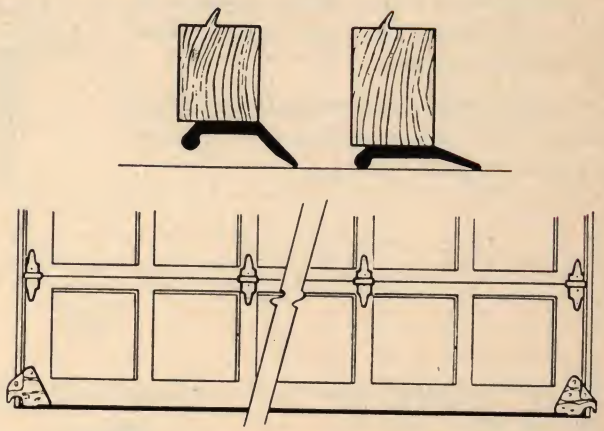
direct drive chain hoist

For use on large doors where minimum opening and closing is required. A hand chain operator is the economical installation, compared with the pushbutton motor operated power operators.

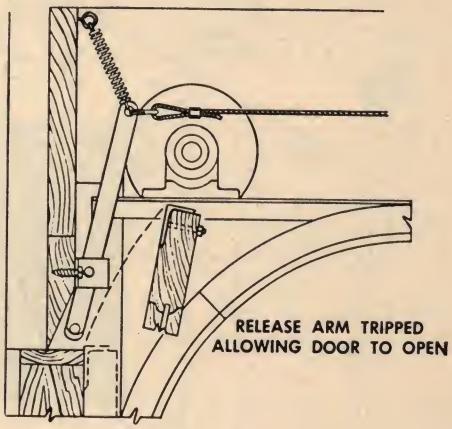
disconnect hoist

For hand operation of motor operated doors in case of power failure. Assembly includes hand chain connected with a clutch that engages shaft assembly. An important emergency operation feature.

rubber astragal for 1 3/8" thick doors and over



automatic opener (wood casings only)



Optional:

This quick release device allows door to open automatically when springs are suitably adjusted.

When desired, standard lock normally furnished can be altered to allow operation of automatic opener from outside.

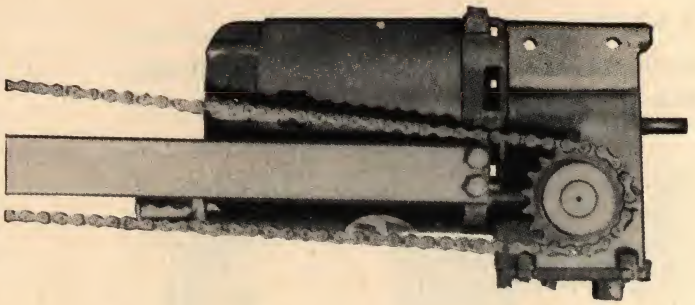
A brake attachment is supplied to stop door in open position.

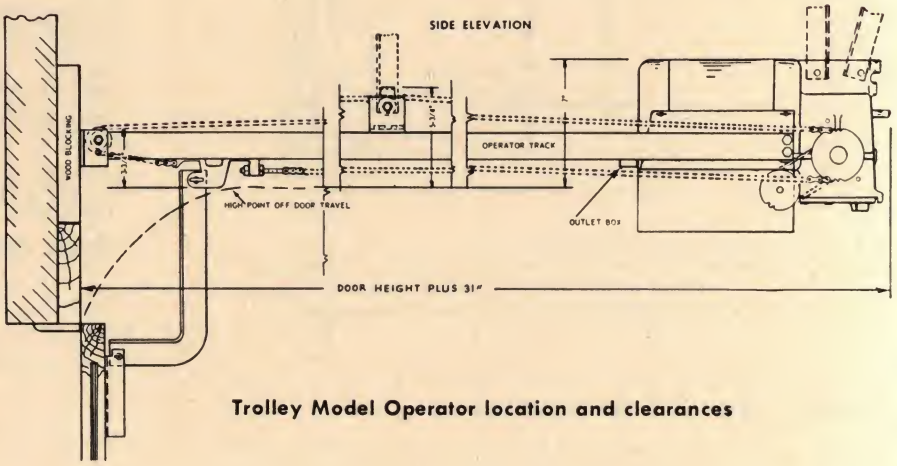
Crawford Mainline Series Door Operators feature:

- Ingenious disconnect mechanism with automatic latching without need for notch plate on wall.
- Limit switch settings are not affected when using disconnect device.
- Electric solenoid brake is standard equipment on side-mounted or Jackshaft and Chainhoist models. Optional on trolley or overhead mounted type.
- Design permits either wall, ceiling or shelf mounting of Jackshaft unit and either ceiling or shelf mounting of Hoist unit.
- Sturdy malleable iron mounting base simplifies installation, and makes a neater and stronger mount.

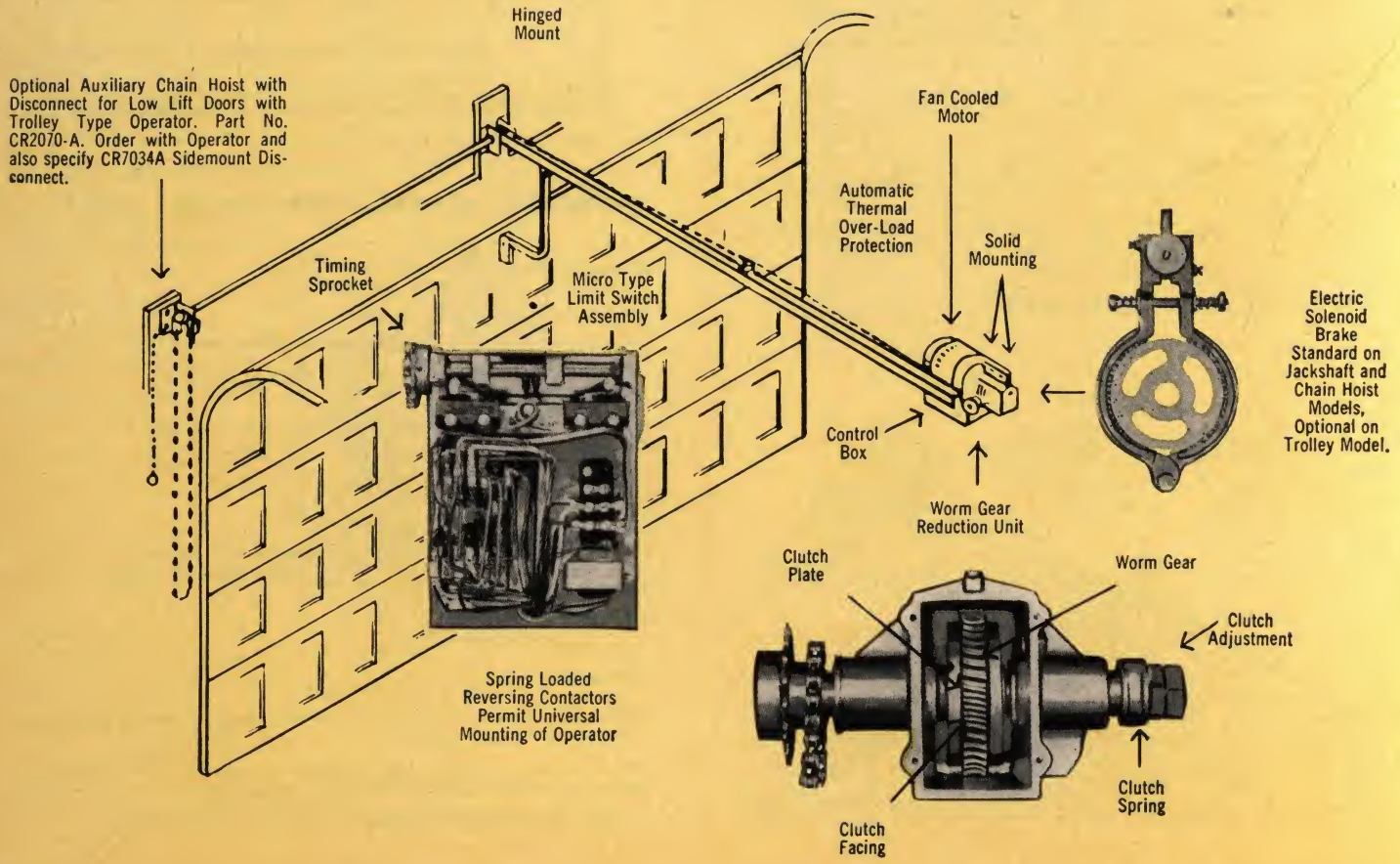
As a safety factor electric power is automatically cut off, on the chain hoist model, when hand hoist is engaged.

Write your nearest Crawford sales representative for your copy of Mainline Series complete Door Operator Catalog.





Trolley Model Operator location and clearances


Hinged Mount
Optional Auxiliary Chain Hoist with Disconnect for Low Lift Doors with Trolley Type Operator. Part No. CR2070-A. Order with Operator and also specify CR7034A Sidemount Disconnect.
Timing Sprocket
Micro Type Limit Switch Assembly
Fan Cooled Motor
Automatic Thermal Over-Load Protection
Solid Mounting
Electric Solenoid Brake Standard on Jackshaft and Chain Hoist Models, Optional on Trolley Model.
Control Box
Worm Gear Reduction Unit
Spring Loaded Reversing Contactors Permit Universal Mounting of Operator
Clutch Plate
Worm Gear
Clutch Adjustment
Clutch Spring
Clutch Facing

mainline operator model chart

maximum door size	OPERATOR MODEL AND APPROXIMATE SHIPPING WEIGHTS						voltage and phase	h.p.	wiring types
	trolley	weight	jackshaft	weight	chain hoist	weight			
200 sq. ft.	CTA311	88	—	—	—	—	110-S	⅓	A
200 sq. ft.	CTAD311	86	—	—	—	—	110-S	⅓	AD
200 sq. ft.	CT311	98	CJ311	65	CJH311	85	110-S	⅓	*B, C, D, E, R
200 sq. ft.	CT321	98	CJ321	65	CJH321	85	220-S	⅓	*B, C, D, E, R
200 sq. ft.	CT323	98	CJ323	65	CJH323	85	220-3	⅓	B, C, D, E, R
200 sq. ft.	CT343	98	CJ343	65	CJH343	85	240-3	⅓	B, C, D, E, R
200 sq. ft.	CT353	98	CJ353	65	CJH353	85	550-3	⅓	B, C, D, E, R
300 sq. ft.	CT211	106	CJ211	75	CJH211	95	110-S	½	*B, C, D, E, R
300 sq. ft.	CT221	106	CJ221	75	CJH221	95	220-S	½	*B, C, D, E, R
300 sq. ft.	CT223	106	CJ223	75	CJH223	95	220-3	½	B, C, D, E, R
300 sq. ft.	CT243	106	CJ243	75	CJH243	95	440-3	½	B, C, D, E, R
300 sq. ft.	CT253	106	CJ253	75	CJH253	95	550-3	½	B, C, D, E, R
400 sq. ft.	CT411	116	CJ411	85	CJH411	95	110-S	¾	*B, C, D, E, R
400 sq. ft.	CT421	116	CJ421	85	CJH421	95	220-S	¾	*B, C, D, E, R
400 sq. ft.	CT423	116	CJ423	85	CJH423	95	220-3	¾	B, C, D, E, R
400 sq. ft.	CT443	116	CJ443	85	CJH443	95	440-3	¾	B, C, D, E, R
400 sq. ft.	CT453	116	CJ453	85	CJH453	95	550-3	¾	B, C, D, E, R
500 sq. ft.	CT123	126	CJ123	95	CJH123	105	220-3	1	B, C, D, E, R
500 sq. ft.	CT143	126	CJ143	95	CJH143	105	440-3	1	B, C, D, E, R
500 sq. ft.	CT153	126	CJ153	95	CJH153	105	550-3	1	B, C, D, E, R

Consult Factory for Higher Horsepower or Voltages not shown.

* See price list for instantly reversible motors necessary on SINGLE PHASE for type "E and R" wiring and for pneumatic safety device to reverse door.

When CJH model is used to drive main spring shaft of roll steel door, use ½ HP on 200 sq. ft.

Every operator supplied with one control station.

Each jackshaft and hoist operator also supplied with 10 ft. drive chain and hoist operator includes 25 ft. of hand chain.

CONTROL STATIONS

CR7028
Three Button
Indoor

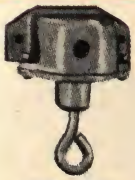
CR597
Three Button
Oil Tight—Indoor

CR475
Keyed
Oil Tight—Indoor

CR7074
Two Button
Indoor

CR7059
Single Button
Indoor

CR596
Single Button
Weatherproof



CR880-S
Ceiling Pull
Weatherproof

CR478
Ceiling Pull
Indoor

CR477
Key Post
Weatherproof

description of wiring types

A Momentary contact (single button) STARTS on first press of button, STOPS on second press if door is moving, REVERSES on third press.

AD Constant pressure (single button) REVERSES direction every time button is pushed, but button must be held in to keep running.

B Momentary contact (three button) OPEN, CLOSE, STOP.

C Momentary contact (three button) on OPEN and STOP, constant pressure on CLOSE.

D Constant pressure (two button) both OPEN and CLOSE. Release of either button stops door.

E Momentary contact (two button) on OPEN, constant pressure on CLOSE, release of "close" button before full closing automatically reverses door to open position.

R Momentary contact (single button) instantly reversible, reverses direction every time button is pushed even if in motion.

customized designs

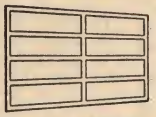
The DOOR of a THOUSAND FACES is the Crawford Garage Door with Customized Design—the door that has brought dramatic "decorator" beauty, color and glamour OUTDOORS, to beautify the entire home frontage.

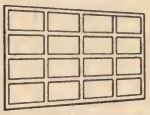
You can select a Customized Design from the wide variety available from your Crawford sales representatives, or create a design of your own in your choice of Decorator Colors, or employing any of the variations pictured below.

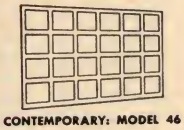
More DOOR *for the Money....More* DOORS *for the choosing with* Crawford GARAGE DOORS

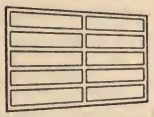
FIRST BASIC DESIGN AND SIZE CHOICES

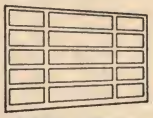
SINGLE CAR

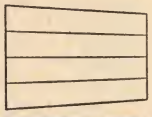

RANCH: MODEL 42


PANEL-MODERN: MODEL 44


CONTEMPORARY: MODEL 46


RANCH-MODERN: MODEL 52

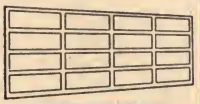

RIVIERA: MODEL 53

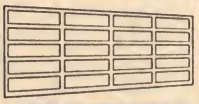

FLUSH-MODERN: MODEL 40

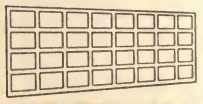
STANDARD SIZES: 8'0" wide x 7'0" high and 9'0" wide x 7'0" high

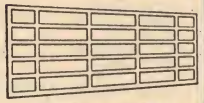
Also available in a wide range of additional widths and heights.

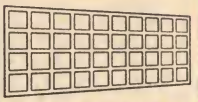
TWO CAR

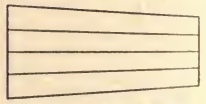

RANCH: MODEL 44


RANCH-MODERN: MODEL 54


PANEL-MODERN: MODEL 48


RIVIERA: MODEL 55


CONTEMPORARY: MODEL 410


FLUSH-MODERN: MODEL 40

STANDARD SIZES: 15'0" wide x 7'0" high and 16'0" wide x 7'0" high
17'0" wide x 7'0" high and 18'0" wide x 7'0" high

Also available in a wide range of additional widths and heights.

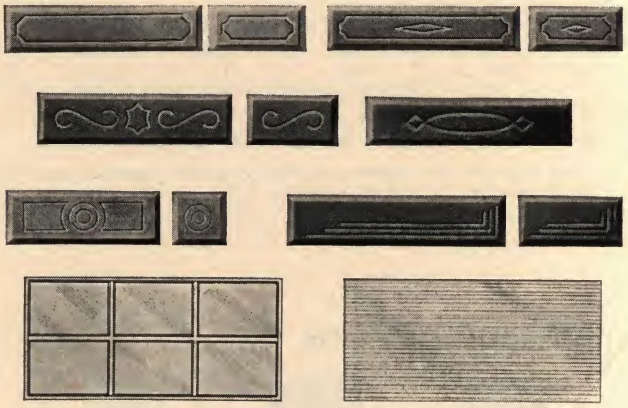
SECOND PANEL VARIATIONS

MARVEL-LIFE HARDBOARD—Smooth, single-ply, ungrained . . . ideal paint-base. Guaranteed for life not to split, splinter, crack or delaminate.

3-PLY DOUGLAS FIR PLYWOOD—Top quality exterior plywood.

RAISED CARVED PANELS—Offered in wide variety of designs to suit every architectural motif. Matched carvings available for use on front door or shutters for ensemble effect.

CARVED HARDBOARD PANELS—Regular Marvel-Life Hardboard carved in many designs to provide the individuality, the luxury engraved look at lower cost than raised carved panels.



THIRD GLASS OPTIONS

GLASS PANELS

Plain or louvered glass as well as muntin windows available. Section panels can be left open for glass to specifications.

FOURTH CUSTOM KIT ACCESSORIES

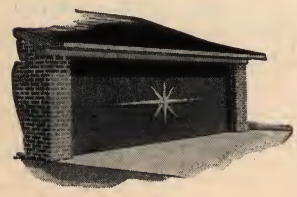
Round and square rosettes, half round and square accent moldings and false louver moldings offered in more than 25 standard packages. Variety of decorative effects possible is unlimited and you can do-it-yourself to achieve a "custom" door at a standard price.

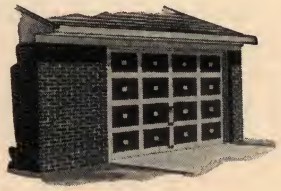
FIFTH SPECIAL ACCESSORIES

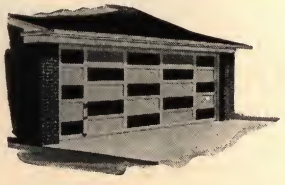
For truly unusual and striking effects, special door accessories . . . monograms, raised hardboard silhouettes, simulated antique hardware, built in clocks . . . may also be applied to your Crawford Marvel-Lift Garage Door.

SPECIAL HARDBOARD OVERLAYS

Offered in 5 designs (three illustrated above) hardboard overlays lend themselves to a countless number of interesting, attractive arrangements . . . they're inexpensive and easy to apply, too.





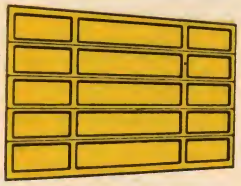


MARVEL-LIFT SINGLE CAR DOORS

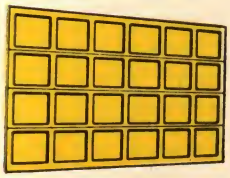
standard sizes

WIDE:	8'0"	8'0"	9'0"	9'0"	10'0"	10'0"
	x	x	x	x	x	x
HIGH:	6'6"	7'0"	6'6"	7'0"	6'6"	7'0"

THICK: 1⅜" standard for residential installations



RIVIERA, MODEL 53



CONTEMPORARY
MODEL 46

FLUSH-MODERN, MODEL 40

dignified, custom design

The clean lines, the refined simplicity of Crawford's Marvel-Lift single garage door make it one of the most popular and widely used residence garage doors on the market. Its basic beauty can be richly enhanced, furthermore, by adding color and the decorator accessories available in Crawford's Customized Design Kits.

smooth, silent action

There is no finer mechanism on any garage door than Crawford's Marvel-Lift. Torsion spring action, perfect counterbalancing plus Crawford's new nylon-tire, 13 ball bearing rollers combine to provide smooth, silent, gliding action . . . so effortless, a small child can raise and lower the door easily.

durable, dent-proof construction

Only the very best quality of clear, edge grain Douglas Fir or Western Hemlock is used in Crawford door stiles and rails, joined by pressure-fitted, glued dowels to provide long-lasting strength, perfect squaring. Panels are Marvel-Life hardboard . . . guaranteed against splitting, splintering, cracking and delamination for the life of the door. Plywood is also offered.

weatherproof installation

Wood to begin with, is a non-conductor of heat (as opposed to metal), so a Crawford door will keep a garage cooler in summer, warmer in winter. Overlapping, rabbeted joints between door sections and Crawford's inclined track, serve to provide a draft-free weather-tight fit when the garage door is closed. Crawford offers its exclusive Magi-Cote process (optional at small additional cost) . . . each door section is immersed for three minutes in Magi-Cote, a clear penetrating liquid which seals all wood fibers against moisture, termites, fungus, dry-rot, etc.

specifications for all Crawford residential doors

Residential upward acting doors to be Model_____ (for single-car widths) or Model_____ (for two-car widths) as manufactured by the Crawford Door Company. (Select model and type from this page or following pages). All wood after assembly to be immersed for 3 minutes in toxic, water repellent, wood preservative Magi-Cote. Optional at additional cost.

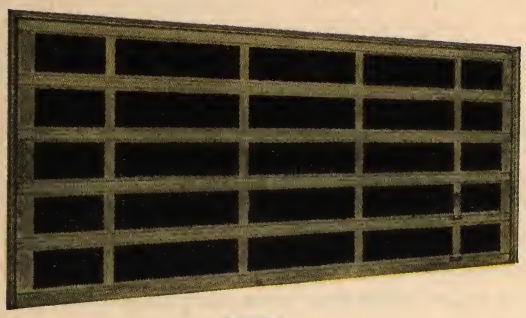
Wood: Wood sections shall have stiles and rails of Douglas Fir or Western Hemlock, dowelled and waterproof glued. Rails to extend full width of door. Panels to be of ¼" Marvel-Life hardboard or of ¼" 3-ply Douglas Fir plywood optional.

Hardware: Hardware shall include safety torsion springs on a continuous shaft across full width of door, (except 1 car Fleetwood door which has "extension" springs) rust-proofed aircraft type cable, ball bearing rollers with both inner and outer races of hardened steel. Bottom corner brackets mortised under bottom of door and of sufficient height to be secured across both rail and stile. Two-car width doors to have suitable steel U-bar reinforcements.

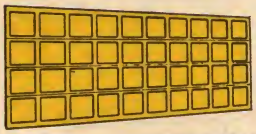
Installation & warranty: Doors shall be installed by the local distributor of the manufacturer, and shall be warranted against faulty or defective material or workmanship under normal operation for a period of one (1) year. Also, twenty-four (24) hour emergency service shall be available from distributor.

MARVEL-LIFT TWO CAR GARAGE DOORS

STANDARD SIZES
WIDTHS: . . . . . 11'0" through 18'0"
HEIGHTS: . . . . . 6'6" through 8'0"
THICKNESS: . . . . . 1⅜" standard
1¾" optional



RIVIERA
MODEL 55



CONTEMPORARY
MODEL 410

FLUSH-MODERN
MODEL 40

STILES AND RAILS

1⅜" thick Douglas Fir, pressure fitted, glued dowels. Rabbeted joint, eased edge.

PANELS

¼" Marvel-Life hardboard guaranteed for life, standard ¼" exterior fir plywood optional.

FINISH

Sanded ready for paint prime coat or Magi-Cote processing optional at extra cost.

HARDWARE

Zin-Cote pure zinc coating on all hardware for rust resistance and appearance. Oil coating on moving parts. Chromium plated lock handle. Suitable steel U-bar reinforcements including vertical truss for doors 14' through 18' wide.

GLASS ARRANGEMENTS

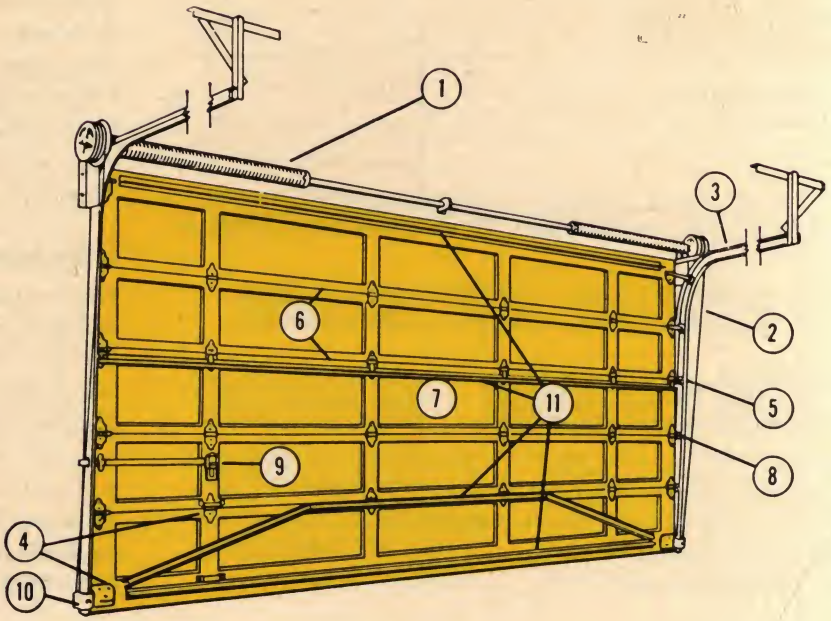
Sections can be left open for glass to individual specification. Also available with Marvel-Lucent plastic panels in Riviera Model 55.

LOCK

5-tumbler cylinder type . . . nationally known make. Two keys supplied. Cylinders may be substituted so house key opens garage also.

OPERATION

Manual, with Marvel-Lift mechanism. Or, electric . . . Delco-Matic Garage Door Operator recommended.



FEATURES

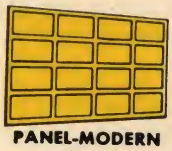
1. Coated safety torsion spring mounted on one-piece continuous tubular steel shaft.
2. Quiet, long-lasting aero-type cables.
3. Zinc-plated, rust-resistant track.
4. Bored dowel construction, pressure-fitted and glued.
5. Sound muffling nylon tire roller . . . 13 ball bearings.
6. Eased-edge, overlapping section joints . . . weather-tight, no binding from paint.
7. Moisture-proof, damage-resistant Marvel-Life panels. Guaranteed for life of door.
8. Precision made, grip-tight roller brackets . . . long free-gliding roller shafts.
9. Single-bar, side-mounted locking mechanism . . . damage-proof night latch.
10. Heavy duty, loading-lifting corner bracket.
11. U-bar trussing for extra strength and durability. For door 11' to 18'0".

FLEETWOOD SINGLE CAR GARAGE DOORS

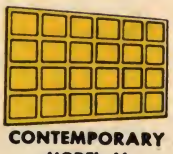
STANDARD SIZES

WIDE	HIGH	THICK
8'-0"	6'-6"	1 3/8"
8'-0"	7'-0"	1 3/8"
9'-0"	6'-6"	1 3/8"
9'-0"	7'-0"	1 3/8"

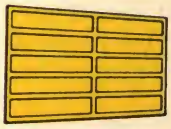
RANCH
MODEL 42



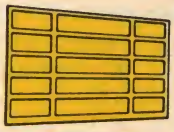
PANEL-MODERN
MODEL 44



CONTEMPORARY
MODEL 46



RANCH-MODERN
MODEL 52

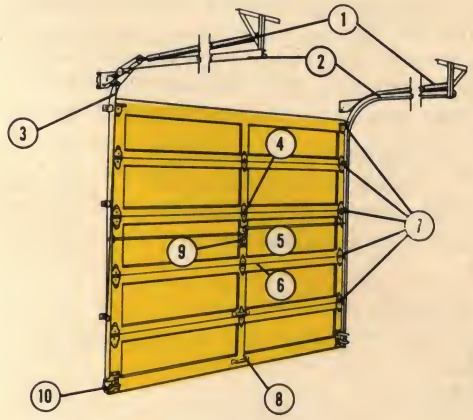


NEWPORT
MODEL 53

FLUSH-MODERN
MODEL 40

SIX STANDARD STYLES—FLEETWOOD single car series offers deluxe sectional construction in a choice of six standard models. There's a design to harmonize with any home . . . ranch, modern, contemporary, colonial.

NEAT, WEATHERPROOF INSTALLATION—Operating mechanisms are compact, out of the way . . . no projecting arms or brackets. And when open, door is completely inside garage where it can't collect rain, snow or ice. The Fleetwood is virtually impervious to the elements, too, with weathertight rabbeted joints between sections.



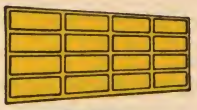
FEATURES

1. Double strength oil treated springs.
2. Zinc-plated, rust-resistant track.
3. Quiet, aero-type cable. Self-lubricating.
4. 300 pound test center hinge for added rigidity.
5. Marvel-Life panels. Guaranteed for life of door.
6. Eased-edge, overlapping section joints.
7. 7 ball bearing rollers, grip-tight roller brackets.
8. Bored dowel construction, pressure fitted and glued.
9. Double bar locking mechanism, damage-proof latch.
10. Heavy duty bottom corner bracket.

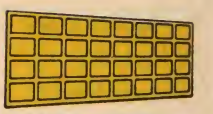
MARVEL-LIFT S-SERIES TWO CAR GARAGE DOORS

STANDARD SIZES

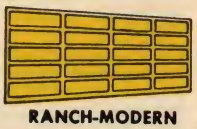
15'0" x 6'6" x 1 3/8"
15'0" x 7'0" x 1 3/8"
16'0" x 6'6" x 1 3/8"
16'0" x 7'0" x 1 3/8"



RANCH
MODEL 44



PANEL-MODERN
MODEL 48

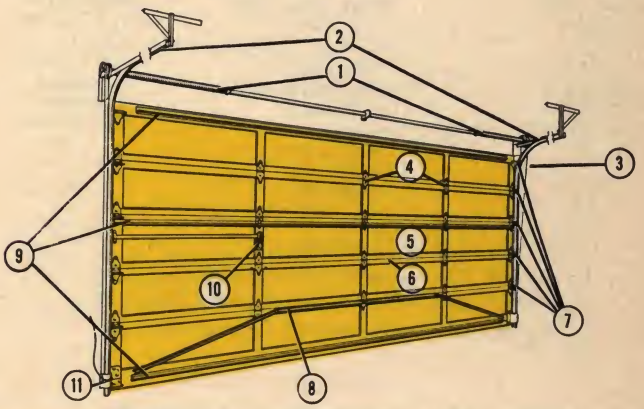


RANCH-MODERN
MODEL 54

FLUSH-MODERN
MODEL 40

RICH IN APPEARANCE — YET LOW IN COST — Separate hinged sections allow door to "float" straight up and out of the way inside the garage . . . no exterior projection to catch rain or snow, no possibility of wind damage. And any damage that may occur is easily remedied simply by replacing the damaged section . . . no need to replace the entire door.

TORSION SPRING OPERATION — The finest mechanism of them all, used on Crawford premium-quality doors, is also included in this series.



FEATURES

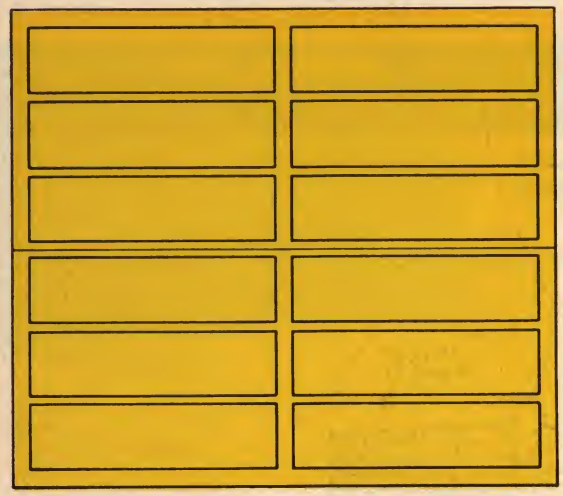
1. Coated safety torsion springs mounted on tubular steel shaft.
2. Zinc-coated, rust-resistant track.
3. Self-lubricated, quiet, aero-type cable.
4. Heavy-duty test hinges for positive section alignment.
5. Smooth, single-ply, weather-resistant Marvel-Life panels.
6. Eased edges, overlapping section joints . . . weathertight.
7. New smooth action long life ball bearing rollers (nylon optional).
8. New inverted U-bar truss for extra strength.
9. Three additional full-length U-bar braces.
10. Conveniently located, damage-proof night latch.
11. Bottom corner bracket with flange mortised under door.

THRIFTMASTER GARAGE DOORS

standard sizes

WIDE:	8'0"	8'0"	9'0"	9'0"	10'0"	10'0"
	x	x	x	x	x	x
HIGH:	6'6"	7'0"	6'6"	7'0"	6'6"	7'0"

THICK: 1⅜" standard for residential installations



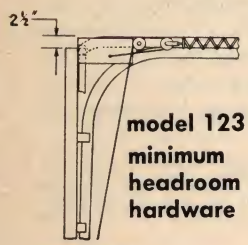
ONE-PIECE ECONOMY DOOR

The Thriftmaster provides for installation where minimum headroom (only 1½") is available. This fact permits considerable savings on garage side wall height. A minimum sideroom of only 2¾" each side of opening is also a design feature. Simple and quick installation is possible because the hardware is engineered for simplicity. It requires no mechanical maintenance other than a drop of oil every few months on rollers and pivot points.

The weather-stripping at each side of the door shuts out the weather and helps to keep your garage clean, dry, and comfortable.

The Thriftmaster operates outward and upward into the building on horizontal track, and, therefore, open door cannot collect snow, rain, leaves, or be whipped by the wind.

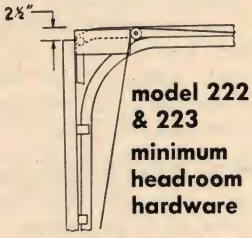
LOW HEADROOM HARDWARE



model 123 minimum headroom hardware

DOOR SIZE:
8'0" x 6'6"
through
10'0" x 8'0"

HEADROOM REQUIRED:
2½" minimum

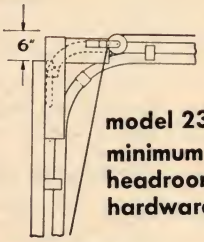


model 222 & 223 minimum headroom hardware

DOOR SIZE—222:
11'0" x 6'6"
through
18'0" x 8'0"

DOOR SIZE—223:
8'0" x 6'6"
through
10'0" x 8'0"

HEADROOM REQUIRED:
2½" minimum

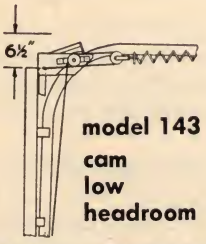


model 232 minimum headroom hardware

DOOR SIZE:
11'0" x 6'6"
through
18'0" x 8'0"

HEADROOM REQUIRED:
6" minimum

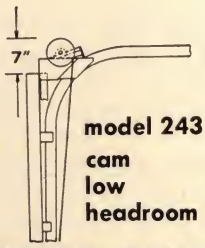
Model 123—Fleetwood
Model 222—Marvel-Lift Custom Two Car
Model 223—Marvel-Lift Custom Single Car
Model 232—Marvel-Lift Custom Two Car



model 143 cam low headroom

DOOR SIZE:
8'0" x 6'6"
through
10'0" x 8'0"

HEADROOM REQUIRED:
6½" minimum



model 243 cam low headroom

DOOR SIZE:
8'0" x 6'6"
through
10'0" x 8'0"

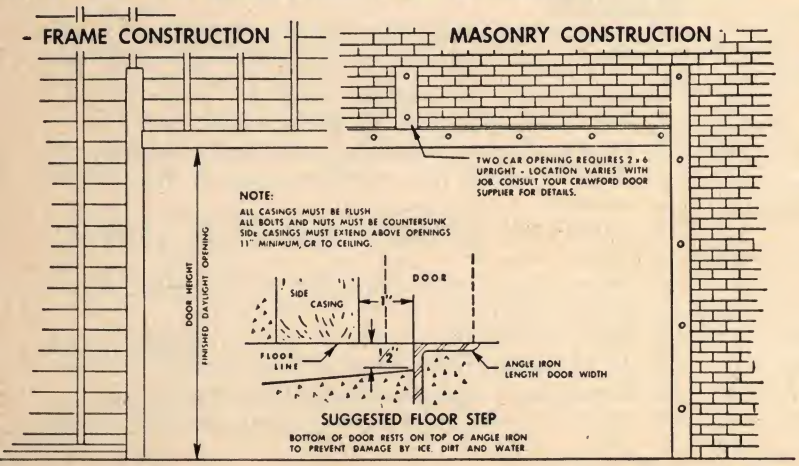
HEADROOM REQUIRED:
7" minimum

The low headroom hardware models illustrated above are designed for use with the various door models described on previous pages. For your convenience the low headroom model numbers and corresponding doors with which they may be used, are listed below:

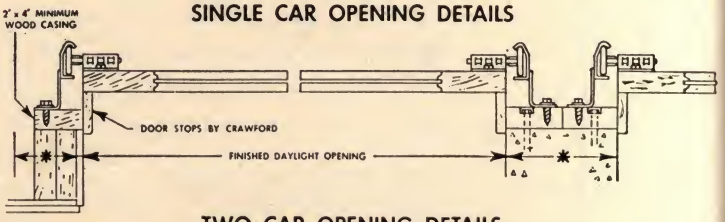
Model 143—Fleetwood
Model 243—Marvel-Lift Custom Single Car

Low headroom hardware for the Marvel-Lift S-Series line is also available.

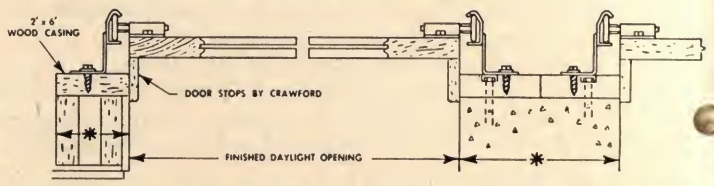
PREPARATIONS FOR RESIDENTIAL OPENINGS


FRAME CONSTRUCTION
MASONRY CONSTRUCTION
TWO CAR OPENING REQUIRES 2 x 6 UPRIGHT - LOCATION VARIES WITH JOB. CONSULT YOUR CRAWFORD DOOR SUPPLIER FOR DETAILS.
NOTE:
ALL CASINGS MUST BE FLUSH
ALL BOLTS AND NUTS MUST BE COUNTERSUNK
SIDE CASINGS MUST EXTEND ABOVE OPENINGS 11" MINIMUM, OR TO CEILING.
DOOR HEIGHT
FINISHED DAYLIGHT OPENING
SIDE CASING
DOOR
1"
FLOOR LINE
½"
ANGLE IRON LENGTH DOOR WIDTH
SUGGESTED FLOOR STEP
BOTTOM OF DOOR RESTS ON TOP OF ANGLE IRON TO PREVENT DAMAGE BY ICE DIRT AND WATER

SINGLE CAR OPENING DETAILS



TWO CAR OPENING DETAILS



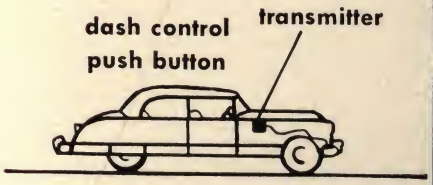
✱ *FOR MINIMUM SIDEROOM AND CENTER POST DIMENSIONS SEE HARDWARE DETAILS PAGES*

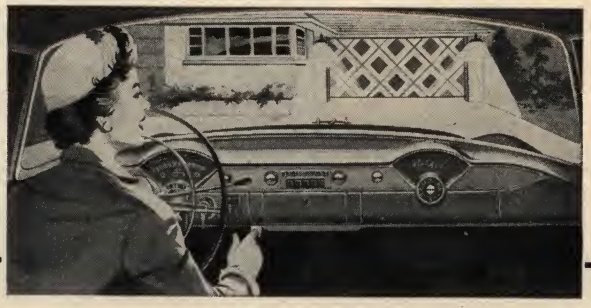
Delco-matic

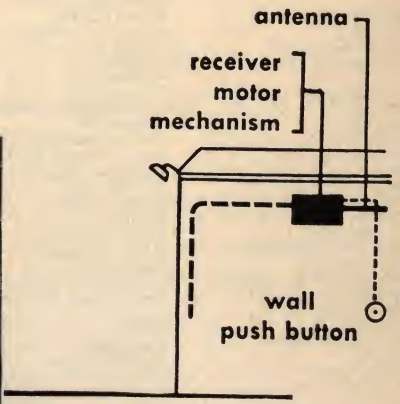
ALL-NEW ALL-TRANSISTOR

for all door sizes up to 18′ x 8′

operator can handle

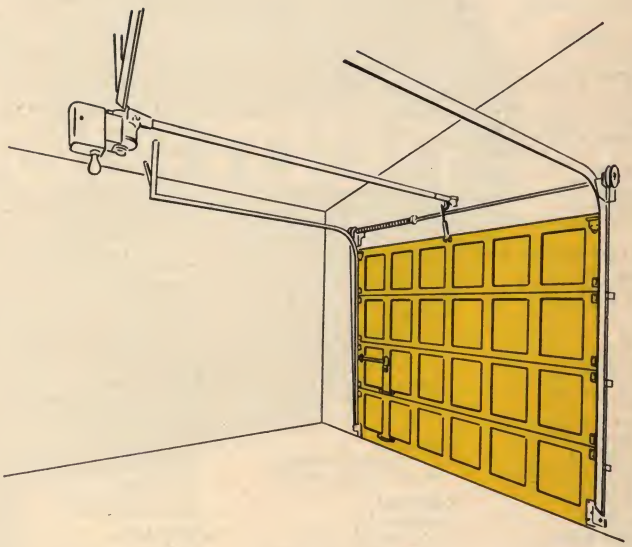


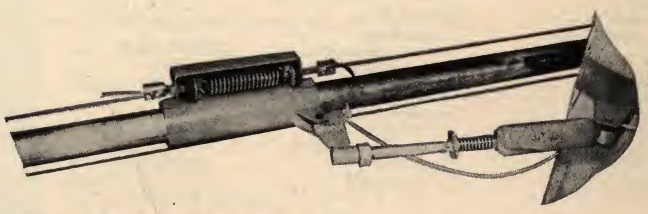


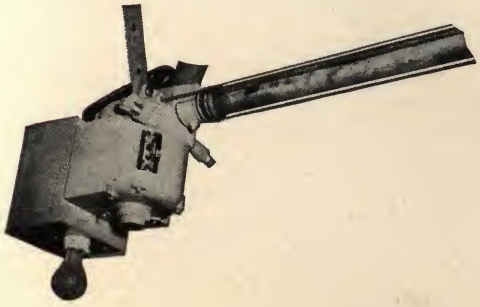


features

1. Has a load-sensitive control that automatically **stops the door instantly** if it touches an obstruction.
2. Is **instantly reversible** in case of emergency.
3. Dashboard control button can **turn on outside lights** as it raises garage door, providing lighted house, yard and driveway for safe entry and exit.
4. Contains **quick release latch** inside garage to return door to hand operation in case of power failure.
5. Has built-in, **lifetime lubrication.**
6. A **hydraulic shock absorber** cushions the movement of the door up and down so that there is no jerk, shock, slam or bang. Yet, door makes a tight weather seal with the floor.
7. Plug-in type unit makes operator **easy to service.** In case of service need, service man simply unplugs the present unit and plugs in a replacement.
8. **Is compact,** requiring only 2½″ over highest point of door travel so that it can be installed in homes with living quarters or deck above garage. Unit weighs only 50 pounds.







SPECIFICATIONS

Overall length—124″.

Maximum carriage travel—96″.

Head room required—2½″ above high point of door travel.

Electrical requirements—independent circuit, 115 volts, 60 cycles, 10 amps. (maximum).

Standard outlet receptacle, located on ceiling, within 6 feet of operator motor.

Available from your local dealer or from these Crawford Door Sales Companies

ALABAMA

Birmingham 4
2630 No. 12th. Ave.
Phone: FAirfax 2-1712
Mobile
P.O. Box 6037
Phone: GR 9-4586

ARIZONA

Phoenix
3808 N. Central
Phone: CRestwood 7-5488

ARKANSAS

Little Rock
317 W. Markham
Phone: FRanklin 5-1108

CALIFORNIA

Daly City
6069 Mission
Phone: JUniper 4-5042
Fresno
4579 E. Lewis
Phone: CL 5-5276
Modesto
P.O. Box 3088
Phone: LAmbert 4-5188
Playa del Rey
206 Montreal St.
Phone: EAstgate 2-0347
Sacramento
1642-35th. St.
Phone: GL 1-7735
San Jose
403 Keyes St.
Phone: CYpress 4-5221

COLORADO

Colorado Springs
1532 N. Nevada
Phone: ME 4-2543
Denver 1
2536 Walnut
Phone: CHerry 4-3114

CONNECTICUT

Bridgeport 5
756 Railroad Ave.
Phone: EDison 4-5191
Glenbrook
15 Maple Tree Ave.
Phone: DAvis 4-5354

DELAWARE

Wilmington
1022 W. 7th. St.
Phone: OLympia 4-9282

DISTRICT OF COLUMBIA

Arlington, Va.
1233 Jefferson Davis Hwy.
Phone: OTis 4-5422

FLORIDA

Daytona Beach
401 No. Beach St.
Phone: CLinton 3-6961
Hialeah
4930 East 10th Lane
Phone: MUrray 8-4513
Hollywood
2221 North Federal Hwy.
Phone: 3-4194
Jacksonville 4
P.O. Box 2147
101 Copeland St.
Phone: ELgin 4-8245
Lakeland
2345 Tanglewood
Phone: MUtual 2-6386
8-3042
Orlando
1616 Sligh Blvd.
P.O. Box 3242
Pensacola
P.O. Box 4091
Phone: GLendale 6-1739
Riviera Beach
P.O. Box 473
Phone: VIctor 4-6463
St. Petersburg
201 17th. St. N.
Phone: 7-8931
Sarasota
2163 9th. St.
Phone: RL 6-1595
Tallahassee
P.O. Box 3295 M.S.S.
Phone: 2-1971
Tampa
1501 Second Ave.
P.O. Box 291
Phone: 4-4114
Vero Beach
P.O. Box 1238
Phone: JO. 2-6536

GEORGIA

Albany
P.O. Box 686
Phone: HEmlock 5-4548
Atlanta 13
700 Hemphill Ave., N.W.
Phone: TRinity 6-6353
Columbus
P.O. Box 112
Phone: 7-4528
Macon
P.O. Box 1002
Phone: SHerwood 3-7473
Savannah
Box 3551, Station B
Phone: ADams 3-0259

ILLINOIS

Maywood
815 Main Street
P.O. Box 328
Phone: FIllmore 4-9725
(Chicago)
COlumbus 1-5077
Moline
Airport Rd. R.R. #1
Phone: 4-8365
Quincy
2000 Broadway
Phone: BAldwin 3-4161
Springfield
447 North Walnut
P.O. Box 879
Phone: LA. 8-3429
Tremont
Drawer "F"
Phone: WAlker 5-7731

INDIANA

Elkhart
P.O. Box 665
Phone: JAckson 4-0808
Evansville 8
421 Fulton Avenue
Phone: HArrison 3-6417
Indianapolis 20
P.O. Box 6028
Phone: CLifford 5-2417

IOWA

Cedar Rapids
921 Norwood Drive, S.E.
Phone: EMpire 3-1823
Des Moines 15
3807 S.W. Second
Phone: CHerry 3-3706
4-8653
Waterloo
215 Sipple—Evansdale
Phone: ADams 2-5346

KANSAS

Wichita 12
200 North West St.
Phone: WHitehall 3-4946

KENTUCKY

Louisville 6
2425 Lexington Road
Phone: HIghland 2552-3

LOUISIANA

Metairie
1118 Central
Phone: VErnon 5-3849
Shreveport
P.O. Box 6325
Phone: 7-6776, 7-7343

MAINE

Portland 5
61 Deane St.
Phone: SPruce 2-2766

MARYLAND

Baltimore 9
6300 Falls Road
Phone: VAlley 5-4460

MASSACHUSETTS

Newton Upper Falls 64
90 Linden Street
Phone: BIgelow 4-5495
Worcester 6
Gold Star Blvd.
Phone: PLeasant 5-2561

MICHIGAN

Battle Creek
2510 Dickman Rd.
Phone: WOodward 2-1130
Benton Harbor
Box 280 Yore Ave.
Phone: WA. 7-1605
Cadillac
314 Haynes St.
Phone: PRospect 5-3451
Detroit 13
10600 Gratiot Ave.
Phone: WAlnut 4-9300
Flint 1
P.O. Box 718
Phone: CEdar 5-2573
Grand Rapids
1222 Burton, S.E.
Phone: CHerry 3-3653
Kalamazoo 24
1919 Factory Ave.
Phone: FL. 4-0183
Lansing 6
310 Beaver Street
Phone: IVanhoe 5-3769
Monroe
2036 N. Monroe St.
Phone: CHerry 1-5630
Muskegon
537 Creston St.
Phone: 73-1445
Port Huron
724 10th Avenue
Phone: YUkon 4-4164
Ypsilanti
5046 W. Michigan
Phone: HUnter 3-4563

MINNESOTA

Minneapolis 5
126 North First Street
Phone: FRanklin 4-3606
St. Paul 7
Raymer Hardware Co.
41 East Fairfield
Phone: CApitol 7-6681

MISSISSIPPI

Jackson
P.O. Box 1313
Phone. FLeetwood 5-6478

MISSOURI

Kansas City 30
5001 East 59th Street
Phone: PR 2-6500
St. Louis 4
1617 Lafayette Ave.
Phone: PR 2-6500
Springfield
327 Booneville Ave.
Phone: UN 6-5041

MONTANA

Billings
P.O. Box 1768
Phone: 9-2463

NEBRASKA

Hastings
1751 West 2nd
Phone: 2-4175
Lincoln
E. Street at 27th
Phone: 5-3215
Omaha 2
1122 No. 19th Street
Phone: WEbster 7262

NEW HAMPSHIRE

Manchester
Route #1, Box 219A
Phone: NAtional 2-4274

NEW JERSEY

Boonton
Vreeland Ave. R. D. 1
Phone: DEerfield 4-3018
Middletown
68 Cherry Tree Farm Rd.
Phone: OSborne 1-1032
Saddle Brook
487 Market Street
Saddle Brook
P.O. Box Rochell Park
Phone: HUbbard 9-5908
Watchung
700 Somerset St.
Phone: PLainfield 4-9266
West Orange
106 Whittingham Pl.
Phone: ORange 2-1400

NEW MEXICO

Albuquerque
1726 Lomas Blvd., N.E.
P.O. Box 681
Phone: CHapel 3-6638

NEW YORK

Amityville L. I.
18 William St.
Phone: MYrtle 1-7000
Bedford Hills
140 Green Lane
Phone: MOunt Kisco 6-4566
Buffalo 11
587 Winslow Avenue
Phone: FIllmore 3800
Jamestown
1292 E. 2nd St.
Phone: 4897
Rensselaer
Sherwood Park
Phone: ALbany 77-3374
Rochester
230 Blakeslee St.
Phone: HOpkins 7-2391
Syracuse
100 Hiawatha Blvd. E.
Phone: HArrison 2-0191
Utica 3
1155 Mohawk
Phone: RAndolph 4-6444

NORTH CAROLINA

Charlotte
3024 Bank Street
Phone: JAckson 3-3935
Raleigh
P.O. Box 6323
Phone: TEmple 2-8711

OHIO

Ashtabula
1105 E. 18th. St.
Phone: WO. 40-216
Cincinnati 8
3650 Hyde Park Ave.
Phone: EAst 1-2822
Cleveland 28
16812 Miles Rd.
Phone: SKyline 1-2600
Columbus 23
422 Brehl Avenue
Phone: BRoadway 9-8629
Dayton 5
1936 North Main Street
P.O. Box 5
Riverdale Station
Phone: CRestview 5-1145
Girard
886 Shannon Road
Phone: LI 5-1030
Hamilton
320 East Ave.
Phone: 2-6411
Lima
763 W. North St.
Phone: CApital 9-6811
Mansfield
79 Glessner Ave.
Phone: LAfayette 2-3826
Newbury
Stone Road
North Canton 20
619 - 9th St., West
P.O. Box 2133
Phone: HY 9-2253
Painesville
39 Heckathorne Dr.
Phone: ELmwood 2-4054
Steubenville
Cadiz Rd. RD 2
Phone: ATlantic 2-9651
Tallmadge
767 North Ave.
Phone:
MEadowbrook 3-2326
Toledo 2
311-315 Tenth Street
Phone: CHerry 8-4606

OKLAHOMA

Lawton
18 C Avenue
Phone: ELgin 3-1792
Oklahoma City 7
3841 N. W. 10th St.
Phone: WIndsor 3-4468
Tulsa 4
1215 South Evanston
Phone: WEbster 9-7424

OREGON

Portland 1
4728 S. W. Macadam
Phone: CA 7-2658

PENNSYLVANIA

Erie
2001 West 12th St.
Phone: 6-2929
Harrisburg—Paxtang
31 S. 31st Street
Phone: CEdar 4-5075
Pittsburgh 36
Cochran Hill Road
Phone: TUxedo 4-0300
Scranton 3
313 Mulberry Street
Phone: DIamond 2-9231
Williamsport
800 Race Street
Phone: 3-4611

RHODE ISLAND

Pawtucket
Pommenville St.
P.O. Box 643
Phone: PAwtucket 5-3347

NORTH CAROLINA

Summerville
607 N. Hickory
Phone: TRemont 3-8726
Columbia
1231 Pine Belt Rd.
Phone: SUnset 7-9985

SOUTH DAKOTA

Sioux Falls
113 N. Main St.
Phone: 4-7757

TENNESSEE

Chattanooga 7
P.O. Box 226
Phone: MAdison 2-9964
Knoxville 19
1915 W. Cumberland Ave.
Phone: JAckson 5-1691
Nashville 3
138 13th Ave., No.
Phone: ALpine 6-2621

TEXAS

Abilene
1757 Wychwood
Phone: ORchard 2-3641
Austin
708 S. Lamar
Phone: HIckory 2-6761
Corpus Christi
3237 Lexington Blvd.
Phone: UL 2-6643
Dallas 35
2622 Fielder Court
Phone: FL 7-4679
El Paso
1830 Texas Street
P.O. Box 1442
Phone: KEystone 3-4481-2
Houston 21
P.O. Box 14338
Phone: OLive 4-4325
Lubbock
4302 47th St.
P.O. Box 3023, Elwood Sta.
Phone: SWift 9-6101
Odessa
3001 N. Golder
P.O. Box 71
Phone: FEderal 2-3122
San Angelo
1308 West Beauregard
Phone: 7776
San Antonio
411 Olmos Dr.
Phone: PErshing 5-3521
Tyler
Rt. 2, Dallas Highway
Phone: LYric 3-2901
Waco
Rt. 9, Box 1154
Old Dallas Highway
Phone: PLaza 4-5366
Westlaco
925 W. Hwy.
P.O. Box 17
Phone: WOodland 8-2420

UTAH

Salt Lake City 1
987 So. West Temple
Phone: DAvis 8-8646

VIRGINIA

Arlington 2
1233 Jefferson Davis Hwy.
Phone: OTis 4-5422
Richmond
21st & Stockton Sts.
Phone: BElmont 3-6967
Roanoke
210 Fourth St., S.W.
Phone: DIamond 4-9285

WASHINGTON

Seattle 4
3320 Airport Way
Phone: MAin 3-8350
Spokane 31
P.O. Box 4061
Phone: WAlnut 6-1674
Tacoma
Roy V. Stratton, Inc.
1751 Center St.
Phone: FUlton 3-2151

WEST VIRGINIA

Beckley
204 N. Oakwood
P.O. Box 1149
Phone: CLifford 3-8392
Bluefield
612 Bluefield
Phone: DA 7-9315
Huntington
204 21st St.
Phone: JAckson 9-7186

WISCONSIN

Milwaukee 14
8251 W. Greenfield Ave.
Phone: SPring 4-8500

CANADA

Ottawa, Ontario 3
335 Roosevelt Avenue
Phone: PArkway 2-6581

MEXICO

Mexico City, D.F.
Schumann 147
Phone: 25-28-94

POWERED DOORS FOR INDUSTRY

Crawford

"APPLICATION ENGINEERED"

FOUR-FOLD DOOR UNITS
CRANE RAIL DOORS
HANGAR DOORS
HOSPITAL DOOR UNITS
COMPUTER ROOM OPERATORS
GATE OPERATORS
PEDESTRIAN DOOR OPERATORS
REFRIGERATOR DOOR OPERATORS
SLIDING FIRE DOOR OPERATORS
OVERHEAD DOOR OPERATORS

Electric Doorman®

SINCE 1923

SPECIALISTS IN

POWERING
ALL TYPES OF
INDUSTRIAL
AND
COMMERCIAL
DOORS

ELECTRIC POWER DOOR CO., INC. MINNEAPOLIS 7, MINNESOTA

CATALOG NO. 1000-10

A.I.A. 16D

ELECTRIC DOORMAN serving industry, commerce, and government whenever doors must be opened and closed.

COMPANY BACKGROUND

The Electric Power Door Co., Inc., is one of the oldest firms in the country devoted entirely to the manufacture of Doors, Hardware, and Electric operators. We have served all types of industry, both large and small from coast to coast on their door problems. We welcome door problems of a special nature as well as regular everyday situations.

ENGINEERING SERVICE

Over thirty years experience gives Electric Power Door Co., Inc., the "know how" to offer special advice on any phase of power door installation for supermarkets, hospitals, factories, garages, or public buildings.

ELECTRIC DOORMAN doors, hardware and operators are designed to complement each other, offering the owner complete one-package units which simplify specification and installation and guarantee one-source service. Since each door presents a slightly different problem we recommend that you utilize this service.

NOTE: Standard drawings furnished upon request.

SPECIAL FEATURES AND ADVANTAGES

Fast Open and Close Action: Permits three to four second open and close operation under all types of weather conditions.

18 to 25 years longer life: ELECTRIC DOORMAN doors, hardware and operators give you up to 18 to 25 more years of service. Maintenance is less than any other unit manufactured.

Warranty: After being in business for more than thirty years, Electric Power Door Company, Inc. gives you, the customer, a guarantee second to none. All products listed and illustrated in this catalog carry a one year guarantee from date of installation.

Unitized Construction: All components are designed to complement each other. This insures simplified installation and service.

Recognition: For more than 30 years, leading architects and contractors have recognized ELECTRIC DOORMAN products as the most reliable door systems available.

SPECIFY ELECTRIC DOORMAN SIMPLY AND WITH COMPLETE CONFIDENCE. ALL SIZES AND APPLICATIONS. WRITE OR CALL COLLECT FOR COMPLETE SPECIFICATIONS FOR YOUR SPECIAL DOOR PROBLEM.

A GUIDE TO ELECTRIC DOORMAN UNITS AND THEIR USE

	APPLICATIONS	DESCRIPTION	PAGE
Four Fold	Factories, warehouses, fire stations.	Unitized Door Design Sections, hardware and operator.	4
Crane Rail	Warehouses, rail terminals, rail shipping and receiving.	Vertical lift sections coordinated with sliding door units.	7
Hangar Doors	Commercial, private and Government type applications.	Tip up and sliding type, manual or power operation.	11
Hospital and Computer Room Doors	Operating room doors, recovery areas, X-ray rooms, computer room entrances.	Fast, quiet dependable operation utilizing little space.	12
Gate	Industrial, commercial and private estate, wherever privacy and convenience is desired.	Swing or sliding gate operators.	13
Pedestrian Door	Supermarkets, drug, and department stores, hospital corridors.	Self-contained, all electric door operator.	14
Sliding Fire Door	Factories, warehouses, office buildings and storage areas.	Operators and hardware does not interfere with fusible links.	14
Refrigerator Doors	Food handling areas and freezing compartments.	Crane rail type openings, sliding refrigerator doors and dual lapped doors.	15
Controls	All units.	Radio, pull cord, electric eye equipment, 1 and 3 button control stations.	15

Sales and service in principal cities throughout the United States. If not, call or write factory, collect.

THESE ARE SOME OF THE PEOPLE ELECTRIC DOORMAN SERVES

Boeing Aircraft
Pillsbury Mills
Twin City Rapid Transit
Loop Parking Garages
Highway Dept. of Minnesota
Northern Pacific R.R.
Northern States Power Co.
Northwestern Bell Telephone Co.
Northwest Airlines
Milwaukee R.R.
Methodist Hospital
Shell Oil Co.
DuPont & Co. D.N.
Great Northern R.R.
Minn. Mutual Insurance
St. Paul Fire & Marine
Red Owl
Super Valu
A&P
Safeway
Hoves
Fairway
Penn Fruit
Daitsch Shopwell
Mayo Memorial Hospital
Ford Motor Co.
General Motors Corp.
Minn. Mining & Mfg. Co.
Proctor & Gamble
Lockheed Aircraft
General Mills
Cargill, Inc.
Phillips Petroleum
Greater Winnipeg Transit Co.
Waldorf Paper Co.
Green Giant Corp.
Texas Co.
Hamm's Brewing Co.
Metallurgical Control
Chicago Sun Times
Trane Company
Hughes Tool Co.
Martin Co. (Aircraft)
Camiskey Ball Park
Chicago Art Institute
Western Electric
Dormeyer
B. F. Goodrich
Seaboard Airline R.R.
International Business Machines

FOUR FOLD DOOR UNITS

DOORS • HARDWARE • OPERATOR

GENERAL DESCRIPTION

Four Fold doors are application engineered by the Electric Power Door Company, Inc. to assure the ultimate in door design and operation. Each door is so designed to give the customer a unit which is capable of smooth positive operation for many years, even under the most adverse conditions. The four fold door is available in all standard sizes as well as special made to order applications. All units are available for either manual or power operation.

DOOR SECTIONS

Door sections can be manufactured from wood, metal covered wood, steel or hollow metal.

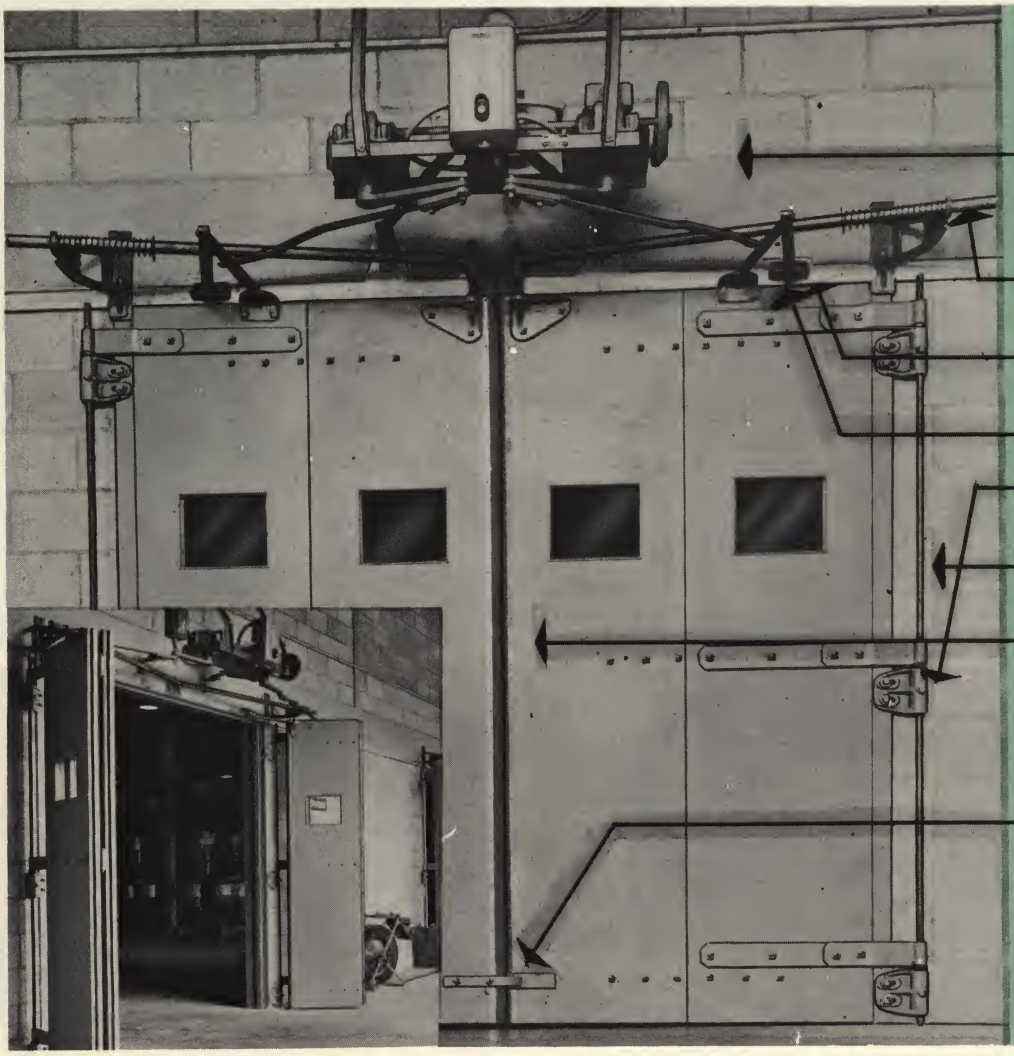
1. Wood Doors: All wood doors can be obtained in either flush or panel type construction and shall be warp resistant if desired.
2. Metal Covered Wood Doors: Metal covered wood doors can be manufactured to customer's specifications with any type or gauge of facing.
3. Steel Sections: Steel sections can be channel or tubular type construction, using any type or kind of steel.
4. Hollow Metal Doors: Hollow metal door sections can be manufactured to customer's specifications and needs; this type of section construction can be sound deadened if desired.

HARDWARE

Four Fold doors are entirely side mounted with custom made hardware. Doors swing freely on hinges equipped with Timken roller bearings which in turn are fastened to continuous cold rolled steel pintle shafts. Upper track is non-binding and serves as a guide for the center sections and is instrumental in resisting windloads up to
Fold hinges are extra long and non-sag and thru-bolted to standing hinges. Hardware also includes center astragal and floor drags with metal binding, center guide arms or floor plates and offset standing hinges which allow for clear opening from jamb to jamb.

OPERATOR

ELECTRIC DOORMAN operators are a unit which draws from thirty-five years of on-the-job experience. Its unique dual gear box design and quality permits long life and effortless operation. During the opening and closing cycle operator smoothly starts and stops with no jerking or racking. (Unit is instantly reversible and door is automatically locked, when in closed position.)



FEATURES

- DUAL GEAR BOX OPERATOR WITH SELF-LOCKING GEAR AND WORMS
- ROUND NON-BINDING CENTER LEAF TRACKS
- LAZY ARM OPERATING LINKAGE
- EMERGENCY RELEASE
- HINGES WITH TIMKEN ROLLER BEARINGS
- CONTINUOUS STEEL PINTLE SUPPORTS
- RUBBER ASTRAGAL AND FLOOR DRAGS
- GUIDE ARMS PROVIDE CLEAR FLOOR FOR FORK LIFT TRUCK TRAFFIC
- FLOOR PLATES (ALSO AVAILABLE)

One of 45 fire stations, Minneapolis, Minnesota

Red Owl Warehouse, Green Bay, Wisconsin

Power Equipment Building, St. Paul, Minnesota

Double Rail Entry—Red Owl Warehouse, Green Bay, Wisconsin

FIRE STATION DOORS

Used on fire stations in New York, Albany, Buffalo, Chicago, Minneapolis, and others for over 25 years. Doors will open in 3 to 4 seconds and are practically wear proof. Average maintenance costs run less than 60 cents per door per year. Doors can be equipped with time delays, safety edges and are instantly reversible. In cases of power failure, doors can be manually operated.

WAREHOUSE TRUCK DOORS

Fast open and close operation retains heat in cold weather and permits more efficient handling of traffic. Available with a variety of controls such as heavy duty pull cords, all weather ground trips, electric eye equipment or push button. This type of door will give a minimum of 20 years service.

MONORAIL DOORS

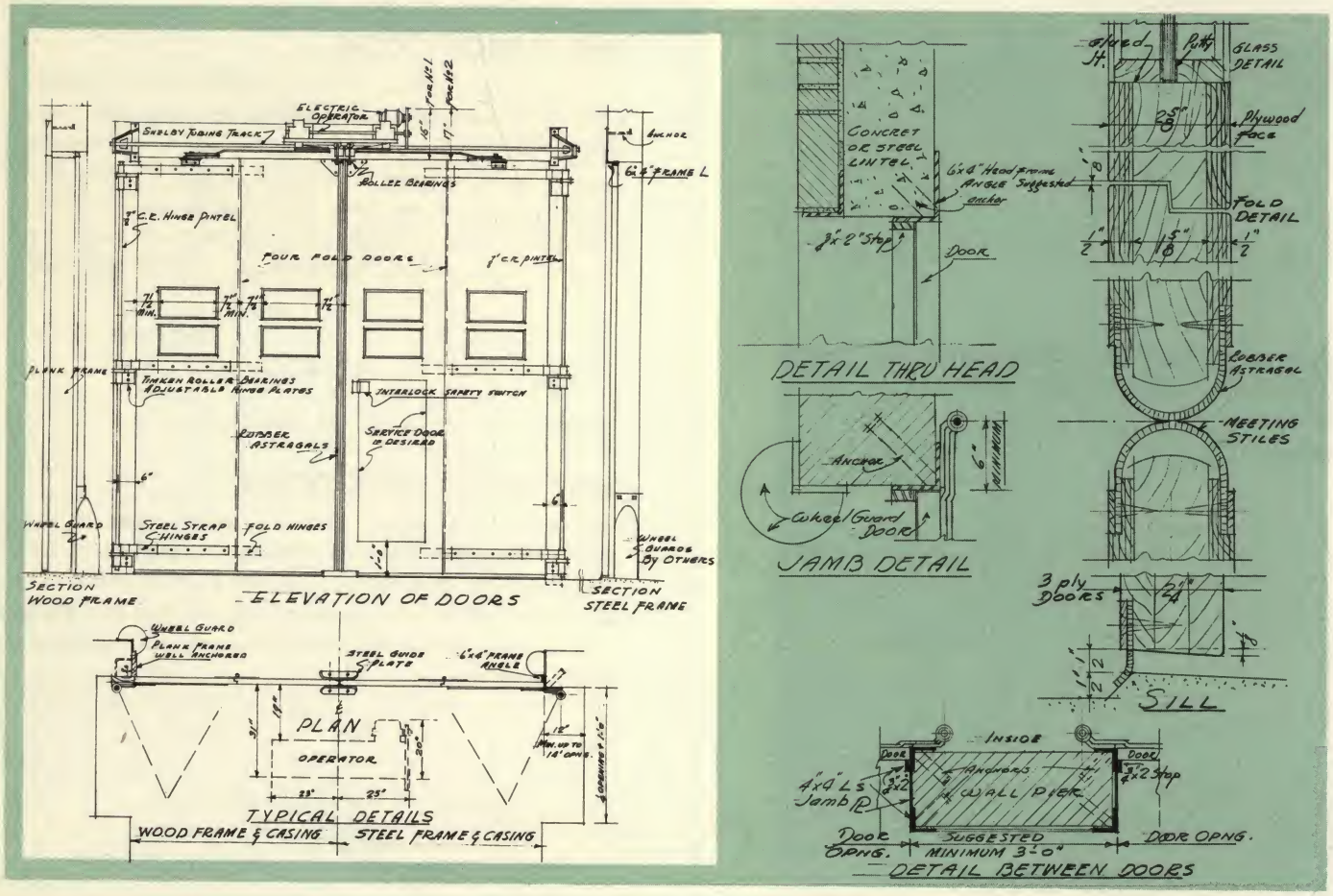
Crane rails present no difficulty for ELECTRIC DOORMAN Four Fold doors. Doors can either be manual or power operated. This is a standard unit and performs with the same efficiency of all other four fold doors.

RAILROAD ENTRANCE DOORS

Where large clear openings are required, ELECTRIC DOORMAN four fold doors are the answer. Doors can be engineered to open in or out, depending upon the circumstances. Doors are unaffected by snow or adverse weather conditions and can withstand wind pressures up to 30 PSF. ELECTRIC DOORMAN four fold doors are insulated and weather tight. Doors can be operated either manually or electrically and each half can be operated independently of the other.

NOTE: Check local and state codes for width and height requirements.

FOUR FOLD DOOR UNITS



SPECIFICATIONS: All Types of Doors—Warehouse, Garages, Fire Stations, Round House, Mines, etc.

Furnish and install ELECTRIC DOORMAN Four-Fold Doors, Hardware, Operators of proper size for opening.....Wide.....High.....thick using all ELECTRIC DOORMAN materials. Manufacturer to certify UNIFIED design for specific use. Doors Model.....Hardware Model.....Operator Model.....Voltage.....Phase.....Controls Model.....
See selection chart page 4.
of the size and quality recommended by the manufacturer. Doors, Hardware, and Operators to be complete in operating order, except for wiring conduit to controls and motors. ELECTRIC DOORMAN units to be started and adjusted after wiring by Electrician following approved wiring diagram. Local distributor must install and service door equipment when requested.

DOORS—ELECTRIC DOORMAN. Model 8 doors shall be warp proof panel doors of tongue and groove, nailed, wood strips on 4" centers, kiln dried and free of imperfection. Model 38 metal covered flush door (wood core) covered with 26 gage steel, thickness as required. Model 18 tongue and grooved, flush wood door same as Model 8 except doors have steel frame to which all supporting hardware is attached. Model 28 (standard) wood flush core door using plank frame covered on both sides with Douglas fir plywood, marine glued and blind nailed to mortised and tennoned frame. Model 16 (standard) three-ply panel door with stiles and rails, 7½" wide including glass stop, minimum bottom rail 12", top rail 8". Model 46 formed channel door covered with corrugated or flat steel one side only. Model 48 formed 18 gage flush one side, stile and rail other side. For hangar doors Model 99. NOTE: All doors shall consist of four leaves as shown on drawings, rabbetted at the folds, shaped and fitted for rubber astragal at the centers and rubber drags on bottoms. Note: One, two, or three leaf doors may be furnished for special use.
Wood door sections, if desired may be immersed for 3 minutes in NWMA solution wood life repellent per government specifications TT-W572. Wood or metal doors may be factory primed if desired with a coat of chromite or white lead. All doors shall be warp proof and not require external bracing. Door thickness provided to depend on size of opening for use as recommended by manufacturer.

PASS DOORS: Note; Use of pass door when desired is recommended since it does not weaken doors. Provide pass door in one center leaf, safety inter-lock switch to prevent injury to pedestrian by cutting off power supply to operator while door is open. Pass door is hinged on right hand side (inside view) has a spring close mechanism swings to outside of building, with cylinder lock master keyed, if desired.

HARDWARE—ELECTRIC DOORMAN. Hardware must be as recommendd for door size required to permit easy manual movement of doors in emergency, regardless of size, assuring long life for electric operator, entirely jamb supported using continuous pintle to equalize bearing load on each hinge. Adjustable slotted through hinge plates of steel for tap securing or welding to steel jambs. Hinge plates slide over a ⅞" cold rolled steel pintle. Each standing hinge to be supported on Timken roller bearing. Provide number of standing hinges required by weight of the doors, offset 6 to 10 inches so doors can move out of opening. Steel standing hinges to be 3" to 4" wide x 5/16" thick, of ample length to prevent sagging, through bolted to doors with ½" or ⅜" machine bolts. Standing hinge (5/16") to be lapped and welded to ⅝" thickness for not less than 12" from pivot point of pintle. Provide 1½", 1¾" or 2" thick wall Shelby tubing track or 4" or 5" I-beam with anti-friction track rollers, securely fastened over door frame as guide for center door leaves.

ASTRAGAL—Provide ELECTRIC DOORMAN heavy rubber astragals Model 141 for 1¾" doors, Model 151 for 2¼" doors, Model 161 for 2⅝" or 3" doors as detailed, secured by heavy aluminum bars screwed to doors on 6" spacing. Provide heavy rubber drags, Model 222 at floor line to make door weathertight. Furnish bottom center lock bars at floor line or moulded cast iron guideplates anchor lagged into cement floor. All hardware except Shelby track to be given coat of rust inhibiting aluminum or gray paint.

DOOR FRAMES (by others). Furnish detail to manufacturer of steel door frame and stops prior to fabrication and erection showing drilling and tapping required to support hardware, track and operator.

OPERATOR: Provide ELECTRIC DOORMAN operator Model SP for single phase Model TP for three phase current, instantly reversible, horse power to be of sufficient size to open or close doors against 30 pound per square foot wide pressure without noise or vibration. Operator must start motor with no load to open or close for first ½ second operation, then rapidly open or close, then quiet slow stop which locks doors open or closed. Provide emergency disconnect from floor level in case of power failure. ELECTRIC DOORMAN unit must have instantly reversible ball bearing motor with manual reset overload, adjustable slip clutch, and positively adjusted rotary type limit switch, using two or more Micro-Switches. Heavy-duty latching relay to be used for one button momentary contact, switches Models 1 to 6, two-button constant pressure switches open, close use double wound motors, Model 2 series. Furnish heavy-duty inter-locked magnetic reversing starters for Model 3 three-button switch operation (open, close, stop) or three phase current. Worms and gears to be immersed in all-weather lubricant, sealed in heavy housings. Provide weatherproof cover if doors swing out. Each half of unit to be positively synchronized and powered from same ¾" steel shaft.

NOTE: except for dual operation where each side operates independently, one motor is provided. ELECTRIC DOORMAN operators to be mounted free of the doors above or to side of door opening. SEE OPERATOR AND HARDWARE HEAD ROOM TABLE.

CRANE DOUBLE RAIL DOOR UNITS

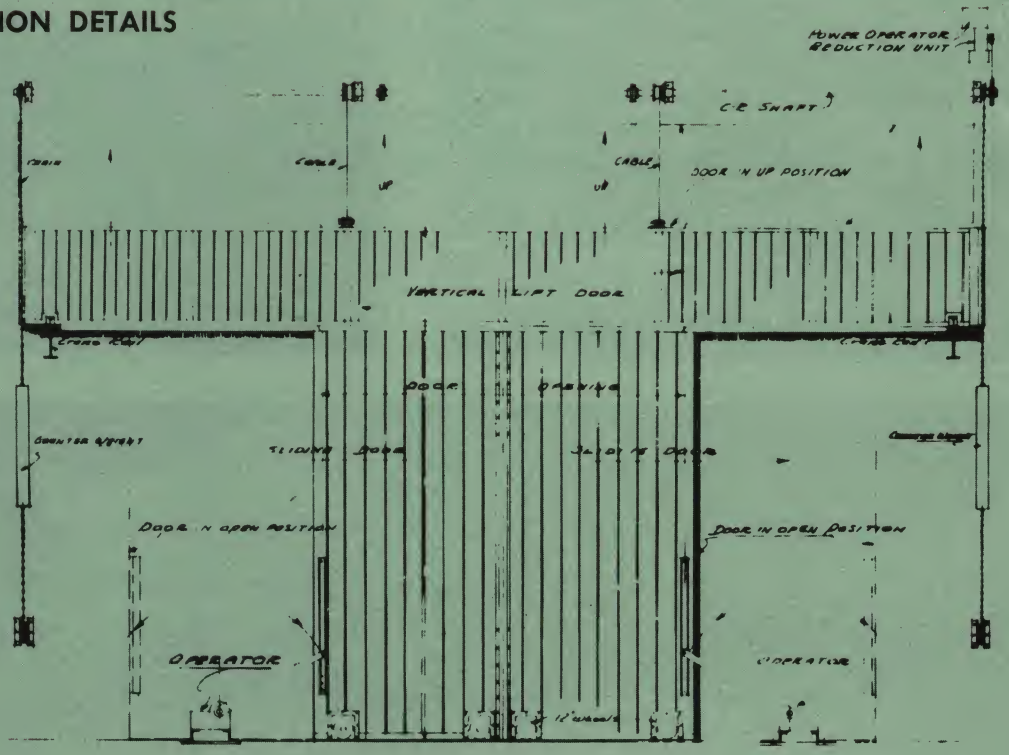
Crane double rail doors as shown above are interlocked and provide a weathertight closure. Unit illustrated consists of a 55′ x 10′ vertical-lift door above and two 10′ x 20′ sliding doors below. Sliding doors cannot open unless doors above are in place. Large crane door can't move unless lower doors have slid to each side. Speed of entire operation is approximately 15 seconds. Vertical-lift door is counter weighted and will withstand 90 miles per hour wind pressure. Doors are entirely of steel and are insulated. All doors can be operated by hand in case of power failure.

SPECIFICATIONS

Furnish and Install ELECTRIC DOORMAN crane double rail doors and sliding access doors below, where shown on plans. Vertical lift doors to be operated by heavy duty gear reducing unit with self-locking gears on 230 or 440 volt, three phase current constant pressure two-button switches on 115 or 230 volts. Size of motors as required.

Sliding door units to be cable or chain actuated and must be capable of being manually operated. Provide all doors, weatherseal, hardware and operator to properly perform efficient door operation. Supply frame details and wiring diagrams for contractor and electrician.

INSTALLATION DETAILS

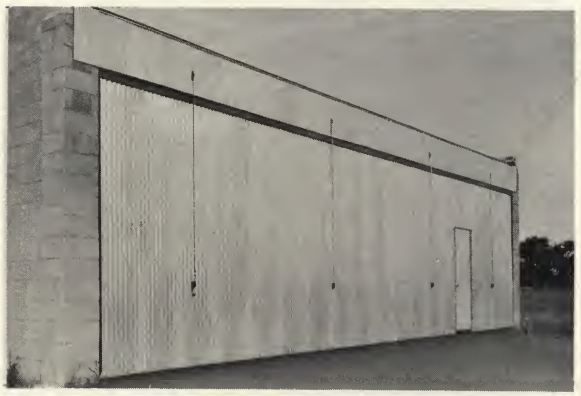


HANGAR DOOR UNITS

light and commercial aircraft

At right are sequential photos of one of many hangar doors installed by ELECTRIC POWER DOOR COMPANY.This door is supplied complete with hardware and operator as a unit, thereby assuring owner and architect of smooth, long lasting trouble free operation. Although standard sizes listed below are the most economical, larger sizes and special doors are available. Also available are horizontal multiple leaf sliding doors for large commercial hangars.

Call collect for further information for all types of hangar doors.



SPECIFICATIONS:

GENERAL:

Door shall be of the tip-up, canopy type, lifted by cables and counterweight and guided by jamb and top rollers.

DOOR CONSTRUCTION:

Door framing shall be light structural steel or formed sheet steel completely fabricated for field bolting. When closed, door will safely withstand wind loads of 10 pounds per square foot or more, if required. Facing may be of corrugated steel, aluminum or translucent plastic.

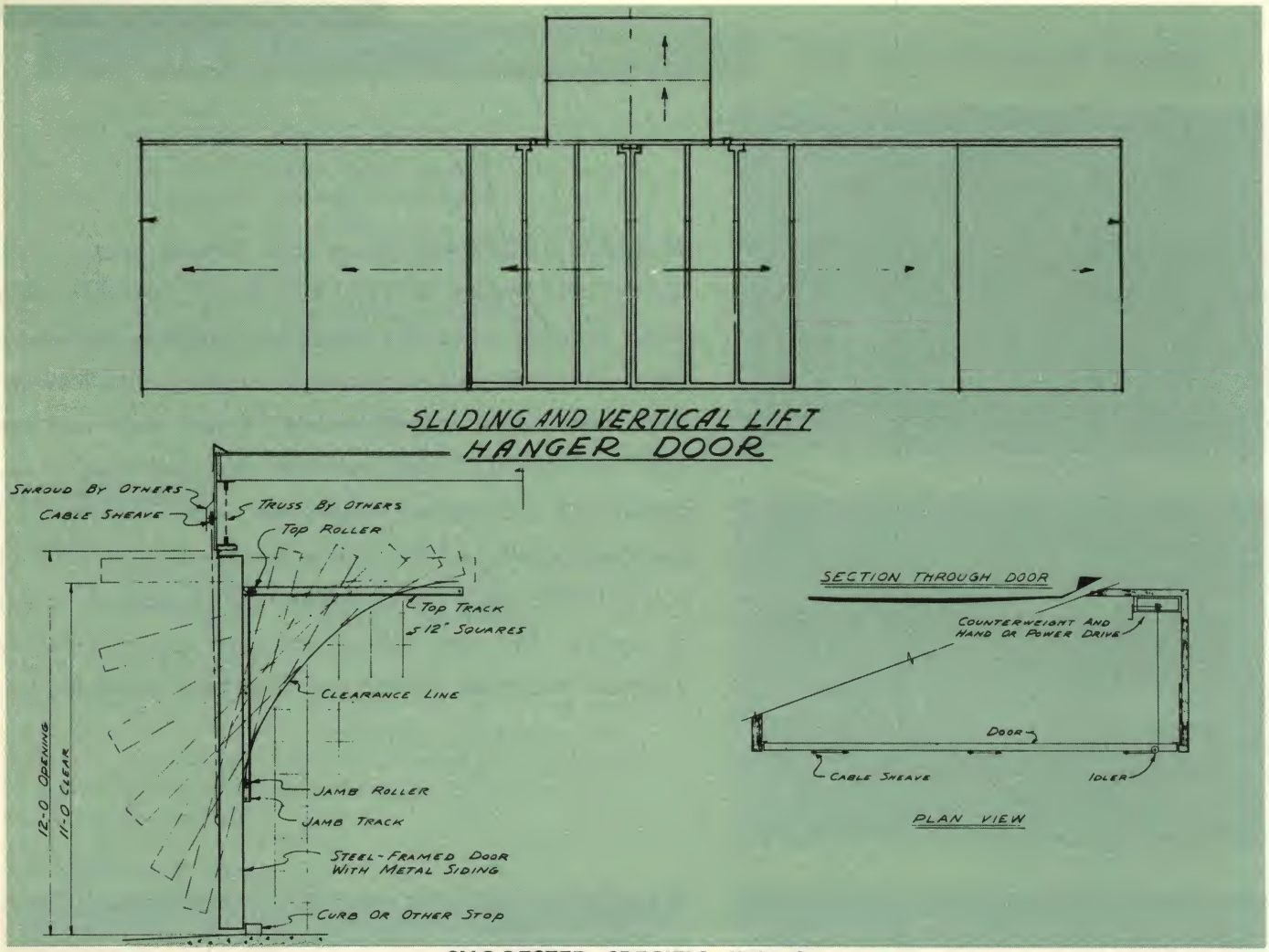
HARDWARE AND DRIVE:

Ball bearing jamb rollers run in tracks at the jamb. Top rollers (two or more as required) are ball or roller bearing type. Cables (three or more as required) run over bronze-bushed or ball-bearing sheaves to the traction drum and counterweight. Door is balanced in all positions. Traction drum may be driven by hand crank or electric motor operator, as desired. Doors are locked in closed position by chain bolts.

MISCELLANEOUS:

Weatherstripping is available. A pass door may be provided in the main door at extra cost.

ELECTRIC DOORMAN tip-up type hangar doors. Door illustrated is typical of over 100 Ready Aircraft Shelter doors installed in various military installations throughout the world. Built and fabricated to exacting specifications, these doors weigh approximately 14 tons each and are 96'0" wide x 32'0" high, yet they open and close in approximately two minutes. Doors are power operated and are counterbalanced in such a manner that in case of power failure doors can be opened easily under the effect of gravity. The basic design has been very successfully adapted for commercial hangars, fixed base operators, etc.



SUGGESTED SPECIFICATIONS

GENERAL: The doors shall be the sliding or rolling steel type with one power leaf and two idler leaves per opening. The three openings shall be served by three continuous top guides and bottom rails such that the three leaves of one opening may be stored in the adjacent opening. The power leaf will pull the idler leaves by means of pick-up plates.

DOOR CONSTRUCTION: Doors shall be framed of structural steel proportioned to withstand dead load, dynamic loads, and 20 PSF wind load, with maximum deflection of 1/120 of the span. The skin shall be 16 gauge or heavier flat steel (primed) fastened by screws or welds. Insulation shall be installed to the inner surface of the skin and half by sheet metal retainer members. A wainscoting of 22 gauge steel deck shall be installed over the insulation to a height of 8′.

DRIVE: The drive shall consist of motor, worm gear reducer, disconnect and torque-limiting clutch, and chain drive to one wheel. The drive shall be sized adequately to move the power leaf and two idler leaves at rated speed, not to exceed 60 feet per minute. The leaves shall be fitted with pick-up plates which engage the power leaf with the idler leaves without undue shock and stress.

HARDWARE: Bottom rollers shall be 12″ or larger diameter with pressure-lubricated tapered-roller, heavy-duty roller bearings, all sized for the specified loads. Wheels shall be of steel with machined treads and bearing seats. Top rollers shall be steel or cast iron and bushed with oilite bronze and sized for the specified loads. Provision for roof deflection shall be made by selecting the correct guide depth. Bumpers shall be furnished to prevent damage if leaves strike each other or the building. Bar pulls shall be furnished at the leading edge of the power leaves.

CONTROLS: A factory-wired control panel shall be mounted on the interior of the power leaf and shall include magnetic starter, control transformer and necessary relays. A safety edge device shall be provided at the leading edge of the power leaf. An "OPEN-CLOSE" pushbutton shall be provided on the interior side of the leading leaf at the leading edge. It shall be necessary for the operator to maintain pressure on the push-button and walk along with the door when moving.

ELECTRICAL: Electrical components shall be provided and mounted by the door contractor. Interconnecting wiring, conduit and a suitable service to the power leaf shall be by the electrical contractor. All electrical shall be 48″ above the floor.

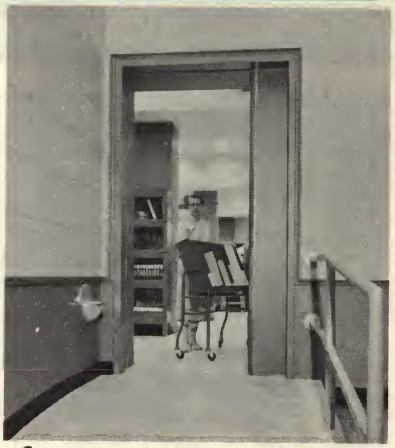
WEATHERING: Weathering shall consist of 1/8″ cloth-inserted rubber sheet of first quality natural rubber equal to U. S. Rubber Diaphragm Sheet #509. This shall be applied to laps and sill in single flap form. Weathering at the head shall be 18 gauge galvanized steel bolted to the door and bent to close the space between door and top guides.

ACCESSORIES: Included are a pass door with electrical inter lock in each power leaf.

BY OTHERS: Bottom rails, top guides and installation thereof shall be by others but the work shall be inspected and approved by the architect and door contractor. Bottom rails shall be ASCE, 30 lbs. per yard.

HOSPITAL AND COMPUTER ROOM DOOR UNITS

Unit eliminates wasted space entirely by sliding into wall pockets. Actuated by elbow switches which are accessible to the shortest nurse or tallest doctor. These units are used as entrances to operating rooms, preoperating areas and surgical recovery rooms where fast, quiet and efficient door operation is absolutely necessary. Doors open at two feet per second and close at one foot per second. In case of power failure doors automatically disconnect from mechanism and can be used as manually operated units. When power is restored doors automatically revert back to power operation. A safety edge is provided so that when striking an obstruction they immediately reopen. Doors are hollow metal with stainless steel covering.



Computer room entrance at Saint Paul Fire & Marine Insurance Co., Saint Paul, Minnesota.

SPECIFICATIONS

Furnish and install ELECTRIC DOORMAN hospital operating room bi-parting doors, hardware, and operators. Doors to be hollow metal covered with stainless steel kick plate or wainscoting both sides. Doors to operate at two feet per second to open, one foot per second to close. Doors reverse and open if they hit an obstruction. Unit is to be powered by adequately-sized gear reducing motors and electric slip clutches on 110 volt, single phase current. Doors must be free for manual operation in case of power failure. Doors must be quiet during operation.

Two of 14 pairs of doors at Mayo Memorial Hospital operating rooms, University of Minnesota.

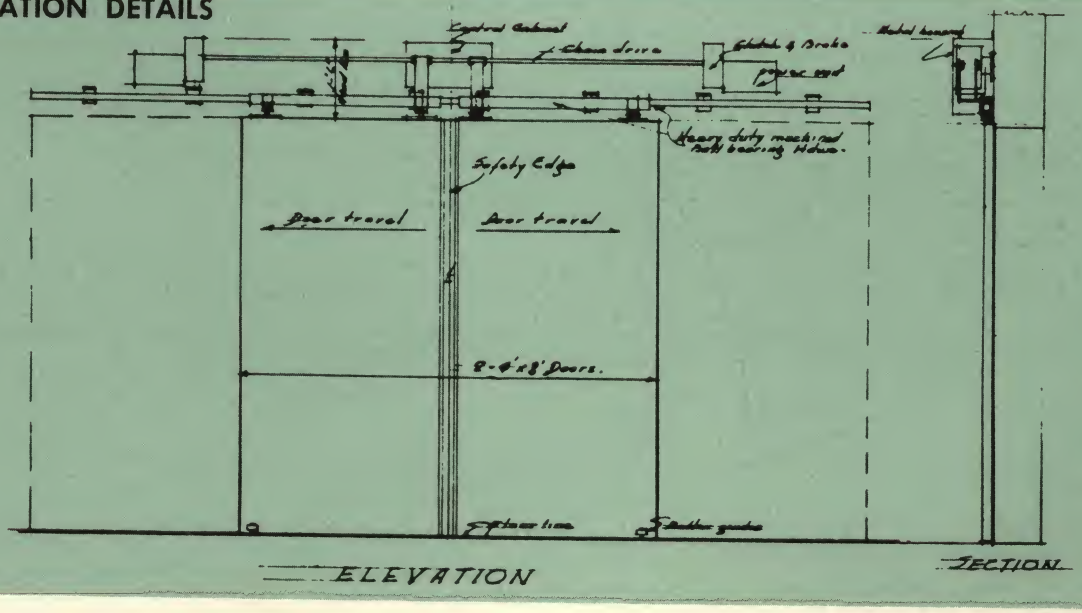
SWINGING DOOR OPERATOR

For automatic operation of corridor doors, main entrance doors. See page 13 for description of ELECTRIC DOORMAN swinging door operators.

AMBULANCE ENTRANCE DOORS

Fast acting, dependable four fold doors as pictured on pages 4 and 5 with automatic or semi-automatic controls are a definite advantage on entrances to ambulance garages.

INSTALLATION DETAILS



GATE OPERATORS (Swing Type — Sliding Type)

SWITCHES

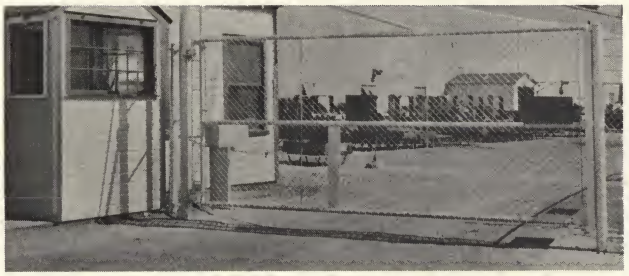
Standard: One Button (Toggle type) 3 and 4 way. Opens and closes — instantly reversible — No stop. Models 1 and 1A.

Radio Controls: One Button (Push or Start type). Momentary contact used with ratchet relay for radio control (Perma Power) FCC approved instantaneous transmission 200 feet. Two tubes receiver, 1 transmitter, all same tube, comes complete with service manual, interchangeable frequencies. Quick transfer to new car; transmitter comes 6 or 12 volt.

Special Controls: (See Page 15). Key post switch, ground trip, pull cord, or electric eye also use same two wire switch system as above. Two Button — Open, Close: Constant pressure stops when finger is removed, instantly reversible. Models 2 and 2A. Three Button — Open, Close, Stop — Momentary Contact Model 3, 4, 5.

Speed Minimum 10 seconds open or close } Swinging Gates
Maximum 20 seconds open or close }
Maximum 1 foot per second for sliding gates

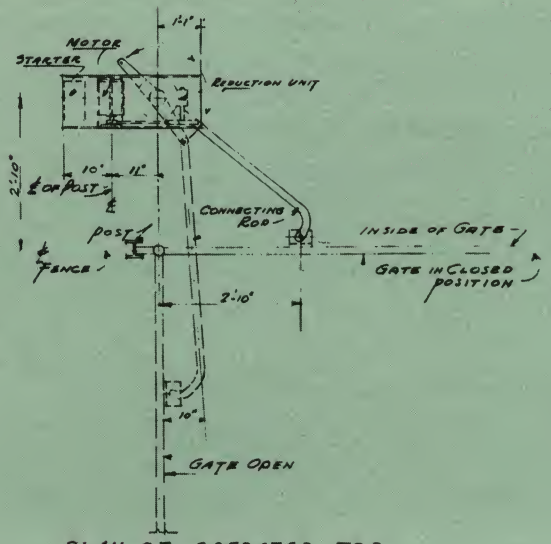
NOTE: Average speed set for normal walking speed at end of gate on swing type or one foot per second on sliding type.



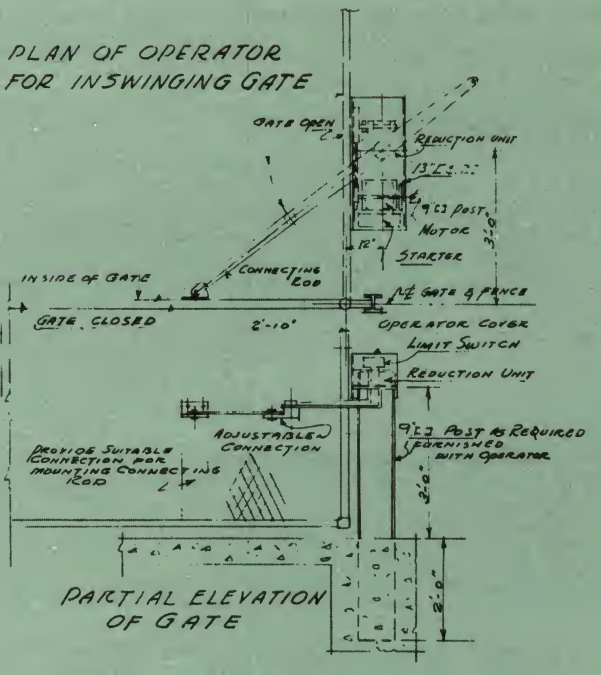
SPECIFICATIONS:

Furnish and install ELECTRIC DOORMAN gate operator for single or double leaf swinging or sliding gates (gates by others). ELECTRIC DOORMAN unit must be of proper size for gate opening specified. Unit shall be powered by properly-sized. Instantly reversible, double wound motor for single phase operation. Electrically reversible with heavy duty magnetic contactor and thermal overload for three phase operation. Unit to be operated by controls as selected (see types of controls this page). All units to be instantly reversible if tripped mid cycle. Unit to come complete with 2 back to back 9" welded mounting channels (must be set in concrete exactly as shown on installation detail), weather resistant 18 gage steel galvanized cover, must have self-locking worm and gear, immersed in all weather lubricant, shafts sealed against leakage and where required ball bearing alignment bearings. Each unit must have rotary type limit switches which when once set control gate accurately. All exposed parts to be rust-resistant. When desired unit is provided with lock unit which releases arm from gate in case of power failure. Unit to be tamper proof from outside gate. Vertical mounting bar, only part not furnished, to be connected to gate by gate manufacturer and varies on each gate. See photo of single swing 18′ gate this page.

INSTALLATION DETAILS



PLAN OF OPERATOR FOR OUT SWINGING GATE



PLAN OF OPERATOR FOR INSWINGING GATE

PARTIAL ELEVATION OF GATE

PEDESTRIAN AND DOOR OPERATORS

The new improved ELECTRIC DOORMAN pedestrian door operator is the only all-electric door opening device of its kind. Designed, engineered and produced by a manufacturer of automatic door operators since 1923. It is a silent, sturdy and maintenance free of quality construction. Because it is an all electric, self-contained unit, there are no hydraulic lines, pumps or pressure tanks to complicate the installation. Everything is enclosed in one operator housing located either in the floor or at the door head. The all electric ELECTRIC DOORMAN pedestrian door operator is highly adaptable for use in grocery, drug, and department stores, computer rooms, hospitals, terminal building entrances, office buildings, plants, rest rooms or wherever there are large amounts of pedestrian traffic.

FEATURES OF THE ELECTRIC DOORMAN PEDESTRIAN DOOR OPERATOR

Appearance: Complete operator unit concealed in the floor or mounted over the door results in an absence of unsightly lines, space wasting tanks or compressors.

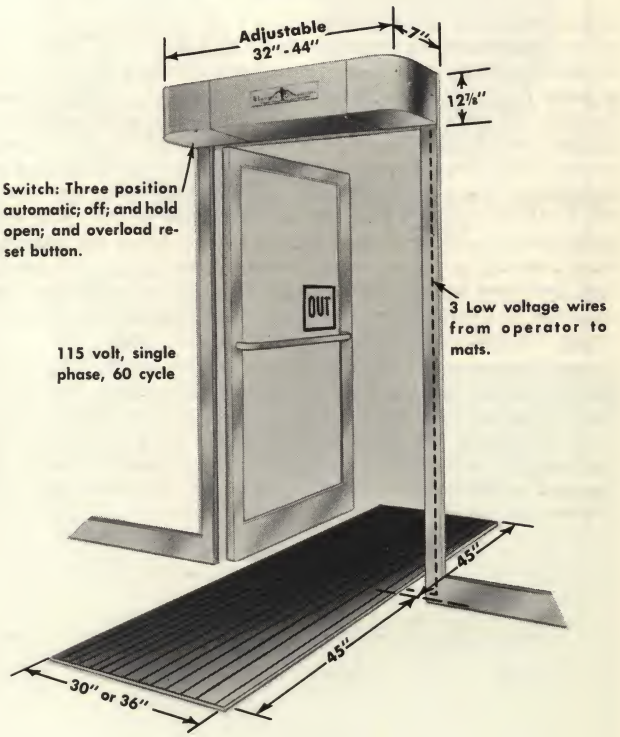
Convenience: Automatic disconnect from power unit allows manual operation in event of power failure. Unit automatically reverts back to power operation when power is restored.

Safety: Operator has incorporated safety features to protect persons, goods, grocery carts, and doors. Doors operate at a smooth constant speed and have adjustments for varying the driving force for both open and close. Doors will not operate when treadle is depressed on outswing side of door. Guide rails are available to help route traffic.

Versatility: This unit is available for either in-the-floor or over-the-door mounting requiring no additional door frame reinforcing. The only requirement being *115 volt current* to the operator location.

Instead of using springs the door operator drives the door closed the same as it does when opening. This assures positive closing regardless of wind or draft conditions.

Quality and Engineering: The ELECTRIC DOORMAN pedestrian operator is not affected by temperature extremes and will operate from −40°F. to +120°F. Adjustable driver limit switches are readily accessible. All components are of highest quality and have proven their reliability through long and dependable service.



OVERHEAD OPERATOR UNIT

The overhead type operator is designed to work equally well in existing construction where installation of a concealed unit is not practicable or in new work. Its neat and attractive appearance does not detract from the decor of the area.

Mats: Either 30 or 36 inch mats may be specified. Special sizes available at extra cost.

ELECTRIC DOORMAN SELECTION TABLE

THRESHOLD UNIT This unit is available only for center hinge or offset hinge		OVERHEAD UNIT For all types of hinges	
MODEL	SWING	MODEL	SWING
EDT-C	Clockwise	EDO-C	Clockwise
EDT-CC	Counter Clockwise	EDO-CC	Counter Clockwise
EDT-OC	Offset Pivot Clockwise	EDO-OC	Out Swing Clockwise
EDT-OCC	Counter Clockwise	EDO-OCC	Out Swing Counter Clockwise

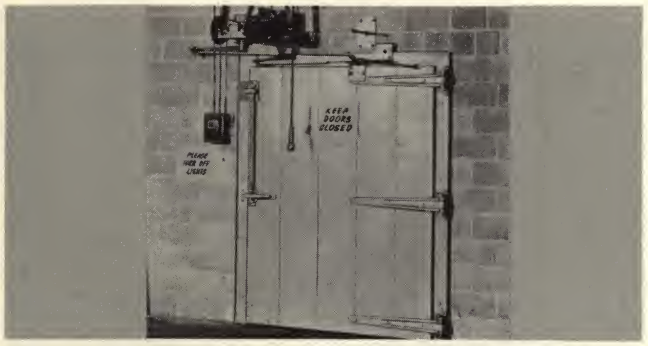
SPECIFICATIONS

General: Furnish and install ELECTRIC DOORMAN all electric pedestrian door operators as manufactured by Electric Power Door Co., Inc., 2127 East Lake Street, Minneapolis 7, Minnesota. Operators to be Model No. for (floor/overhead) mounting. Operator shall be completely self-contained, requiring no remote pumps, compressors, hydraulic or pneumatic tubing; and shall automatically disconnect in case of power failure and reconnect when power is restored, shall be provided with hold open-off-automatic toggle switch, motor overload reset and actuating mats.

Operator: Each operator shall consist of one electrically-driven motor unit with positive, constant speed drive in both directions and metal threshold case for below floor mounting or operator cover if used for overhead mounting. Operators shall be complete in all respects including controls, hangers, and anchors.

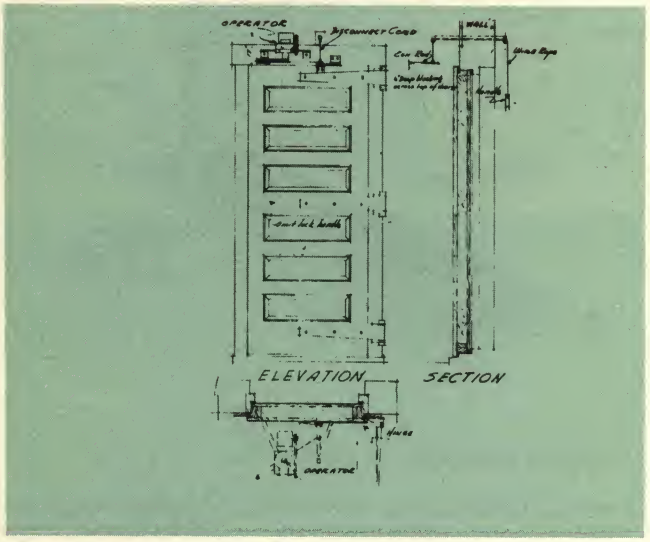
Controls: ELECTRIC DOORMAN operators shall be actuated by means of (treadles/elbow switches/push buttons/electric eyes) which, in turn shall be installed in accordance with drawings and directions as furnished by the manufacturer.

REFRIGERATOR DOORS



Model 6080 Electric DOORMAN operator for cooler door—
Red Owl Warehouse, Green Bay, Wisconsin

Electric Doorman refrigerator door operators are used and recommended by refrigerator door manufacturers because they provide smooth, fast, and non-violent opening and closing plus holding the door rigid against the jamb creating a tight seal. Longer door and hardware life can be expected because of this smooth and non-jarring operation, and also is not dangerous to personnel. The door equipped with Electric Doorman units moves slowly to start then fast at the middle of the cycle and slows down for an easy stop. Four to six seconds is the approximate opening or closing time. Normal operation is with heavy duty pull cord controls although other types are available. The operator is available also for dual lapped doors, doors with crane rail openings, and sliding refrigerator doors.



SPECIFICATIONS

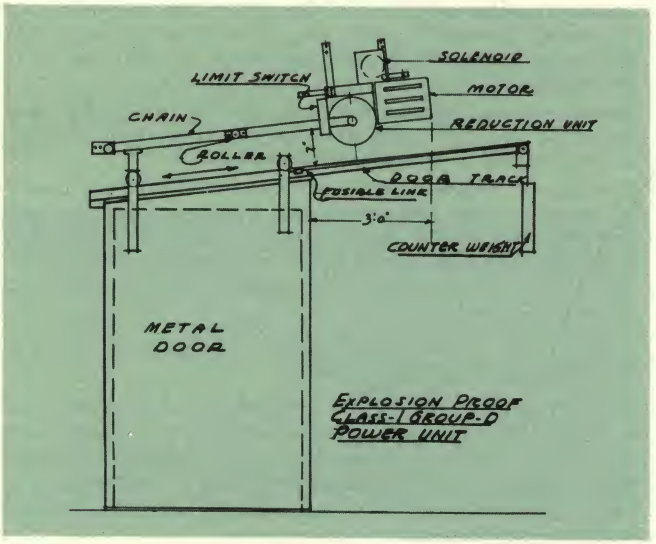
Furnish and install ELECTRIC DOORMAN operator as required to be mounted above the overlapping pair or single swing refrigerator door. ELECTRIC DOORMAN operators to be operated on 208 volt, single or three phase current, with motor of sufficient size to open or close doors against 30 P.S.F. wind pressure without noise or vibration. Operator manufacturer to provide door fabricator with detail of reinforcing timber to be provided by them across inside of door for door arm connection. The door equipped with ELECTRIC DOORMAN unit moves slowly to start, faster at the middle of the cycle, then slows down to a non-jarring stop. Door must then be automatically locked with sufficient pressure to seal door. Provide emergency manual disconnect from inside of freezer. ELECTRIC DOORMAN unit to be instantly reversible with ball bearing motor, manual overload reset, adjustable slip clutch and positively adjusted rotary type limit switch. Worms and gears to be immersed in all-weather lubricant which will not freeze.

Normal operation to be with Model 6 heavy duty pull cord switches to be installed by electrician.

SLIDING FIRE DOOR OPERATOR

Minnesota, Mining Class A—sliding fire door,
Bristol, Penn.

Class A Fire doors present a problem since Underwriters won't permit power operation. Usually our ELECTRIC DOORMAN unit will be approved since it never interferes with fusible link. Power opening and closing is always more economical and allows uninterrupted flow of traffic. Actuated by heavy-duty pull cord switches. Unit can be also provided explosion proof. Easy to install, it fits all standard fire doors.

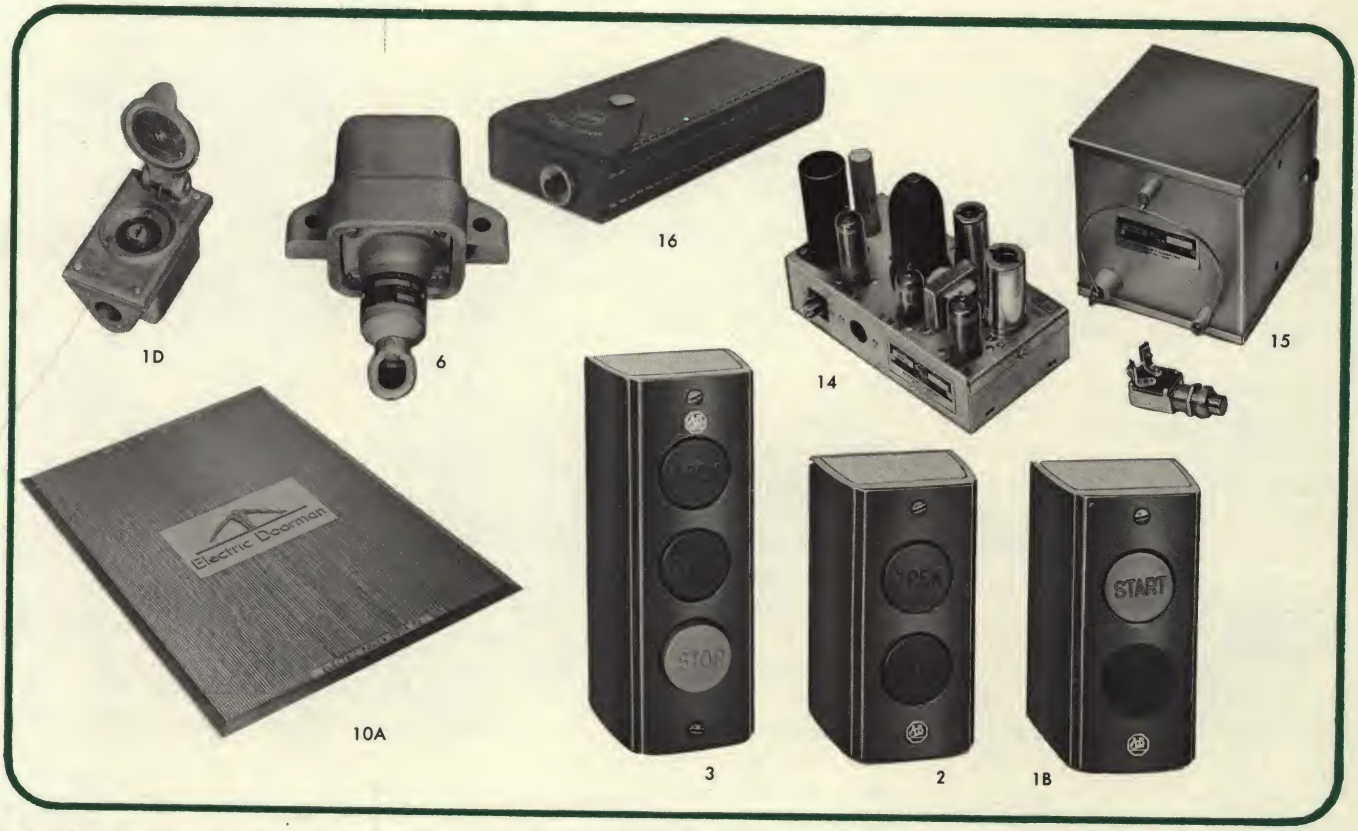


SPECIFICATIONS

Furnish and install ELECTRIC DOORMAN A-Label sliding door operator with automatic disconnect clutch with Model 6 pull cord switch for both sides of opening. Current to be 110, 220, or 440, single or three phase as required (explosion proof if required). Motor and gear reducing unit to be of adequate size and horsepower to move door at 1 ft. per second to open or close. Normal operation — Open, Close, Open — No stop. Unit to be provided with slip clutch and rotary type limit switch, easily adjusted.

Controls

Controls illustrated below are a few of many offered by the Electric Power Door Co., Inc., to actuate and operate all units described in this catalog. All controls can be obtained explosion proof or dust tight — Class 1, Group D. Currents shown are those recommended. Switches can be adapted to all currents and phases. If the type required for your purposes is not listed or illustrated please contact representative.



MODEL NUMBER	SWITCH NUMBER AND TYPE CONTROL	CURRENT	PHASE
1B	1 button momentary contact (inside)	115-230	S or 3Ø
1C	1 button weatherproof M/C (outside)	115-230	S or 3Ø
1D	1 button key post weatherproof M/C	115-230	S or 3Ø
2	2 button constant pressure, 2 button momentary contact, open close	115-230-440-550	S or 3Ø
2A	Same as 2 weatherproof	115-230-440-550	S or 3Ø
3	3 button momentary contact (inside) open, close, stop. Constant pressure close, if desired	115-230-440-550	S or 3Ø
4	3 button weatherproof key switch	115-230-440-550	S or 3Ø
5	3 button weatherproof momentary contact, same as 3	115-230-440-550	S or 3Ø
6	Pull cord switch, heavy-duty, weatherproof, momentary contact	115-230-440-550	S or 3Ø
7	Elbow operated hospital wall switch M/C	115-230 or low volt.	S or 3Ø
9	Safety Edge — 2 required	Low Voltage	S or 3Ø
10	Magnetic ground trip — not recommended where ice or snow accumulate	Low Voltage	S or 3Ø
10A	Ground trip — all weather use	Low Voltage	S or 3Ø
11	Light source	115-230 or low volt.	S or 3Ø
12	Electric eye	115-230	S or 3Ø
14	Radio receiver	115	S or 3Ø
14A	Antennae	115	S or 3Ø
15	Radio transmitter*	6 or 12 volt battery	S or 3Ø
16	Transmitter dash switch for car — bracket mounted	6 or 12 volt battery	S or 3Ø

*NOTE: When used on electric fork lift trucks, one cell of battery provides current.

Sales and Service . . . wherever you may be

The Electric Power Door Company, Inc. has been in the business of power door operation for over 35 years and we pride ourselves in the earned reputation of standing behind our products wherever and whenever sold. On a furnished and installed basis, we offer a one year written guarantee against all workmanship and defective material. To further assure our intentions, we offer a 24-hour service policy to all our customers anywhere within the continental United States.

The Electric Power Door Company, Inc. has at your disposal a full time engineering department to answer your questions and to solve your special door problems, from 500'0 hangar door openings to residential door operators.

Sales and service in principal cities throughout the United States. However, if you fail to locate a representative in your area do not hesitate to write or call factory collect.

Special door applications are our business, but never overlook the fact we can supply all standard type door and power operators.

REPRESENTATIVES

STATE	CITY	NAME	ADDRESS	PHONE
Alabama	Montgomery 2	Morton Sales Co., Inc.	P.O. Box 814	AM 2-4877
California	Hollywood	Electric Power Door Co. (West Coast Branch Office)	5823 ½ Sunset Blvd.	HO 4-5115
Canada, Quebec	Montreal 23	Ambassador Mfg. Co.	1102 Victoria St., St. Lambert	OR 1-1917
Georgia	Atlanta	Gilsteel, Inc.	2720 Apple Valley Rd.	CE 3-6779
Illinois	Chicago 3	Burton Bruckman & Co., Inc.	135 S. LaSalle St.	AN 3-5220
Illinois	River Forest	Electric Door Control Co.	7707 Lake St.	FO 9-5230
Maryland	Baltimore 27	Yankee Engineering Co., Inc.	3500 Washington Blvd.	CI 7-0070
Minnesota	Minneapolis	Electric Power Door Co., Inc.	2127 E. Lake St.	PA 2-6685
Missouri	Kansas City 30	Truog-Nichols Distributing Company	5001 E. 59th St.	DE 3-2100
Montana	Billings	E. R. Young Company	P.O. Box 1768	AL 9-2463
Nebraska	Omaha	Crawford Door Sales Co.	1122 North 19th St.	WE 7262
New York	Buffalo 11	Crawford Door Sales of Buffalo, Inc.	587 Winslow Avenue	FI 3800
New York	New York 57	Automatic Doorman of N. Y.	2034 Webster Avenue	CY 5-9400
New York	Rochester 7	The Maurer Company, Inc.	31 Richmond Street	HA 6-0030
New York	Syracuse 5	B. R. Johnson & Son, Inc.	5900 S. Salina St.	HO 9-3244
Pennsylvania	Allentown	Crawford Door Sales Co.	213 S. 16th Street	HE 5-3731
Pennsylvania	Scranton	Crawford Door Sales Co.	313 Mulberry Street	DI 2-9231
Pennsylvania	Philadelphia 3	Victor C. Smith, Inc.	1717 Sansom Street	LO 7-5377
Rhode Island	Providence	G. Fred Swanson	618 Cranston Street	GA 1-0788
South Carolina	Greenville	J. Edgeworth Beattie Co., Inc.	106 Masonic Temple P.O. Box 82	CE 3-1721
Tennessee	Memphis 5	Dillard Door Company	632 Court	JA 5-1691
Texas	Dallas	W. Donald Box Company	4515 Prentice Street Room 101	EM 8-8827
Texas	San Antonio	Lee Garison Company	416 Cornell Street	PE 5-5247
Washington	Seattle 9	Power Door Engineering	1158 East Lake Avenue	MA 4-1576

If there is not a representative or distributor in your locality, write or call factory collect.

DISTRIBUTED BY

Electric Doorman®

ELECTRIC POWER DOOR CO., INC.

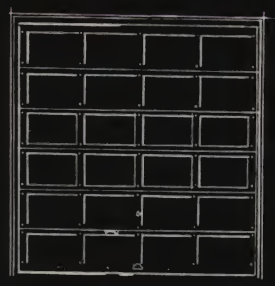
2127 East Lake St. Minneapolis 7, Minn.

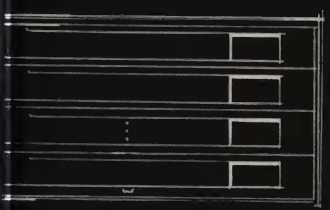
PArkway 2-6685

BD-10-59

PRINTED IN USA

A.I.A. FILE NO. 16-D





TORSION COMMERCIAL and INDUSTRIAL SPRING OVERHEAD TYPE DOORS

Residential torsion and extension spring type doors

FRANTZ

MANUFACTURING COMPANY
Sterling, Illinois

A.I.A. FILE NO. 16-D

FRANTZ

FRANTZ LEADERSHIP

Frantz doors are distributed coast to coast almost entirely through lumber dealers. As a result they are especially well known to builders and contractors everywhere for their excellence of styling and quality of materials and workmanship. The fine engineering of Frantz doors comes from over a half century of experience in designing and producing builder's hardware, sectional and rigid garage doors, and garage door hardware. Frantz doors can therefore be specified with complete assurance of high quality at reasonable cost, wide application as to function, and the extra value of local source convenience. Over 100 sizes and designs of residential, commercial and industrial doors in the Frantz line offer wide latitude of choice to fit virtually any architectural plan.

FRANTZ HARDWARE FEATURES

Hinges, hangers and track are zinc plated. All doors feature chrome or stainless steel lock handles, with bar type lock, full size brass cylinder. Two or more doors may be keyed alike at no extra cost. Tapered track, anti-friction bearings, and free-floating wheels and axles are utilized for easy operation and long life. Doors over 12'6" wide furnished with heavy U-bar braces. Doors over 16'6" wide also include diagonal bracing for bottom section. Springs are high grade, oil tempered, japan finished, custom made and tested to assure easiest operation, long life and maximum safety.

FRANTZ WOOD DOORS

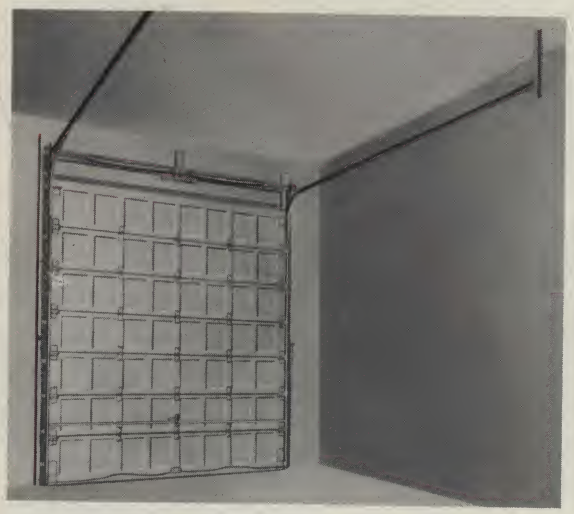
All wood door sections are built by Frantz. Panels are ¼" thick, 3 ply, A-B Exterior grade Fir Plywood or hardboard. Door frames are 1⅜" or 1¾" thick, depending on series. Stiles and rails are made of kiln dried Douglas Fir or equal. All joints are mortised and tenoned. Doors are "pinned" as well as glued, and the bottom rails in wider sizes are also dowelled for additional strength. Doors are sanded both sides, ready for painting. Each section is prebored and numbered to insure proper installation. Stock residential doors furnished with No.3 section open for glazing. Commercial and industrial doors can be specified solid or with any number of sections open for glazing.

FRANTZ GUARANTEE

Frantz Doors are guaranteed against defects in materials or component parts. When properly ordered and installed, every Frantz Door must be as represented. This guarantee is backed by Frantz' reputation established by a half century of satisfactory service to the building industry.

Commercial and Industrial

series 1420, 1425, 1430 torsion spring
custom made up to 20′ wide or 14′ high



1420—Bracket Mounting

1425—Continuous Angle Mounting

1430—Reverse Angle Mounting

REGULAR LIFT HEAVY DUTY

The 1400 Series features the heaviest construction of all Frantz doors, with extra wide stiles and rails, and heavy duty hardware to withstand severe service. Each door equipped with tandem ball bearing rollers for greater strength and longer life. The rugged torsion spring shaft assembly is designed for smooth, efficient operation. Two adjusting bars are furnished for convenience and safety in adjusting springs. The two-piece shaft, connected with adjustable coupling, provides exactly the same lift at each side of door for proper alignment and easy operation. Horizontal track is reinforced with heavy angles. Vertical track is taper mounted on *adjustable* brackets, (Series 1420), continuous *adjustable* angle (Series 1425), or reverse continuous *adjustable* angle (Series 1430).

series 1020-1025-1030 torsion spring
custom made up to 18′ wide or 12′ high

series 920-925-930 torsion spring
custom made up to 18′ wide or 12′ high

1020—Bracket Mounting

1025—Continuous Angle Mounting

1030—Reverse Angle Mounting

920—Bracket Mounting

925—Continuous Angle Mounting

930—Reverse Angle Mounting

REGULAR LIFT STANDARD HARDWARE

The 1000 Series and 900 Series are designed for industrial and commercial applications with normal duty requirements. Hardware in both series is identical — only the door thickness being different. The inside view shows a complete Frantz Torsion Spring installation. The continuous shaft, mounted on anti-friction ball bearings, is a feature of all Frantz Torsion Spring Doors.

Spring tension is thereby distributed evenly to insure level lifting and easy operation from either side. The reinforced horizontal track, tapered vertical track, full size hinges and other features emphasize the value of the 1000 and 900 Series. See page 4 for accessories available.

Overhead Type Doors

FRANTZ complete line of sectional type overhead doors

regular lift heavy duty

not exceeding 225 sq. ft.—1¾" door thickness

TANDEM ROLLERS
Ball bearing for greater strength, longer life and easier operation. Note strong hinge hanger support for axle.

TORSION SPRING DRUM
Grooves are machined into malleable iron drums for accurate winding of cable. Set screws provide ample holding power. Made for heavy duty service.

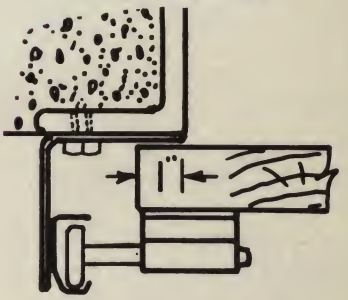
PANEL AND SECTION SCHEDULE

Door Width	No. of Panels
8'0" thru 10'6"	3 or 6
10'7" thru 14'6"	4 or 8
14'7" thru 18'6"	5 or 10
18'7" thru 20'0"	6 or 12
Door Height	**No. of Sections**
8'0" thru 8'6"	4
8'7" thru 10'6"	5
10'7" thru 12'6"	6
12'7" thru 14'0"	7

CLEARANCES REQUIRED

Bracket or Continuous Angle Mounting	Reverse Angle Mounting
Headroom 16½"	16½"
Sideroom 7"	8"
Centerpost 14"	16"

FRAMING DETAILS

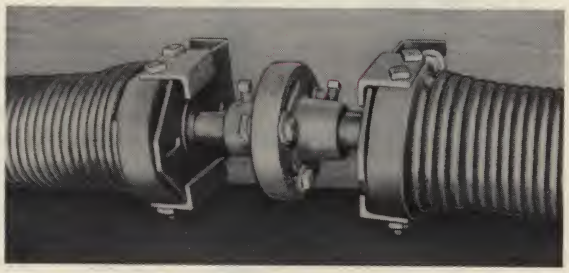


Reverse Angle Mounting

Note door laps jamb one inch. See chart above for clearances.

TORSION SPRING SHAFT ASSEMBLY

Coupling provides easy adjustment of cable tension. Transmits perfect balance and uniform lift to both sides for easier operation.



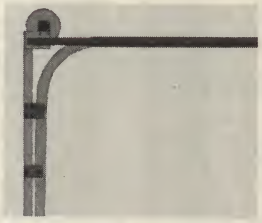
SEE PAGE 5 FOR ARCHITECT'S SPECIFICATIONS AND OTHER ORDERING INFORMATION

regular lift

not exceeding 144 sq. ft.—1¾" door thickness

regular lift

not exceeding 144 sq. ft.—1⅜" door thickness



TAPERED TRACK
Vertical track is taper mounted and adjustable on brackets or continuous angles for tight closing.

HINGES-HANGERS
Securely anchored to door with bolts for greater strength. Zinc plated to resist rust and corrosion, for longer life.

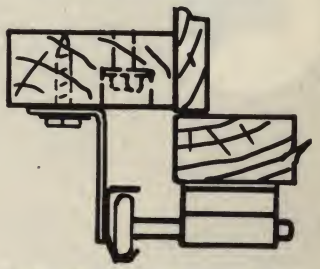
PANEL AND SECTION SCHEDULE

Door Width	No. of Panels
8' thru 10'6"	3 or 6
10'7" thru 14'6"	4 or 8
14'7" thru 18'0"	5 or 10
Door Height	**No. of Sections**
8'0" thru 8'6"	4
8'7" thru 10'6"	5
10'7" thru 12'0"	6

CLEARANCES REQUIRED

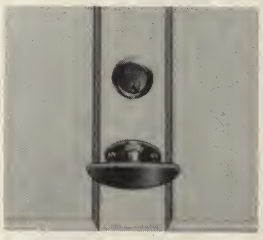
Bracket or Continuous Angle Mounting	Reverse Angle Mounting
Headroom 14½"	14½"
Sideroom 4½"	5½"
Centerpost 9"	11"

FRAMING DETAILS



Bracket or continuous angle mounting

Door same size as opening. See chart above for clearances.



CHROME HANDLE-CYLINDER LOCK
Adds desirable quality look and convenience to door. Standard five pin brass cylinder.

OFFSET JOINT
Rabbeted offset joint between door sections seals out elements. Makes door weather-tight.

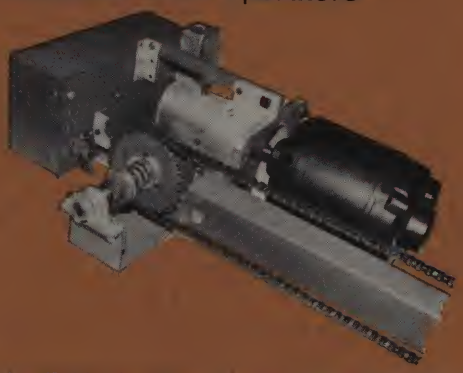
STOCK SIZES

10' x 9', 10' x 10', 10' x 12', 12' x 10', 12' x 12', and 16' x 8' in both 1000 and 900 Series are in stock at factory. Panels of stock doors are made with hardboard. Design is wide panel with two sections open except 16' x 8' size—one section open.

See page 5 for Architect's Specifications

FRANTZ OPTIONAL EQUIPMENT

industrial door operators



Available for doors from 100 square feet to 270 square feet, reversible or non-reversible type, with 1-button momentary contact, or 3-button up-down-stop controls. The reversible operator can be stopped and door travel reversed at any point. Motors provide ample reserve power. Depth required: Height of door plus 4 feet for ¼, ⅓, and ½ H.P. operators; height of door plus 5 ft. for ¾ H.P. operators. Headroom clearance required for operator is 6". This is in addition to headroom clearance for door. Write for complete specifications.

pass doors

Pass door (separate entrance door within a door) can be furnished on order for doors not exceeding 12'6" in width, and a minimum of 8' high. Size will be 3 sections high and 30" wide and may be located anywhere but in either of extreme side panels. All necessary hardware is furnished, including two 2½" U bar braces.

weather stripping (No. 2090)

Available for all models of Frantz wood doors. Available in 8, 9, 10, and 16 ft. lengths and 100 ft. rolls. Prevents door from freezing shut and absorbs shock of closing impact. Seals in heat, seals out weather. Coupled with the tapered track and offset joint of door, it effectually weatherproofs the installation.

door panel types

Either wide or narrow panels may be specified for No. 1400, 1000, or 900 Series.

series 1050-1055-1060, 1¾" series 950-

custom made up to 18' wide or 12' high not to

MAXIMUM HIGH LIFT STANDARD HARDWARE

High Lift doors are specified for installations where the door and track must be up and out of the way when door is open, such as service stations, warehouses, industrial buildings, garages, and similar structures. This calls for extra clearance under doors and tracks, and for such purposes Frantz HI-LIFT Torsion Spring Doors are well suited. They provide up to a full six feet of high lift, measured from the top of the door opening to the bottom of the horizontal track. In estimating high lift requirements, allow 9 inches extra clearance for operational headroom. The amount of high lift may be limited on high narrow doors due to lack of space between tracks for mounting springs. Doors are of same construction as in all 1000 and 900 series. Hardware is modified to produce high lift.

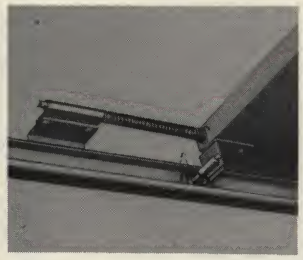
1050—Bracket Mounting
1055—Continuous Angle Mounting
1060—Reverse Angle Mounting
950—Bracket Mounting
955—Continuous Angle Mounting
960—Reverse Angle Mounting

door selector chart

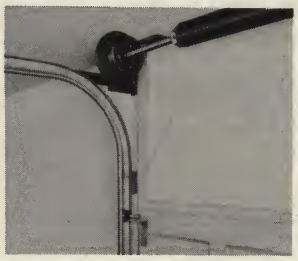
	920	925	930	950	955	960	1020	1025	1030	1050	1055	1060	1420	1425	1430
Door Thickness 1-3/4"							X	X	X	X	X	X	X	X	X
Door Thickness 1-3/8"	X	X	X	X	X	X									
Max. Door Size 20' wide Max. 14' high 225 sq. ft.													X	X	X
Max. Door Size 18' wide Max. 14' high 144 sq. ft.	X	X	X	X	X	X	X	X	X	X	X	X			
Regular Lift	X	X	X				X	X	X				X	X	X
High Lift—Max. 6'				X	X	X				X	X	X			
2" Galvanized Track	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Adjustable Bracket Mounted Taper Track	X			X			X			X			X		
Adjustable Continuous Angle Mounted Taper Track		X			X			X			X			X	
Adjustable Reverse Angle Mounted Taper Track			X			X			X			X			X
Bar Lock	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
2" "U" Bar Braces	X	X	X	X	X	X	X	X	X	X	X	X			
2-1/2" "U" Bar Braces													X	X	X
Ball Bearing Single Rollers	X	X	X	X	X	X	X	X	X	X	X	X			
Ball Bearing Tandem Rollers													X	X	X
16" Radius Curve													X	X	X
12" Radius Curve	X	X	X	X	X	X	X	X	X	X	X	X			
Aircraft Cable 1700#	X	X	X	X	X	X	X	X	X	X	X	X			
Aircraft Cable 4200 test#													X	X	X
Reinforcing Angle on Horiz. Track	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Headroom Clearance 16-1/2"													X	X	X
Headroom Clearance 14-1/2"	X	X	X				X	X	X						
Headroom Clearance Highlift + 9"				X	X	X				X	X	X			
Sideroom Clearance 4-1/2"	X	X		X	X		X	X		X	X				
Sideroom Clearance 5-1/2"			X			X			X			X			
Sideroom Clearance 7"													X	X	
Sideroom Clearance 8"															X
Centerpost Clearance 9"	X	X		X	X		X	X		X	X				
Centerpost Clearance 11"			X			X			X			X			
Centerpost Clearance 14"													X	X	
Centerpost Clearance 16"															X
Continuous Torsion Shaft	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Overhead Type Doors

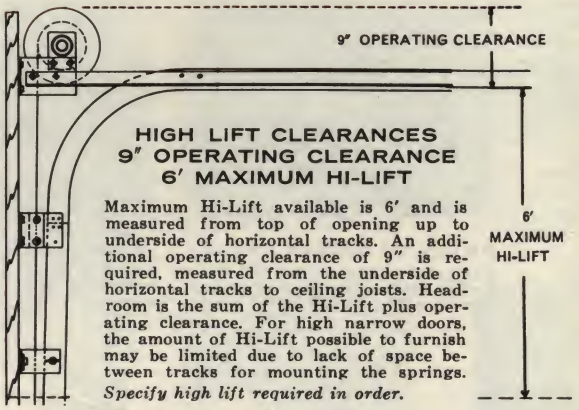
955-960, 1⅜" torsion spring, high lift exceed 144 sq. ft.



Spring Bumper
Spring bumper on horizontal track stops door when bottom section has cleared opening.



Tapered Drum
Tapered drum assures proper door balance for high lift. Door opens evenly and smoothly.



HIGH LIFT CLEARANCES
9" OPERATING CLEARANCE
6' MAXIMUM HI-LIFT

Maximum Hi-Lift available is 6' and is measured from top of opening up to underside of horizontal tracks. An additional operating clearance of 9" is required, measured from the underside of horizontal tracks to ceiling joists. Headroom is the sum of the Hi-Lift plus operating clearance. For high narrow doors, the amount of Hi-Lift possible to furnish may be limited due to lack of space between tracks for mounting the springs. *Specify high lift required in order.*

CLEARANCES REQUIRED

Bracket or Continuous Angle Mounting		Reverse Angle Mounting
Headroom	Hi-Lift plus 9"	Hi-Lift plus 9"
Sideroom	4½"	5½"
Centerpost	9"	11"

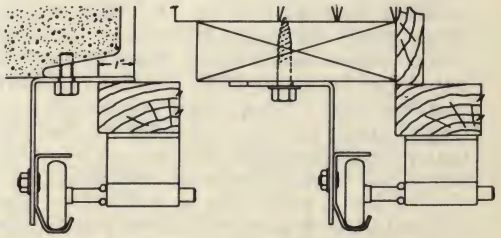
FRAMING DETAILS

Inside facing to extend above the opening, amount of HI-LIFT, plus 6". Center support mounting block must be securely anchored to the wall.

STOCK SIZES—Refer to Page 3

PANEL AND SECTION SCHEDULE

Door Width	No. of Panels
8'0" thru 10'6"	3 or 6
10'7" thru 14'6"	4 or 8
14'7" thru 18'0"	5 or 10
Door Height	**No. of Sections**
8'0" thru 8'6"	4
8'7" thru 10'6"	5
10'7" thru 12'0"	6



See below for Architect's Specifications

general architect's specifications

Overhead type doors shall be FRANTZ No. _____ manufactured by the Frantz Manufacturing Company, Sterling, Illinois, and shall be of a size and design as shown on the plans.

Door Sections shall be (1¾" or 1⅜") thick, made of kiln dried fir or equal, with mortise and tenon glued and pinned joints.

Panels are ¼" hardboard (optional masonite or exterior plywood).

Track of galvanized steel — vertical track shall be taper mounted on adjustable brackets or adjustable continuous angle, regular or reverse mounting. Horizontal track reinforced with heavy angle.

Counterbalancing shall be with custom engineered torsion springs on continuous shaft mounted on anti-friction bearings. Aircraft quality cable is wound on machine grooved malleable iron drums.

Hardware — rollers shall be ball bearing with hardened races. Hinges, hangers and brackets shall be heavy gauge zinc plated steel.

Lock — bar type with five pin brass cylinder and chrome plated or stainless steel handles.

Bracing — doors to be furnished with the necessary trusses to manufacturer's specifications.

Operation — manual, chain hoist or electric.

Framing — door openings to be framed by customer. Door stops not furnished.

Guarantee — doors shall be guaranteed for one year against defective material and workmanship.

Rubber Weatherstrip — for bottom of doors is available at extra cost.

See door selector chart on page 4 for detailed specifications.

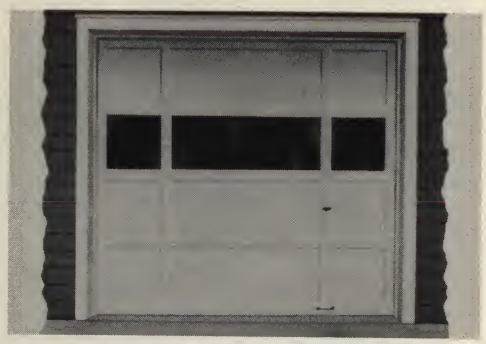
ordering information

When ordering Frantz Commercial and Industrial doors give the following information:

- Series number
- Door width and height
- Size of finished opening (note: if vertical track is to be continuous angle *reverse* mounted, door must be 2" wider and 1" higher than opening. To promote accuracy and promptness in filling orders please state *both* opening size and door size.)
- Number of sections
- Width of Panels (Narrow or Wide) (wide panel supplied unless otherwise specified)
- Sections left open for glass (No. 3 section left open unless otherwise stated. Supplied solid or any number of open sections at no extra cost.)
- For additional literature regarding Frantz Doors write to factory, Sterling, Illinois

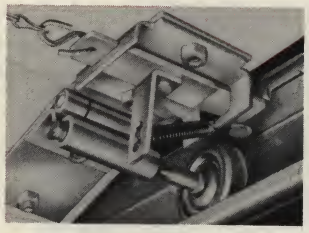
FRANTZ Residential Overhead Type Doors

series 400—extension spring sectional type doors
with patented safety catch



Distinctive Ranch Home Styling

The modern panel designs of the 400 Series have been very popular with builders. This series is distinguished by its unique safety catch which eliminates rebound of the door when opened. Many other features include adjustable taper mounted vertical track for weather-tight closing, angle reinforced horizontal track (double width doors), 16" radius curve, adjustable springs and the latch lock which engages automatically on adjustable strikes at both sides as door closes. The aircraft quality cable for single width doors is 900 lb. test; for double width doors, 1700 lb. test. One intermediate section is left open for glazing.



PATENTED SAFETY CATCH
Designed especially for the 400 Series, holds door securely in full open position. Prevents rebound.

CHROME HANDLE
Smart Chrome key-in-handle provides security, safety.

WHEEL AND AXLE ASSEMBLY
Sturdy ball bearing wheel and axle assembly made for hard service and long life.

CLEARANCE REQUIRED

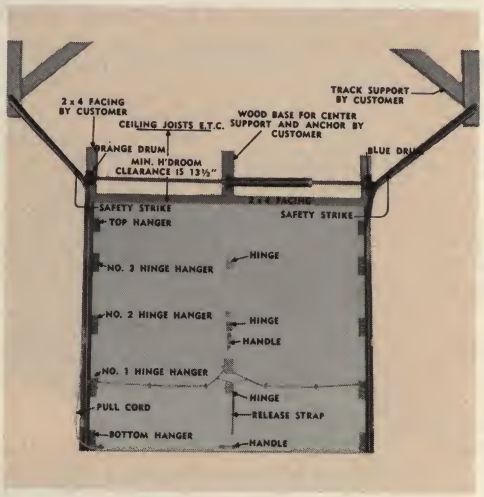
	single width	double width
Headroom	10½"	10½"
Sideroom	4"	5½"
Centerpost	8"	11"

Use of the No. 99 Bracket reduces headroom requirements—see page 8.

STOCK SIZES

Single Width				Double Width	
4 Section 3 Panels (unequal) wide	4 Section 3 Panels (equal) wide	5 Section 3 Panels (unequal) wide	Light Commercial 4 Section, 4 Panels (equal)	4 Section 4 Panel (equal) wide	5 Section 5 Panels (unequal) wide
8'x6'6" # 486 9'x6'6" # 479 8'x7' # 400 9'x7' # 419	12'x6'6" # 407 12'x7' # 408	8'x6'6" # 451 9'x6'6" # 452 8'x7' # 450 9'x7' # 459	8'x8' # 488 9'x8' # 490	16'x6'6" # 424 15'x7' # 435 16'x7' # 426	16'x6'6" # 454 16'x7' # 466
5 Section, 4 Panels (equal) 10'x10' # 460					

series 800—torsion spring sectional type doors
with patented safety catch



For those who prefer torsion spring

The 800 Series operates by torsion spring power lift, but in all other details is the same as the 400 Series described above. All 800 doors are identical with the 400 Series. Range of sizes is similar as shown in table below.

The continuous shaft torsion spring assembly provides equalized lifting power and perfect balance to both sides of door for easier operation. Springs are oil tempered and japan finished. Drums are malleable iron, 4½" in diameter and machine grooved to insure smooth cable winding. Two adjusting bars are furnished with every Frantz Torsion Spring door. These bars fit in winding plugs to turn spring for correct lifting power. Springs should be adjusted only when door is closed and locked.

WINDING PLUG
Illustration shows how adjusting bars fit into winding plugs of spring for easy spring adjustment.

LATCH LOCK
Automatically engages on adjustable strikes at both sides as door closes. Inside latch permits opening door when outside chrome handle is in locked position.

CLEARANCES REQUIRED

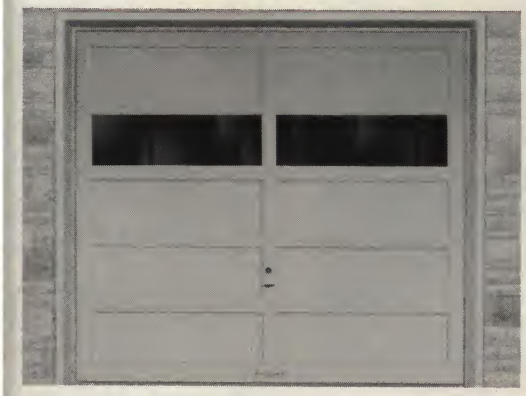
	single and double doors
Headroom	13½"
Sideroom	4"
Centerpost	8"

Use of the No. 99 Bracket reduces headroom requirements—see page 8.

STOCK SIZES

Single Width Sizes			Double Width Sizes	
Four Section	Four Section	Five Section	Four Section	Five Section
8'x6'6" No. 886 8'x7' No. 800 9'x6'6" No. 879 9'x7' No. 819	8'x8' No. 888 9'x8' No. 890 10'x7' No. 870	8'x6'6" No. 851 8'x7' No. 850 9'x6'6" No. 852 9'x7' No. 859	15'x7' No. 835 16'x6'6" No. 824 16'x7' No. 826	16'x6'6" No. 854 16'x7' No. 866

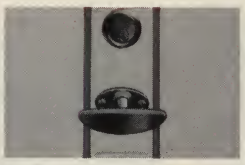
series 200—deluxe extension spring, sectional type doors
with patented adjustable brake



FRANTZ' FINEST DOOR

Highest quality in garage door construction and operation is represented by the 200 Series. This series possesses the "famous 14 Frantz features" which first made Frantz so well known in the building field. They include exclusive "Glide-O-Matic" self opening, exclusive adjustable brakes, two way spring power adjustment, full size brass cylinder lock with chrome plated outside handle, and double-acting automatic latch lock. Available in four or five sections, to fit 12 different size openings. Doors are 1⅜" kiln dried fir or equal with ¼" AB Exterior Grade fir plywood panels. One intermediate section is open for glazing or panelling.

WHEELS—SHEAVES
All wheels and sheaves are mounted on all-hardened ball bearing assemblies.



LOCK HANDLE
Full size cylinder lock and chrome plated handle supplied at no extra cost.

ADJUSTABLE SPRINGS
Two-way adjustable springs provide perfect tension. An exclusive Frantz feature.

DOUBLE BRAKES
Adjustable and self-equalizing. Prevents door rebound and holds door in open position.

LATCH LOCK
Dependable latch lock mechanism automatically latches at both sides of door.

CLEARANCES REQUIRED

single width	double width
Headroom 13½"	Headroom 13½"
Sideroom 4"	Sideroom 5½"
Centerpost 8"	Centerpost 11"

Use of the No. 99 Bracket reduces headroom requirements. See page 8.

STOCK SIZES

Single Width				Double Width	
4 Section—4 Panel	4 Section—4 Panel	5 Section—2 Panel (#257 3 Panel)	5 Section—4 Panel	4 Section—8 Panel	5 Section—4 Panel
8'x6'6" #286	9'x8' #290	8'x6'6" #251	10'x10' #260	15'x7' #235	15'x7' #255
8'x7' #200	10'x6'6" #269	8'x7' #250		16'x6'6" #224	16'x6'6" #254
8'x8' #244	10'x7' #270	9'x6'6" #252		16'x7' #226	16'x7' #266
9'x6'6" #279	10'x8' #258	9'x7' #259			
9'x7' #219		10'x7' #257			

series 2400 "FILUMA" extension spring sectional type doors
fiberglass panels—aluminum frame

An Entirely New Concept

The Filuma, in yellow, white or coral, is a colorful four-section door featuring sculptured translucent fiberglass panels encased in tempered aluminum extrusions, riveted into strong, durable sections with overlapping joints to seal out weather. Diffuses daylight inside the garage. No glazing, no painting—a light hosing keeps door clean. Installation and operation are remarkably easy—door weighs only a third as much as a comparable wood door. Requires only 11½" headroom. Hardware features are similar to those of other Frantz doors. Built-in bottom weatherstripping, fleximatic guide and tapered vertical track help to make the Filuma weathertight.

Lets Light In—The translucence of the Filuma Door diffuses soft daylight inside garage, eliminating shadows and dark corners.

CLEARANCES REQUIRED

Headroom	**11½"**
Sideroom	**4"**
Centerpost	**8"**

ARCHITECTURAL SPECIFICATIONS

Sectional overhead type garage door(s) shall be Frantz Filuma 2400 Series, as manufactured by Frantz Manufacturing Company, Sterling, Illinois, and be _____ wide and _____ high as shown on the plans.

Four section doors shall be Frantz-designed fiberglass panels, in _____ (yellow, white, or coral) color. Frames are of tempered extruded aluminum with overlapping section joints and built-in bottom weatherstripping.

Track shall be galvanized—Vertical track shall be tapered and reversible for easy mounting.

Springs shall be extension type with adjustable tension for proper balance.

Hangers and rollers shall be graduated, and numbered for correct location. Hardware shall be zinc plated except springs and track support angles.

Latch lock shall be double acting and engage both sides of door automatically—outside handle chrome plated.

Fleximatic guide shall be included to seal top section to the header.

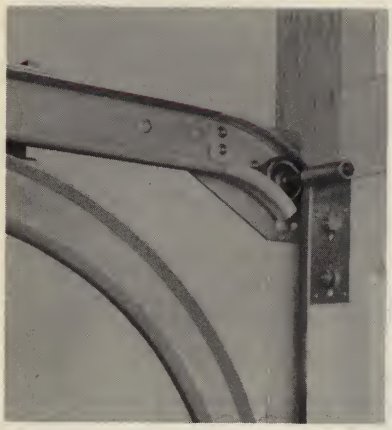
STOCK SIZES

Single Width—Four Section			Double Width—Four Section	
8'x6'6" No. 2486	9'x6'6" No. 2479	10'x6'6" No. 2469	16'x6'6" No. 2424	18'x6'6" No. 2441
8'x7' No. 2400	9'x7' No. 2419	10'x7' No. 2470	16'x7' No. 2426	18'x7' No. 2440

FRANTZ Special Purpose Residential Doors

(Extension Spring type)

series 300–low headroom



The hardware for the 300 Series is designed to operate with only 3 in. of overhead clearance and is furnished with double track and bar lock. The low headroom also makes possible further economies in building materials and construction. A variety of sizes in single and double width is available. Wood sections are similar to those of the 400 Series.

CLEARANCES REQUIRED		
	single width	double width
Headroom	3″	3″
Sideroom	4″	5½″
Centerpost	8″	11″

STOCK SIZES

Order these special units only when regular hardware with No. 99 low headroom attachment cannot be used.

8′x6′6″, 4 Section No. 387
8′x7′ , 4 Section No. 342
9′x6′6″, 4 Section No. 378
9′x7′ , 4 Section No. 348
8′x7′ , 5 Section No. 352
9′x7′ , 5 Section No. 358
16′x7′ , 4 Section No. 327

series 1200–economy doors

CLEARANCES REQUIRED		
	single width	double width
Headroom	11½″	11½″
Sideroom	4″	4″
Centerpost	8″	8″

Special Design Sectional

Low in cost but high in performance, the 1200 Series features zinc plated hardware, ball bearing sheaves, tapered track and 14″ radius curve. Wood sections have substantial stiles and rails. The new type hanger rollers are graduated and have "floating action" for smoother operation. The door provides for positive latching and locking and has an attractive key-in-handle lock with chrome finished handle. Available in 7 sizes in 4 and 5 section, for single and double width openings.

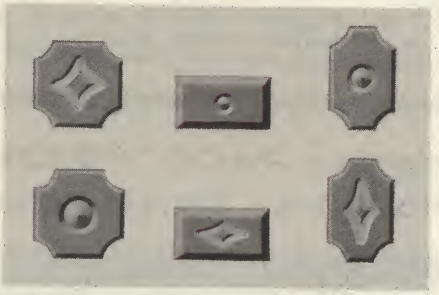
Decorator Doors and Accessories

FLUSH DOORS

Smooth finished flush panels, provide owner with endless design possibilities using moulding or rosettes. Five sizes —8′ x 7′, 9′ x 7′, 10′ x 7′, 15′ x 7′ and 16′ x 7′. 200 Series Hardware.

CARVED PANEL DOORS

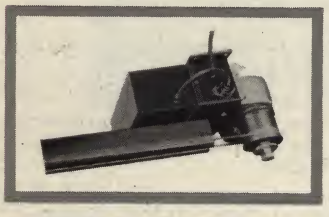
Built-in prestige for the discriminating buyer. Choice of carved patterns in four and five section styles. Rich looking, heavily built, with Frantz quality hardware features.



ROSETTES

Wood overlays for decorating doors. An inexpensive way to impart individualized effects especially with contrasting colors. Can be used on all Frantz wood doors. Wide choice of designs.

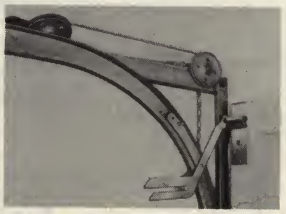
Residential Door Operators



No. 200 Electric Door Operator.

Model No. 200 is a better quality operator for residential overhead garage doors. It brings the safety, comfort and convenience of automatic door operation within reach of the average home owner. Available with or without remote control. Opens and closes door; turns lights on and off. Will accommodate 6′6″ or 7′ high doors. Easy to install.

Low Headroom Bracket



No. 99 Bracket application.

The No. 99 Low Headroom bracket is an inexpensive accessory for reducing headroom requirements of the 200, 400 and 800 Series Doors.

HEADROOM REQUIREMENTS USING NO. 99 BRACKETS		
	Single Width Doors	Double Width Doors
200 Series	6″	8″
400 Series	6″	8″
800 Series	8″	8″

FRANTZ MANUFACTURING COMPANY

STERLING, ILLINOIS

dealer's imprint space

Form 0197

McKee
OVERDOORS

RESIDENTIAL • INDUSTRIAL • SERVICE STATION

Residential Overdoors ..2, 3, 4 & 5
Wood Door Construction Details 5
Industrial Overdoors .....6, 7 & 8
Service Station Overdoors 9
Extra Clearance Construction 10
Low Headroom Construction 10
Service Doors 10
Opening Preparation 11
Hardware Details .....12 & 13
Wood and Steel Jamb Construction 13
Industrial Door Operators ..14 & 15
Chain Hoist 15
Representatives 16

OVERDOORS McKee TRADE MARK OPERATORS

McKee STANDARD RESIDENTIAL

MODEL DESCRIPTION

MODELS RWT (wide panels) and RNT (narrow panels) — Doors are counterbalanced by torsion type springs of oil tempered wire attached to a continuous "live" shaft.

MODELS RWS (wide panels) and RNS (narrow panels) — Doors are counterbalanced by individually operating stretch type springs of oil tempered wire.

MODEL R5WT (or S) — Doors are five sections high, instead of the standard four. Hardware and counterbalance are the same as other corresponding models. Available in wide panel arrangement only.

MODEL RFT (or S) "Customline Flush Doors" — Door sections are 1⅝" thick, and are faced both sides with ¼" exterior type fir plywood. A variety of stock window inserts and decorative mouldings are available as optional extras.

MODEL ERWT (or S) "Pacemaker" Economy series. Wood door sections have slightly narrower member sizes, and the panels are of tempered hardboard. Hardware is plated, but does not include exclusive McKee "Twin-Rollors." Weathertight closure and ease of operation are maintained by use of graduated hinges and single rollers. All doors furnished complete, less painting and glazing, for installation in properly prepared openings. All installations by the McKee Door Company or its authorized representatives are fully guaranteed for a full year.

SPECIFICATIONS

STILES AND RAILS: 1⅜" thick Sitka Spruce or Douglas Fir, mortised and tenoned, steel-pinned and glued for extra strength. All meeting rails rabbeted ⅜" for weathertight closure.

PANELS: ¼" exterior grade Fir Plywood or ¼" Hardboard — guaranteed for a lifetime.

SASH SECTION: All solid panels or 3rd or 4th section from the bottom left open for SS or DS glass.

THRU-SHAFT SAFETY COUNTERBALANCE: Helical wound springs, oil tempered wire, custom-computed for individual door.

LIFT CABLES: ⅛" preformed, tinned, aircraft grade cables over grooved, cast metal drums.

TRACKS: 2", inclined, bracket mounted, vertical track and reinforced horizontal track formed with 15" radius segment. Tracks plated to resist rust and corrosion.

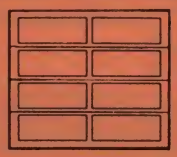
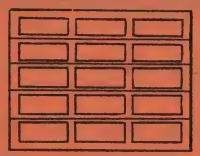
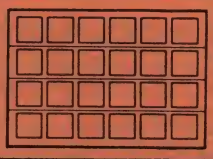
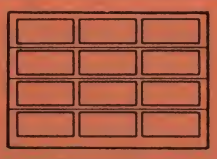
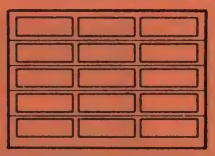
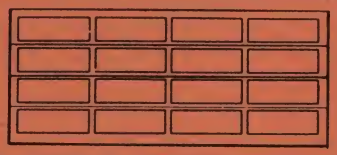
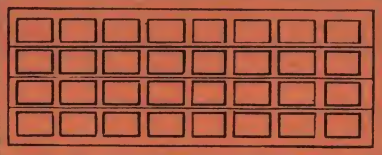
HARDWARE: Zinc-plated, heavy gauge, embossed hinges and fixtures for maximum strength and efficiency.

ROLLERS: Exclusive, patented McKee "Twin-Rollors" at each section joint. Nylon or ball-bearing rollers with case hardened races, attached to adjustable plates eliminate need for graduated type hinges, permit easy adjustment of sections against stop mouldings for weathertight closure, ease of operation and immeasurably longer life.

SIDE LOCK: Rugged, compact mechanism with 5-pin tumbler locking cylinder installed on right or left side of door: Eliminates reaching over car to operate lock.

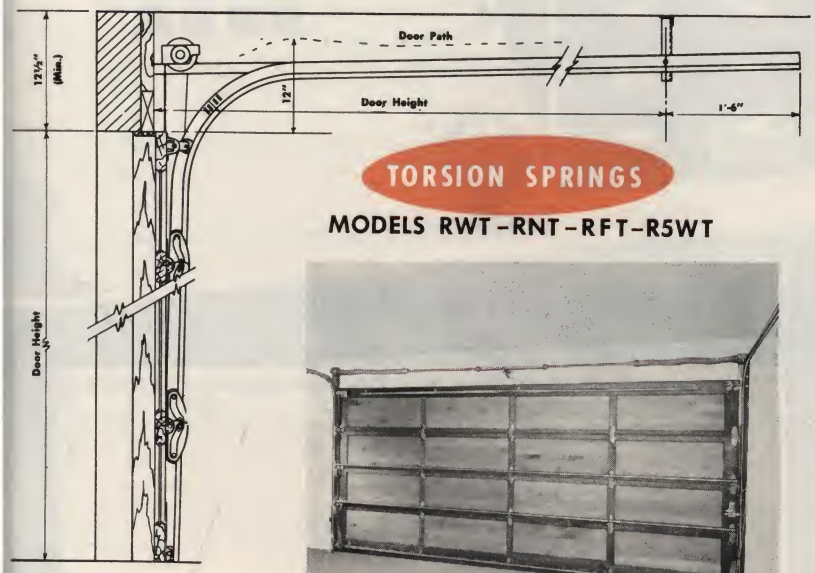
Furnished complete ready for painting and glazing.
All material and workmanship guaranteed for a full year.

PANEL SCHEDULE

Door Width	Model RN (T or S)	Model RW (T or S)	Model R5W (T or S)
6'-4" Thru 8'-3"			
8'-4" Thru 9'-3"			
9'-4" Thru 13'-3"			
13'-4" Thru 16'-3"			
16'-4" Thru 18'-0"			

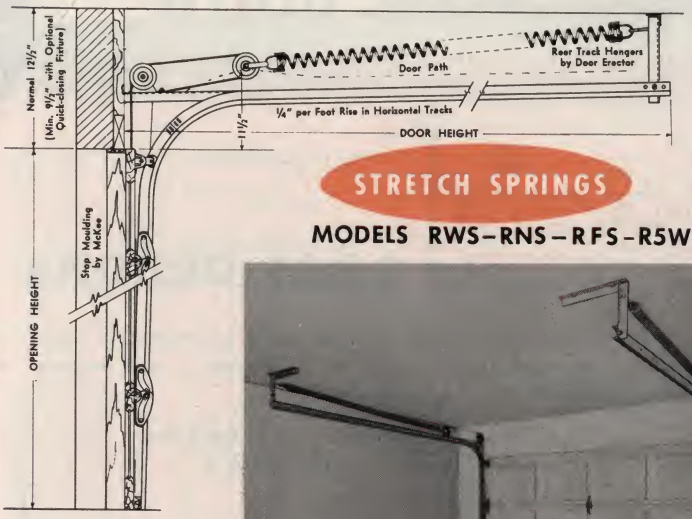
McKEE Residential Overdoors are available in any size 6'-4" thru 18'-0" wide and 6'-0" thru 8'-8" high.

OVERDOORS



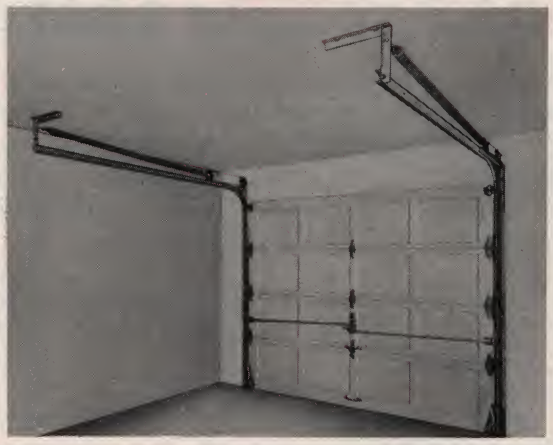
TORSION SPRINGS

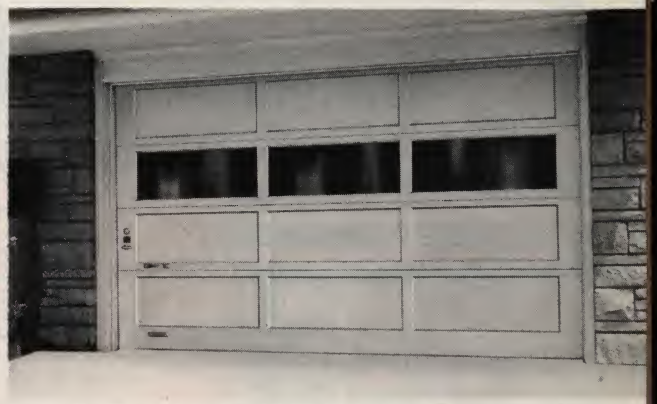
MODELS RWT–RNT–RFT–R5WT



STRETCH SPRINGS

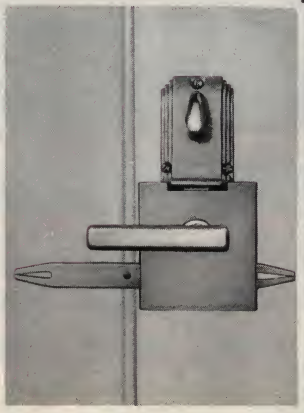
MODELS RWS–RNS–RFS–R5WS

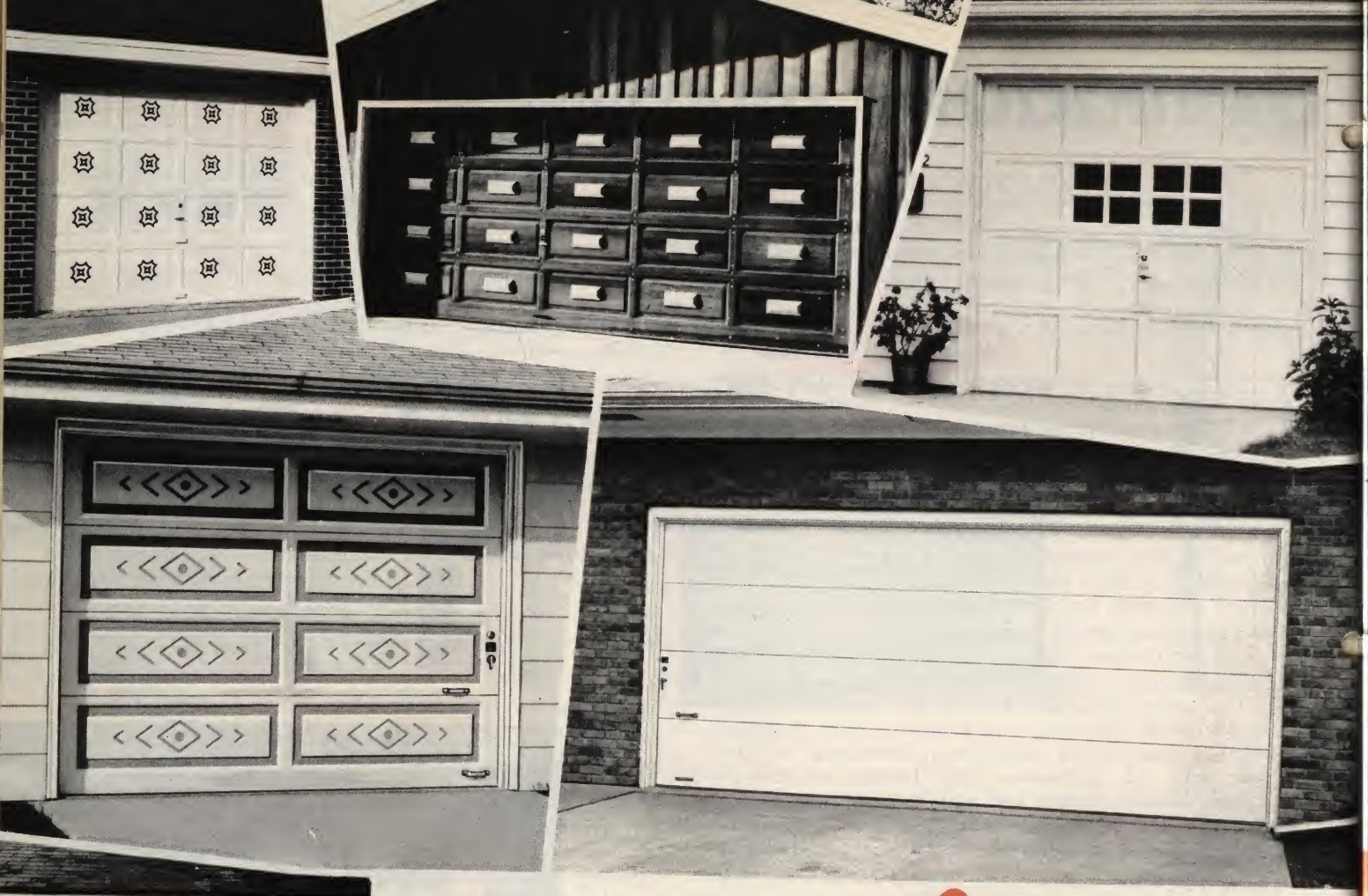


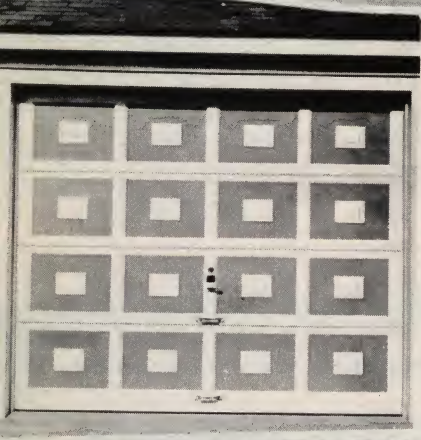


LOCKING DEVICE — MODELS RWT - RNT - RFT - R5WT

Handsome chrome plated handle and escutcheon on the outside. 5 pin tumbler cylinder lock and rugged, compact side lock mechanism on the inside. Protects the property, and eliminates reaching over car to operate lock.







McKee *Special* DOOR DESIGNS

McKee Overdoors are furnished in many special types or combinations of paneling arrangements, sash arrangements and decorative designs. The following list provides a wide range of special designs to meet the requirements of any decorative scheme:

- **raised panels**
- **raised mouldings**
- **louver panels**
- **decorative blocks**
- **special panel or sash sections**
- **carved raised panels**
- **flush doors**

Your McKee representative is qualified by experience and training to advise you in the proper selection of wood and design to best suit your individual garage door needs. The result will be a McKee Overdoor that will not only enhance the architectural beauty of your home, but will operate so easily that it can be opened and closed by a small child.

Consult factory for availability of special woods such as cypress, redwood, sugar pine, Idaho pine, chestnut, red or white oak.

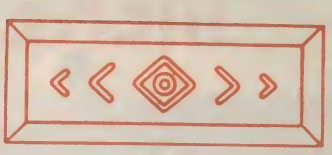
CARVED RAISED PANELS

These popular carved panel designs offer a wide latitude in attractive door patterns. Proper selection and painting of the carved panels will complement the architectural styling and color harmony of your home.

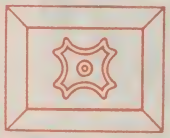
The panels are ¾" thick for both 1⅜" and 1¾" Doors.

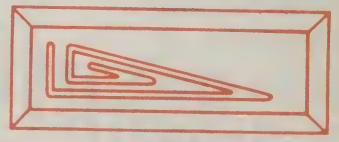
CRP1

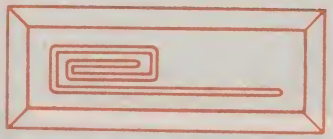
CRP2

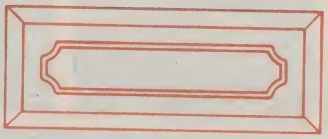

CRP5

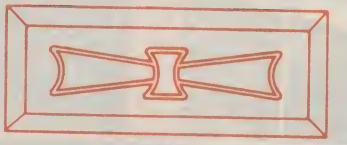
CRP3


CRP4


CRP6
DESIGN REVERSED—CRP15


CRP7
DESIGN REVERSED—CRP16


CRP8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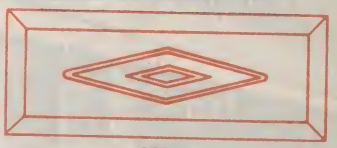
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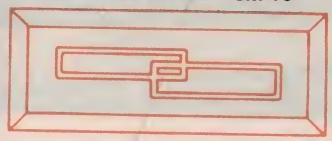
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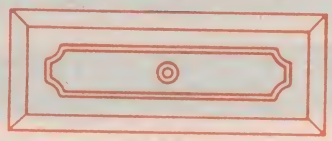
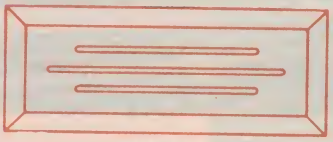
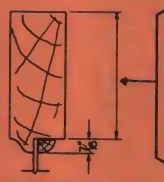
DESIGN REVERSED—CRP17


CRP12


CRP13

CRP14

WOOD DOOR CONSTRUCTION DETAILS


E-E TOP RAIL

RESIDENTIAL (1⅜")
5" for all doors

INDUSTRIAL (1¾")
4" for doors thru 8'-3" wide
5" for doors 8'-4" and wider

"PACEMAKER" RESIDENTIAL OVERDOORS (1⅜" THICK)						
DOOR SIZE	MEMBER SIZES					No. of Panels Wide
	D-D	E-E	C-C	A-A	B-B	
8'-0" x 7'-0"	3⅞"	3⅛"	3⅛"	3⅛"	2¾"	2
9'-0" x 7'-0"	3⅞"	3⅛"	3⅛"	3⅛"	2¾"	3
15'-0" x 7'-0"	3⅞"	4"	5"	5"	2¾"	4
16'-0" x 7'-0"	3⅞"	4"	5"	5"	2¾"	4

D-D MEETING RAIL

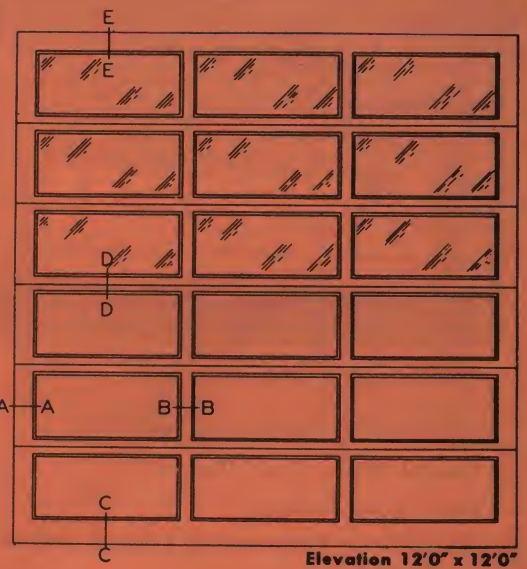
RESIDENTIAL (1¾")
5" for doors thru 11'-3" wide
7" for doors 11'-4" thru 18'-0"
(9'-4" and wider for wide panel doors)

INDUSTRIAL (1¾")
5" for doors thru 10'-3" wide
(Thru 13'-3" for 4 and 5 section high doors)
7" for doors 13'-4" thru 21'-3" wide
(10'-4" thru 13'-3" over 6 sections high)
8¾" for doors 21'-4" thru 26'-3"
10¾" for doors 26'-4" and wider

RESIDENTIAL OVERDOORS (1⅜" THICK)
4 Sections High (6'0" thru 8'-8" High)
5 Sections High (6'-6" thru 8'-8" High)

DOOR WIDTH	NO. OF PANELS WIDE	
	Wide	Narrow
thru 6'-3"	2	2
6'-4" thru 8'-3"	2	4
8'-4" thru 9'-3"	3	4
9'-4" thru 13'-3"	3	6
13'-4" thru 16'-3"	4	8
16'-4" thru 18'-0"	5	8

Note: 5 section high doors furnished only with wide paneling.



Elevation 12'0" x 12'0"

C-C BOTTOM RAIL

RESIDENTIAL (1⅜")
5" for all door sizes

INDUSTRIAL (1¾")
5" for doors thru 16'-3" wide
7" for doors 16'-4" and wider

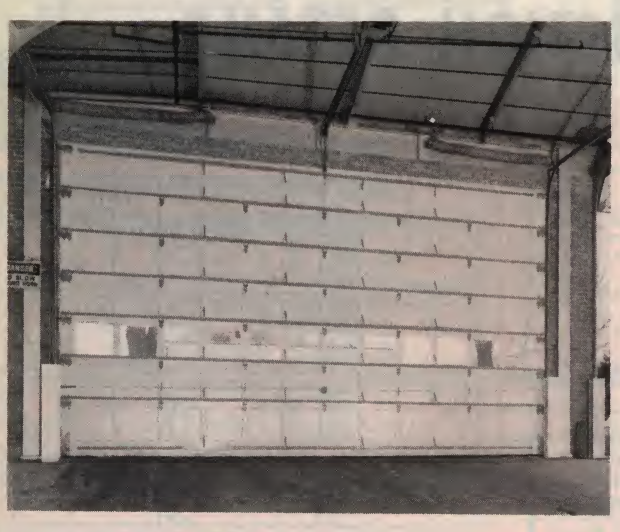
A-A END STILE

B-B INTER STILE

INDUSTRIAL AND COMMERCIAL DOORS (1¾" thick)

PANELS			SECTIONS	
DOOR WIDTH	No. of Panels Wide		DOOR HEIGHT	No. of Sections
	Wide	Narrow		
thru 8'-3"	2	4	6'-0" thru 8'-8"	4
8'-4" thru 10'-3"	3	4	8'-9" thru 10'-8"	5
10'-4" thru 14'-3"	4	6	10'-9" thru 12'-8"	6
14'-4" thru 21'-3"	6	8	12'-9" thru 14'-8"	7
21'-4" thru 24'-3"	8	10	14'-9" thru 17'-0"	8
24'-4" thru 26'-3"	10			
26'-4" thru 30'-3"	12			

McKee STANDARD INDUSTRIAL



OPTIONAL FEATURES AVAILABLE AT EXTRA COST

- Special Wood Door Designs
- Flush Door Sections
- Wood Door Preservative Treated and/or Primed
- Steel or Aluminum Door Sections
- Extra Clearance or Low Headroom Construction
- Continuous Angle Mounting — Where Bracket Mounting is Standard
- Rubber Astragal (page 13)
- Chain Hoist (page 15)
- Electric Operator (page 14)
- Movable Post(s)
- Vertical Lift Doors — Weight or Spring Counterbalanced (page 8)
- Special Features to Order

SPECIFICATIONS

STILES AND RAILS: 1¾" thick Sitka Spruce, mortised and tenoned, steel-pinned and glued for extra strength. All meeting rails rabbeted ⅜" for weathertight closure.

PANELS: ¼" hardboard or exterior type Fir plywood at customer's option.

SASH SECTIONS: Doors either all solid panels or any section or sections open for glass.

COUNTERBALANCE: Twin Torsion Springs of oil tempered wire, custom-computed for weight and travel of each door supplied. Cable drums of heavy cast metal, featuring a graduated spiral groove for vernier adjustment.

LIFT CABLES: 7 x 19 strand high-tensile type of a diameter properly selected for weight of door plus adequate safety factor.

TRACKS: 2", inclined, bracket mounted vertical tracks and reinforced horizontal tracks formed on combination 15" — 20" radius (8" — 15" radius combination optional). Tracks plated to resist rust and corrosion.

HARDWARE: Zinc-plated, heavy 12 gauge hinges and fixtures designed by McKee for maximum strength and efficiency.

ROLLERS: Exclusive, patented McKee "Twin-Rollors" at each section joint. Ball-bearing rollers with case hardened races, attached to adjustable plates eliminate need for graduated type hinges, permit easy adjustment of sections against stop mouldings for weathertight closure, ease of operation and immeasurably longer roller life.

LOCKING: Cremone type locking device with heavy lock bars engaging both tracks. Equipped with 5 pin tumbler cylinder lock with two keys.

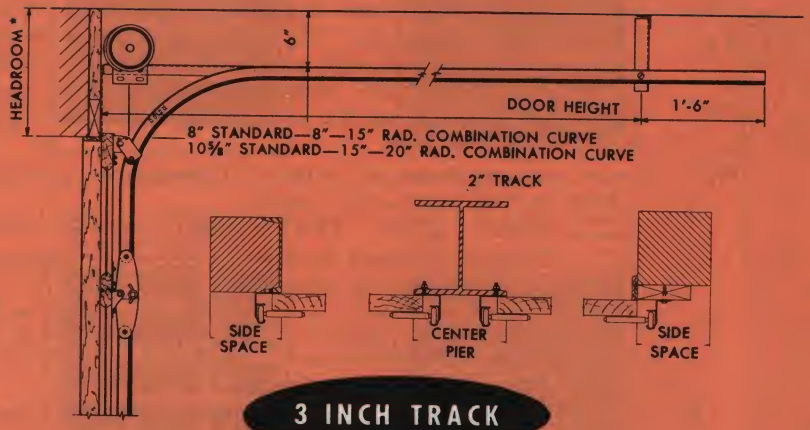
MODELS CWT (wide panel) and **CNT** (narrow panel) — Designed for commercial and industrial use where opening width does not exceed 24'-3", or area does not exceed 310 square feet. (Consult factory for use of these models on larger openings). Doors furnished with 2" track and two steel ball bearing Twin Rollors at each section joint. Vertical tracks mounted for application to wood jambs, except four section doors over 16'-3" wide, five or more section high doors over 14'-3" wide, and all eight or more section high doors which are continuous angle mounted.
Vertical tracks for all steel jamb applications are continuous, reverse angle mounted.

MODELS HWT (wide panel) and **HNT** (narrow panel) — Designed for heavy industrial use where area exceeds 310 sq. ft. or heavier equipment is desired. Furnished with 3" - 11 gauge tracks and heavier 3" Twin Rollors at each section joint. Vertical tracks for all door sizes are continuous angle mounted for wood jamb application and continuous reverse angle mounted for steel jamb application.

OVERDOORS

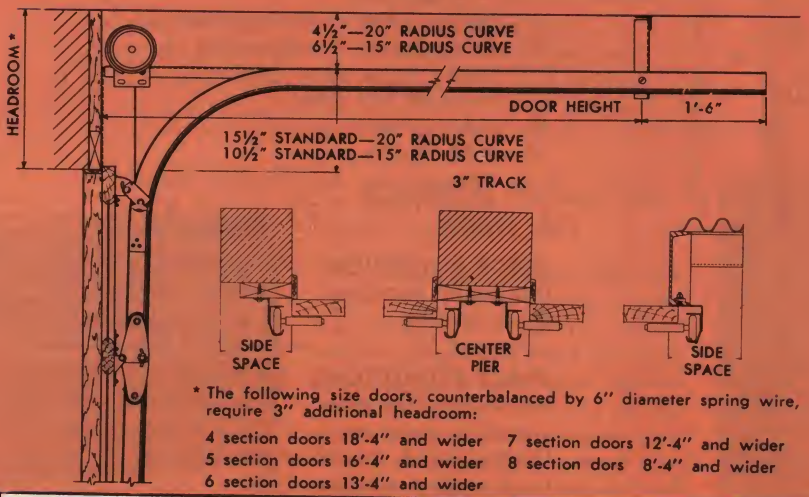
2 INCH TRACK

MODEL CWT and CNT



3 INCH TRACK

MODEL HWT and HNT



* The following size doors, counterbalanced by 6" diameter spring wire, require 3" additional headroom:

4 section doors 18'-4" and wider
5 section doors 16'-4" and wider
6 section doors 13'-4" and wider
7 section doors 12'-4" and wider
8 section dors 8'-4" and wider

SPACE CONDITIONS

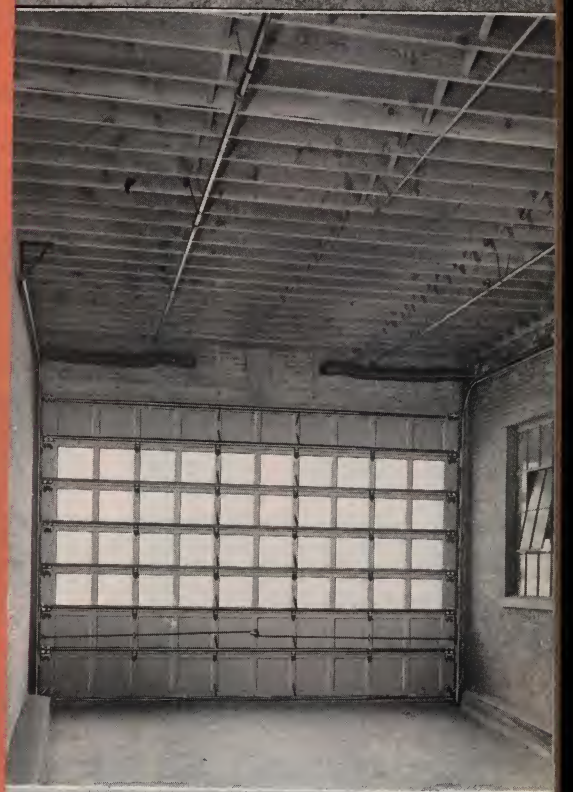
MODEL NO.	TRACK TYPE	MINIMUM HEAD ROOM	WOOD JAMBS		STEEL JAMBS	
			SIDE SPACE	CENTER PIER	SIDE SPACE	CENTER PIER
CWT & CNT	8"—15" Radius	14"	4"	8"	5"	10"
	15"—20" Radius	16½"	4"	8"	5"	10"
	Low Headroom*	7"	5"	10"	6"	12"
HWT & HNT	15" Radius	17"	5"	10"	6"	12"
	20" Radius	20"	5"	10"	6"	12"

*Furnished for Doors thru 14'-3" wide, or thru 18'-3" if 12'-8" or less high.
For Electric Operation add 4" Headroom.
For Chain Hoist Operation add 5" Headroom and 3" side space for pocket wheel side.
NOTE: Consult your McKee representative for lesser space conditions.

TRUSS BARS

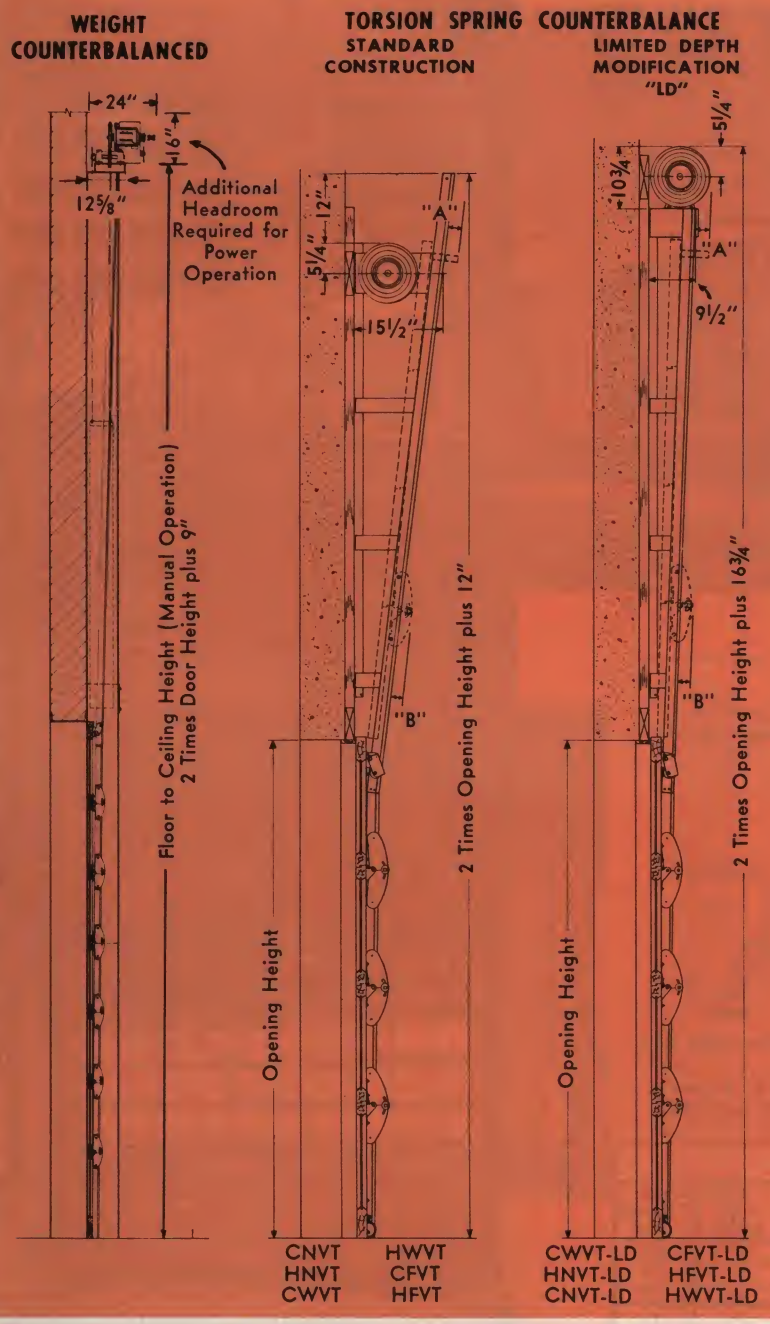
DOOR WIDTH	NUMBER OF SECTIONS IN HEIGHT				
	4	5	6	7	8
10'-4" thru 12'-3"	T	T	T	T	T
12'-4" thru 13'-3"	2-T	2-T	2-4-T	2-4-T	2-4-6-T
13'-4" thru 14'-3"*	B-1-2-TR	B-1-2-3-TR	B-1-2-3-4-TR	B-1-2-3-4-5-TR	B-1-2-3-4-5-6-TR
14'-4" thru 16'-3"*	B-1-2-3-TR	B-1-2-3-4-TR	B-1-2-3-4-5-TR	B-1-2-3-4-5-6-TR	B-1-2-3-4-5-6-7-TR
16'-4" thru 18'-3"*	BR-1-2R-3-TR	BR-1-2R-3-4-TR	BR-1-2R-3-4R-5-TR	BR-1-2R-3-4R-5-6-TR	BR-1-2R-3-4R-5-6R-7-TR
18'-4" thru 26'-3"**	BR-1R-2R-3R-TR	BR-1R-2R-3R-4R-TR	BR-1R-2R-3R-4R-5R-TR	BR-1R-2R-3R-4R-5R-6R-TR	BR-1R-2R-3R-4R-5R-6R-7R-TR
26'-4" and Wider	Special Trussing determined by Door Size.				

*4" deep tapered Channel Truss used for Reinforced Trusses.
** 6" deep tapered Channel Trusses used at all locations.
Numeral—Section joint; T—Top Rail; B—Bottom Rail; R—Reinforced.
Numeral, T and B—Plain (Track Section) Truss Bars.



McKee VERTICAL LIFT DOORS

General Specifications



McKee Vertical Lift Doors provide overdoor convenience in high ceiling factories, warehouses and other structures requiring unobstructed travel of overhead cranes, power-lift equipment and where maximum utilization of floor to ceiling area is required. This type door rises vertically along the wall, and can be either spring or weight counterbalanced. Door sections, hardware, Twin Rollors, etc. are the same as furnished for standard overdoors.

Spring balanced vertical lift doors are available in the following models:

CWVT CNVT CFVT HWVT HNVT HFVT

Weight balanced vertical lift doors are available in the following models:

CNV40L or R CNV50L or R HNV40L or R HNV50L or R
CWV40L or R CWV50L or R HWV40L or R HWV50L or R
CFV40L or R CFV50L or R HFV40L or R HFV50L or R

KEY TO MODEL CODING:

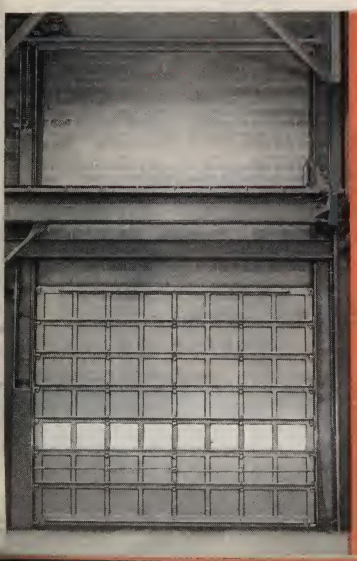
C — Standard Duty Commercial Door 2" Track and Hardware.
H — Heavy Duty Commercial Door 3" Track and Hardware.
N — Narrow Panel Arrangement
W — Wide Panel Arrangement
F — Flush Type Door Sections
V — Vertical Lift Door
40 — #40 Chain
50 — #50 Chain
L — Weight Box Left (Inside View)
R — Weight Box Right (Inside View)
T — Torsion Spring (Spring Counterbalance)

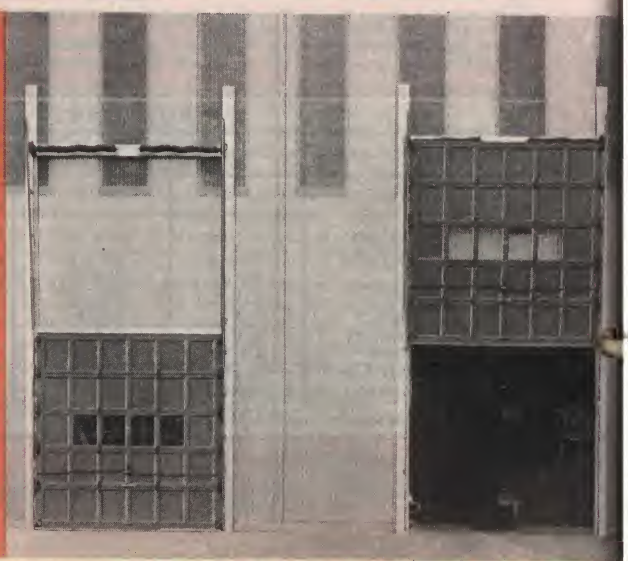
SPACE CONDITIONS Weight Counterbalance — Headroom required — Door height plus 9". Side space required — 7½" on opposite counterweight side and 16" on counterweight side.

SPACE CONDITIONS Spring Counterbalance — Headroom required — Door height plus 12" for standard construction — Door height plus 17" for Limited Depth Modification. Side space — same as for standard overdoors.

Torsion spring counterbalance can be used for doors up through 225 square feet in area. Operation can be manual, chain hoist, or by electric operator.

Weight counterbalanced doors can be furnished in practically any size.





McKee SERVICE STATION OVERDOORS

TYPICAL SERVICE STATION OVERDOORS

Model NLT

Narrow Line—Wood Muntins
Special Height Bottom Rail
4 Sections—All Sections Glass

Model ALT-Aluminum Muntin
Model PLT-Plastic Muntin
Narrow Line—One Panel Wide
Aluminum or Plastic Muntins
5 Sections—All Sections Glass

Model CWT

Standard (CWT) Construction
Panel Bottom Section
5 Sections—Top 4 Sections Glass

Model NLT

Narrow Line—Wood Muntins
Flush Bottom Section
5 Sections—Top 4 Sections Glass

Usual construction consists of 3 equal panels wide with all sections, or all sections except the bottom section, open for DS glass. The bottom section can be open for glass, paneled or flush (plywood faced or plank).

In addition to the Overdoors, matching fixed panels or matching pedestrian doors and transom sections between the Overdoors can be supplied.

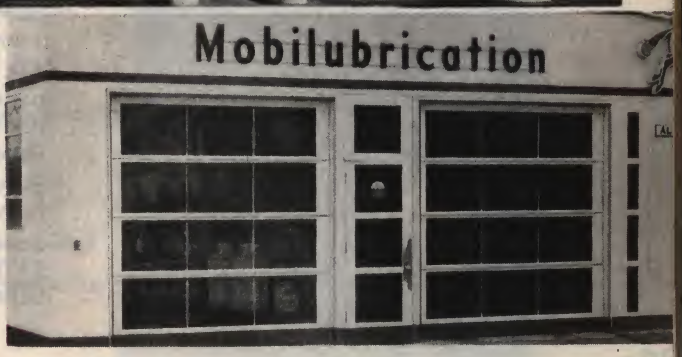
For details of Extra Clearance Construction, usually necessary for service stations so that Overdoors in the open position will clear automobiles raised on hoists, *see page 10.*

NARROW LINE CONSTRUCTION

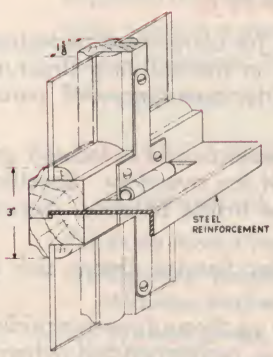
WOOD MUNTINS—The wood door has horizontal meeting rails 3" overall and vertical intermediate stiles 1⅝" overall. All meeting rails have a continuous steel angle reinforcement for added rigidity. Furnished in sizes through 13'-3" wide. ONE PANEL WIDE—The wood door to be glazed with 3 lights of DS glass divided by two plastic or aluminum muntins. The 3¾" overall horizontal meeting rails have a continuous steel angle reinforcement for added rigidity. Doors with Plastic Muntins are furnished in sizes through 10'-3" wide. Aluminum Muntin doors are furnished in sizes through 13'-3" wide.

ALUMINUM OVERDOORS MODEL ACT

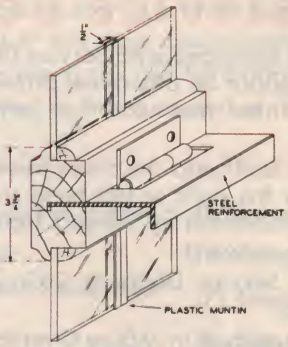
The McKee Door Company offers the latest in extruded aluminum Overdoors. Completely anodized sections assure lasting beauty and a very minimum of maintenance. Doors available with all solid panels, or any sections open for glass. Panels and/or glass lights are hermetically sealed with plastic extrusions and retained with extruded aluminum molding.



NARROW LINE CONSTRUCTION



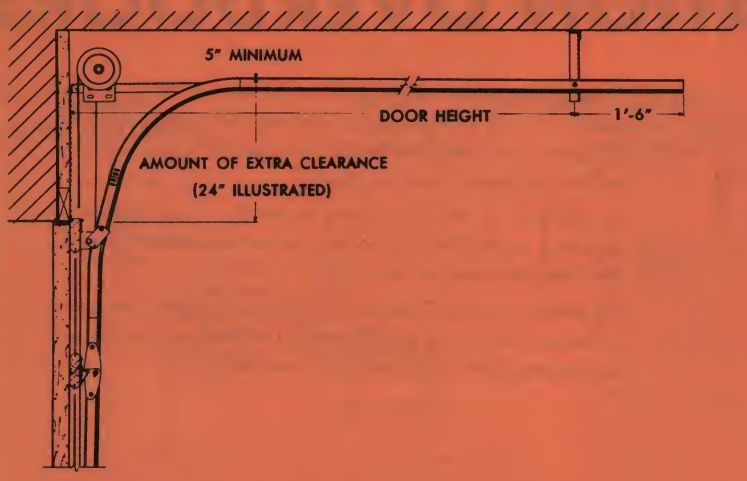
WOOD MUNTINS



ONE PANEL WIDE
WITH PLASTIC MUNTINS

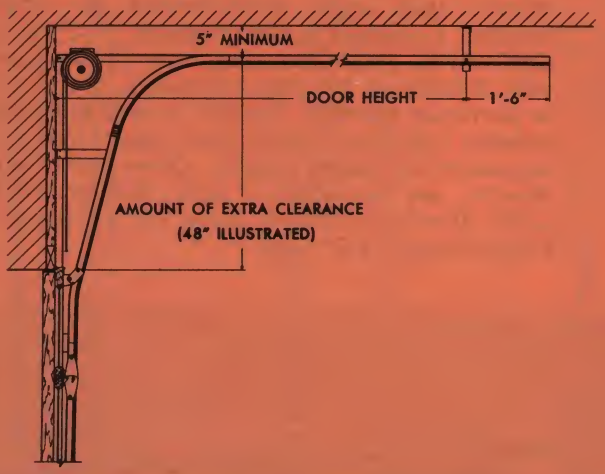
EXTRA CLEARANCE CONSTRUCTION

(FOR HORIZONTAL TRACK UP TO 26" ABOVE LINTEL)



EXTRA CLEARANCE CONSTRUCTION

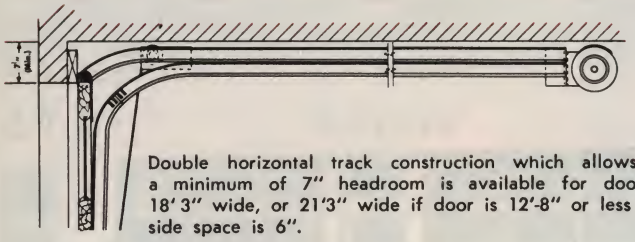
(FOR HORIZONTAL TRACK FROM 27" TO 96" ABOVE LINTEL)



EXTRA CLEARANCE CONSTRUCTION

Recommended for extra clearance under doors in the raised (open) position where power lift trucks are used or storage space requires. This type construction allows the door to rise along the wall to a maximum of 96 inches above the lintel or within 5" of the ceiling before turning horizontally. Graduated cable drums connected to the Twin-Torsion springs insure balanced operation. Suggested for loading docks, factory, commercial and service station installation.

LOW HEADROOM CONSTRUCTION



Double horizontal track construction which allows installation in a minimum of 7" headroom is available for door sizes through 18'3" wide, or 21'3" wide if door is 12'-8" or less high. Minimum side space is 6".

SERVICE DOORS

McKee Doors can be equipped with Service Doors for convenient pedestrian access when such cannot be otherwise provided in the building structure. Service Doors eliminate the need for constantly operating the parent overdoor.

The Service Door is built into the three lower sections and is located one panel in from either the right or left hand side of the overdoor. Specifications should note placement as viewed from the inside of door. Service Doors always open outward.

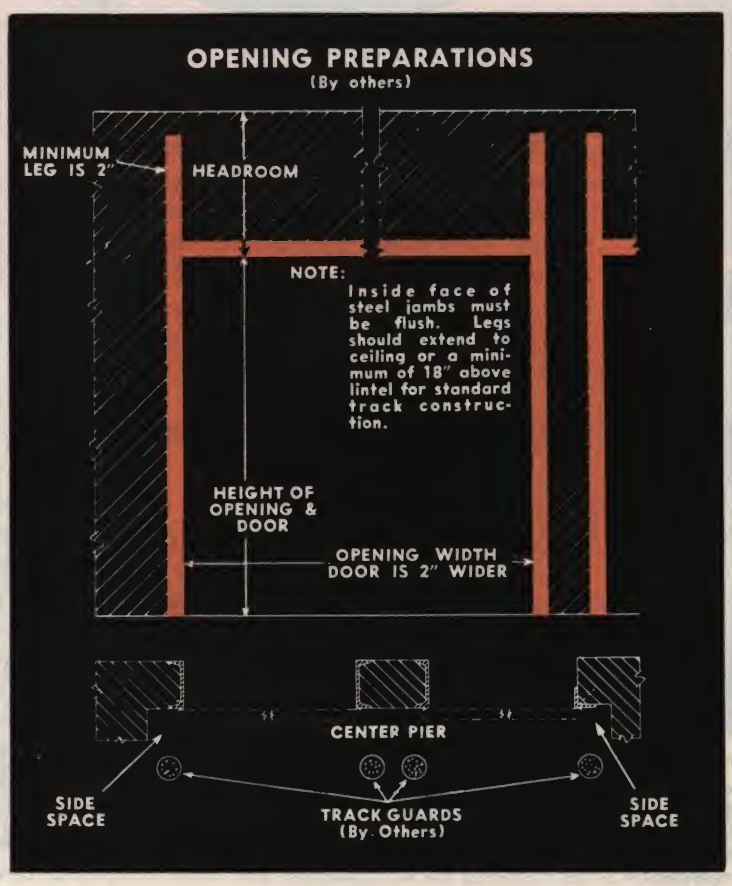
Standard width of Service Doors is 26". Wider Service Doors can be furnished if desired.

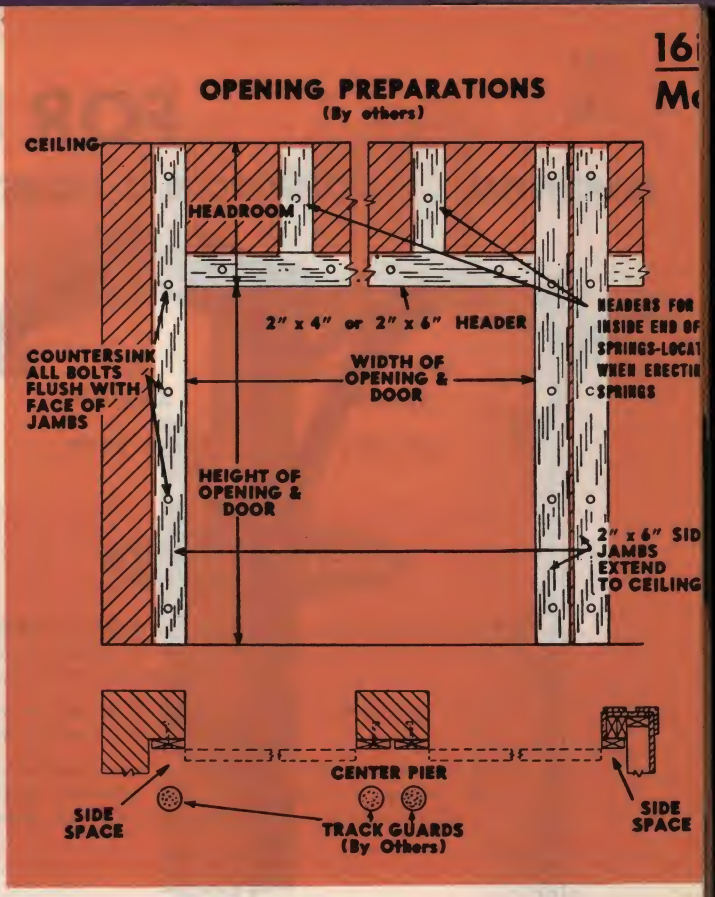
Service Doors are furnished in McKee Overdoors up through and including 21'3" wide; however, a Center Support Track is recommended when a Service Door is built into overdoor wider than 13'4".

OPENING PREPARATIONS FOR WOOD JAMB CONSTRUCTION

The inside face of the opening must be prepared with all members presenting a flush surface. Nothing should project between the jambs, unless it is above the minimum headroom requirement and outside the required amount of side space.

Standard construction for wood jambs should conform with diagram at the right. Doors are furnished only in *even inch* widths and heights. Door height furnished is approximately ¾" higher than opening to allow for scribing and fitting.


OPENING PREPARATIONS
(By others)
MINIMUM LEG IS 2"
HEADROOM
NOTE:
Inside face of steel jambs must be flush. Legs should extend to ceiling or a minimum of 18" above lintel for standard track construction.
HEIGHT OF OPENING & DOOR
OPENING WIDTH DOOR IS 2" WIDER
CENTER PIER
SIDE SPACE
TRACK GUARDS (By Others)
SIDE SPACE



OPENING PREPARATIONS FOR STEEL JAMB CONSTRUCTION

Application to steel jambs can be to any structural member—such as channels, I-beams, or angles presenting a flush face around the inside of the opening. Nothing should project between the jambs, unless it is above the minimum headroom requirement and outside the required amount of side space. Doors are furnished in *even inch* widths and heights only, and must be ordered 2" wider than opening to provide a 1" lap on each side. Door height furnished is approximately ¾" higher than opening to allow for scribing and fitting.

TRACK GUARDS FOR **INDUSTRIAL** INSTALLATIONS—it is strongly recommended that *track guards* be used to protect the vertical tracks in doorways where hand or powered material handling vehicles regularly pass through. A simple track guard is a piece of 4" dia. pipe, approximately 5' high, filled with concrete and set in the floor not closer than 9" to rear of the jambs. Track guards can also be constructed from old railroad rails, I-beams, or heavy steel angles or channels. These guards are provided by others as part of the opening preparation.

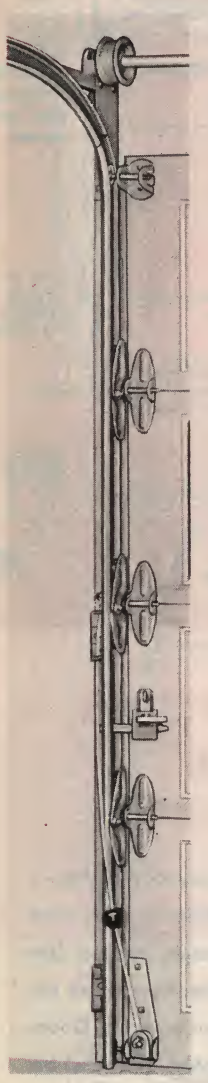
ORDERING DOOR — INFORMATION NEEDED (Residential or Commercial)

Orders should include the following dimensions and information for factory fabrication:

(1) Exact Model Number
(2) Opening height, width, and door thickness desired
(3) Type of jambs
(4) Sash and panel layout
(5) Type of glass to be used
(6) Special features desired
(7) Headroom
(8) Side and/or center pier space
(9) Distance to nearest obstruction at rear of opening
(10) Type of ceiling and direction joists run
(11) Type of building (residence, service station, public garage, industrial building, or other use).

HARDWARE FOR McKEE OVERDOORS

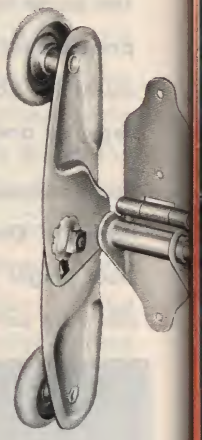
RESIDENTIAL **COMMERCIAL & INDUSTRIAL**



2" BRACKET MOUNTED TRACK
One car Residential Door.

3" ANGLE MOUNTED TRACK
Doors over 16'-3" wide, have double top fixtures and roller bracket hinges.

2" OVERLAPPING STEEL JAMB TRACK
Heavy gauge formed angle welded to track with leg turned inward provides rigid attachment to steel jambs and assures weather tight closure.



(1) TWIN ROLLORS—Two ball-bearing (or nylon) rollers mounted to adjustable plates are used at each section joint. This adjustment in plates enable the Twin Rollors to be used interchangeably at any section joint, and assures a weather-tight seal of the door in the closed position. With the Twin Rollors an unusually even distribution of weight is achieved during the movement of the door through the curved track.

(2) TWIN TORSION SPRINGS—Smooth, even balance is provided by twin torsion springs operating on cable drums. The springs are tailor-made with extremely low stress to exact weight and travel for each door. Spring assemblies are easily adjusted for proper tension. By mounting springs directly over the door opening, a direct pull is applied with the spring loading carried by the door tracks.

Cables are preformed, tinned, high tensile type with adequate safety factor.

(3) OTHER QUALITY HARDWARE FEATURES — Where metal parts are used in McKee Over-doors, you will find high grade materials and top quality construction. Gauges of steel utilized vary from 16 to 11 gauge, depending upon the location of the particular part, the operation involved, and the size of the door. All moving parts are equipped with either roller or ball-bearings. McKee ball-bearing rollers are equipped with chrome steel balls encased within hardened inner and outer races with a one piece steel tire formed around the outer race.

All hardware parts have a rust-resistant ***plated*** finish.

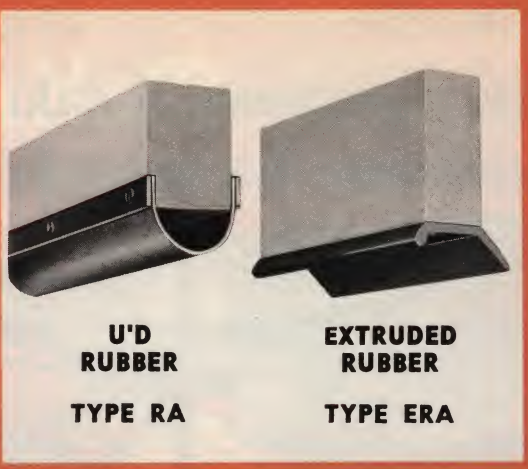
Commercial and Stretch Spring Residentia

LOCKING DEVICES

Heavy ¼" x ¾" locking bars engage the tracks at each side of the door to assure positive locking. The lock assembly consists of a 5-pin tumbler, cylinder type lock, with 2 keys (keyed as requested—alike, or master keyed to other locks in the building).

WEDGE CLOSING

All Overdoors are equipped with adjustable Twin Rollors (or graduated hinges with single rollers—*Pacemaker* only) and inclined vertical tracks, so that the door sections can be easily adjusted to fit tightly against the jambs in the closed position. As the door opens, it progressively moves away from the jambs, assuring free and easy operation; as the door closes it moves to a weathertight seal. In the event of swelling or shrinking of the wood sections and stop mouldings, this adjustable construction allows easy readjustment.



RUBBER ASTRAGALS

Rubber astragal is furnished only when specified, and is recommended to lessen the shock of the door in closing and insure a weathertight seal.

For residential doors an extruded rubber strip nailed to the bottom rail is suggested.

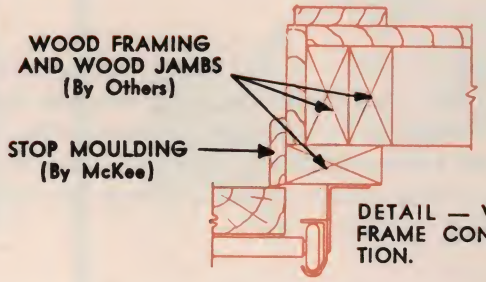
For industrial and commercial installations—use of a U'd rubber astragal is recommended. It is applied to the bottom rail with galvanized steel strips and screws.

DETAIL WOOD AND STEEL JAMB CONSTRUCTION

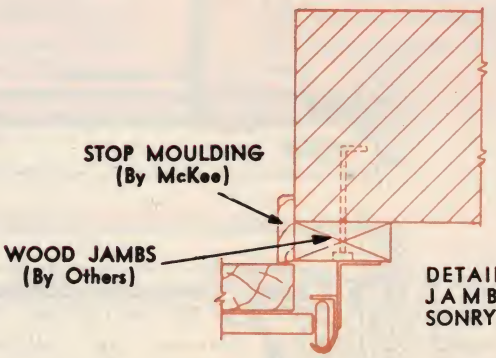
The various section views shown here portray how McKee Overdoors can be installed on any type of building construction. See page 11 for proper preparation of the opening for both wood and steel jambs.

WOOD JAMB CONSTRUCTION—The inclined vertical tracks either have special brackets welded to the tracks, or are mounted on a 12-gauge angle with the leg turned away from the door opening. Both the brackets and angle mounting are fastened to the jambs by means of lag bolts. Wood stop mouldings are furnished as a trim around the prepared opening to ensure tight door closure.

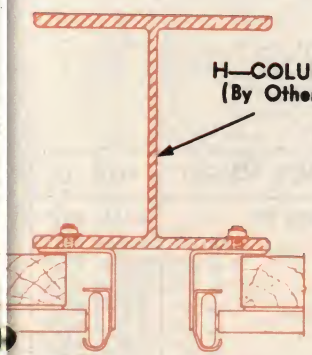
STEEL JAMB CONSTRUCTION—Overlapping Steel Jamb Construction is used. The inclined vertical tracks are mounted on a 12-gauge angle with the leg turned in towards the door opening. The angle mounting is fastened to the jambs either by tapped holes or through bolt fasteners, depending upon the type of jamb construction. Wood stop mouldings are not furnished, but a wood strip is supplied for attaching to the top rail of the door to seal it against the header.



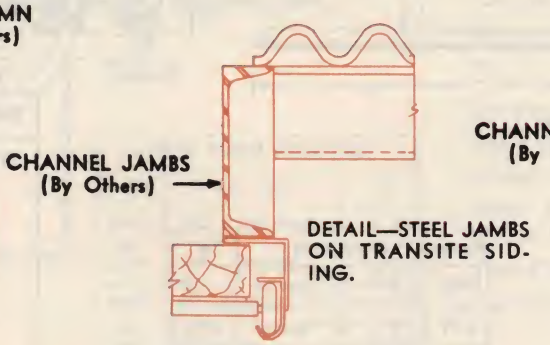
DETAIL — WOOD FRAME CONSTRUCTION.



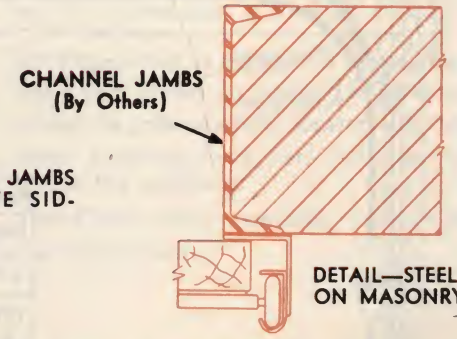
DETAIL — WOOD JAMBS ON MASONRY.



DETAIL — "H" COLUMN.

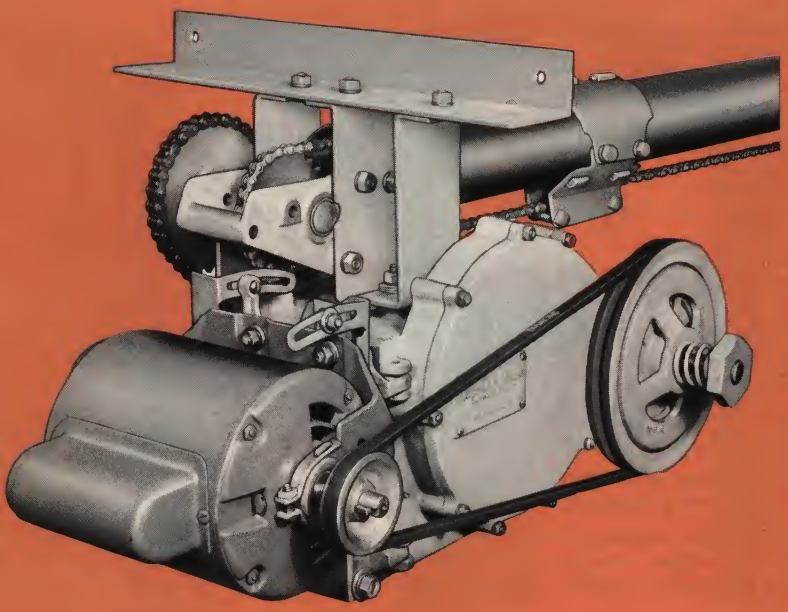


DETAIL—STEEL JAMBS ON TRANSITE SIDING.



DETAIL—STEEL JAMBS ON MASONRY.

McKEE ELECTRIC DOOR



POWER UNIT, REAR VIEW, showing rear hanger attachment and part of operator track. Note the easily adjustable friction clutch, rugged roller chain drive and adjustable motor mounting which simplifies setting the proper V-belt tension.

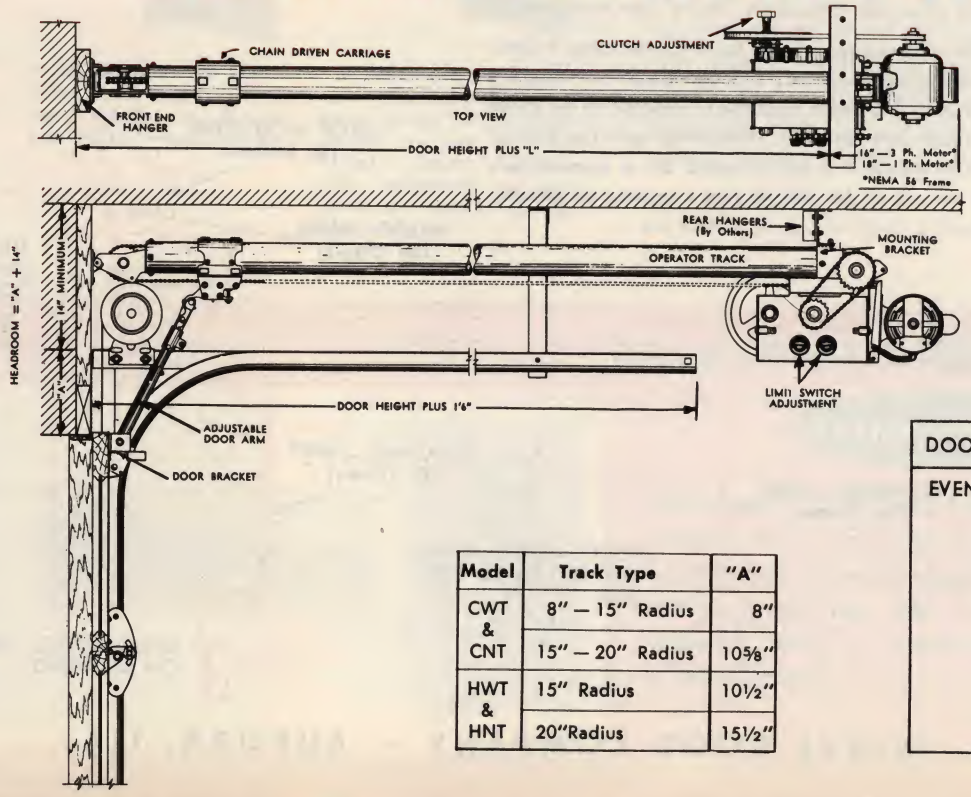
McKEE MODEL 600 SERIES Electric door operators are designed for heavy-duty commercial and industrial use. Power, supplied by a standard 1725 RPM, instantly-reversible motor, is transmitted to the door arm by roller chain through adjustable V-belted friction clutch and spur gear reduction assembly.

Complete factory wiring of the power unit reduces field wiring, time and costs. Only power and control station wiring is required at the installation site.

The Electric Door Operator has three major components, namely: (1) Power unit with motor and controls; (2) Operator track with chain driven carriage; and (3) Arm connection to door. These components are used to operate all standard overdoors. The power unit alone with special drive connections can be used for operating vertical lift type doors, and for other special applications.

SPECIFICATIONS — Electric operators shall be Model 603 as manufactured by the McKEE DOOR COMPANY. Operators shall be equipped with magnetic reversing contactors, traveling nut limit switches, spur gear reduction, adjustable friction clutch, solenoid disc brake and a 3 button control station (open-close-stop) of momentary contact type (or controls as specified). Instantly-reversible motor shall be of such power to suit size of door, and to be wired for _____ volts _____ phase _____ cycle operation.

LAYOUT OF MODEL 600 ELECTRIC DOOR OPERATOR



Model	Track Type	"A"
CWT & CNT	8" — 15" Radius	8"
	15" — 20" Radius	10⅝"
HWT & HNT	15" Radius	10½"
	20"Radius	15½"

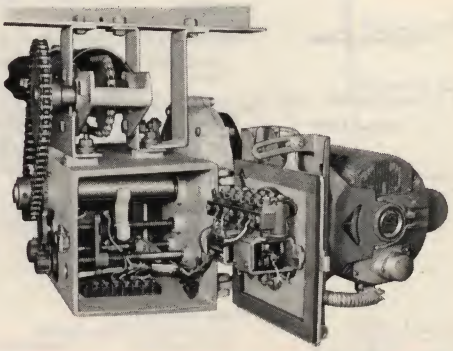
DOOR HEIGHT	PLUS "L"
EVEN FT.	+3'— 9¼"
+ 1"	+3'— 8¼"
+ 2"	+3'— 7¼"
+ 3"	+3'— 6¼"
+ 4"	+3'— 5¼"
+ 5"	+3'— 4¼"
+ 6"	+4'— 3¼"
+ 7"	+4'— 2¼"
+ 8"	+4'— 1¼"
+ 9"	+4'— 0¼"
+10"	+3'—11¼"
+11"	+3'—10¼"

OPERATORS FOR HEAVY DUTY COMMERCIAL USE

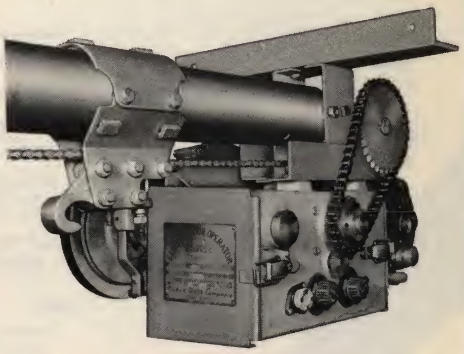
A COMBINATION OF FEATURES FOUND IN NO OTHER ELECTRIC OPERATOR

ELECTRIC DOOR OPERATORS

The wide adaptability of electrical circuits and controls is one of the outstanding features of the Model 600 series of Electric Door Operators. Standard Control is a 3-button station "OPEN-CLOSE-STOP" of momentary contact type. Special circuits and controls are available for constant contact down. Outside weatherproof control stations, key switch, time delay closing, safety astragal, tread switch, radio controls, quick release, auxiliary chain hoist, and other special circuits, controls or features are available to meet specific requirements.

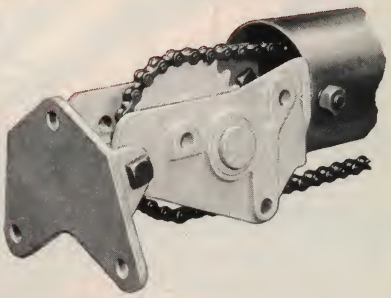


POWER UNIT, REAR VIEW, hinged cover swung open shows accessibility of terminal blocks for easy field wiring of power line and control stations. Opening rear door automatically disengages motor from operator track drive.



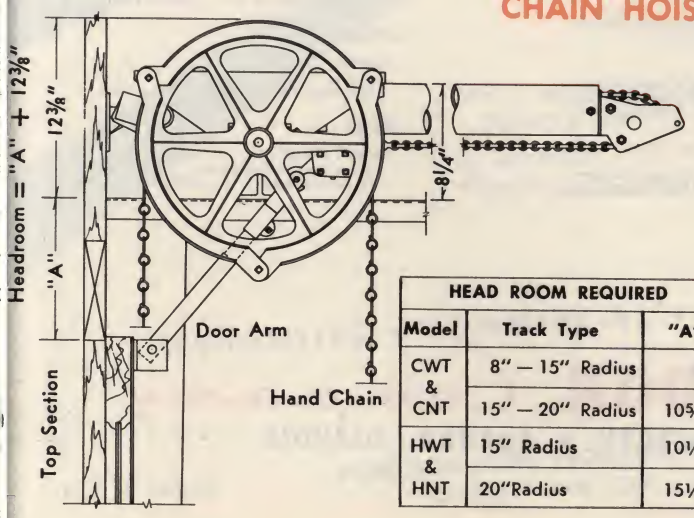
POWER UNIT, FRONT VIEW, shows roller-chain driven carriage on portion of operator track. Note the readily accessible limit control knobs, solenoid disc brake, fuse receptacle, and the noise and friction reducing nylon inserts in the carriage.

View of Front End of Operator Track mounted to wall above door. Parts shown are: (1) Hinged jamb mounting of Operator Track; (2) Chain Driven Carriage and Arm connected to Door; and (3) Chain Pull for quick release of Door Arm.



Front View of Hinged Jamb Mounting of Operator Track. Features shown are: (1) Flat Plate with three holes for mounting above Door; and (2) Hinged Connection of plate to Operator Track.

CHAIN HOIST (Manual Operation)



HEAD ROOM REQUIRED		
Model	Track Type	"A"
CWT & CNT	8" — 15" Radius	8"
	15" — 20" Radius	10⅝"
HWT & HNT	15" Radius	10½"
	20"Radius	15½"

A Chain Hoist is available as optional equipment for use in opening or closing the large or exceptionally high, manually operated Overdoors. It is recommended when the door area exceeds 180 sq. ft., or the door is over 15'-0" high.

Door operation is controlled by pulling on an endless chain that drives a pocketed hand wheel. The handwheel is conveniently located on one side of the door opening, and can only be operated from inside the building.

The Chain Hoist operates independently of door counterbalance.

LET US HELP YOU WITH YOUR PROBLEMS!

REPRESENTATIVES

ARIZONA

Phoenix
McKee Door Sales of Phoenix
1869 North 38th Place ... Alpine 2-5178

ARKANSAS

Little Rock
Capital Steel Company
329 Gazette Building .. Franklin 2-1494

COLORADO

Denver (2)
Associated Builders Supply Company
1421-25 Seventeenth St. .. Acoma 2-5851

CONNECTICUT

Cos Cob
Frank Peters
7 Butler Street ..... Townsend 9-7484

FLORIDA

Maitland
McKee Door Sales of Orlando
R.F.D. #2, Box 135 ..... Valley 8-5902

St. Petersburg
McKee Overdoor Sales Company
1510 Thirtieth Avenue, North
P. O. Box 1041-Station A 54-4692

IDAHO

Boise
Morrison-Merrill and Company
P. O. Box 2900 3-6446

ILLINOIS

Aurora
McKee-Illinois Door Sales, Inc.
85 Hankes Avenue ... Twinoaks 7-4256

Brookfield
McKee Overdoor Sales, Inc.
9038 W. Ogden Avenue . Hunter 5-5000

Chicago (9)
McKee Chicago Door Company
4614 South Western Ave .. Yards 7-1984

Decatur
McKee Door Sales of Decatur
990 West Harrison 3-1355

Freeport
Kaney-Wolf
1322 South Birchard ..... Adams 2-1800

Glencoe
McKee North Shore Sales, Inc.
1155 Skokie Highway
P. O. Box 117 ..... Vernon 5-3040

Peoria
McKee Door Sales of Peoria
211 Seventh Street 4-1528

Quincy
D. H. Rouse Company
McKee Overdoor Division
1315 Broadway ..... Baldwin 2-6240

Rockford
Robert A. Gibson
307 North London 3-7433

INDIANA

Evansville
Van Deest Supply
2406 Gum Street ..... Gr. 6-6558

Fort Wayne
Old Fort Supply Company, Inc.
709 Clay Street ..... Anthony 6425

Hammond
Standard Equipment & Supply Corp.
5020 Hohman Ave. ... Westmore 1-3060

Indianapolis (18)
McKee Door Sales of Indianapolis
5906 East 16th St. ... Fleetwood 6-9066

Lafayette
McKee Overdoor Sales of Lafayette
Division of Sullivan & Fortner Roofing Company
700 N. 31st St. ..... Gibson 7-2887

Michigan City
A. C. Heitschmidt Company
East Michigan Street ... Triangle 2-4433

South Bend (14)
Sumner B. Shimp
1625 Miami Street ..... Atlantic 7-1588

IOWA

Burlington
McKee Overdoor Sales of Burlington
Division of Tri-State Glass Company
625½ North Main Street .. Plaza 2-4491

Cedar Rapids
Automatic Door, Inc.
Division of Iowa Lumber Dealers, Inc.
1204 Ninth St., S.W. .... Empire 5-2544

Davenport
Austin Crabbs, Inc.
1010 Farragut Avenue
P. O. Box 816 2-6294

Des Moines
Automatic Door Company
4039 East 14th Street .. Amhurst 2-7424

Marshalltown
Lander-Landon Company
McKee Overdoor Division
1603 West Main
P. O. Box 304 6666

Mason City
Percy Construction Company
231 Ninth Street, S.E. ... Garden 4-4255

KANSAS

Wichita
Claude Balzer, Inc.
P. O. Box 2141 ..... Murray 3-8241

Hutchinson
L. J. Bromert Mfg. & Dist. Company
319 West Fifth Street
P. O. Box 535 ..... Mohawk 5-6911

KENTUCKY

Paducah
Paducah Iron Company
229-233 South First Street 2-8238

MASSACHUSETTS

Boston
Construction Specialties, Inc.
126 Massachusetts Ave. .. Copley 7-1503

MICHIGAN

Detroit (34)
McKee Overdoor, Inc.
17507 Van Dyke ..... Forest 6-2332

Grand Rapids (3)
McKee Overdoor Sales of Grand Rapids
28 Mayfield, N.E. .... Glendale 8-8319

Kalamazoo
Johnson Door Sales and Service of Kalamazoo
1528 Reycraft Drive .... Fireside 2-7174

Michigan Center
McKee Door Sales of Jackson
4428 Allison Road ..... Porter 4-2645

Saginaw
Charles Burkholder
428 McCoskry Street ... Pleasant 4-9354

MINNESOTA

Cook
T. J. Korber
McKee Door Sales of N.E. Minnesota
Route 1

Minneapolis
Minnesota-McKee Door Company—Div. of Steel Structures, Inc.
821 Ninth Avenue, S.E. .. Federal 9-2786

MISSISSIPPI

Jackson
Contractors Material Company, Inc.
182 N. Gallatin Street
Box 3421—W. Jackson Station .. 3-8381

MISSOURI

Cape Girardeau
Cape Paint and Glass Service
501 Broadway ..... Edgewater 4-2212

Maplewood (17)
Cox Brothers, Inc.
Dist. of McKee Door of Missouri
3101 Bartold ..... Sterling 1-0651

MONTANA

Billings
Hanson Overdoor Sales and Service
1148 North 29th Street 5-5479

Helena
Builders Supply Company ... Hi 2-2520

NEBRASKA

Hastings
Hansen Building Specialties, Inc.
110 South Hastings Avenue 2-2186

Lincoln
W. F. Hoppe Lumber Company
9th & S Streets 2-4202

Omaha
Earl G. Hermie
7060 Maple Street ..... Walnut 2330

NEW YORK

Buffalo (13)
McKee Door Sales Company of Buffalo
Division of Troup Engineering Company
295 Auburn Avenue ..... Garfield 0900

DeWitt
Wm. F. Cummins Company, Inc.
4451 East Genesee St. ... Gibson 6-0901

Jamaica (28)
McKee Door Sales Company, Inc.
Queens Village
211-14 Jamaica Avenue .. Hollis 4-2524

Rochester
McKee Door Sales of Rochester
1292 East Main St. ... Hubbard 2-5170

NORTH DAKOTA

Fargo
Fargo Linoleum Company
616 Second Avenue, North .. Ad. 2-2493

Mandan
Supercrete Industries, Inc.
P. O. Box 111

Minot
Thorsrud Supply Company
129 5th Ave. N.W.—Box 569 2-5111

OHIO

Akron
R. J. Flickinger Company
1574 Akron-Peninsula Rd. ..Walnut 3-9737

Cleveland
McKee Door Sales of Cleveland
2831 Woodhill Rd. .. Sweetbriar 1-5220

Niles
Traichal Construction Company
724 West Street ..... Olympic 2-6346

Portsmouth
McKee Overdoor Sales of Portsmouth
Division of Lancaster and Gulker, Inc.
1401 Chillicothe St. ... Elmwood 3-2858

Springfield
McKee Door Sales of Springfield, Ohio
605 Hubert Avenue .... Fairfax 5-5809

Worthington
Emil E. Kerbler and Company
6491 Proprietors Road ..... Tu. 5-5387

PENNSYLVANIA

Pittsburgh
Allied Materials Company
300 Cedar Blvd. ..... Locust 3-4511

SOUTH CAROLINA

Sumter
B. L. Montague Company
East Liberty Street
P. O. Box 909 ..... Spruce 3-3311

SOUTH DAKOTA

Rapid City (2)
Dakota Steel and Supply Company
P. O. Box 631 ..... Fi. 2-6070

Sioux Falls
Hassenstein Steel Company
300 East Walnut Street 4-7091

TENNESSEE

Chattanooga (1)
The Currin Company
1208 Carter Street ... Amhurst 6-2762

Memphis
McKee Overdoor Sales of Memphis
Division of Dunn, Baskin and Dunn
1319 Clementine Avenue .. W.H. 6-0027

TEXAS

San Angelo
Nesom and Spence
McKee Overdoor & Weatherstripping Company
31 North Chadbourne 6358

UTAH

Salt Lake City (10)
Gerstner Specialties, Inc.
83 Navajo Street
P. O. Box 336 ..... El. 5-2993

VERMONT

Burlington
Vermont Engineering and Supply Co.
207 Flynn Avenue 4-9844

WISCONSIN

Milwaukee
McKee Door Sales and Service of Wisconsin
2435 North Holton St. .. Concord 4-7522

WYOMING

Riverton
J. Teter
2301 West Park Avenue .. Walnut 2330

CANADA

Ontario, Toronto (18)
McKee Door of Canada Ltd.
12 Jutland Road ..... Clifford 9-4442

OVERDOORS McKEE TRADE MARK OPERATORS

McKee Door Company

MAIN OFFICE & FACTORY • AURORA, ILLINOIS

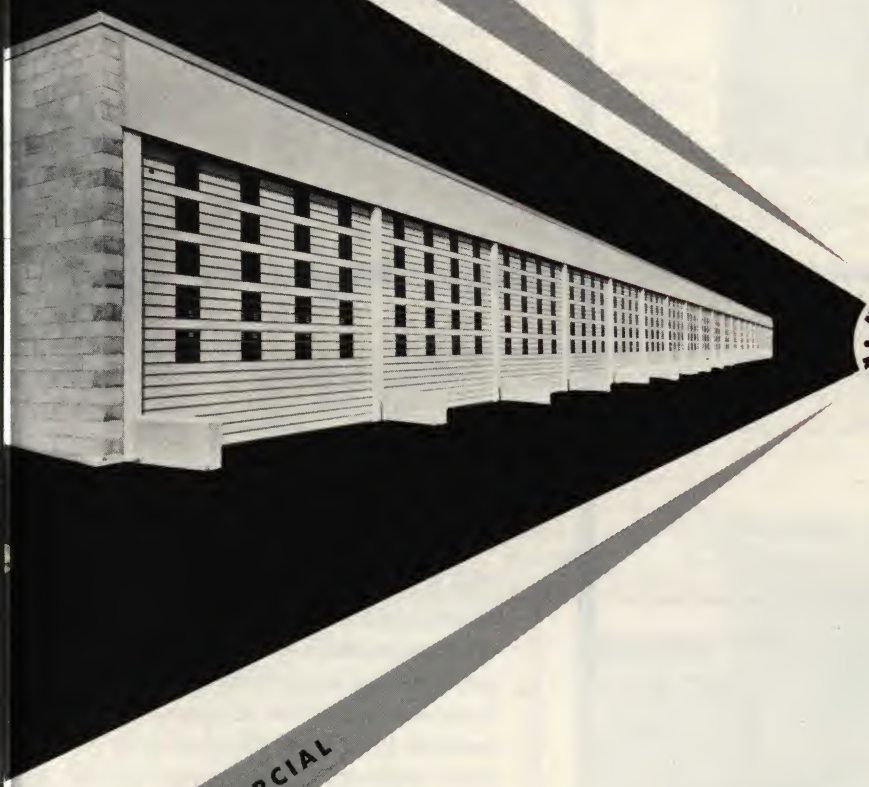
CATALOG NO. 32

PRINTED IN U.S.A.

MORRISON
steel sectional
Roly-Doors

IMPERIAL COMMERCIAL

REGENT COMMERCIAL



IMPERIAL RESIDENTIAL

REGENT RESIDENTIAL

PREMIER RESIDENTIAL

MORRISON ROLY-DOORS

Newly-Expanded lines to include an extremely wide selection of models for new construction and remodeling.

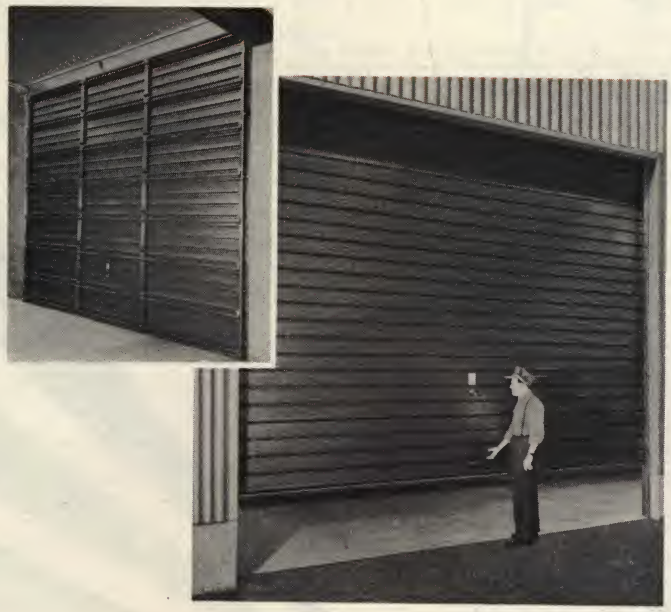
RESIDENTIAL • COMMERCIAL • INDUSTRIAL

STEEL SECTIONAL DOORS and AUTOMATIC OPERATORS

MORRISON STEEL PRODUCTS, INC.
BUFFALO 7, NEW YORK

REPLACEMENT OR REFUND OF MONEY
Guaranteed by Good Housekeeping
IF NOT AS ADVERTISED THEREIN

IMPERIAL COMMERCIAL



IMPERIAL sections

The IMPERIAL model represents the crowning achievement of Morrison Roly-Doors. Here is a steel sectional door for those who appreciate engineering excellence. Truly, this is the finest line of Commercial, Industrial, Residential doors ever offered. The latest and most outstanding features have been incorporated into the Imperial Line to provide a door neatly designed to blend with all styles of architecture, properly reinforced to offer maximum strength and precisely balanced to assure ease of operation with or without a motor driven operator.

REGENT COMMERCIAL

REGENT sections

The REGENT model has been developed for those users who want ruggedness and dependable performance at an economical price. Incorporated in this new model are features heretofore found only in much more costly commercial doors. Where price is a factor the REGENT model can be specified with assurance that proper reinforcing makes this model a rugged door designed to withstand the rough treatment that all doors undergo in daily use.

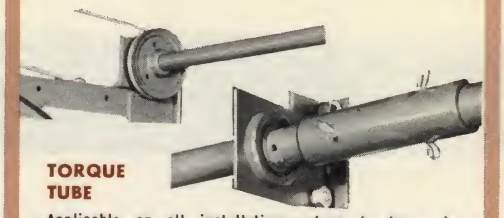
NATIONWIDE SALES AND SERVICE

Roly-Door Distributors and Dealer-Installers, located in principal cities of the U. S. and Canada, offer prompt delivery and expert installation service. They are listed in the classified Telephone Directory. Complete information is also available from Morrison Steel Products, Inc. 601 Amherst Street, Buffalo 7, New York.

TRUSS BARS

TRUSS BAR ARRANGEMENTS

Door Widths	Standard Truss Bars	Reinforced Truss Bars
8′-0″ thru 9′-2″		
9′-3″ thru 10′-2″	On Top & Bottom Sections	
10′-3″ thru 16′-2″	On Top & Bottom Sections and at Each Section Joint	
16′-3″ thru 18′-2″	At Each Section Joint	On Top & Bottom and #3 Sections
18′-3″ thru 20′-2″		On Top & Bottom Sections and at Each Section Joint

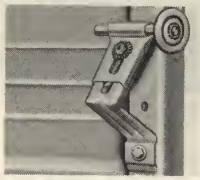


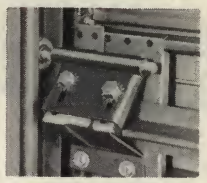
TORQUE TUBE

Applicable on all installations where headroom is standard 12½″ or over (Not applicable for low headroom.) No torque tube assembly supplied on doors 8′-0″ through 16′-0″ wide, through 12′-0″ high. (Torque tube assembly available as optional extra equipment on above sized doors.) Doors of all other sizes supplied with torque tube assemblies including cable sheaves mounted on heavy steel tube across door head, supported in three ball bearing brackets. These brackets are mounted one at each end on track reinforcing and one in center on adjustable bracket.

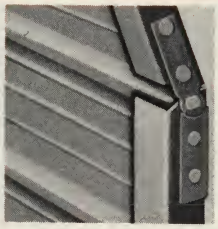
FULLY ADJUSTABLE ROLLER BRACKETS

Heavy gauge steel, precision designed to meet overload providing sturdy, smooth operation in tapered or wedge type track.


SINGLE ROLLER


DOUBLE ROLLER

See Roller Brackets on Reverse Side for Specifications.

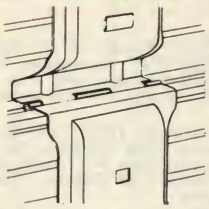


PATENTED HINGING

Patented, rolling socket hinging for easy, positive opening and closing with minimum maintenance.

PRECISE COUNTER-BALANCING

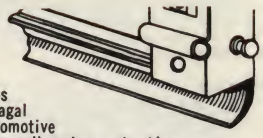
Precise, adjustable counterbalancing with accurately calibrated springs for safe, positive action.



VERTICAL BRACING

Additional stability and support is secured by welding 20 gauge die-formed steel vertical reinforcements to each section. Intermediate hinging is formed into the vertical reinforcements to insure positive positioning of all interlocking section joints. Doors through 10′-2″ wide have a single row of vertical reinforcements, doors 10′-3″ wide through 16′-2″ wide have a double row evenly spaced and doors 16′-3″ and wider have three evenly spaced rows of vertical braces.

ASTRAGAL: STANDARD EQUIPMENT

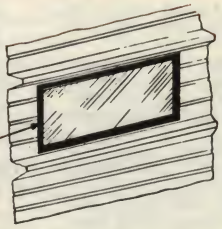


Doors 8′-0″ through 9′-0″ wide. 6′-6″ through 14′-0″ high, supplied with 1″ astragal. All other sizes supplied with 1½″ astragal of special analysis, automotive type rubber, resistant to salt and sun checking, resilient through wide temperature range.

WINDOW SECTION

Solid Vinyl Window Moulding Interlocking Glass and Steel Panel.

Glass size 18″ x 4¾″ S.S.

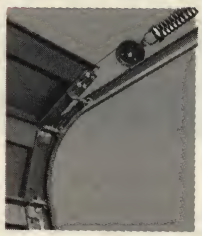


LOW HEADROOM

In Roly-Door installations where the distance between the top of the door opening and the bottom of the rafter structure is less than 12½″ a low headroom kit is available as extra equipment. With these low headroom brackets, Morrison Roly-Doors can be installed in headroom clearances as low as 3½″. Applicable on Imperial doors up to 150 square feet.

SECTION REINFORCING

Door Size Up To	Reinforcements Horizontal & 1 Vertical	Reinforcements Horizontal & 2 Vertical	Reinforcements Horizontal & 3 Vertical	End Reinforcements
8′ & 9′ x 12′ High	Bottom Section Only			
10′ x 10′ High	All Sections			
10′ x 12′ High	All Sections			All Sections
12′ x 12′ High	All Sections		Bottom Section	All Sections
14′-15′-16′ x 12′ High		All Sections	Bottom and Lock Section	All Sections

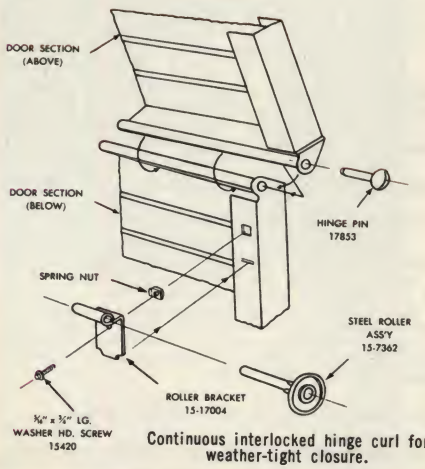


GRADUATED ROLLER BRACKETS AND ROLLERS

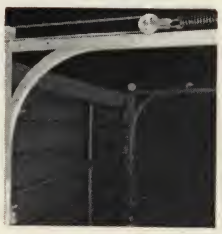
Heavy gauge steel, precision designed to meet overload providing sturdy, smooth operation in tapered or wedge type track.

See Roller Brackets on Reverse Side for Specifications.

HINGING



Continuous interlocked hinge curl for weather-tight closure.



PRECISE COUNTER-BALANCING

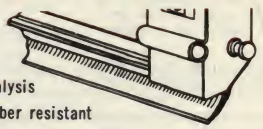
Precise, adjustable counterbalancing with accurately calibrated springs for safe, positive action.

LOW HEADROOM

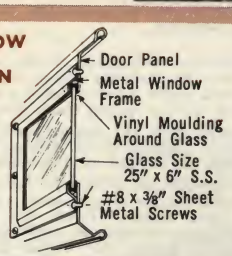
In Roly-Door installations where the distance between the top of the door opening and the bottom of the rafter structure is less than 11½″, a low headroom kit is available as extra equipment. With these low headroom brackets, Morrison Roly-Doors can be installed in headroom clearances as low as 4¼″.

ASTRAGAL: STANDARD EQUIPMENT

All doors supplied with astragal special analysis automotive type rubber resistant to salt and sun checking, resilient through wide temperature range.



WINDOW SECTION



ROLY-DOORS ARE BONDERIZED TO PRESERVE FINISH

All Roly-Doors are Bonderized, protected by a non-metallic phosphate coating of Bonderite. This forms an excellent base for the baked-on rust inhibiting primer. Together they provide a conditioned surface that securely anchors the finish coat of paint to the door. Peeling and flaking are eliminated and the door requires much less repainting.

IMPERIAL COMMERCIAL

Roly-Door Specifications

GENERAL: Roly-Doors are furnished ready for installation including sections, tracks, springs, bottom astragal, stop mouldings, lock, cables, pull rope and hardware.

STANDARD SIZES: Include 8'-0", 9'-0", 10'-0", 12'-0", 14'-0", 15'-0", 16'-0", 18'-0", and 20'-0" wide, and 7'-6" through 14'-0" high in 6" increments.

CUSTOM SIZES: Include 8'-1" through 24'-0" wide in one inch increments, and 7'-6" through 18'-0" high in 6" increments. Custom doors produced to maximum size of 336 square feet of door face area. Maximum widths 24'-0" and maximum height 18'-0". Custom size doors available on special order.

CLEARANCES: Standard headroom 12½" minimum—side space 3½" minimum, center pier 7" minimum. Low headroom kit available as extra equipment. Headroom clearance minimum 3½" with minimum side space of 4" for standard track arrangement. ON SPECIAL TRACK ARRANGEMENTS see text for clearance requirements.

MATERIAL: Steel, 24 gauge, roll-formed into deep horizontal ribbed panels. Strength and rigidity are obtained by welding 16 gauge end channels to ends of each section.

TRACKS: Vertical wedge-type tracks of 2" roll-formed steel mounted on die-formed steel brackets for wood jambs and masonry where wood jambs are applied. (For continuous or reverse angle track and overlapping steel jamb construction, for application to steel jambs or masonry steel jambs as optional extra equipment.)

Horizontal tracks with 15" curved section made of 2" roll-formed steel with angle reinforcement and a 4" x 1½" x 12 gauge jamb angle, 22" long, all welded into one unit.

Doors through 9'-0" wide, 7'-0" high, tracks are .062 gauge and horizontal curve reinforcing angle is 1¾" x 1¼" x 12 gauge, 24" long.

Doors over 9'-0" through 16'-0" wide, through 7'-0" high, tracks are .083 gauge and horizontal curve reinforcing angle is 1¾" x 1¼" x 10 gauge, 6'-3" long.

Doors 8'-0" through 16'-0" wide, over 7'-0" through 10'-0" high, tracks are .083 gauge and horizontal curve reinforcing angle is 1¾" x 1¼" x 10 gauge, 10" longer than door height.

Doors over 16'-0" wide; or over 10'-0" high, tracks are .093 gauge and horizontal curve reinforcing angle is 2" x 1¼" x 3/16", 10" longer than door height.

TRACK HANGERS: Because of varying ceiling heights and construction method, no hangers are furnished with commercial size doors.

ROLLERS: All doors supplied with ten (10) ball, steel ball bearing rollers.

ROLLER BRACKETS: Doors 8'-0" to 10'-2" wide by 10'-6" and higher; and doors 11'-3" to 16'-2" wide by 7'-6" and higher; and doors 16'-3" and wider by 6'-6" and higher are provided with double graduated adjustable roller brackets, all other sizes are provided with single graduated adjustable roller brackets.

CABLE SHEAVES: Doors 8'-0" through 9'-2" wide, 7'-6" through 10'-0" high, supplied with 3" O.D. steel ball bearing sheaves.
Doors of all other sizes supplied with 4" O.D. steel ball bearing sheaves.

CABLES: Doors 8'-0" through 9'-2" wide, 7'-6" through 10'-0" high, supplied with ⅛" diameter 6 x 7 galvanized, 1210# tensile preformed plow steel cable.

Doors 9'-3" through 16'-2" wide, 7'-6" through 14'-0" high and 8'-0" through 9'-0" wide, over 10'-0" through 14'-0" high, supplied with 3/16" diameter 6 x 19 galvanized, 2500# tensile preformed plow steel cable.

Doors of all other sizes supplied with 3/16" diameter 7 x 19 tinned, 4200# tensile preformed aircraft cable.

PROTECTIVE COATING: All metal surfaces are Bonderized.

PRIMER: Red oxide baked prime coat.

SPRINGS: All doors supplied with two extension springs made of oil tempered steel wire of low stress for long life. All springs engineered to exact requirement for each size door for perfect balance. Torsion springs are specifically designed for use on high lift applications—also available as extra equipment on standard installations. Roly-Doors do not rot, warp or absorb moisture—weight remains constant. Therefore, standard installations are equipped with extension springs to insure permanent, easy operation without the additional cost of torsion springs.

FASTENERS: All screws, bolts, nuts and washers are cadmium plated.

GUARANTEE: All doors guaranteed against defects in material and workmanship for one year.

PREPARATION: Jambs and opening, preparation, painting and glazing by others.

WINDOW OPENINGS . . . Doors available with window openings — 2 openings in doors 10'-2" wide and under, 3 openings in doors 10'-3" through 16'-2" wide and 4 openings in doors 16'-3" wide and over.

REGENT COMMERCIAL

Roly-Door Specifications

GENERAL: Regent doors are furnished ready for installation including sections, tracks, springs, bottom astragal, stop mouldings, locks, cables, pull rope and hardware.

STANDARD SIZES: Include 8'-0", 9'-0", 10'-0", 12'-0", 14'-0", 15'-0", 16'-0" wide and 7'-6" through 12'-0" high in 6" increments.

CUSTOM SIZES: Include 8'-1" through 16'-2" wide in one inch increments and 7'-6" through 12'-0" high in 6" increments. Custom doors produced to maximum size of 194 square feet of door surface area. Maximum widths 16'-2" and maximum heights 12'-0". Custom size doors available on special order only.

CLEARANCES: Standard headroom 11½" minimum—side space 3½" minimum, center pier 7" minimum. Low headroom kit available as extra equipment. Headroom clearance minimum 4¼" with minimum side space of 4½" for standard track arrangements. On special track arrangements,—see text for clearance requirements.

MATERIALS: Steel, 24 gauge, roll-formed into deep horizontal ribbed panels. Strength and rigidity are added by welding 16 gauge end channel to the ends of each section. On doors 10'-3" wide and over strength and rigidity are increased with the use of horizontal and vertical reinforcing welded to the sections.

TRACKS: Vertical wedge-type tracks of 2" roll-formed steel mounted on die formed steel brackets for wood jambs. (For continuous angle track and overlapping steel jamb construction for application to steel jambs or masonry steel jambs see text on special track arrangements.)

Horizontal tracks with 11" curved section made of 2" roll formed steel with horizontal angle reinforcement and a 4" x 1½" x 12 gauge vertical jamb angle, 19" long, all welded into one unit.

Doors 8'-0" through 16'-2" wide, over 7'-0" through 10'-0" high, tracks are .083" gauge and horizontal reinforcing angle is 1¾" x 1¼" x 10 gauge, 10" longer than track height. Doors 8'-0" through 16'-2" wide, over 10'-0" through 12'-0" high, tracks are .093" gauge and horizontal reinforcing angle is 2" x 1½" x 3/16" gauge, 10" longer than track height.

TRACK HANGERS: Because of varying ceiling heights and construction method, no hangers are furnished with commercial size doors.

ROLLERS: All Commercial Regent Doors 7'-6" high and higher are supplied with ten (10) ball, steel ball bearing rollers.

ROLLER BRACKETS: Doors 9'-3" through 10'-2" wide by 10'-6" high and higher and doors 10'-3" through 16'-2" wide by 7'-6" high and higher are provided with graduated fixed double roller brackets. All other sizes are provided with graduated fixed single roller brackets.

CABLE SHEAVES: Doors 8'-0" through 9'-2" wide by 7'-6" through 10'-0" high are supplied with 3" O.D. steel ball bearing sheaves. All other commercial Regent Doors 7'-6" high and higher are supplied with 4" O.D. ball bearing sheaves.

CABLES: All doors 8'-0" through 9'-2" wide are supplied with ⅛" diameter 6 x 7 galvanized, 1210# tensil preformed plow steel cable.
All doors 9'-3" wide and wider are supplied with 3/16" diameter 6 x 19 galvanized, 2500# tensil preformed plow steel cable.

PROTECTIVE COATING: All door sections are Bonderized.

PRIMER: Red oxide baked prime coat.

SPRINGS: All doors supplied with two extension springs made of oil tempered steel wire of low stress for long life. All springs engineered to exact requirements for each size door for perfect balance. Torsion springs are specifically designed for use on high lift applications—also available as extra equipment on standard installations. Regent Roly-Doors do not rot, warp or absorb moisture—weight remains constant. Therefore, standard installations are equipped with extension springs to insure permanent, easy operation without the additional cost of torsion springs.

FASTENERS: All screws, bolts, nuts and washers are cadmium plated.

GUARANTEE: All doors guaranteed against defects in material and workmanship for one year.

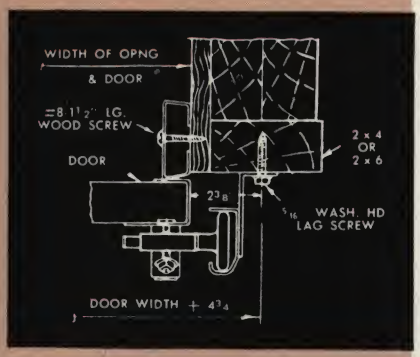
PREPARATION: Jambs and opening preparation, painting and glazing by others.

WINDOW OPENINGS . . . Doors available with window openings — 2 openings in doors 8' through 12'-2" . . . 3 openings in doors 12'-3" through 16'-2".

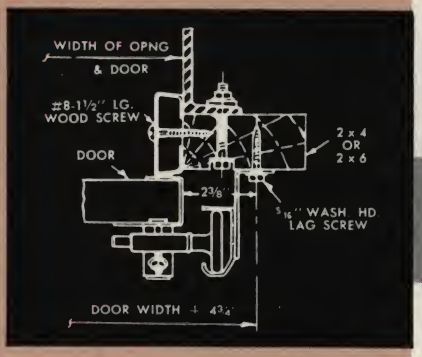
MORRISON ROLY-DOORS ARE BONDERIZED FOR DURABILITY • TIE

JAMB APPLICATION FOR IMPERIAL REGENT

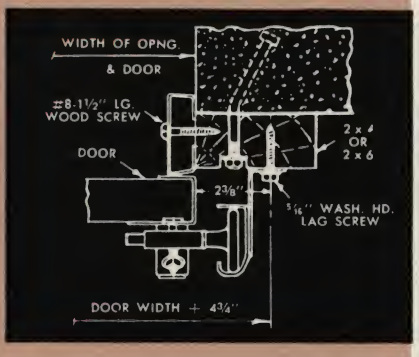
WOOD

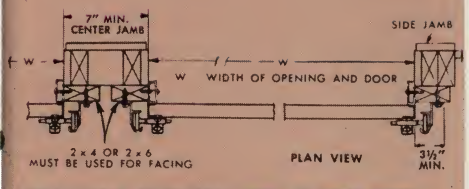


STEEL



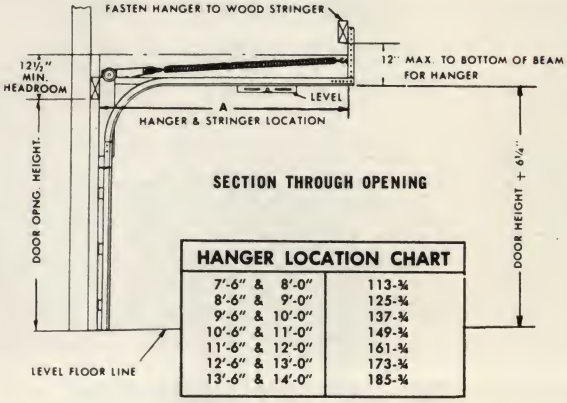
MASONRY



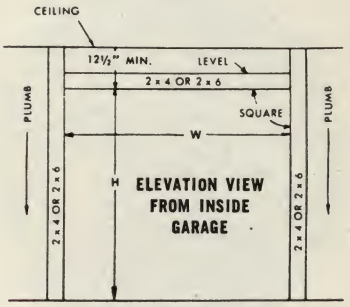


APPLICATION TO WOOD JAMBS (SINGLE OR DOUBLE DOORS)

IMPERIAL *Framing Details*



HANGER LOCATION CHART	
7'-6" & 8'-0"	113-¾
8'-6" & 9'-0"	125-¾
9'-6" & 10'-0"	137-¾
10'-6" & 11'-0"	149-¾
11'-6" & 12'-0"	161-¾
12'-6" & 13'-0"	173-¾
13'-6" & 14'-0"	185-¾



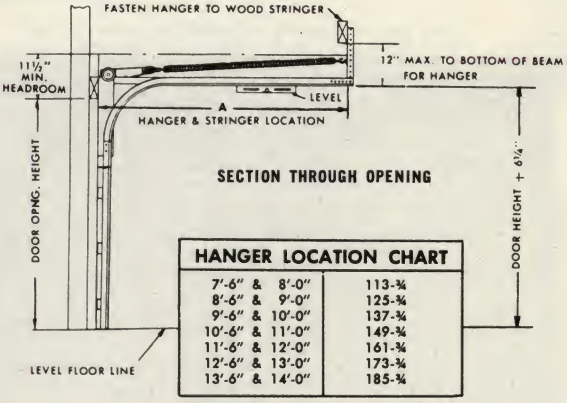
W–WIDTH OF OPENING AND DOOR
H–HEIGHT OF OPENING AND DOOR
CHECK OPENING FOR SIZE AND SQUARENESS

Door opening and Roly-Door should be the same size. Vertical side jambs must be plumb and parallel. Top header should be level and square with side jambs as shown. Surface for mounting track brackets must be flat and square. (Any jamb bolts must be countersunk flush.)

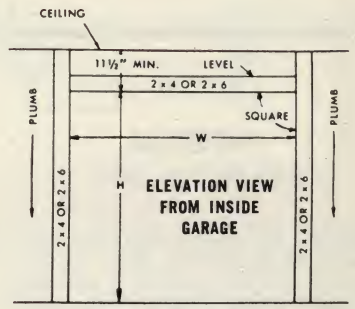
NOTE: Standard door installations require 12½" minimum headroom from the bottom of the header to the ceiling.

A LOW HEADROOM KIT IS AVAILABLE FOR INSTALLATIONS WITH LESS THAN 12½" CLEARANCE.

REGENT *Framing Details*



HANGER LOCATION CHART	
7'-6" & 8'-0"	113-¾
8'-6" & 9'-0"	125-¾
9'-6" & 10'-0"	137-¾
10'-6" & 11'-0"	149-¾
11'-6" & 12'-0"	161-¾
12'-6" & 13'-0"	173-¾
13'-6" & 14'-0"	185-¾



W–WIDTH OF OPENING AND DOOR
H–HEIGHT OF OPENING AND DOOR
CHECK OPENING FOR SIZE AND SQUARENESS

Door opening and Roly-Door should be the same size. Vertical side jambs must be plumb and parallel. Top header should be level and square with side jambs as shown. Surface for mounting track brackets must be flat and square. (Any jamb bolts must be countersunk flush.)

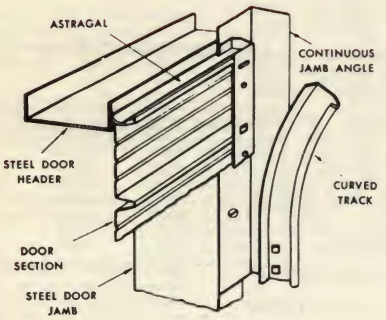
NOTE: Standard door installations require 11½" minimum headroom from the bottom of the header to the ceiling.

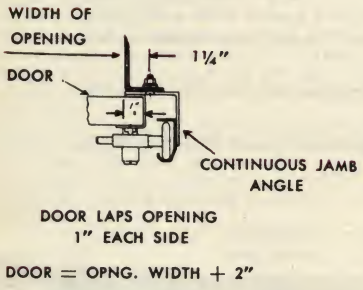
A LOW HEADROOM KIT IS AVAILABLE FOR INSTALLATIONS WITH LESS THAN 11½" CLEARANCE.

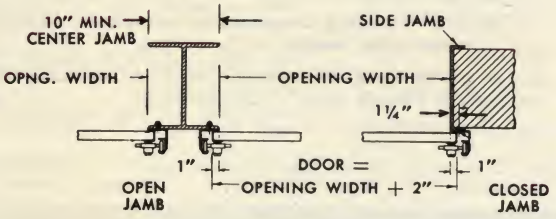
SPECIAL COMMERCIAL APPLICATIONS

IMPERIAL and REGENT

OVERLAPPING STEEL JAMB



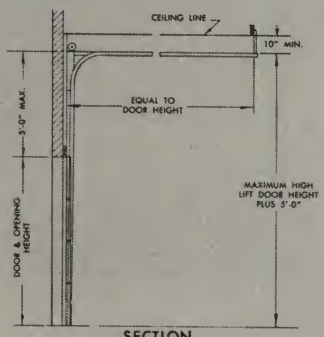




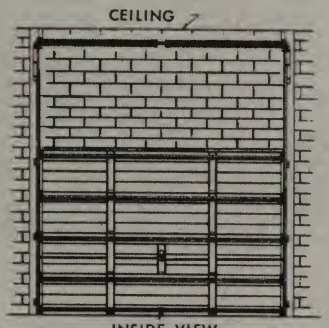
The vertical track is factory assembled to 2¾" x 2¾" x 12 gauge angles for mounting to the steel building columns. This permits the door to overlap the opening by 1" on each side and eliminates the use of stop moulding.

IMPERIAL HIGH LIFT

Roly-Door's high lift door installation permits ceiling heights to be fully utilized. This method is used in many warehouses, industrial buildings and service stations where obstruction between the floor and ceiling would be a hinderance.



SECTION

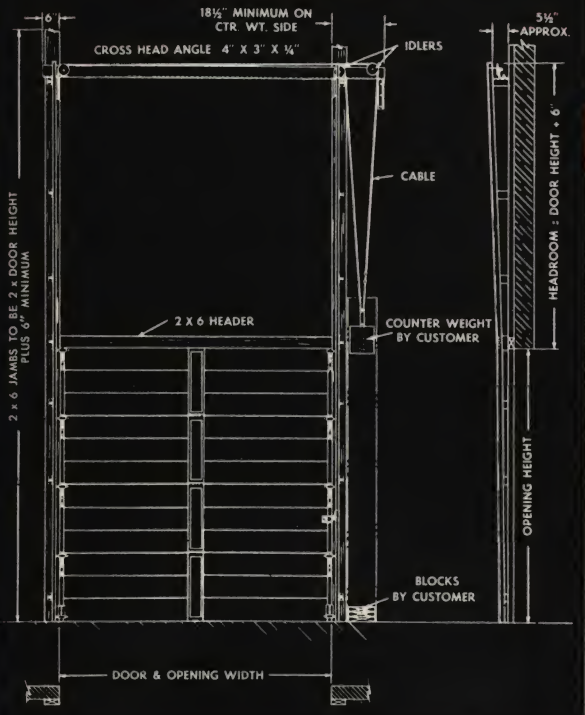


INSIDE VIEW

IMPERIAL VERTICAL LIFT

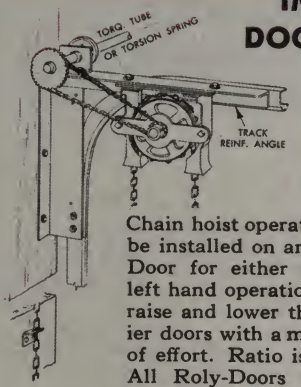
Vertical lift means just what the name implies. The door travels straight up the wall in a vertical position until it clears the door opening. In buildings where merchandise is stored close to the door and overhead cranes are utilized, the vertical lift installation permits full advantage being taken of the floor to ceiling area. Morrison Vertical Lift Roly-Doors are counter balanced with specially designed weights. Door sections, hardware and tracks are the same as standard Roly-Doors except for the substitution of straight vertical track for the curved horizontal track and the counter balancing weights for the tension springs. Vertical Lift Roly-Doors may be installed on either side of the door opening.

VERTICAL LIFT


6"
18½" MINIMUM ON CTR. WT. SIDE
5½" APPROX.
CROSS HEAD ANGLE 4" X 3" X ¼"
IDLERS
CABLE
2 X 6 HEADER
COUNTER WEIGHT BY CUSTOMER
HEADROOM = DOOR HEIGHT + 6"
2 x 6 JAMBS TO BE 2 x DOOR HEIGHT PLUS 6" MINIMUM
OPENING HEIGHT
BLOCKS BY CUSTOMER
DOOR & OPENING WIDTH

CHAIN HOIST

IMPERIAL DOORS ONLY



Chain hoist operators may be installed on any Roly-Door for either right or left hand operation. They raise and lower the heavier doors with a minimum of effort. Ratio is 3 to 1. All Roly-Doors may be equipped with any type radio or electric door operators.

IMPERIAL RESIDENTIAL

IMPERIAL SPECIFICATIONS

DESCRIPTION: All steel, sectional upward acting, overhead doors with patented weather-tight seal at each section joint.

SIZES: 8'-0" through 20'-0" wide, 6'-6" to 7'-0" high. Door widths available in increments of 1" starting with 8'-0".

CLEARANCES: Standard headroom 12½" minimum—side space 3½" minimum, center pier 7" minimum. Low headroom kit available with headroom clearance 3½" minimum and minimum side space of 4".

MATERIAL: Steel—roll formed into strong, rigid, durable sections.

TRACKS: Horizontal tracks, with 15" curved section made of 2" roll formed steel with angle reinforcement. Vertical wedge-type tracks of 2" roll formed steel.

ASTRAGAL: Resilient rubber resistant to salt and sun checking and extreme temperatures.

WINDOW OPENINGS: Doors available with window openings — 2 openings in doors 10'-2" wide and under, 3 openings in doors 10'-3" through 16'-2" wide and 4 openings in doors 16'-3" wide and over.

ROLLERS: Doors 8'-0" through 9'-0" wide and 6'-6" to 7'-0" high Nylon Rollers—All other doors supplied with steel ball bearing rollers.

ROLLER BRACKETS: 12 Ga., die stamped, adjustable roller brackets.

PROTECTIVE COATING: All exposed metal surfaces are Bonderized and primed.

CABLES: Galvanized preformed steel cable.

SPRINGS: All doors supplied with two extension springs made of oil tempered steel wire.

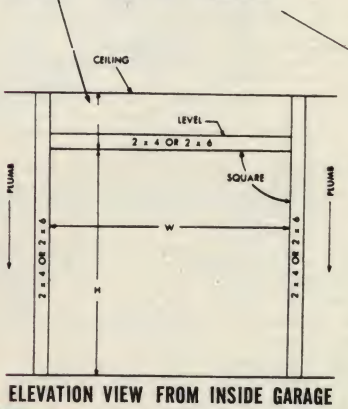
FASTENERS: All screws, bolts, nuts, and washers are cadmium plated.

LOCKS: Doors 8'-0" through 9'-0" wide, 6'-6" and 7'-0" high, side spring latch lock. All other doors center spring latch lock with locking rods.

All specifications and prices subject to change without notice. U. S. and foreign patents applied for.

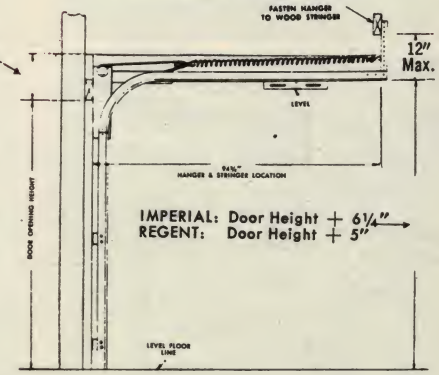
RESIDENTIAL IMPERIAL AND REGENT FRAMING DETAILS

IMPERIAL: 12½" Min. Headroom
REGENT: 11½" Min. Headroom



ELEVATION VIEW FROM INSIDE GARAGE

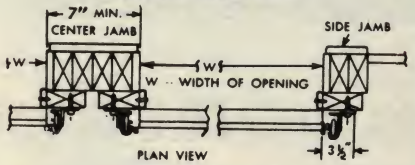
SECTION THROUGH OPENING



IMPERIAL: Door Height + 6¼"
REGENT: Door Height + 5"

Door Opening and Roly-Door should be the same size. Vertical side jambs must be plumb and parallel. Top header should be level and square with side jambs as shown. Surface for mounting track brackets must be flat and square.

APPLICATION TO WOOD JAMBS
(Single or Double Doors)



PLAN VIEW

REGENT RESIDENTIAL

REGENT SPECIFICATIONS

GENERAL: Morrison Roly-Door's "Regent" models are 7-section, upward acting doors furnished ready for installation, including sections, tracks, springs, bottom astragal, steel weather strips with mitered corner brackets, lock, cables and hardware. Full length, interlocking, weatherproof sections.

SIZE: Available in all stock sizes — 8' - 9' - 10' - 12' - 14' - 15' and 16', custom sizes in 1-inch increments produced on firm order, in two heights 6'-6" and 7'-0".

CLEARANCES: Standard headroom minimum 11½" side space 3½"—minimum center pier for multiple door installation 7".

SECTIONS: 24 gauge, roll formed, ribbed steel. All doors 12' and wider incorporate horizontal and vertical reinforcing members, resistance welded to the sections.

END CHANNELS: 16 gauge, die-stamped channels with flanged ends, projection welded to door sections.

ROLLER BRACKETS: 12 gauge, die-stamped graduated fixed roller brackets.

HINGE PINS: Complete set of solid steel, 7/16" diameter hinge pins.

TRACKS: Horizontal tracks with 11" curved section made of 2" roll formed steel with angle corner brackets. Vertical wedge-type tracks for free opening and tight closing.

TRACK HANGER BRACKETS: Perforated angles furnished as standard equipment.

ROLLERS AND SHEAVES: Complete set of long life, quiet, free-turning rollers and sheaves.

CABLES: Pre-formed galvanized steel cable.

SPRINGS: Extension springs of oil tempered steel, low stress for long life and perfect balance.

LOCKS: Standard pin tumbler, rim cylinder, spring latch lock (2 keys per lock). Side mounted on 8', 9' and 10' models—center mounted on 12' and wider models.

FASTENERS: All screws, nuts, washers and bolts cadmium or zinc plated.

ASTRAGAL: Resilient rubber, weatherproof — resistant to rock salt.

PROTECTIVE COATING: All sections are Bonderized. Red oxide prime coat baked on.

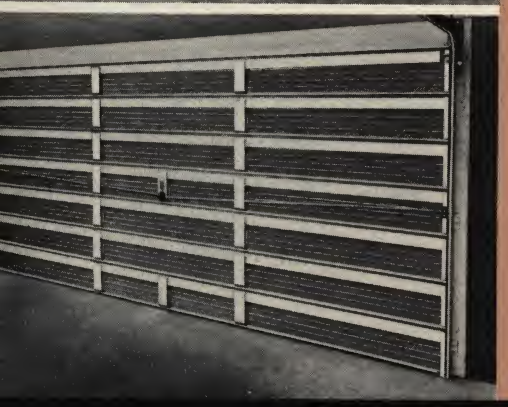
WINDOW OPENINGS: Doors available with window openings — 2 openings in doors 8' through 12'-2" . . . 3 openings in doors 12'-3" through 16'-2".

GUARANTEE: All doors guaranteed against defects in material and workmanship for one year.

PREPARATION: Jambs, openings and painting by others.

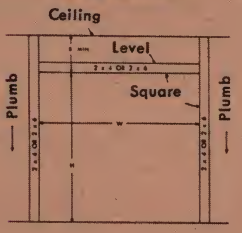
All specifications and prices subject to change without notice. U. S. and foreign patents applied for.

PREMIER RESIDENTIAL

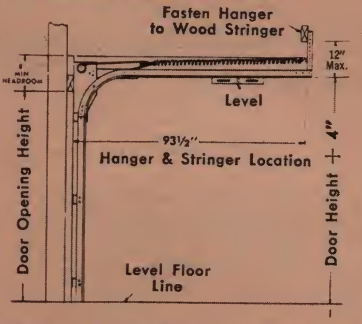


FRAMING DETAILS

ELEVATION VIEW FROM INSIDE GARAGE



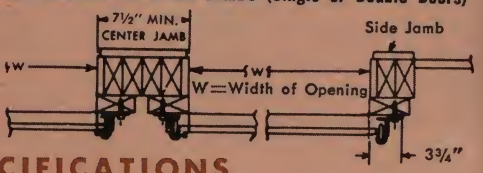
SECTION THROUGH OPENING



Door Opening must be to the even foot width. Vertical side jambs must be plumb and parallel. Top header should be level and square with side jambs as shown. Surface for mounting track brackets must be flat and square.

NOTE: Standard door installations require 8" minimum headroom from the bottom of the header to the ceiling.

APPLICATION TO WOOD JAMBS (Single or Double Doors)



PREMIER SPECIFICATIONS

GENERAL: Morrison Roly-Door's "Premier" models are 7-section, upward acting doors furnished ready for installation, including sections, tracks, springs, bottom astragal, lock, cables and hardware. Full length, interlocking, weatherproof sections.

SIZE: Available in all stock sizes — 8' - 9' - 10' 12' - 14' - 15' and 16'. Two heights 6'-6" and 7'-0".

CLEARANCES: Standard headroom minimum 8" — side space 3¾" — minimum center pier for multiple door installation 7½".

SECTIONS: 24 gauge, roll formed, ribbed steel. All doors 12' and wider incorporate horizontal and vertical reinforcing members, resistance welded to the sections.

END CHANNELS: 16 gauge, die-stamped channels with flanged ends, projection welded to door sections.

ROLLER BRACKETS: Die-stamped roller brackets at top and bottom of door.

TRACKS: Horizontal tracks with 8" curved section made of 2" roll formed steel with angle corner brackets. Vertical tracks are mounted on adjustable brackets.

TRACK HANGER BRACKETS: Perforated angles furnished as standard equipment.

ROLLERS AND SHEAVES: Complete set of long life, quiet, free-turning rollers and sheaves.

CABLES: Pre-formed galvanized steel cable.

SPRINGS: Extension springs of oil tempered steel, low stress for long life and perfect balance.

LOCKS: Standard pin tumbler, rim cylinder, spring latch lock (2 keys per lock). Side mounted on 8', 9' and 10' models—center mounted on 12' and wider models.

FASTENERS: All screws, nuts, washers and bolts cadmium or zinc plated.

ASTRAGAL: Resilient rubber, weatherproof — resistant to rock salt.

PROTECTIVE COATING: All sections are Bonderized. Red oxide prime coat baked on.

WINDOW OPENINGS: Doors available with window openings — 2 openings in doors 8' through 12'-2" . . . 3 openings in doors 12'-3" through 16'-2".

APPLIQUES: Decorative appliques optional at extra cost.

GUARANTEE: All doors guaranteed against defects in material and workmanship for one year.

PREPARATION: Jambs, openings and painting by others.

All specifications and prices subject to change without notice. U. S. and foreign patents applied for.

MORRISON
STEEL PRODUCTS, INC.

In this 350,000 sq. foot of modern manufacturing facilities Morrison Steel Products, Inc. was the first company in the United States to manufacture steel sectional upward rolling doors for all classifications of building. Each Morrison Roly-Door is built with a full background of manufacturing skill, technical know-how and a constant continuing program of research and development.

Roly-Door DIVISION

Because of the forward thinking of this company, the Morrison Roly-Door Division has kept ahead of the field with new features and improved performance with one objective in mind . . . "SATISFIED CUSTOMERS."

MORRISON STEEL PRODUCTS, INC., 601 AMHERST ST., BUFFALO 7, NEW YORK

Manufactured under U.S. Patent No. 2,567,021
Other U.S. and foreign patents pending.
All specifications and prices subject to change without notice.

MAILING ADDRESS:
MORRISON STEEL PRODUCTS, INC.
Box 3003 Buffalo 5, N. Y.

FORM # D 591 R1 LITHO in USA

UPWARD ACTING

SECTIONAL DOORS

wood · steel · aluminum

INDUSTRIAL · COMMERCIAL · RESIDENTIAL

OVERDOORS INC.

Home Office

Pacific Coast Division
OVERDOORS INC.
216 North Howard Street
Glendale 6, California

Southwest Division
OVERDOORS INC. of OKLA.
1819-30 N.W. 5th Street
Oklahoma City, Oklahoma

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OVERDOORS INC.

OVERDOORS INC., and associates with over 38 years of experience are recognized as one of the outstanding manufacturers of sectional upward acting doors. We have two modern factories exclusively engaged in manufacturing sectional doors. Originally the activities of these factories were restricted to their own immediate localities, but due to our high standards for QUALITY and insistence on SERVICE, our sales and installation departments are always expanding.

DISTRIBUTORS

ARKANSAS
Little Rock
Overdoors Inc. of Arkansas
3019 Asher Street
Phone: MO 6-9048

CALIFORNIA
Berkeley
Overdoors Inc.
600 University Avenue
Phone: TH 5-5865

Fresno
Friant Overhead Door Co.
7216 N. Blackstone
Phone: BA 2-9577

Glendale
Overdoors Inc.
216 No. Howard St.
Phone: CH 5-1296

Lodi
Memco
651 Reynolds Road
Phone: EN 8-2638
EN 8-5420

San Bernardino
Overdoors Inc.
P. O. Box 722
Phone: TU 3-2253

San Diego
Vinyard Overhead Doors
3225 Bean Street
Phone: CY 8-9951

HAWAII
Honolulu
Lawrence B. Stuart, Ltd.
1216 Kapiolani Blvd.
P.O. Box 2556
Phone: Honolulu 5-6253

ILLINOIS
Wilmette
C. A. Thorp
503 Park Avenue
Phone: AL 1-0233

INDIANA
Indianapolis
Building Specialties Co.
1102 West 25th Street
Phone: WAlnut 4-5368

KANSAS
Wichita
H & J Steel Company
631 South Mission
Phone: MU 3-1262

NEW MEXICO
Albuquerque
Raymond E. Garvey
2625 Monroe, N.E.
Phone: ALpine 5-7298

OKLAHOMA
Lawton
Overdoors Inc. of Oklahoma
209 Euclid Avenue
Phone: EL 3-6658

Oklahoma City
Overdoors Inc .of Oklahoma
1819–1830 N.W. 5th St.
Phone: CE 2-6767

Tulsa
Overdoors Inc. of Oklahoma
403 South Rockford Street
Phone: DI 3-3051

TEXAS
Amarillo
Overdoors Inc. of Okla.
& Texas Panhandle
2826 Northeast 8th St.
Phone: DR 2-4566

Corpus Christi
Custom Door Company
4937 Blundell
Phone: TU 3-0331

Fort Worth
Webb Overhead Door Co.
2519–25 West 7th St.
Phone: ED 2-5283

Lubbock
Overdoor Sales & Service
514 Avenue D
Phone: PO 2-8448

CANADA
North Vancouver, B.C.
General Doors Ltd.
Post Box 401650
West First Avenue
Phone: YUkon 8-8939

THIS IS OUR TRADEMARK

"It is your assurance of the finest."

Our creed is . . .

QUALITY *with* SERVICE

We will engineer and build the finest door made from the best materials available.
We will furnish willing and competent engineering, sales and service benefits to all prospective buyers for the best solutions to their door problems.
We hand pick our distributors—they must provide the SERVICE we demand to go with our QUALITY doors.
We will be competitive in price, but will not lower our standards of QUALITY.
We will give the same prompt, cheerful and expert SERVICE to all orders, large or small.
We will give a fair guarantee and back it up.

OVERDOORS INC.

Selector Chart

Heavy Duty Commercial Door Models	descriptions of doors, opening sizes,	pages 3, 4, 7
Industrial Standard Door Models	door sizes, model numbers, detail	page 12
Metal Doors	drawings and specifications	page 7
Special Doors	description, an example, post details, special track and hardware	page 8
Residential Doors and Electric Operators	Custom, Deluxe and Standard type doors—description, detail drawings and specifications	pages 10, 11
Service Station Doors	description, detail drawings and specifications	page 6
Framing Details—Commercial and Industrial	detail drawings for framing—wood or steel jambs	page 9
Electric Operators—Industrial	also electronic, mechanical and manual	page 9
Architectural Specifications	short form specifications	page 5

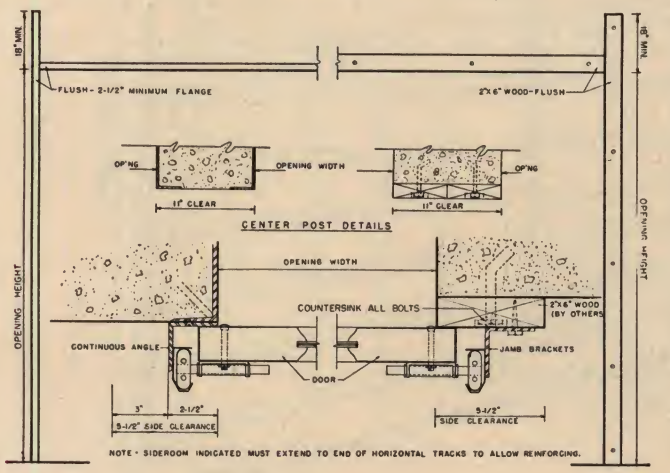
Heavy Duty Commercial Type — HD Models—Wood

Sunland Tujunga Telephone Company, Sunland, California

Merchants Biscuit Company, Oklahoma City, Oklahoma

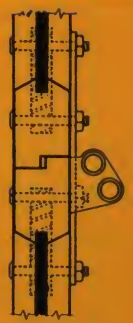
Standard Framing Details

• **general description**—The HD Series wood doors are selected by those who require the finest door appearance, ruggedness, durability, ease of operation and minimum maintenance. All door components are the finest available—each door is fabricated to suit specific opening requirements.
The vertical track is set on a taper and all door hinges are graduated. This assures a weather-tight joint when the door is closed.



• **commercial type doors**—The table below has been arranged to simplify the selection of the correct door and to protect the architect by assuring that the type selected has the proper track and hardware. Please specify the door size.

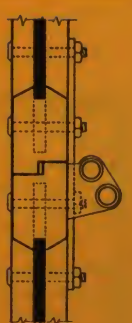
The Coca Cola Company, Los Angeles, California



detail for Pacific Coast Div.

Opening Size		Sections	Model Number	
Width	Maximum Height		Wood Jambs	Steel Jambs
8′-0″ to 12′-0″	8′-6″	4	HD1 A W	HD5 A S
	10′-6″	5	HD2 A W	HD6 A S
	12′-6″	6	HD3 A W	HD7 A S
	14′-6″	7	HD3 B W	HD7 B S
12′-6″ to 16′-0″	8′-6″	4	HD2 C W	HD6 C S
	10′-6″	5	HD3 C W	HD7 C S
	12′-6″	6	HD3 D W	HD7 D S
	14′-6″	7	HD4 D W	HD8 D S
16′-6″ to 20′-0″	8′-6″	4	HD2 E W	HD6 E S
	10′-6″	5	HD3 E W	HD7 E S
	12′-6″	6	HD3 F W	HD7 F S
	14′-6″	7	HD4 F W	HD8 F S

For larger openings, consult our engineering department.



detail for Southwest Mfg. Div.

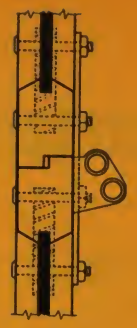
OVERDOORS INC.

Heavy Duty Commercial Type

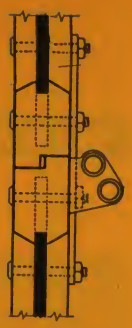
HD Models—Wood

"OVERDOORS" are used by customers requiring dependability. Here is a partial list of firms for whom we have built and installed overdoors:

American Can Company
Cascade Plywood Corp.
Chrysler Corporation
Coca Cola Company
Douglas Aircraft Co.
Dr. Pepper Bottling Co.
Firestone Tire & Rubber Co.
Ford Motor Company
General Motors
Goodyear Tire & Rubber Co.
Kimberly-Clark Corporation
National Biscuit Company
Pacific Telephone & Telegraph Company
Pepsi Cola Bottling Company
Ralphs Grocery Company
Seven-Up Bottling Company
Southern California Gas Co.
Studebaker-Packard Corp.
Union Pacific Railroad
United Parcel Service

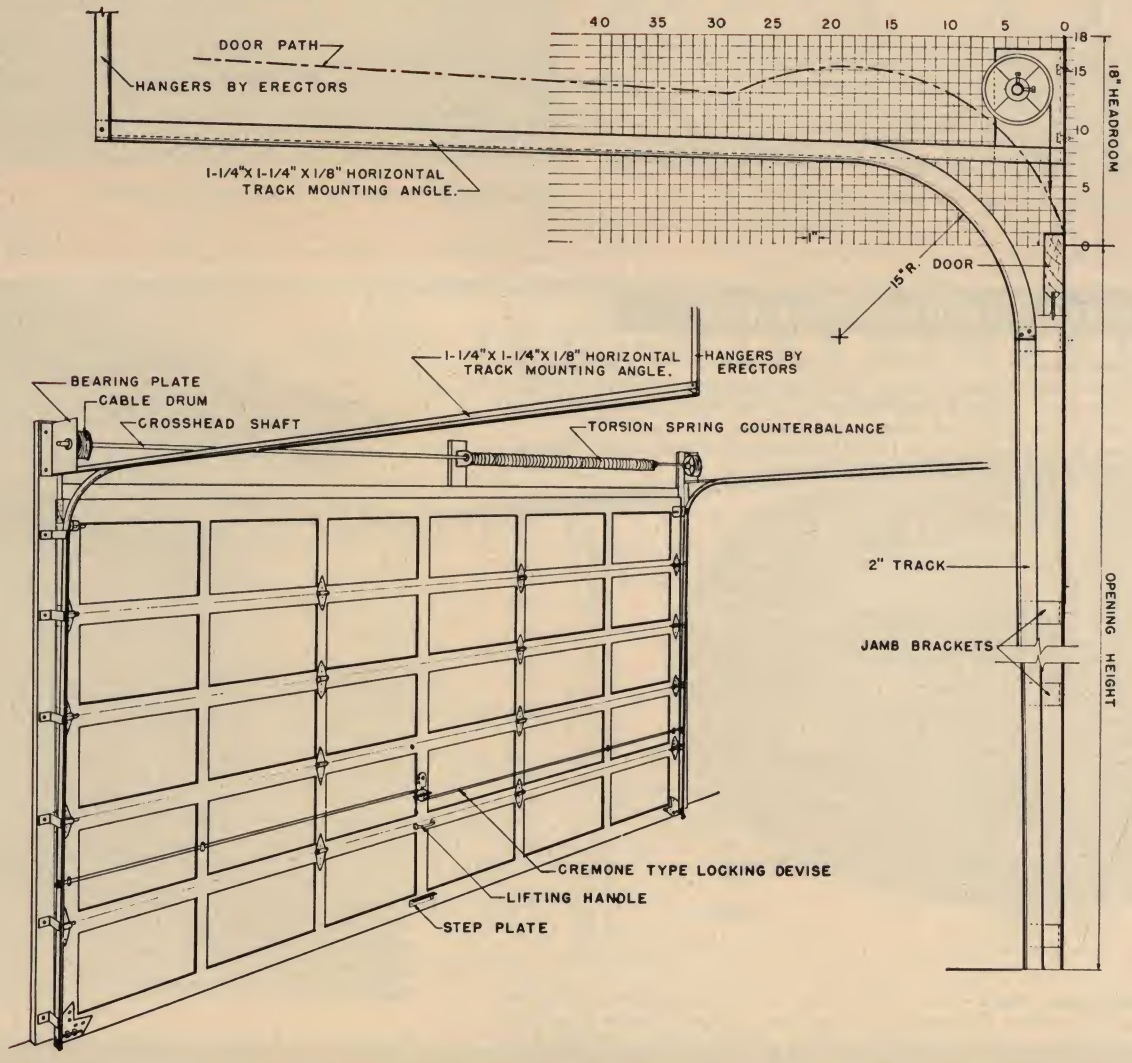


detail for Pacific Coast Div.



detail for Southwest Mfg. Div.

• for door sizes up to 12′–0″ wide



• specifications

track—Inclined vertical track—2″ x .093 gauge, 15″ radius, ***"Weather tight Wedge"*** for easy operation. Verticals are bracket mounted for wood casings and angle mounted for steel or concrete; horizontals reinforced as necessary; treated with a rust inhibitive metal primer.

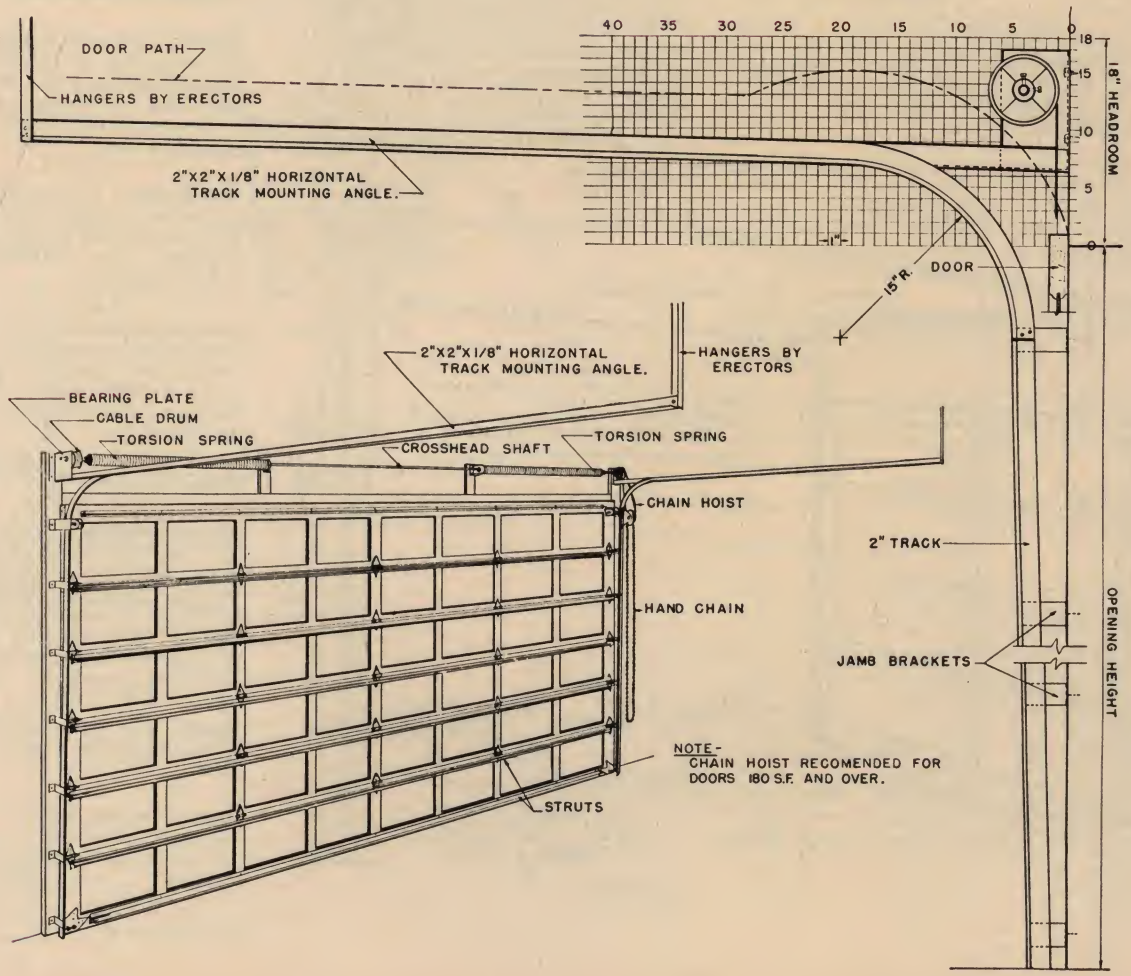
hardware—Heavy duty progressively graduated galvanized hinges to conform with inclined ***"Weather tight Wedge"*** vertical track; heavy duty steel galvanized top and bottom fixtures; all hinges and fixtures bolted to door sections; rollers are full race, ballbearing, hardened steel, full floating type.

counterbalance—Heavy duty, helical wound, tortion spring mounted on a continuous 1″ steel shaft with die cast drums; rust-proof strength tested lifting cables; all supported with sealed, hardened ballbearing units.

wood sections—Rails and stiles of 1¾″ thick K.D. vertical grain Douglas Fir, stuck mould, assembled with WATERPROOF GLUE. Pacific Coast Division uses spiraled hardwood dowels, mortise and short tenon, steel pinned method. The Southwest Division uses regular mortise and tenon, steel pinned method. Panels are ¼″ hardboard, smooth both sides (***see guarantee***). Sections are sanded ready for paint or varnish.

Architects Specifications
Upward acting doors shall be "OVERDOORS" as manufactured by OVERDOORS INC., and of sizes and designs as shown on the drawings.

• for door sizes over 12′–0″ wide



extension springs – Available if specified.

lock – Cremone type with 5 pin brass cylinder.

glass – Any or all sections may be left open for glazing.

sag prevention – Doors over 12′6″ wide are trussed to maintain their original shape.

weatherstrip – Available for bottom rail.

guaranteed – against faulty or defective material or workmanship for one (1) year (see panel guarantee page 5)

HARDBOARD PANEL

Lifetime Guarantee

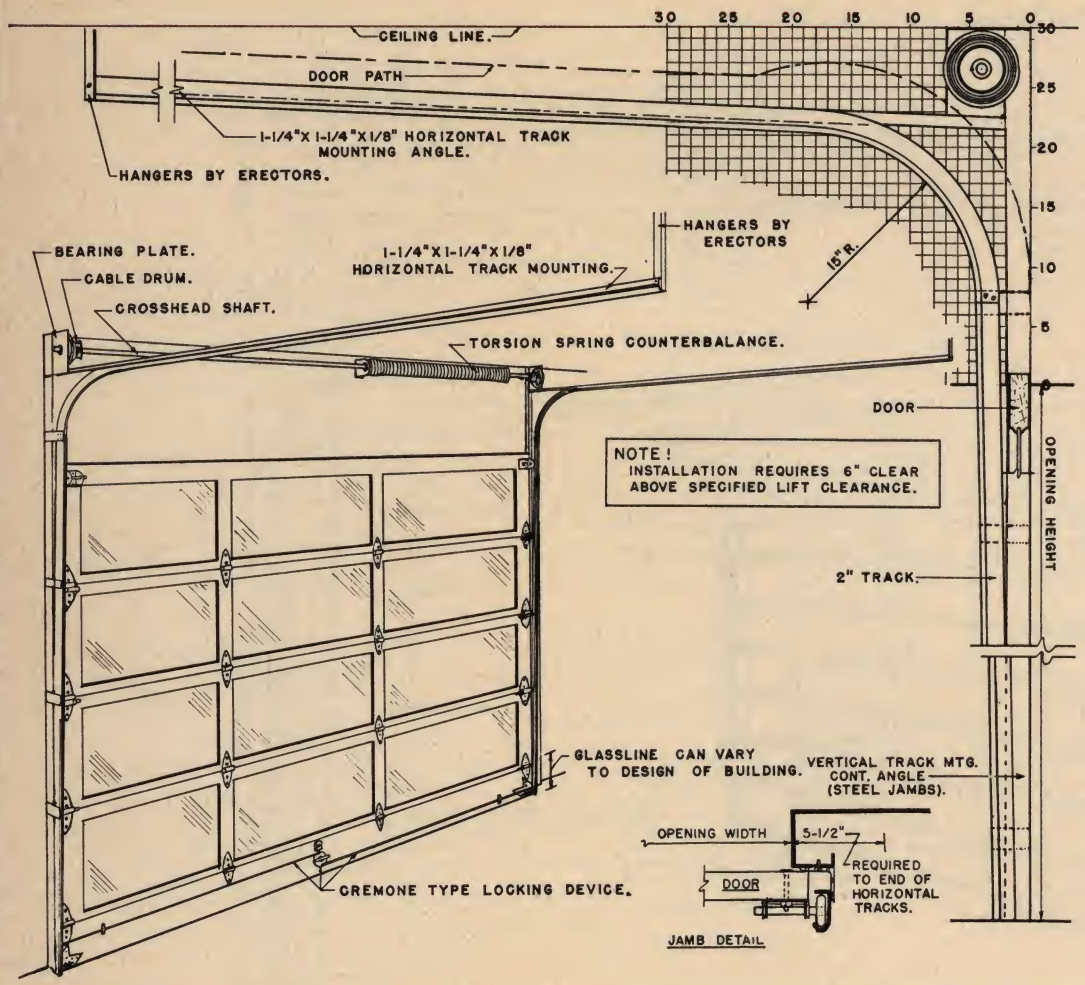
The panels of this door are genuine hardboard and have been selected for quality and service, and are guaranteed not to split, splinter, check, crack, or delaminate due to natural conditions of weathering or exposure.

OVERDOORS INC.

Service Station Type — wood

• general

These doors are especially designed to provide the maximum amount of light when the door is in the closed position. The glass area of the bottom section may be varied according to the wishes of the architect. The size and design of the doors will be manufactured so as to conform to any size or requirement of the openings. The hardware is designed to provide maximum clearance over the top of lubrication hoists.



• specifications

track — Inclined vertical track — 2" x .093 gauge, 15" radius ***"Weather tight Wedge"*** for easy operation. Verticals and horizontals are reinforced entire length and treated with a rust inhibitive metal primer.

hardware — Progressively graduated heavy hinges, bottom and top fixtures made of galvanized metals; hardened steel ballbearing rollers, full floating type.

counterbalance — Helical wound torsion spring mounted on a continuous 1" shaft; cast taper drums; rustproof strength tested lifting cables supported with sealed hardened ballbearing units.

lock — Cremone type.

wood sections — Rails and stiles of 1¾" (net) thick K.D. vertical grain Douglas Fir assembled with WATERPROOF GLUE. Bottom section to be (indicate whether hollow or solid). Sections are sanded and primed with lead and oil before hardware is applied.

glass — Any and all sections may be open for glazing — glass line as desired.

guaranteed — against faulty or defective material or workmanship for one (1) year (see panel guarantee page 5).

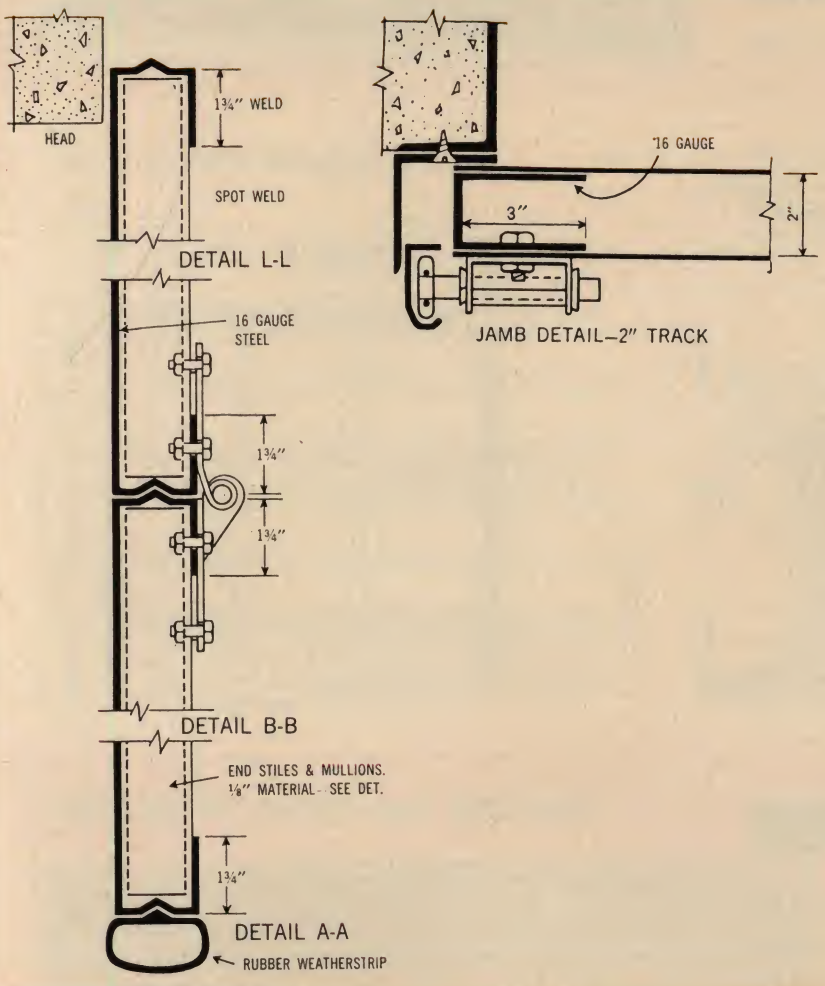
OVERDOORS are used by customers requiring dependability.
Here is a partial list of firms for whom we have built and installed OVERDOORS.

Anderson Prichard Oil Corp.	General Petroleum	Shamrock Oil & Gas Co.
Champlin Refining Co.	Knox Industries Inc.	Shell Oil Co.
Chevron Stations	Magnolia Petroleum Co.	Signal Oil Co.
Conoco Oil Co.	Pan American Oil	Sinclair Refining Co.
Douglas	Petrofina Oil Co.	Standard Oil Co.
D X Sunray Oil Co.	Phillips Petroleum Co.	Texaco Co.
ESSO Standard Oil Co.	Richfield Oil Co.	Union Oil Co.

Metal Doors — steel, aluminum

• general

These doors are unique in their design and fabrication and give a ruggedness and durability unequaled. This is due to the new design of a double tight weather joint between the sections and made possible with specially designed roller dies which form the exterior face of the section and the rail joints from one piece of metal. The vertical members or rolled form is a deep 'V' shape and spot welded into place. You will note all hardware is bolted to the interior surface of the door and prevents any bolt head to mar the smooth exterior surface. Glass panels and metal louvres are available in many shapes and designs.



• specifications

metal sections—Flush exterior design rolled formed one piece of . . . gauge metal to make the exterior surface and double type weather joint on each edge of section. Stiles are rolled formed of 16 gauge metal to make a 3" wide surface channel and are securely welded into place.

hardware—Heavy duty progressively graduated hinges to conform to inclined vertical track. Heavy duty bottom fixtures and top fixtures. All hinges and fixtures are galvanized. Rollers are heavy duty full race type. Lock: Special design heavy duty side lock. (Cremone type available on specifications.)

track—Inclined vertical track angle mounted ***"Weather Tight Wedge"*** for easy operations with 15" joint radius horizontal track reinforced as necessary.

counterbalance—Torsion spring mounted in a continuous shaft set on ballbearing roller, special formed cast drums with strength tested lifting cables. Extension spring available on specification.

glass—Any or all sections may be left open for glazing.

weatherstrip—Available.

note—These sections made in two gauges of metal—16 gauge and 20 gauge. This applies to exterior surfaces and joint rolls. The vertical members in either of these doors are formed from 16 gauge materials. There are also two finishes available: GALVANIZED and plain STEEL, treated with a rust inhibitive metal primer.

section schedule

door height	no. of sections
8'-6"	4
10'-6"	5
12'-6"	6
14'-6"	7
16'-6"	8

stile schedule

door width	no. of stiles
to 8'-6"	3
8'-7" to 10'-6"	4
10'-7" to 13'-6"	5
13'-7" to 16'-6"	6
16'-6" to 20'-6"	7

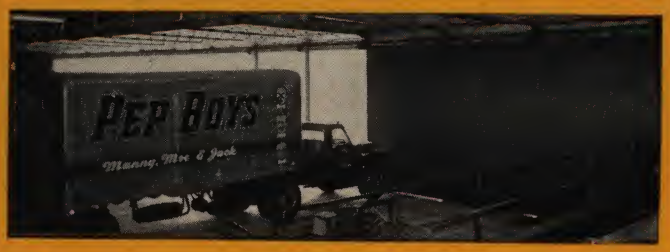
100 Metal Doors 18'x11'

ATCHISON-TOPEKA and SANTA FE RAILWAY COMPANY
New Freight Forwarder Warehouse at Los Angeles

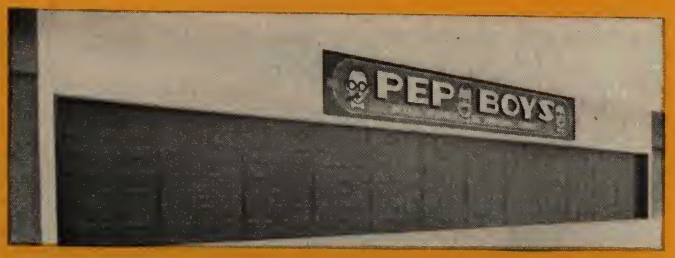
Track and hardware designed to allow maximum clearance for freight and storage.

Special Doors

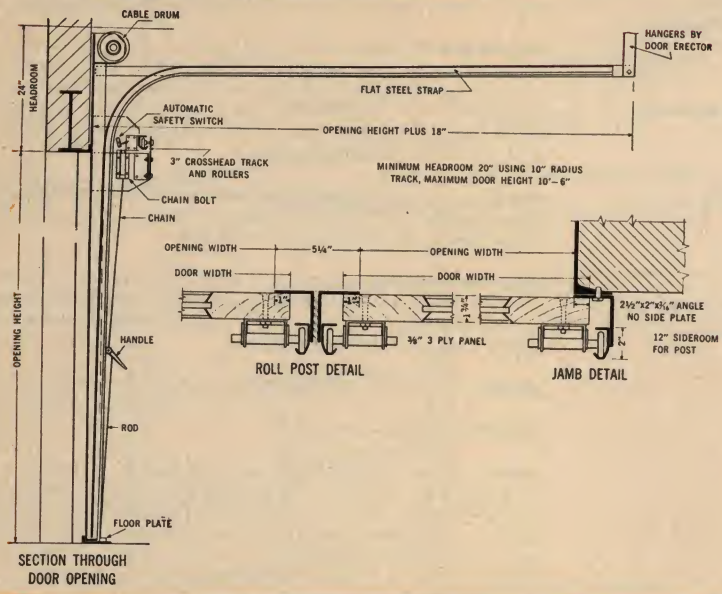
Overdoors Inc., will engineer and manufacture doors to any design and for all methods of operation. Doors may be upward acting sections, straight vertical lift, double hung verticle lift, etc., to name a few. Consult our engineering staff for all unusual conditions or sizes.

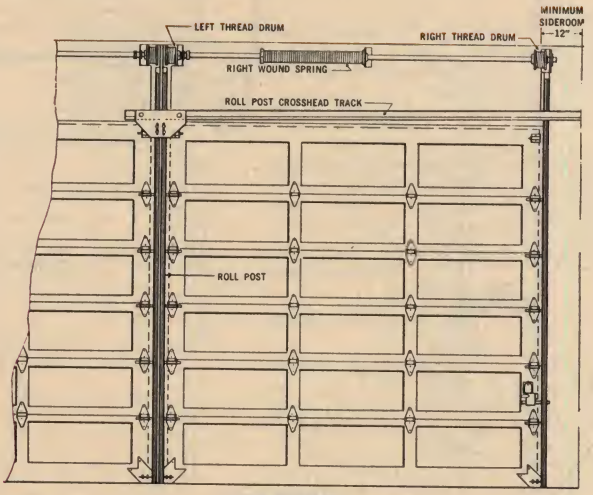


Pep Boys Warehouse Los Angeles, California opening 118' wide, 14' high, rolling posts move to each side.



• rolling post details—no scale

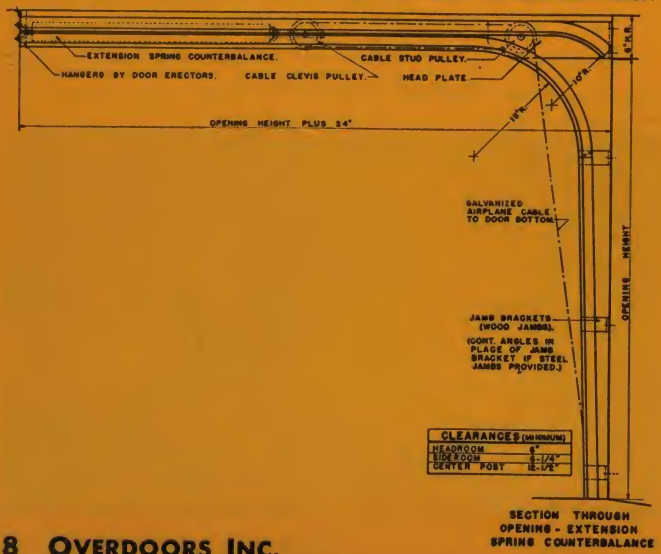




Special Track and Hardware

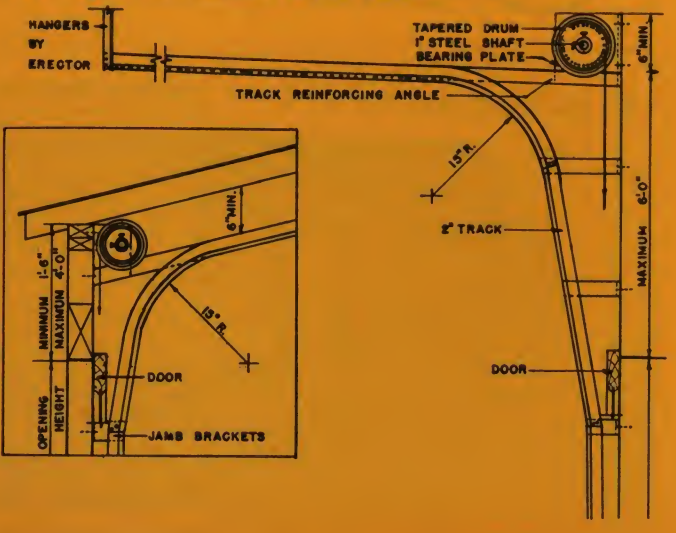
• Low headroom track and hardware

Track and hardware is designed for limited head room applications where standard. "Overdoor" track and hardware cannot be used. General specifications are the same as those used for standard door.

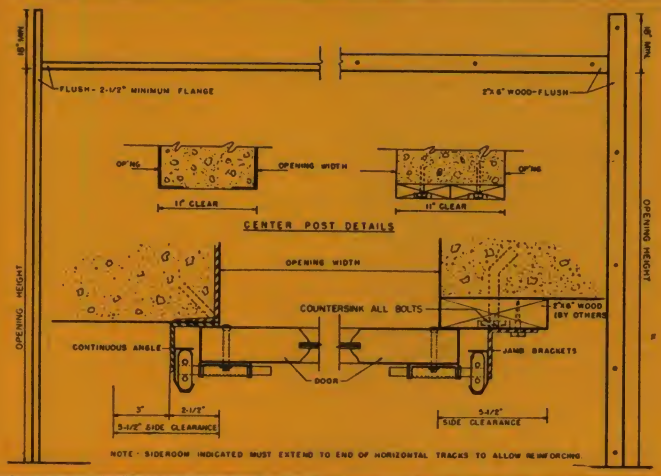


• High lift door track and hardware

High lift doors are especially recommended for use over lubrication hoists or in factories or warehouses where fork lift trucks are used for storage of material close to front wall.



Standard Framing Details



The HD Series wood doors are selected by those who require the finest door appearance, ruggedness, durability, ease of operation, and minimum of maintenance.

We will engineer and build any design and size door that may be requested to close an opening.

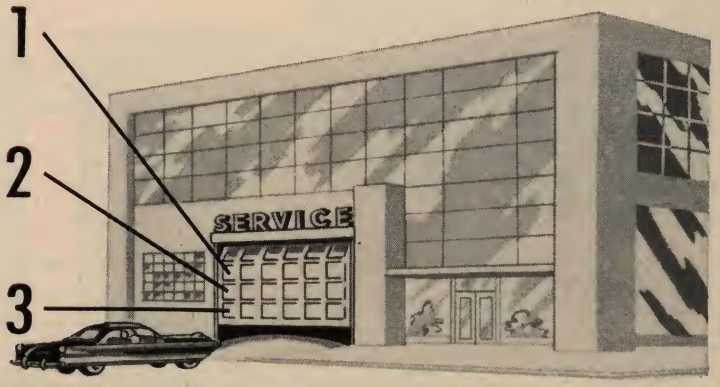
• electric door operators

Controlled power at all times—available in any push-button combination: single button momentary contact station, two button constant pressure station or three button UP-DOWN-STOP momentary contact station.

Single button station—opens, closes or stops door but cannot reverse door during travel.

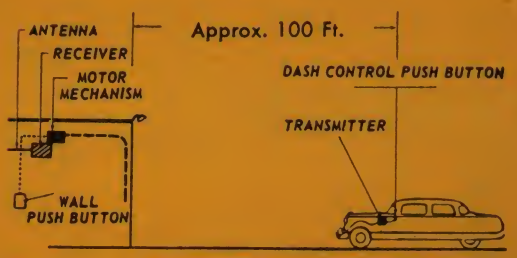
Two button constant pressure station—(UP-DOWN) can open, close or stop door at any point.

Three button station—(UP-DOWN-STOP) a touch of the button and door travels to its full open or closed position. May be stopped and reversed at any point during travel. Also available wired for constant pressure on DOWN button.



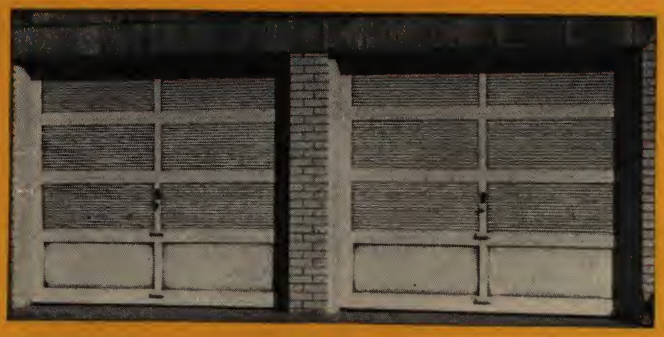
• commercial electric door operators

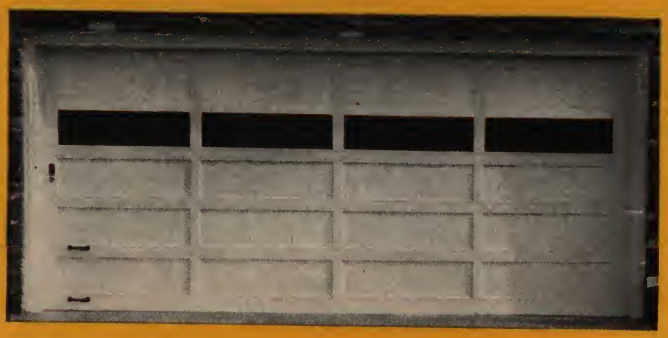
Overdoors Inc. offers the convenience of electrically, electronically or mechanically controlled doors. Electrically operated doors may be activated by push or pull buttons, plates or cables from close or remote stations. Limit switches automatically stop the door when in the full open or closed position. Electronically operated doors may be controlled from within the truck or car. Mechanically controlled doors may be operated as outlined below.



The savings on labor and winter fuel bills will soon pay for this modern convenience.

Left: Remote controlled door on loading dock with operator and transmitters installed on a fleet of lift trucks. Note the approach from any angle.





• TYLER DELUXE

These doors are made in many designs. The range of patterns is limitless which allows architectural conformity. Although these are stock piled in standard sizes they are available in special sizes.

WE WILL MAKE ANY DESIGN AND SIZE YOU REQUIRE

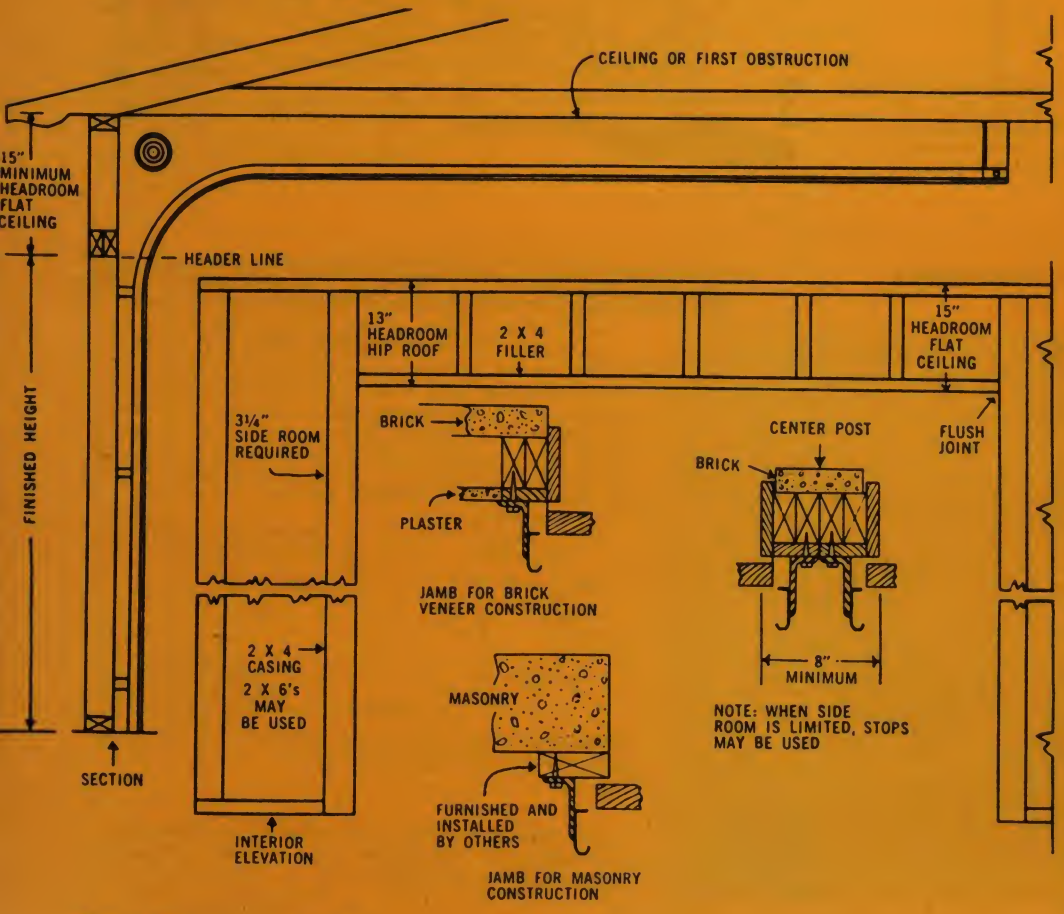
• TYLER

This is a quality door made from fine materials. Due to mass production it becomes the ideal door when economy is a factor.

stock sizes

8′-0″ x 7′-0″—3, 4 or 6 panels wide
9′-0″ x 7′-0″—3, 4 or 6 panels wide
Extension spring balanced.

standard framing details



• specifications

track—Inclined vertical track—2″ with 15″ radius, ***"Weather tight Wedge"*** for easy operation. Verticals are bracket mounted, horizontals reinforced as necessary and treated with a rust preventive.

hardware—Heavy residential hardware is used throughout; progressively graduated hinges conform with inclined ***"Weather tight Wedge"*** vertical track for easy operation. Full race, hardened steel ballbearing rollers, full floating type.

counterbalance—extension springs—on 8′0″–9′0″ wide doors; torsion springs—on 15′0″–16′0″ wide doors.

sag prevention—Single doors are designed and built to eliminate sag. Double car "OVERDOORS" are trussed with a special design truss to maintain original shape.

lock—5 pin tumbler cylinder with 2 keys for outside operation, lock bar engages into track.

wood sections—rails and stiles of a K.D. Douglas Fir, 1⅜″ thick all assembled with WATERPROOF GLUE. (Custom models are made especially to architect's or purchaser's requirements.) Panels are ¼″ hardboard, smooth both sides (see guarantee page 5). Sections are sanded, ready for paint or varnish.

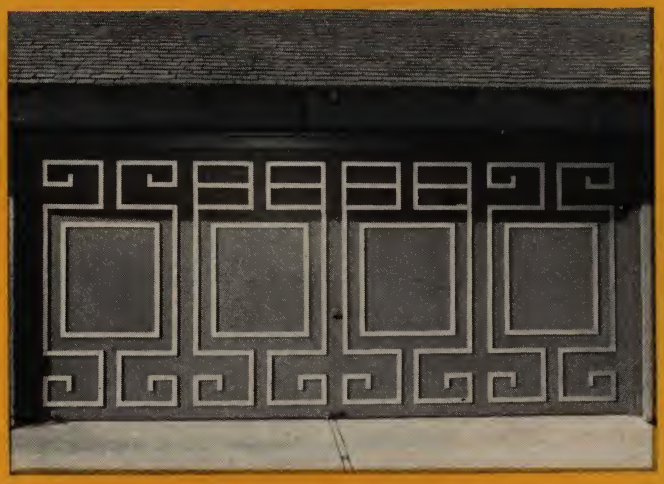
glass—Any panels or sections may be left open for glazing.

weatherstrip—Available for bottom rail.

guaranteed—against faulty or defective material or workmanship for one (1) year (see panel guarantee page 5).

• Custom Model Overdoors

Custom Model "OVERDOORS" are offered to architects and owners who wish to create a special or unique appearance and still have a dependable, easy operating door. Four types are shown, many more are available.



Overdoors Inc. will engineer and build any size or design of sectional upward acting door that is required to conform with your requirements.

BE KING–BE QUEEN–OPEN YOUR OVERDOOR WITH A MAGIC TOUCH!

• remote control garage door operators

For protection against weather, prowlers, or accidents in dark garages—open and close your garage door the modern way—just press a button within your car.

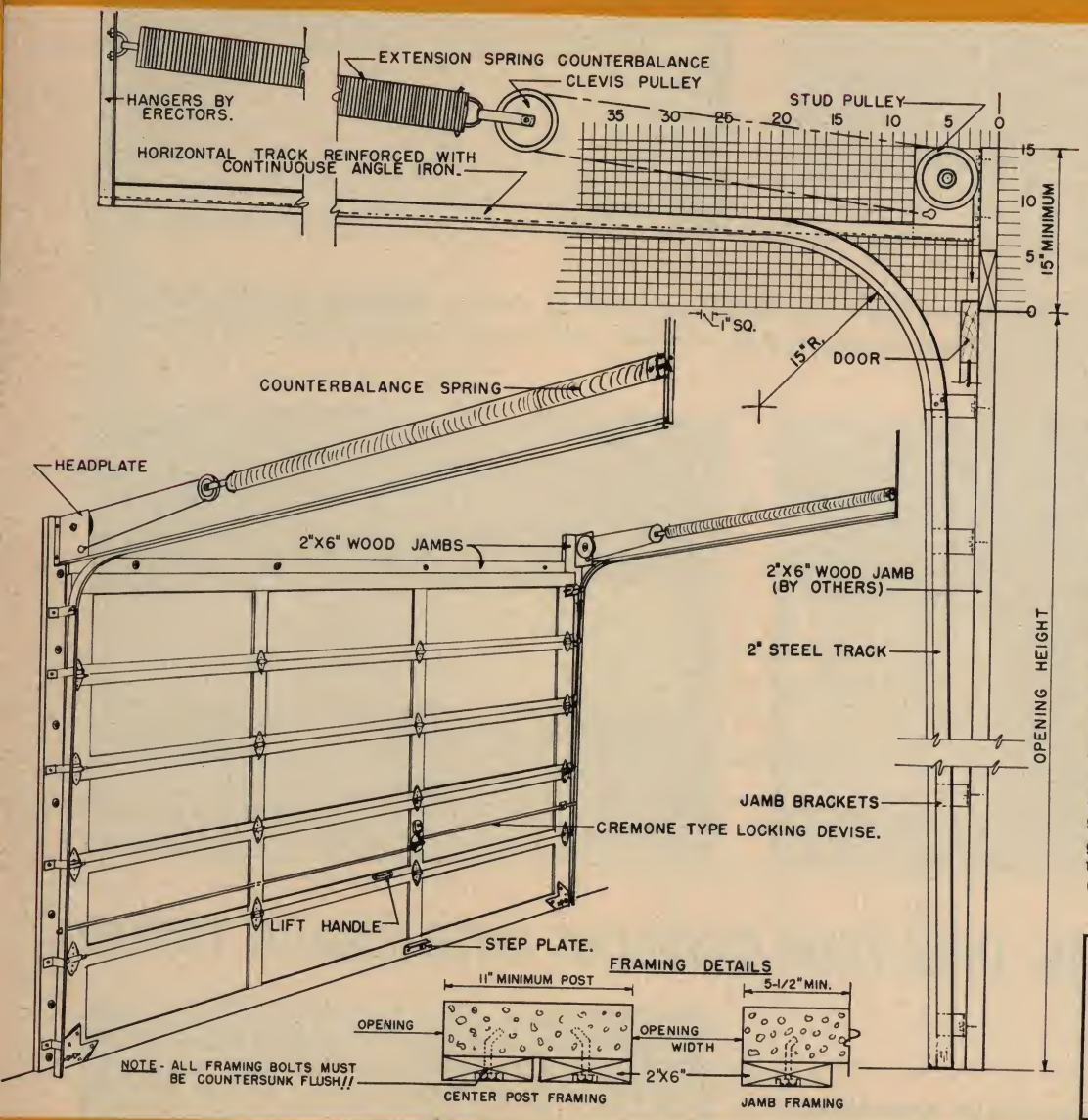
- Latest in modern design
- Reverses automatically
- Turns garage light on and off
- Can be stopped in any position
- Can be reversed from any position

OVERDOORS INC.

Industrial Standard Type — wood

• general

This door is intended for use in industrial and commercial type buildings. It combines strength and ruggedness with outstanding appearance, easy operation, and minimum maintenance and is recommended for installations where **economy of purchase price is essential.** Our full policy of the highest quality of materials and workmanship has been maintained. The note of economy has been achieved through the mass production of several stock sizes. Weather-tight jamb laps are assured if the openings are designed and constructed to the dimensions shown in the table at the right.



sizes and models

Opening Size Width	Opening Size Height	Panels Wide	Sections High	Number Series
8'-0"	8'-0"	2	4	808
	10'-0"	2	5	810
	12'-0"	2	6	812
10'-0"	8'-0"	3	4	1008
	10'-0"	3	5	1010
	12'-0"	3	6	1012
	14'-0"	3	7	1014
12'-0"	8'-0"	4	4	1208
	10'-0"	4	5	1210
	12'-0"	4	6	1212
	14'-0"	4	7	1214

Special sizes available.

specifications

track—Inclined 2" vertical track bracket mounted forming the ***"Weather-tight Wedge"***—1" radius to horizontal track—treated with a rust inhibitive metal primer.

hardware—Progressively galvanized bottom fixtures—hinges and top fixtures all bolted to door—rollers are full floating.

counterbalance—Extension or torsion springs.

wood sections—Rails and stiles of kiln dried lumber, 1⅝" thick assembled with Weldwood Glue—¼" hardboard panels, sanded ready for paint or varnish.

glass, weatherstrip—Available.

guaranteed—against faulty or defective material or workmanship for one (1) year.

Hardboard Panel Lifetime Guarantee

The panels of this door are genuine hardboard and have been selected for quality and service, and are guaranteed not to split, splinter, check, crack, or delaminate due to natural conditions of weathering or exposure.

OVERDOORS INC.

Home Office
Pacific Coast Division
OVERDOORS INC.
216 North Howard Street
Glendale 6, California

OVERDOORS INC.

Southwest Division
OVERDOORS INC. OF OKLA.
1819-30 N.W., 5th Street
Oklahoma City, Oklahoma

OVERDOOR — A Mark of Quality With Service

PRESENTED BY:

This space reserved for the local representative's name and address

AVAILABLE:

Consult our engineering department for:

- pass doors
- metal covered doors
- fire station doors—automatic
- vertical lift doors
- semi-vertical lift doors
- two section vertical lift doors

A.I.A. File No. 16-D

16i
Ove

the door with the "MIRACLE WEDGE"

THE "OVERHEAD DOOR"
TRADE MARK

SECTIONAL UPWARD-ACTING DOORS

commercial buildings
industrial plants
residential garages

OVERHEAD DOOR CORPORATION
HARTFORD CITY · INDIANA

Copyright 1960, Overhead Door Corporation

THE "OVERHEAD DOOR"
TRADE MARK

Always specify The "OVERHEAD DOOR."
A quality "spec" written as suggested
will have no "equal."

we welcome ANY door problem . . . . . .

Your most complicated door problems are welcomed and handled with the same ease and assurance given to standard, everyday applications.

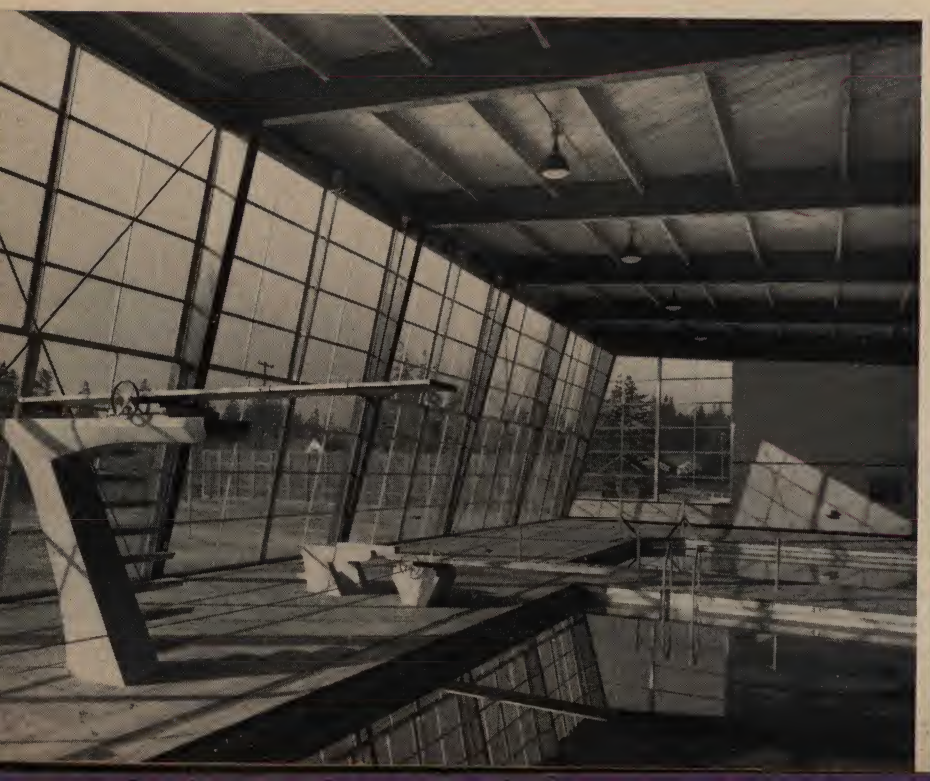
This confidence comes from 39 years experience in every conceivable application of garage doors to commerce and industry as well as to homes.

No 'special' job is too unique, too rugged, or too much bother for our engineering service to manage.

Regardless of door size or shape or weight, whether wood, aluminum or steel, The "OVERHEAD DOOR" specialists will serve you with full responsibility and warranted service.

There is an "OVERHEAD DOOR" distributor located in your area to serve you faithfully today . . . and permanently. For List of Distributors, refer to inside back cover.

a complete line of highest quality sectional, upward-acting doors



expert installation

means *everything* in equipment which must be precisely balanced for easy, finger-lift operation. Nearly all "OVERHEAD DOOR" distributors are exclusively engaged on a full time basis, in the installation and service of this garage door and operators. They are factory trained experts.

coast to coast service

As in most mechanical equipment, local availability of service is vital. "OVERHEAD DOOR'S" exclusive outlets, listed on the final spread of this catalog, are all pledged to stand behind their work with a year's warranty plus unlimited interested service.

responsibility

by the local distributor guards your reputation. That's why "OVERHEAD DOOR'S" long-established distributors offer you an uncommon advantage in their follow-through of expert installation with strong, after-sale service and responsibility. . . . . for life.

commercial • industrial • residential

THE "OVERHEAD DOOR" TRADE MARK

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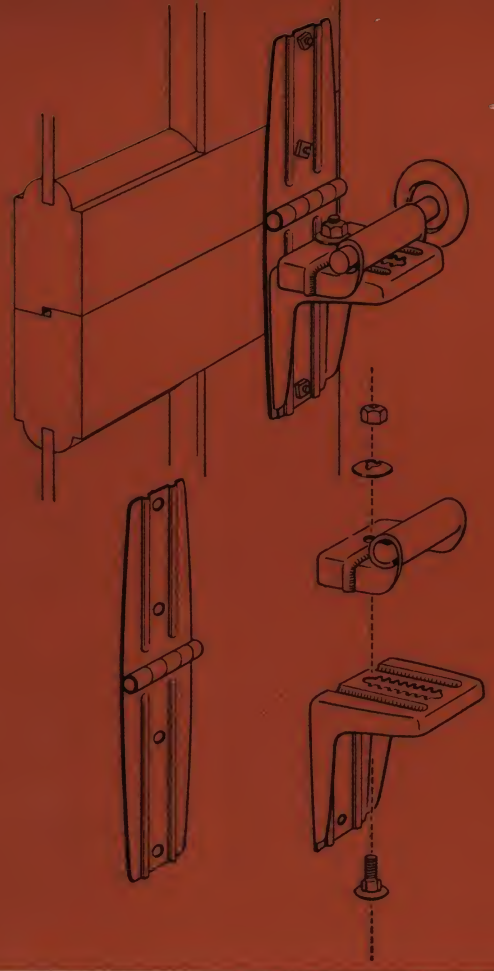


NEW, IMPROVED

adjustable hinge and roller holder assembly*

Precise fitting of doors to casings and jambs is now possible with these universally Adjustable Roller Holders. This means assurance of a snug seal on both sides of door despite unforeseen jamb irregularities.

Position of roller holders on brackets may be reversed for greater range of adjustment. Notched slots in bracket and holder permit precise fitting of door in steps of 1/16" and prevents final adjustment from changing.

Heavy gauge steel roller holder reinforced with horizontal ribs fits over top of bracket. Flanges on roller holder mate with sides of bracket to keep center line of roller stem parallel with door.

One-piece, cold-formed, rigid steel brackets are securely held at each end hinge with two bolts. Two deep embossed grooves on each bracket key to deep ridges on leaf of hinge.

Shoulders of special retaining bolt fit into notched slots in bracket and holder. Bolt is secured with nut and spring steel cup washer.

*Patent Pending

MIRACLE WEDGE*

weather tight closure

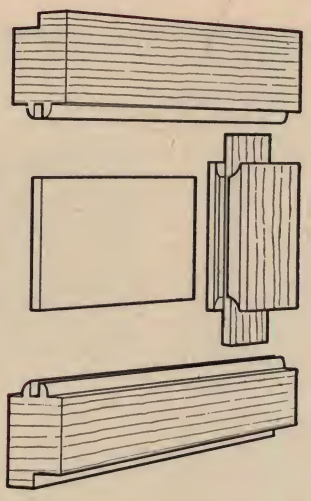
Vertical tracks incline away from jambs at a pitch of ¼" per door section, forming the basis of the MIRACLE WEDGE* action.

End hinges with adjustable roller holders guide the descending door tightly against jambs and header.

Full-floating hardened steel ball-bearing rollers and ball-bearing counterbalance afford frictionless, positive ease of operation.

wood door sections

Stiles and rails full 1¾" thick made of Sitka spruce or Douglas fir. Mortise and tenon construction. Assembled in press with waterproof glue and steel doweled. ¼" Hardboard is standard (see guarantee). ⅜" exterior grade fir plywood is available. Sections sanded smooth. Glass installed with wood glazing mold, miter cut to exact size.



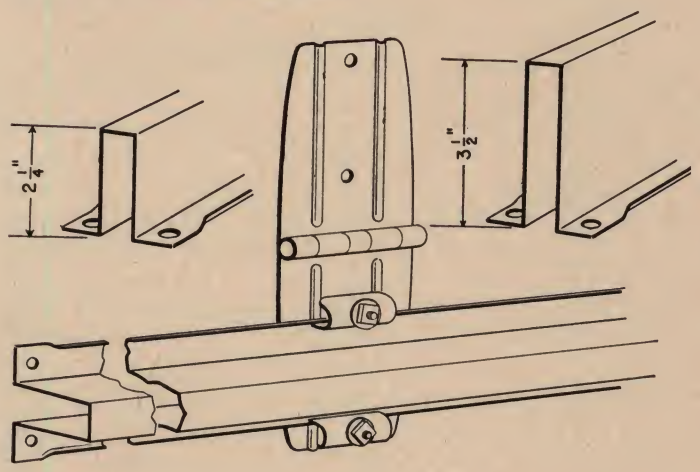
section not to scale

hardboard panel—guarantee

Guaranteed for Life of Door. The panels of this door are genuine Hardboard. Selected for quality and service, these panels are guaranteed not to split, splinter, check, crack or delaminate, due to natural conditions of weathering or exposure. Overhead Door Corporation will furnish a replacement section if a Hardboard Panel does not comply with this guarantee.

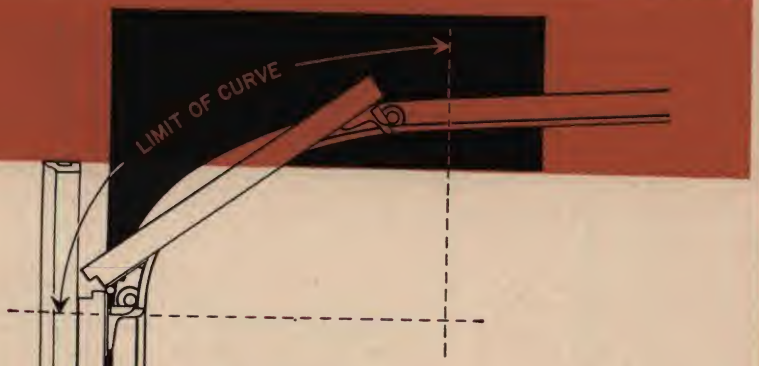
*TRADE MARK

NEW, IMPROVED
struts and strut assembly



Steel struts 2¼" and 3½" high are rolled of two different gauges of steel to provide a full range of reinforcement members for doors of varying widths. Proper number, size and gauge struts are furnished for each door according to the best engineering practice.

Channel shape of struts and lips on flanges add to rigidity. Flattened ends of strut flanges add to bearing surface at fastening points. Special crown shaped strut clips apply constant holding pressure perpendicular to hinge leaf and strut leg.



NEW, IMPROVED
compound-radius track

Both smoother operation and lower headroom are a reality through the use of the "OVERHEAD DOOR" exclusive, compound-radius, now standard on all 2" track.

The combination of radii used to form the track bend creates an arc long enough to accommodate two pairs of door rollers in the track curves at the same time. This means smoother action because the door will lose and gain weight constantly and evenly in its upward and downward travel. The use of the compound-radius also reduces the amount of clearance required when the sections are moved around the curve, thus permitting installations in lower headroom.

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial——wood

FEATURES

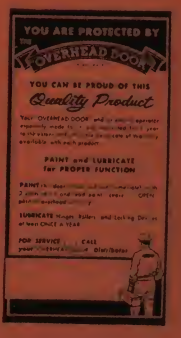
cables Galvanized aircraft type. Seven strands of 19 wires each, preformed.

tapered drums Die cast aluminum or cast iron, keyed to shaft.

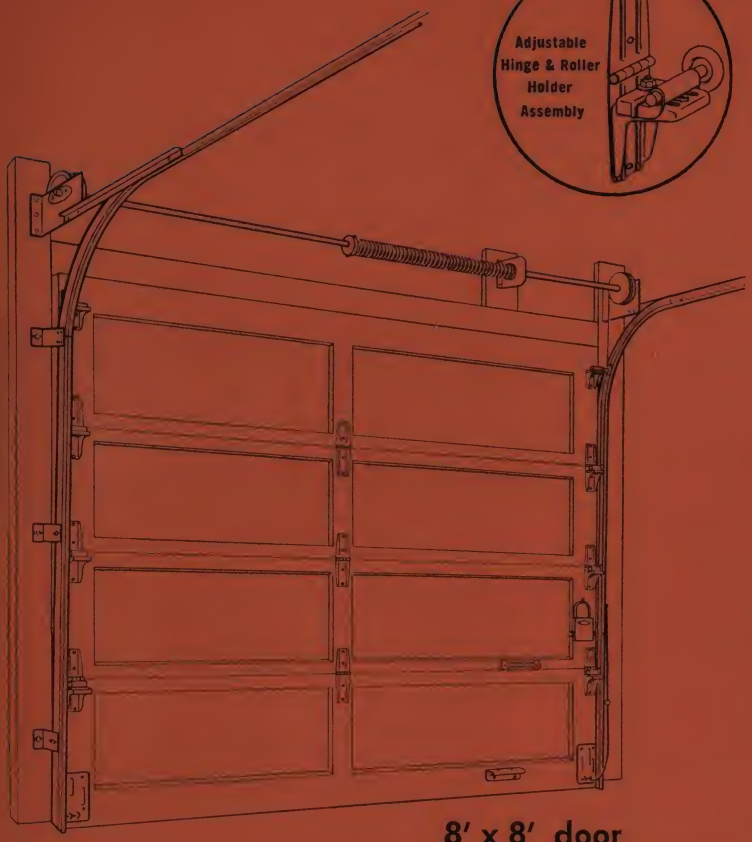
tracks 2" tracks are standard. Heavier gauge 3" tracks used on large heavy doors. Reinforced where required.

rollers Ball-bearing, case-hardened, screw machine races.

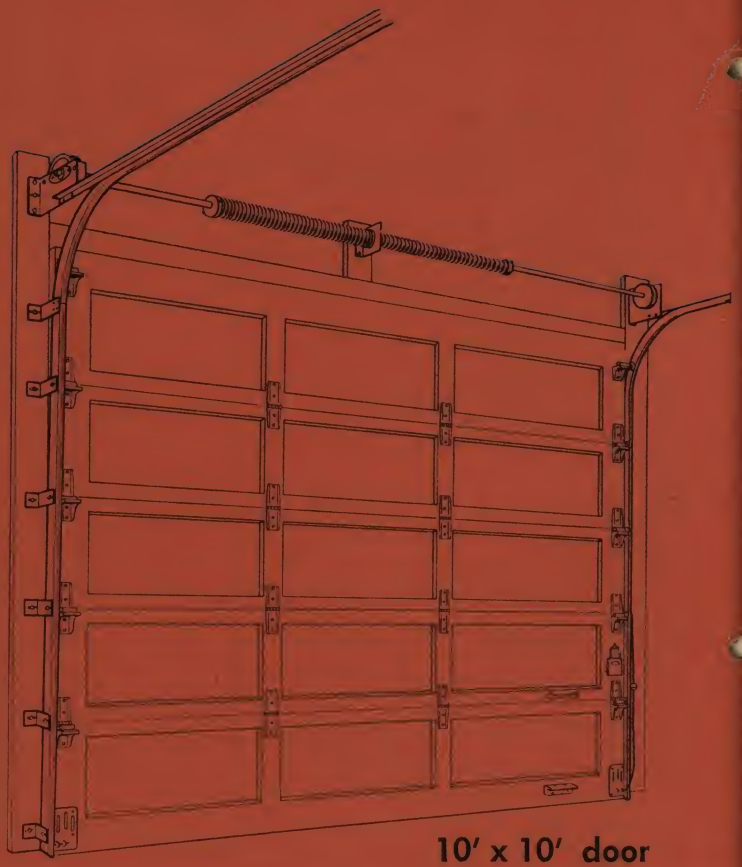
SALT SPRAY STEEL* All tracks and hardware are fabricated of SALT SPRAY STEEL*—steel that is coated with bright zinc galvanizing to prevent rusting.



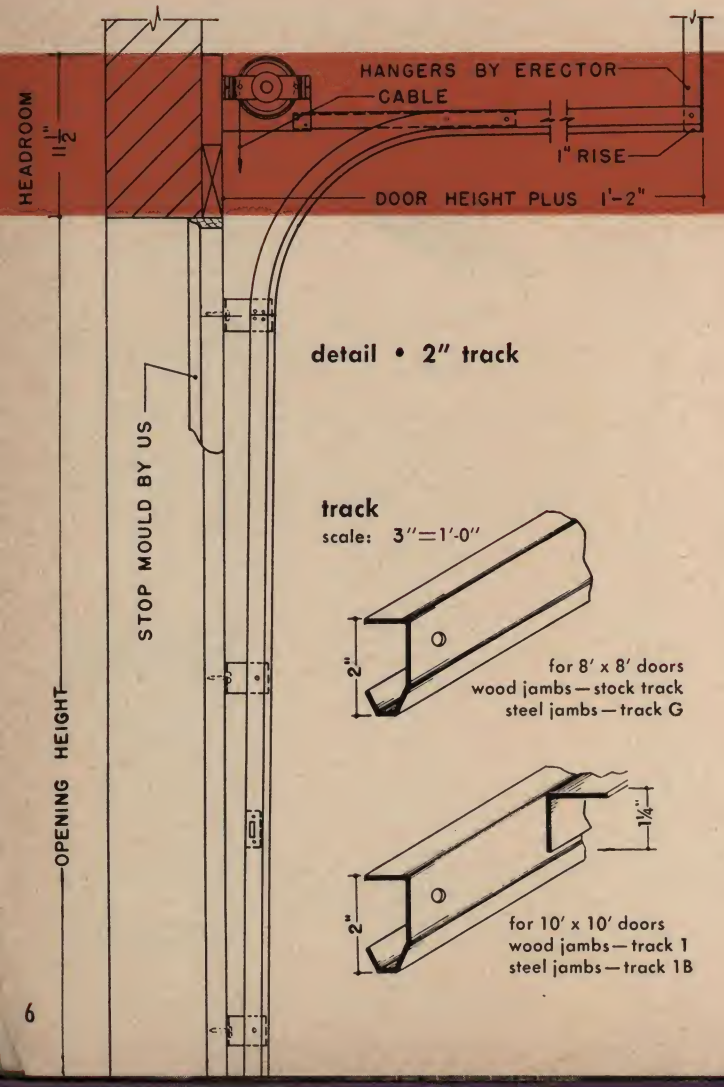
fully warranted by your "OVERHEAD DOOR" distributor. All materials and workmanship bear a one-year warranty.



8′ x 8′ door



10′ x 10′ door

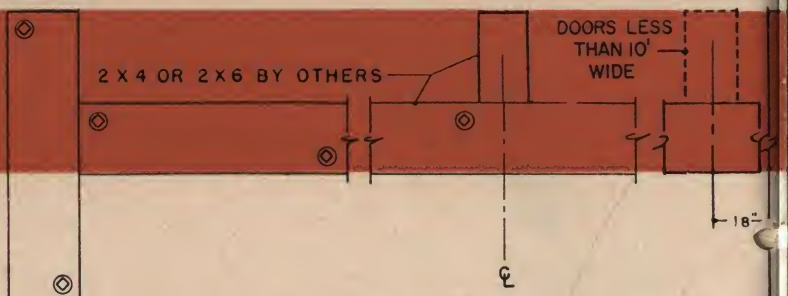


detail • 2" track

track
scale: 3"=1'-0"

for 8′ x 8′ doors
wood jambs—stock track
steel jambs—track G

for 10′ x 10′ doors
wood jambs—track 1
steel jambs—track 1B



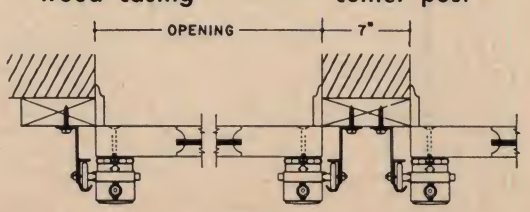
OPENING WIDTH
(SAME AS DOOR WIDTH)

2X6'S BY OTHERS

wood casing detail

wood casing

minimum center post



no scale

stiles and rails
1¾" thick Sitka spruce or Douglas fir stiles and rails, mortised and tenoned, glued, steel doweled, with rebated weather joints. 5½" top and bottom rails. 5½" end stiles. 3½" center stiles. 2⅝ center rails.

panels
¼" Hardboard is standard (see Lifetime Guarantee).

finish
Sanded and ready for paint.

glass arrangement
Any or all sections left open for glass, with glazing mold cut to fit. For glass pattern, see page 21.

headroom
11½" minimum for compound radius track.

sideroom
3¼" for bracket mounted verticals. 4¼" for angle mounted verticals.

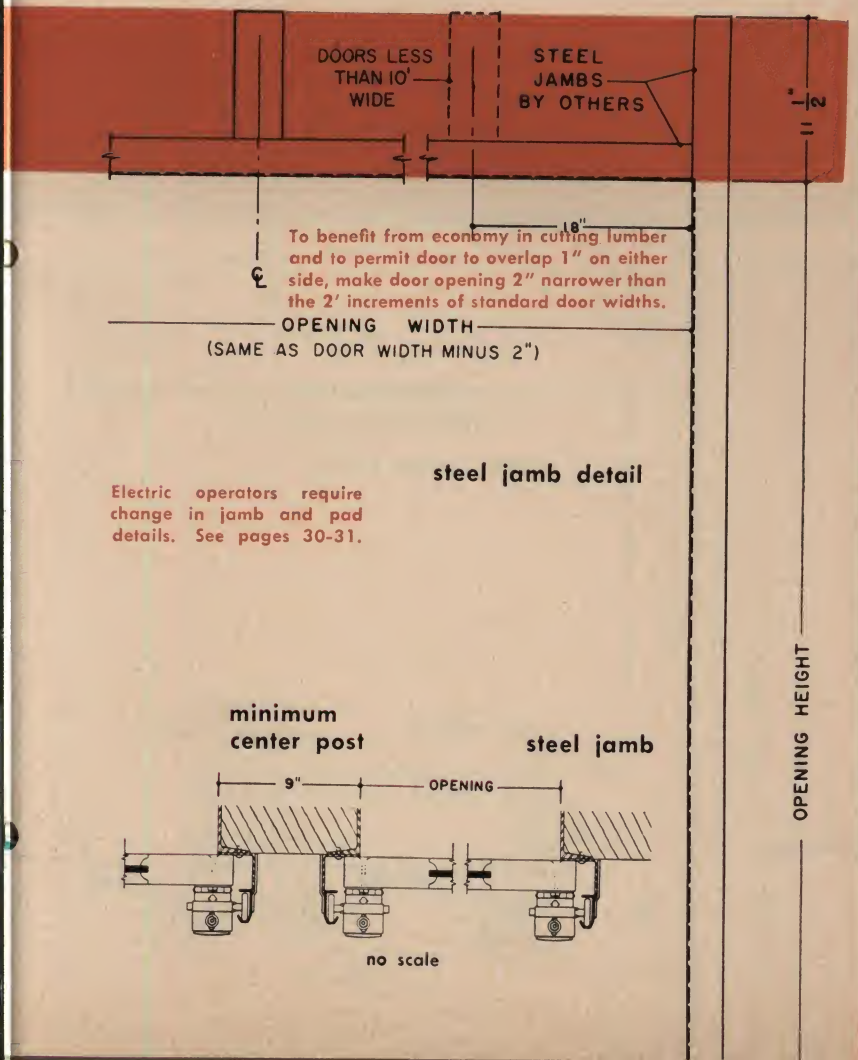
operation
Manual or electric. Model L electric operator is recommended.

hardware
SALT SPRAY STEEL* heavy duty hinges and fixtures, full floating hardened ball-bearing rollers.

lock
5-pin tumbler side lock, two keys. Adjustable keeper on track. Right or left installation.

tracks
SALT SPRAY STEEL* with MIRACLE WEDGE* weathertight closure. 2" tracks curved on a compound radius. Bracket mounted verticals for wood casings. Stock track for 8'x8' doors; track 1 for 10'x10' doors. Angle mounted verticals for steel jambs: track G for 8'x8' doors; track 1B with horizontals reinforced full length with 1¼"x1¼"x⅛" angles for 10'x10' doors.

counterbalance
One strong helical wound torsion spring on cross-header shaft of 8'x8' door; two torsion springs on 10'x10' door. Die cast aluminum tapered drums. Aircraft cables.



To benefit from economy in cutting lumber and to permit door to overlap 1" on either side, make door opening 2" narrower than the 2' increments of standard door widths.

steel jamb detail

Electric operators require change in jamb and pad details. See pages 30-31.

minimum center post **steel jamb**

no scale

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial - wood

8'x8' & 10'x10'

OTHER SIZES ALWAYS AVAILABLE

We make doors of any size to fit any opening.

For intermediate sizes, see pages 20–21.

standard specification

Wood sectional upward-acting doors shall be OVERHEAD DOOR CORPORATION doors of size shown on plans. To be made of clear grade B or better Sitka spruce or Douglas fir not less than 1¾" finished thickness with panels of ¼" Hardboard and to be accurately counterbalanced with torsion springs, tapered drums and galvanized aircraft-type cables. Doors shall be equipped with MIRACLE WEDGE* closing action, 2" track and hardware of SALT SPRAY STEEL,* ¼" ball bearings in all rollers, and a 5-pin tumbler side lock with two keys.

Doors shall be installed by the local distributor of The "OVERHEAD DOOR."

Doors shall be guaranteed against faulty workmanship or material for a period of one year. Door openings, jambs, pads, painting and glazing to be furnished by others.

alternate specifications

Toxic treatment of wood panel sections. ⅜" exterior grade plywood in place of hardboard panels. Extension springs instead of torsion springs and tapered drums. Rubber weatherstrip for bottom rail.

optional equipment

Refer to Table of Contents for:

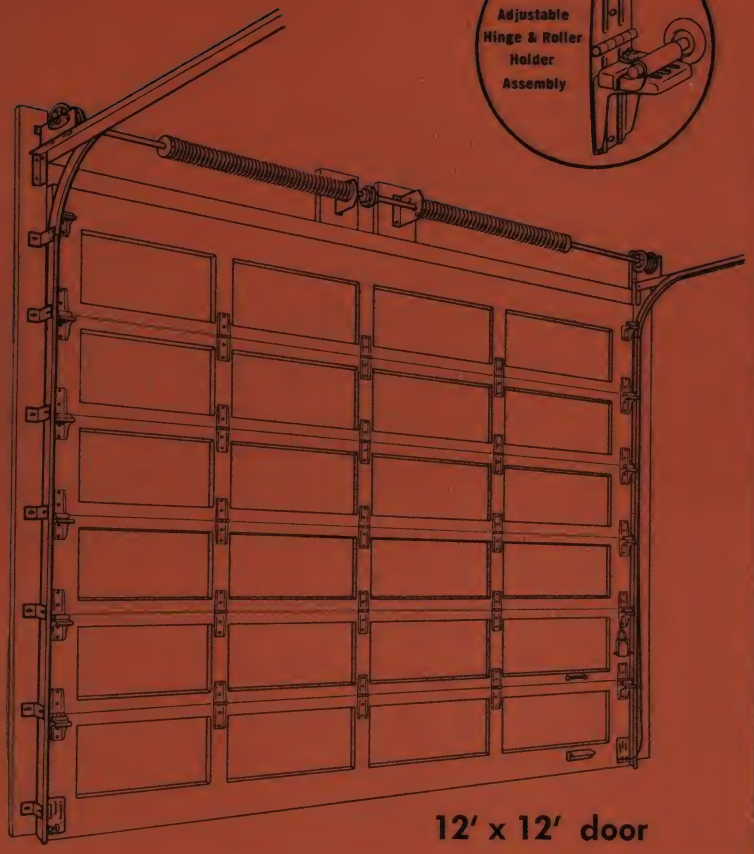
Electric operator and control switches.
Low headroom equipment.
Lift clearance.
Pass doors.
Ventilating doors.

short form specification

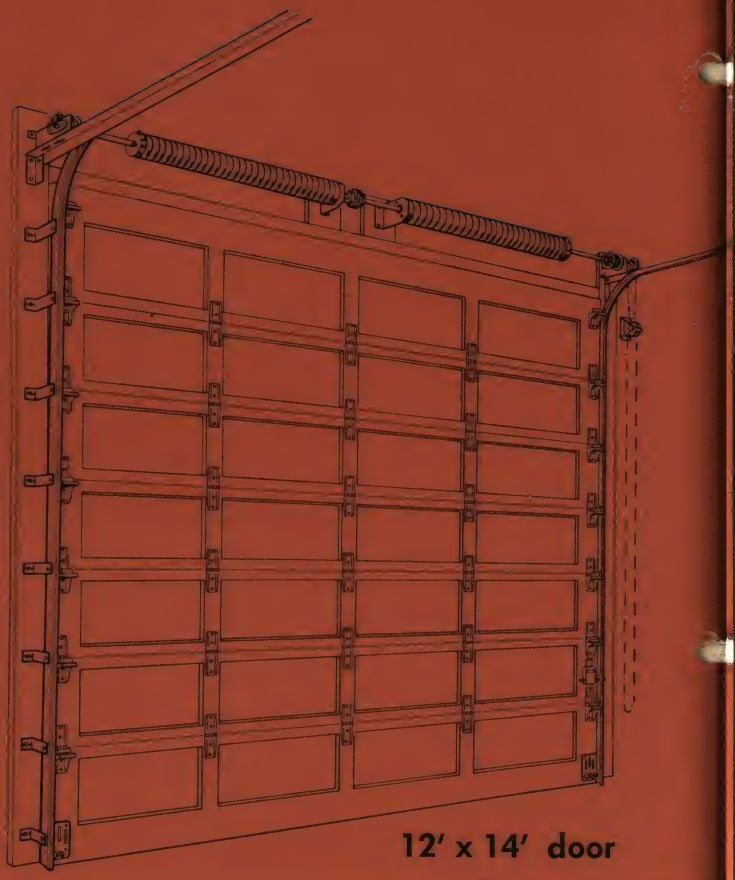
lumber	1¾" clear B&B fir
panels	¼" Hardboard
hardware	Galvanized
tracks	2"
struts	none
operation	manual
electric operator	L drawbar, ⅓ hp

Please call us if change in specification must be considered.

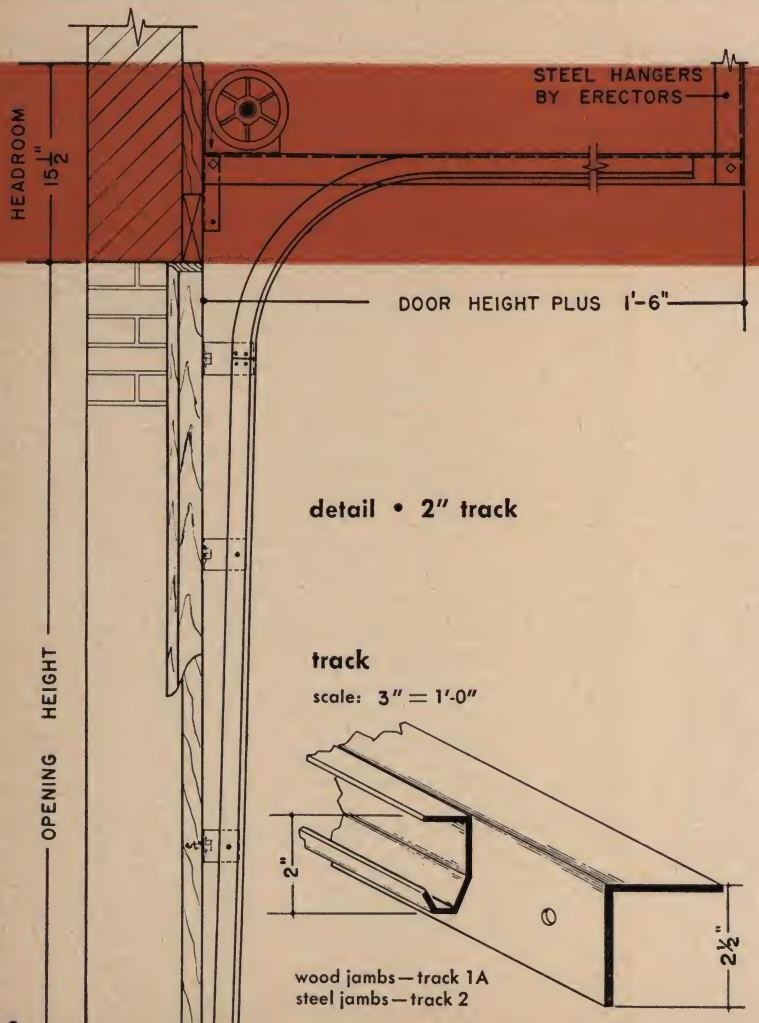
*TRADE MARK



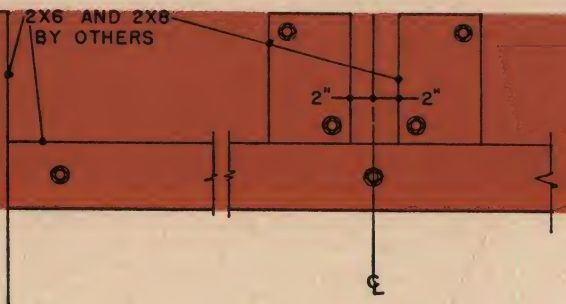
12′ x 12′ door



12′ x 14′ door



detail • 2″ track



wood casing detail

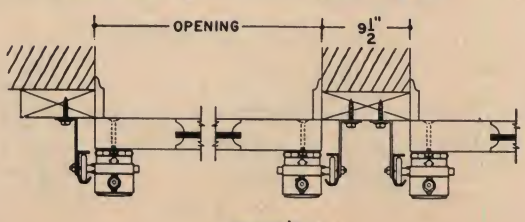
track

scale: 3″ = 1′-0″

wood jambs—track 1A
steel jambs—track 2

wood casing

minimum
center post



no scale

stiles and rails
1¾" thick Sitka spruce or Douglas fir stiles and rails, mortised and tenoned, glued, steel doweled, with rebated weather joints. 5½" top and bottom rails. 5½" end stiles. 3½" center stiles. 2⅜ center rails.

panels
¼" Hardboard is standard (see Lifetime Guarantee).

finish
Sections sanded and ready for paint.

glass arrangement
Any or all sections left open for glass, with glazing mold cut to fit. For glass pattern, see page 21.

headroom
15½" minimum for compound radius track.

sideroom
4¾" for bracket mounted verticals. 5¾" for angle mounted verticals.

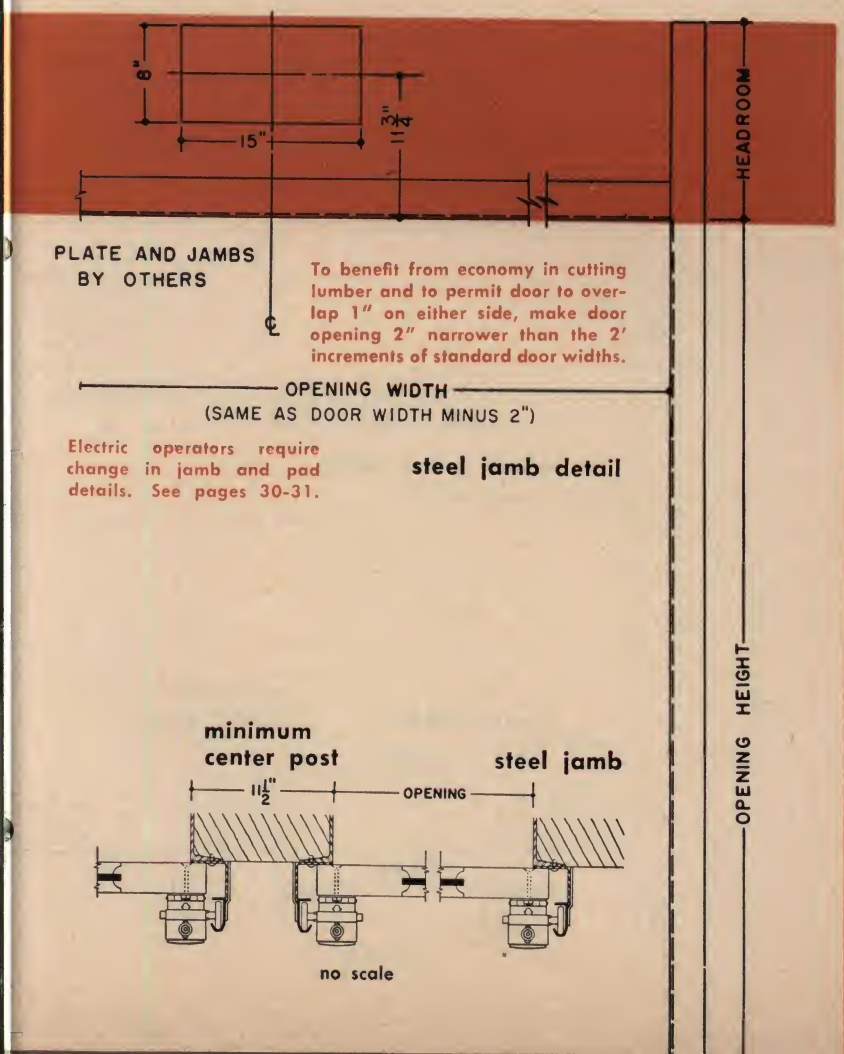
operation
Manual or electric for 12'x12' doors; chain hoist or electric for 12'x14' doors. Model L electric operator is recommended.

hardware
SALT SPRAY STEEL* heavy duty hinges and fixtures. Full floating hardened ball-bearing screw machine type rollers.

lock
5-pin tumbler cylinder side lock, two keys, adjustable keeper on track. Right or left side installation.

tracks
SALT SPRAY STEEL* with MIRACLE WEDGE* weathertight closure. 2" tracks curved on compound radius. Bracket mounted verticals for wood casings (track 1A). Angle mounted verticals for steel jambs (track 2). Horizontals reinforced full length with 2½" x 2½" x ⅛" angles.

counterbalance
Two heavy duty helical wound torsion springs on crossheader shaft. Die cast aluminum tapered drums using 3/16" aircraft cables.



To benefit from economy in cutting lumber and to permit door to overlap 1" on either side, make door opening 2" narrower than the 2' increments of standard door widths.

Electric operators require change in jamb and pad details. See pages 30-31.

steel jamb detail

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial - wood

12'x12' & 12'x14'

OTHER SIZES ALWAYS AVAILABLE

We make doors of any size to fit any opening.

For intermediate sizes, see pages 20–21.

standard specification

Wood sectional upward-acting doors shall be OVERHEAD DOOR CORPORATION doors of size shown on plans. To be made of clear grade B or better Sitka spruce or Douglas fir not less than 1¾" finished thickness with panels of ¼" Hardboard and to be accurately counterbalanced with torsion springs, tapered drums and galvanized aircraft-type cables. Doors shall be equipped with MIRACLE WEDGE* closing action, 2" track and hardware of SALT SPRAY STEEL,* ¼" ball bearings in all rollers, and a 5-pin tumbler side lock with two keys.

Doors shall be installed by the local distributor of The "OVERHEAD DOOR."

Doors shall be guaranteed against faulty workmanship or material for a period of one year. Door openings, jambs, pads, painting and glazing to be furnished by others.

alternate specifications

Toxic treatment of wood panel sections. ⅜" exterior grade plywood in place of hardboard panels. Extension springs instead of torsion springs and tapered drums. Rubber weatherstrip for bottom rail.

optional equipment

Refer to Table of Contents for:

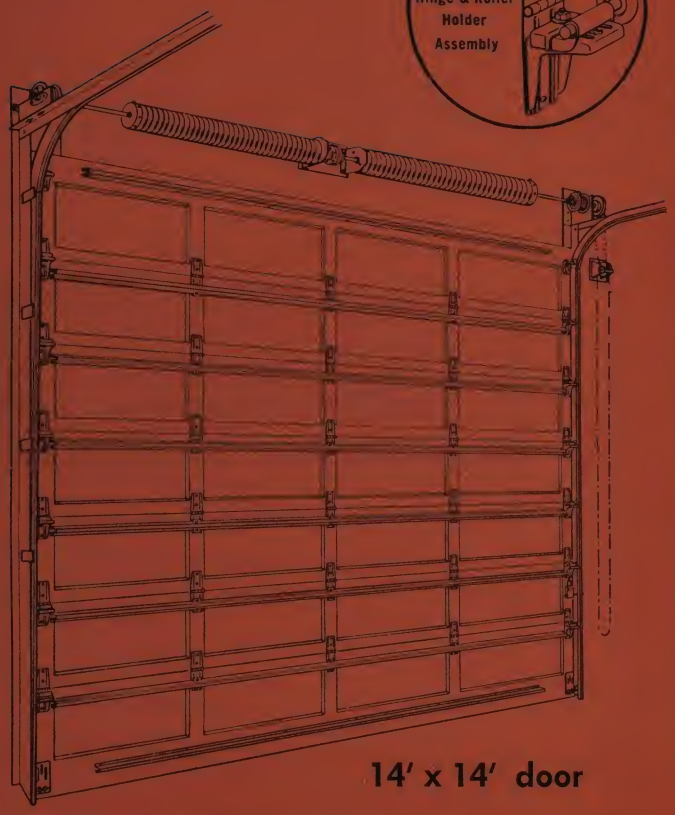
Electric operator and control switches.
Low headroom equipment.
Lift clearance.
Pass doors.
Ventilating doors.

short form specification

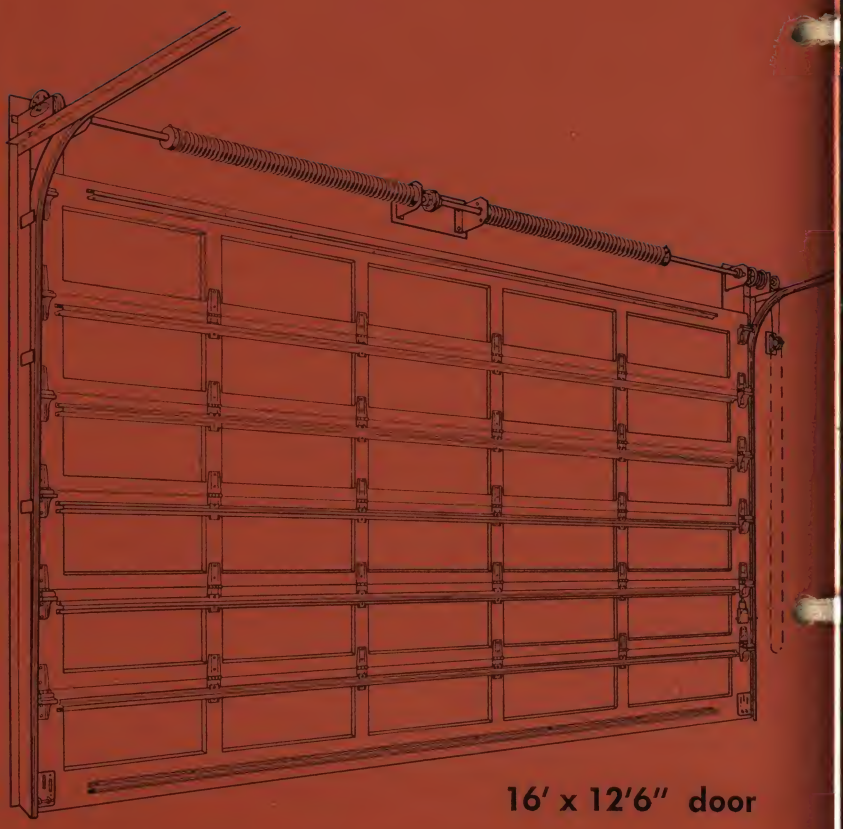
lumber	1¾" clear B&B fir
panels	¼" Hardboard
hardware	Galvanized
tracks	2"
struts	none
operation	chain hoist
electric operator	L drawbar, ⅓ hp

Please call us if change in specification must be considered.

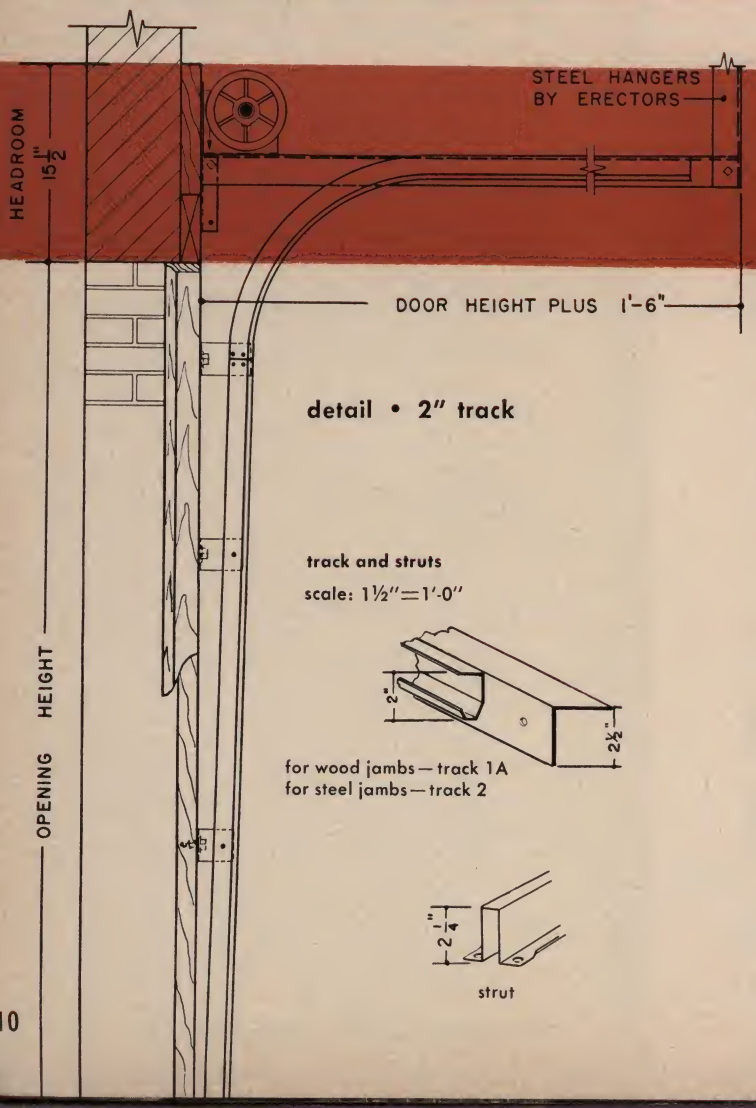
*TRADE MARK



14′ x 14′ door



16′ x 12′6″ door

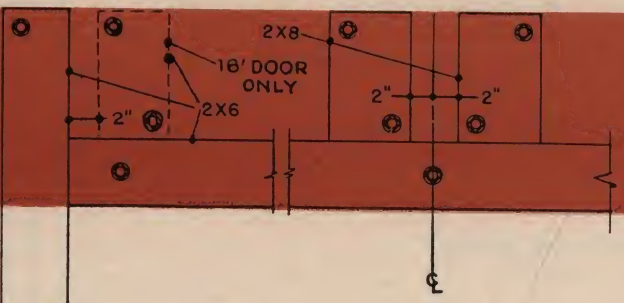


detail • 2″ track

track and struts
scale: 1½″=1′-0″

for wood jambs—track 1A
for steel jambs—track 2

strut

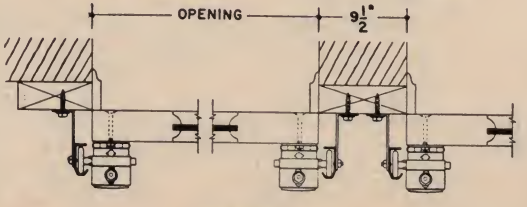


OPENING WIDTH
(SAME AS DOOR WIDTH)

wood casing detail

wood casing

minimum
center post



no scale

stiles and rails

1¾" thick Sitka spruce or Douglas fir stiles and rails, mortised and tenoned, glued, steel doweled, with rebated weather joints 5½" top and 7½" bottom rails. 5½" end stiles. 3½" center stiles. 2⁹⁄₁₆" center rails.

panels

¼" Hardboard is standard (see Lifetime Guarantee).

finish

Sections sanded and ready for paint.

glass arrangement

Any sections except bottom left open for glass, with glazing mold cut to fit. For glass pattern, see page 21.

headroom

15½" minimum for compound radius tracks.

sideroom

5½" sideroom for bracket mounted verticals, 9½" for chain hoist. 6½" sideroom for angle mounted verticals, 10½" for chain hoist.

operation

Chain hoist or electric. Model L electric operator is recommended.

hardware

SALT SPRAY STEEL* heavy duty hinges and fixtures, full-floating hardened steel ball-bearing rollers. Each section reinforced with steel struts.

lock

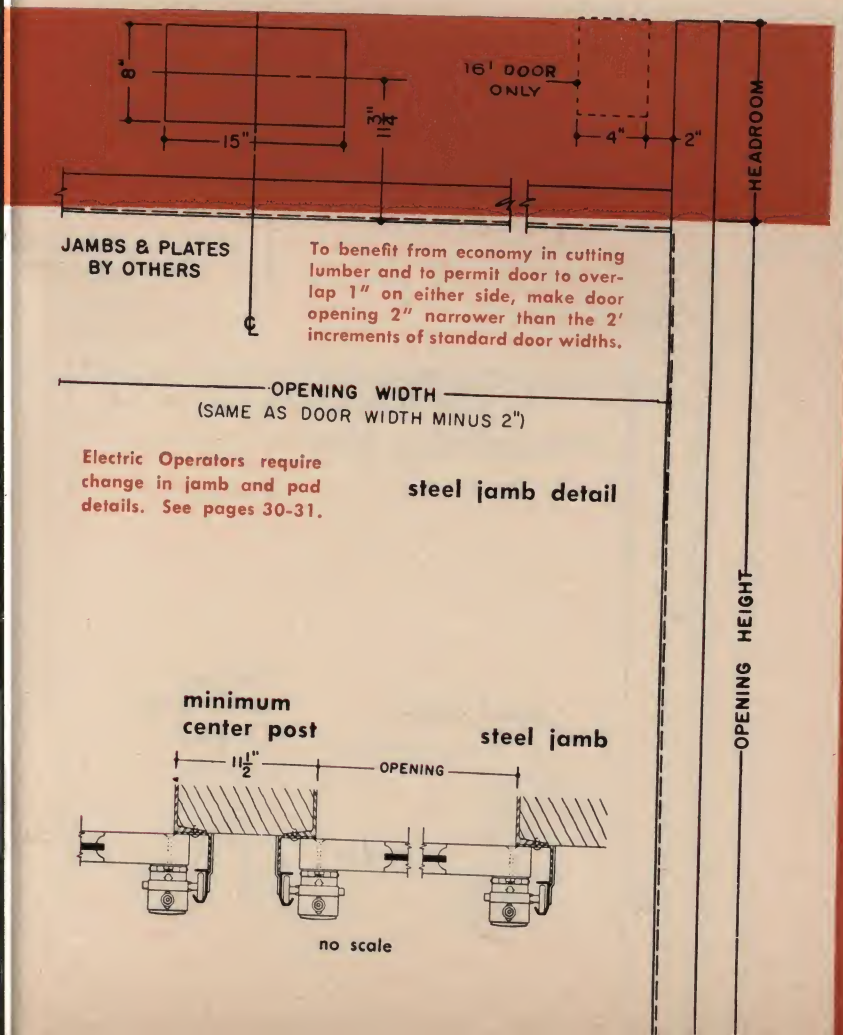
5-pin tumbler side lock two keys. Adjustable keeper on track. Right or left installation.

tracks

SALT SPRAY STEEL* with MIRACLE WEDGE* weathertight closure. 2" tracks curved on compound radius. Bracket mounted verticals for wood casings (track 1A). Angle mounted verticals for steel jambs (track 2) Horizontals reinforced full length with 2½" x 2½" x ⅛" angles.

counterbalance

Two heavy duty torsion springs on a crossheader shaft. Die cast aluminum tapered drums using ³⁄₁₆" aircraft cables.


8"
15"
16' DOOR ONLY
4"
2"
HEADROOM
JAMBS & PLATES BY OTHERS
℄
To benefit from economy in cutting lumber and to permit door to overlap 1" on either side, make door opening 2" narrower than the 2' increments of standard door widths.
OPENING WIDTH
(SAME AS DOOR WIDTH MINUS 2")
OPENING HEIGHT

Electric Operators require change in jamb and pad details. See pages 30-31.

steel jamb detail

no scale

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial-wood

14'x14' & 16'x12'6"

OTHER SIZES ALWAYS AVAILABLE

We make doors of any size to fit any opening.

For intermediate sizes, see pages 20–21.

standard specification

Wood sectional upward-acting doors shall be OVERHEAD DOOR CORPORATION doors of size shown on plans. To be made of clear grade B or better Sitka spruce or Douglas fir not less than 1¾" finished thickness with panels of ¼" Hardboard and to be accurately counterbalanced with torsion springs, tapered drums and galvanized aircraft-type cables. Doors shall be equipped with MIRACLE WEDGE* closing action, 2" track and hardware of SALT SPRAY STEEL,* ¼" ball bearings in all rollers, and a 5-pin tumbler side lock with two keys.

Doors over 12'2" wide to be adequately reinforced with suitable struts. Doors over 13' high or over 168 square feet to be equipped with hand chain hoist.

Doors shall be installed by the local distributor of The "OVERHEAD DOOR."

Doors shall be guaranteed against faulty workmanship or material for a period of one year. Door openings, jambs, pads, painting and glazing to be furnished by others.

alternate specifications

Toxic treatment of wood panel sections. ⅜" exterior grade plywood in place of hardboard panels. Extension springs instead of torsion springs and tapered drums. Rubber weatherstrip for bottom rail.

optional equipment

Refer to Table of Contents for:

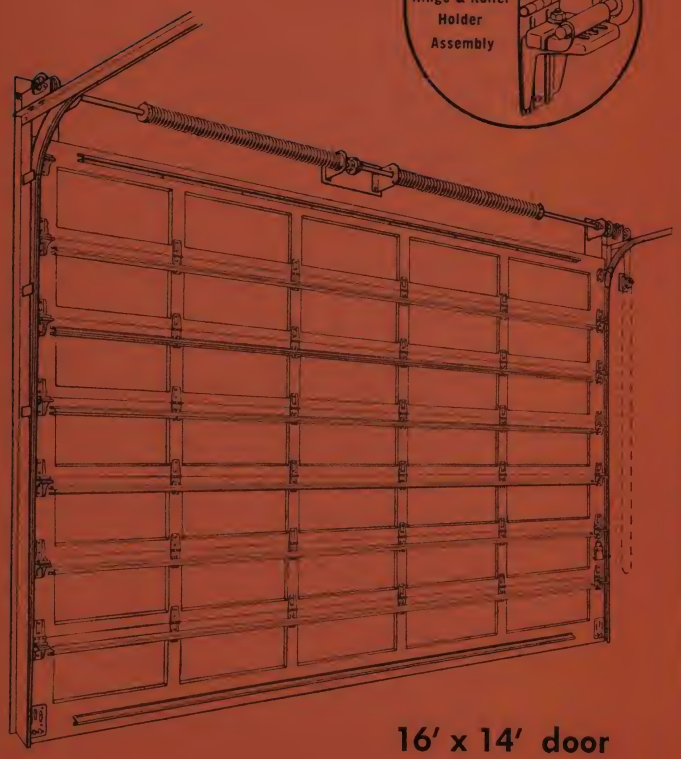
Electric operator and control switches.
Low headroom equipment.
Lift clearance.
Pass doors.
Ventilating doors.

short form specification

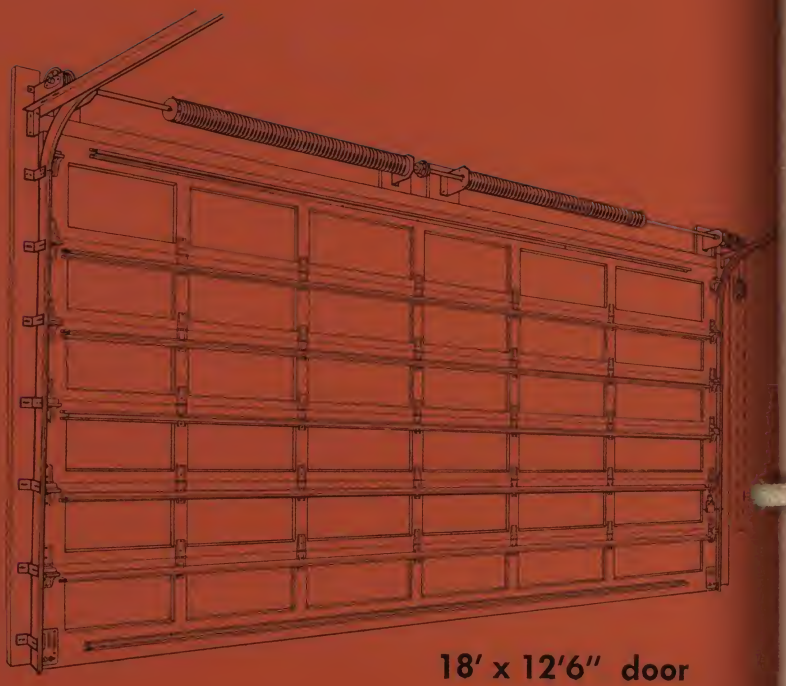
lumber	1¾" clear B&B fir
panels	¼" Hardboard
hardware	Galvanized
tracks	2"
struts	eight 2¼" high (14'x14') seven 2¼" high (16'x12'6")
operation	chain hoist
electric operator	L drawbar, ⅓ hp

Please call us if change in specification must be considered.

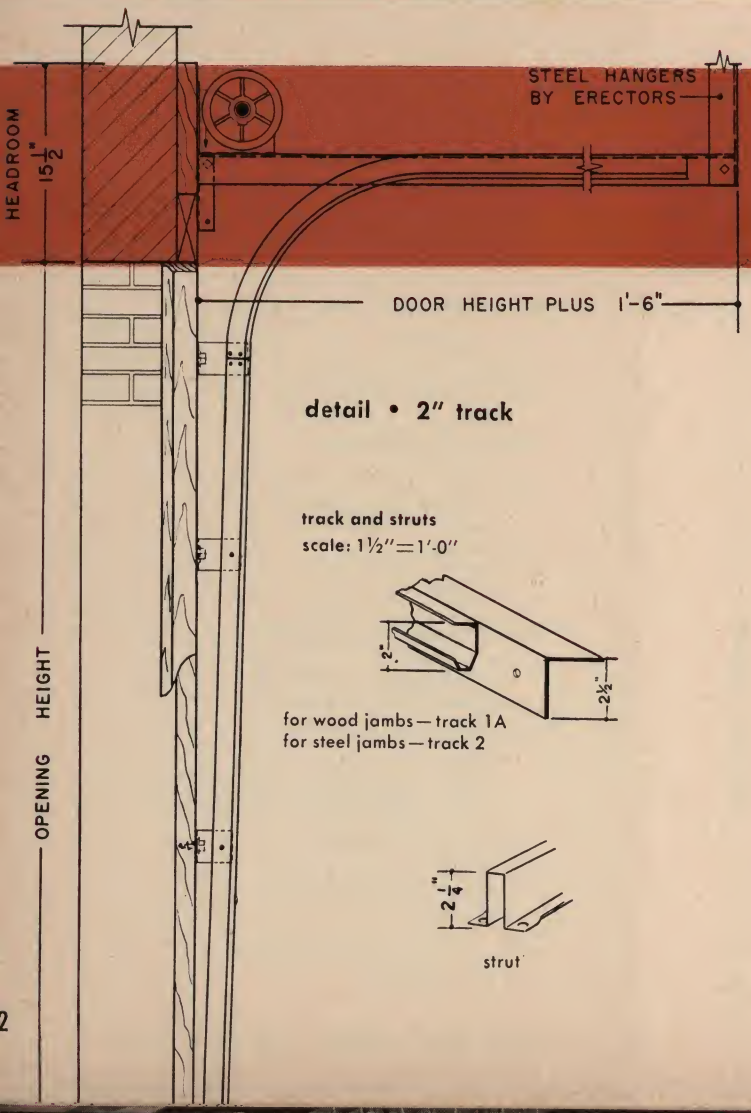
*TRADE MARK



16′ x 14′ door



18′ x 12′6″ door

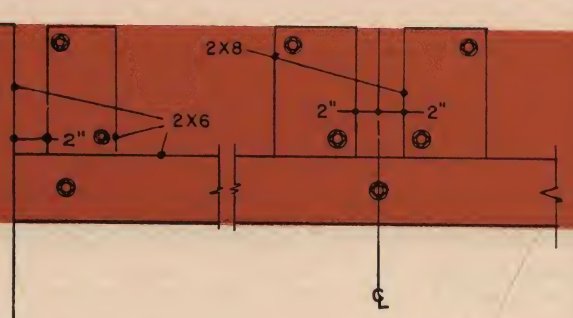


detail • 2″ track

track and struts
scale: 1½″=1′-0″

for wood jambs—track 1A
for steel jambs—track 2

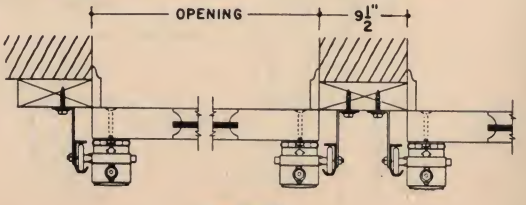
strut



OPENING WIDTH
(SAME AS DOOR WIDTH)

wood casing detail

wood casing **minimum center post**



no scale

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial-wood

16'x14' & 18'x12'6"

OTHER SIZES ALWAYS AVAILABLE

We make doors of any size to fit any opening.

For intermediate sizes, see pages 20–21.

stiles and rails
1¾" thick Sitka spruce or Douglas fir, mortised and tenoned, glued, steel doweled, with rebated weather joints. 7½" bottom rail. 5½" top rail. 5½" end stiles. 3½" center stiles. 2⁹⁄₁₆"center rails.

panels
¼" Hardboard is standard (see Lifetime Guarantee).

finish
Sanded and ready for paint.

glass arrangement
Any sections except bottom open for glass. Glazing mold cut to fit. For glass pattern, see page 21.

headroom
15½" minimum for compound radius tracks.

sideroom
5½" for bracket mounted verticals, 9½" for chain hoist. 6½" for angle mounted verticals, 10½" for chain hoist.

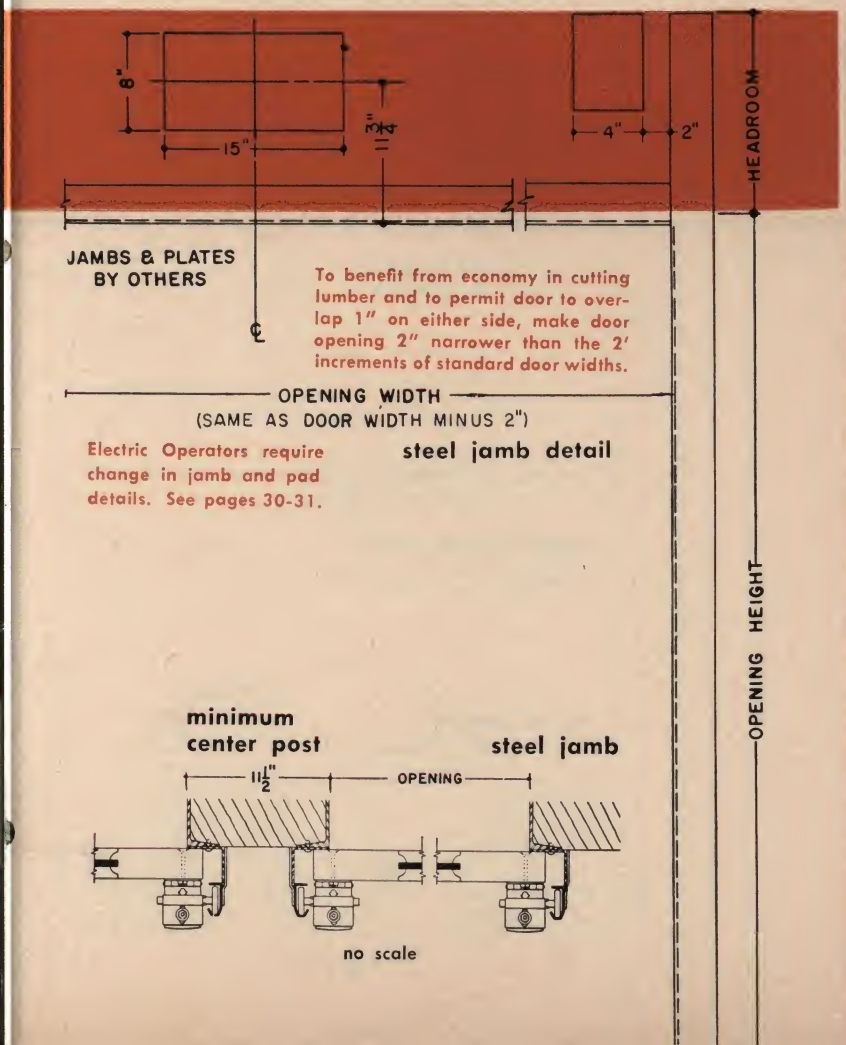
operation
Chain hoist or electric. Model L electric operator is recommended.

hardware
SALT SPRAY STEEL* heavy duty hinges and fixtures, full-floating hardened ball-bearing rollers. Each section reinforced with steel struts.

lock
5-pin tumbler side lock, two keys. Adjustable keeper on track. Right or left installation.

tracks
SALT SPRAY STEEL* with MIRACLE WEDGE* weathertight closure. 2" tracks curved on compound radius. Bracket mounted verticals for wood casings (track 1A). Angle mounted verticals for steel jambs (track 2). Horizontals reinforced with 2½" x 2½" x ⅛" angles.

counterbalance
Two heavy duty torsion springs on crossheader shaft. Die cast aluminum tapered drums using ³⁄₁₆" aircraft cables.



To benefit from economy in cutting lumber and to permit door to overlap 1" on either side, make door opening 2" narrower than the 2' increments of standard door widths.

steel jamb detail

Electric Operators require change in jamb and pad details. See pages 30-31.

minimum center post **steel jamb**

no scale

short form specification

lumber	1 ¾" clear B&B fir
panels	¼" Hardboard
hardware	Galvanized
tracks	2"
struts	eight 2¼" high (16'x14') seven 2¼" high (18'x12'6")
operation	chain hoist
electric operator	L drawbar, ⅓ hp

Please call us if change in specification must be considered.

standard specification
Wood sectional upward-acting doors shall be OVERHEAD DOOR CORPORATION doors of size shown on plans. To be made of clear grade B or better Sitka spruce or Douglas fir not less than 1¾" finished thickness with panels of ¼" Hardboard and to be accurately counterbalanced with torsion springs, tapered drums and galvanized aircraft-type cables. Doors shall be equipped with MIRACLE WEDGE* closing action, 2" track and hardware of SALT SPRAY STEEL,* ¼" ball bearings in all rollers, and a 5-pin tumbler side lock with two keys. Doors over 12'2" wide to be adequately reinforced with suitable struts. Doors over 13' high or over 168 square feet to be equipped with hand chain hoist.

Doors shall be installed by the local distributor of The "OVERHEAD DOOR."

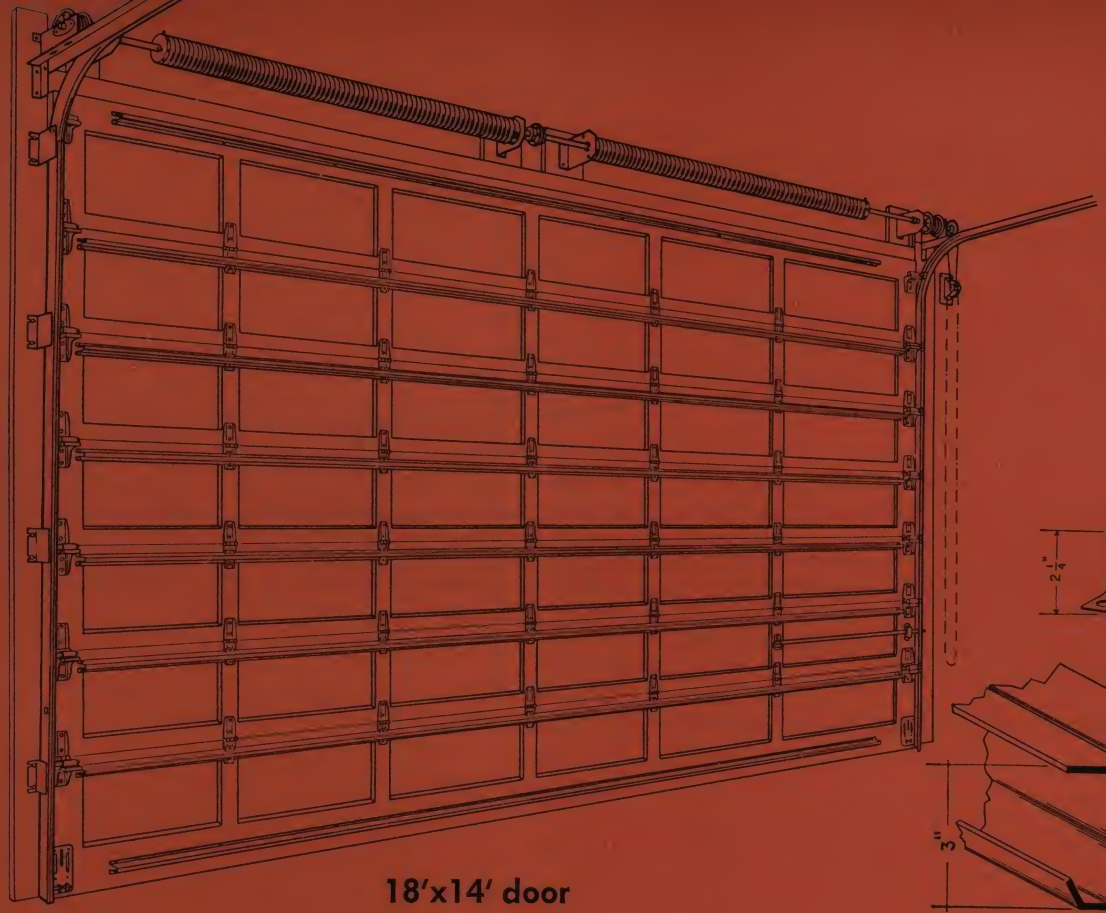
Doors shall be guaranteed against faulty workmanship or material for a period of one year. Door openings, jambs, pads, painting and glazing to be furnished by others.

alternate specifications
Toxic treatment of wood panel sections. ⅜" exterior grade plywood in place of hardboard panels. Extension springs instead of torsion springs and tapered drums. Rubber weatherstrip for bottom rail.

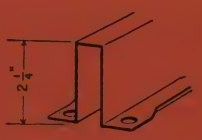
optional equipment
Refer to Table of Contents for:

Electric operator and control switches.
Low headroom equipment.
Lift clearance.
Pass doors.
Ventilating doors.

*TRADE MARK



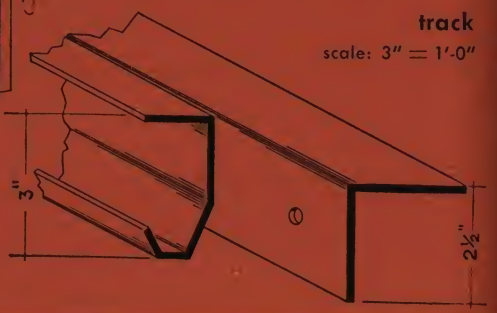
18'x14' door

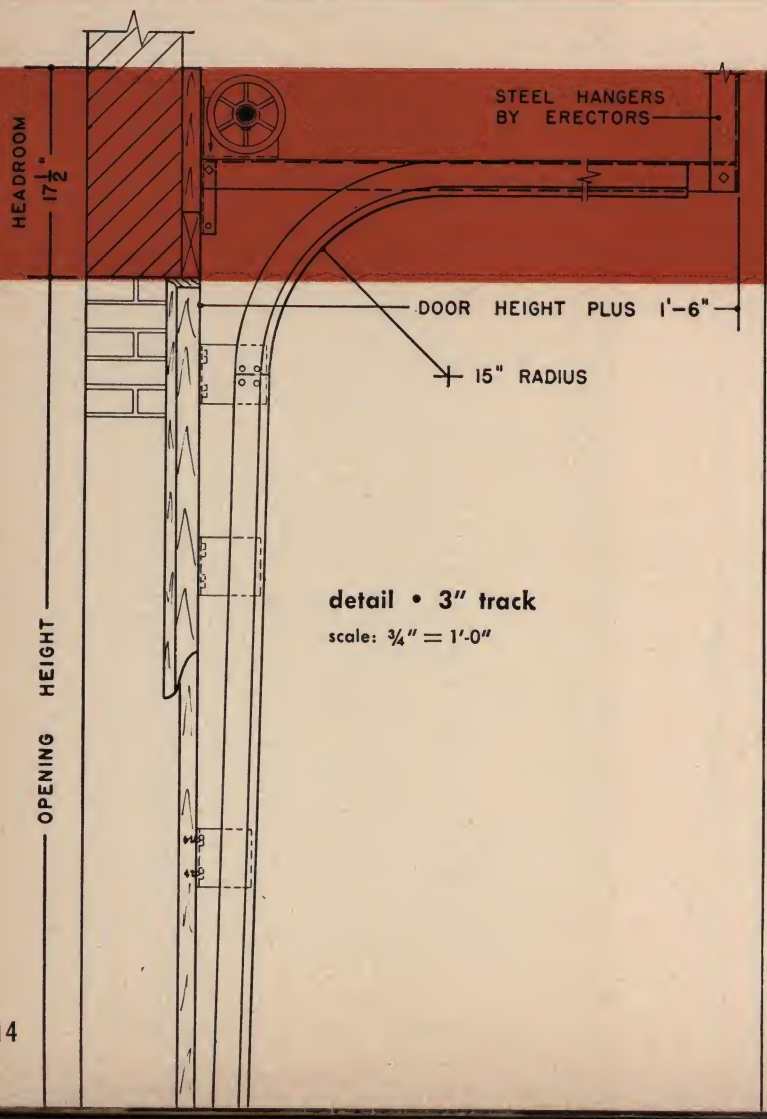


strut

track

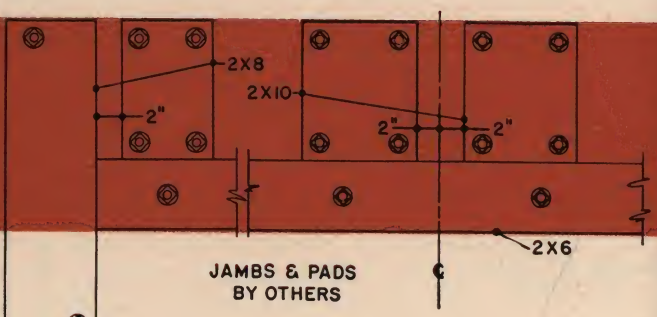
scale: 3" = 1'-0"





detail • 3" track

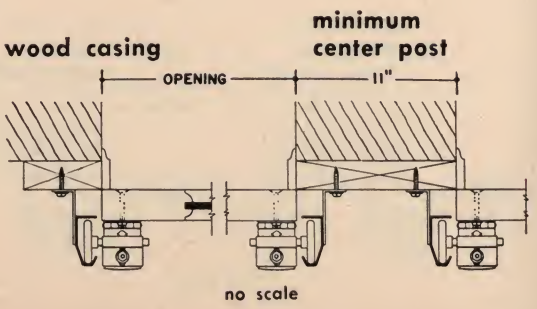
scale: ¾" = 1'-0"



OPENING WIDTH
(SAME AS DOOR WIDTH)

wood casing detail

scale: ¾" = 1'-0"



no scale

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial——wood

18′ x 14′

OTHER SIZES ALWAYS AVAILABLE

We make doors of any size to fit any opening.

For intermediate sizes, see pages 20–21.

stiles and rails
1¾" thick Sitka spruce or Douglas fir, mortised and tenoned, glued, steel doweled, with rebated weather joints. 7½" bottom rail. 5½" top rail. 5½" end stiles. 3½" center stiles. 2 9/16" center rails.

panels
¼" Hardboard is standard (see Lifetime Guarantee).

finish
Sanded and ready for paint.

glass arrangement
Any sections except bottom open for glass. Glazing mold cut to fit. For glass pattern, see page 21.

headroom
17½" minimum for 3" tracks.

sideroom
5½" for bracket mounted verticals, 9½" for chain hoist. 6½" for angle mounted verticals, 10½" for chain hoist.

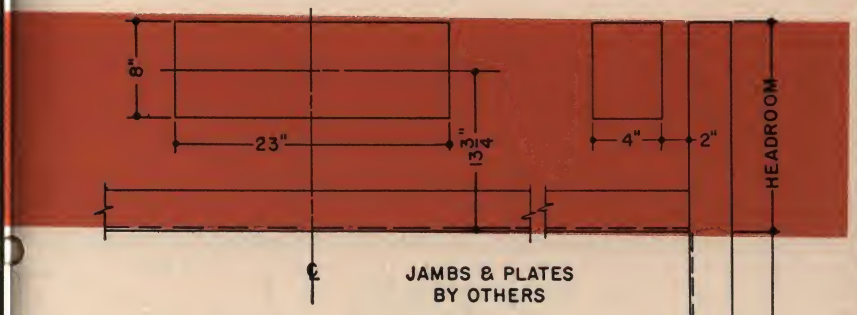
operation
Chain hoist or electric. Model L electric operator is recommended.

hardware
SALT SPRAY STEEL* heavy duty hinges and fixtures, full-floating hardened ball-bearing rollers with double ball races. Each section reinforced with steel struts.

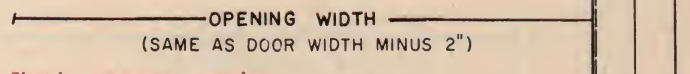
lock
5-pin tumbler lock, two keys, cremone type locking bar. Adjustable lock bar guide.

tracks
SALT SPRAY STEEL* with MIRACLE WEDGE* weathertight closure. 3" tracks curved on 15" radius. Bracket mounted verticals for wood casings (track 5). Angle mounted verticals for steel jambs (track 6). Horizontals reinforced with 2½" x 2½" x ⅛" angles.

counterbalance
Two heavy duty torsion springs on crossheader shaft. Die cast aluminum tapered drums using 3/16" aircraft cables.

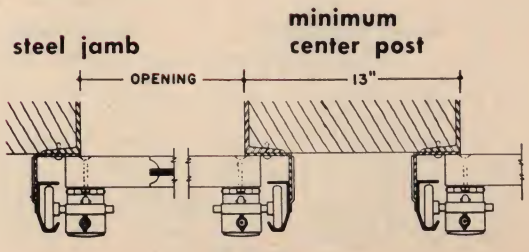


To benefit from economy in cutting lumber and to permit door to overlap 1" on either side, make door opening 2" narrower than the 2′ increments of standard door widths.



Electric operators require change in jamb and pad details. See pages 30-31.

steel jamb detail
scale: ¾" = 1′-0"



no scale

alternate specifications
Toxic treatment of wood panel sections. ⅜" exterior grade plywood in place of hardboard panels. Extension springs instead of torsion springs and tapered drums. Rubber weatherstrip for bottom rail.

optional equipment
Refer to Table of Contents for:
Electric operator and control switches.
Low headroom equipment.
Lift clearance.
Pass doors.
Ventilating doors.

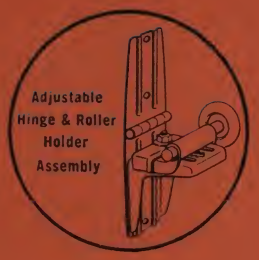
short form specification

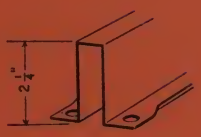
lumber	1¾" clear B&B fir
panels	¼" Hardboard
hardware	Galvanized
tracks	3"
struts	eight 2¼" high
operation	chain hoist
electric operator	L drawbar, ½ hp

Please call us if change in specification must be considered.

*TRADE MARK

20'x12'6" door

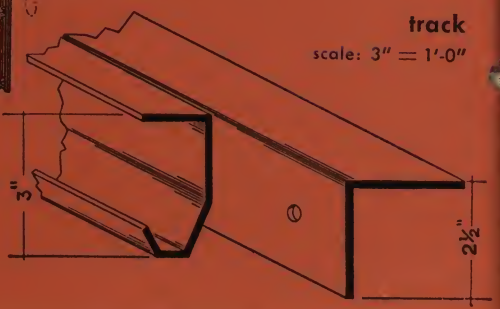


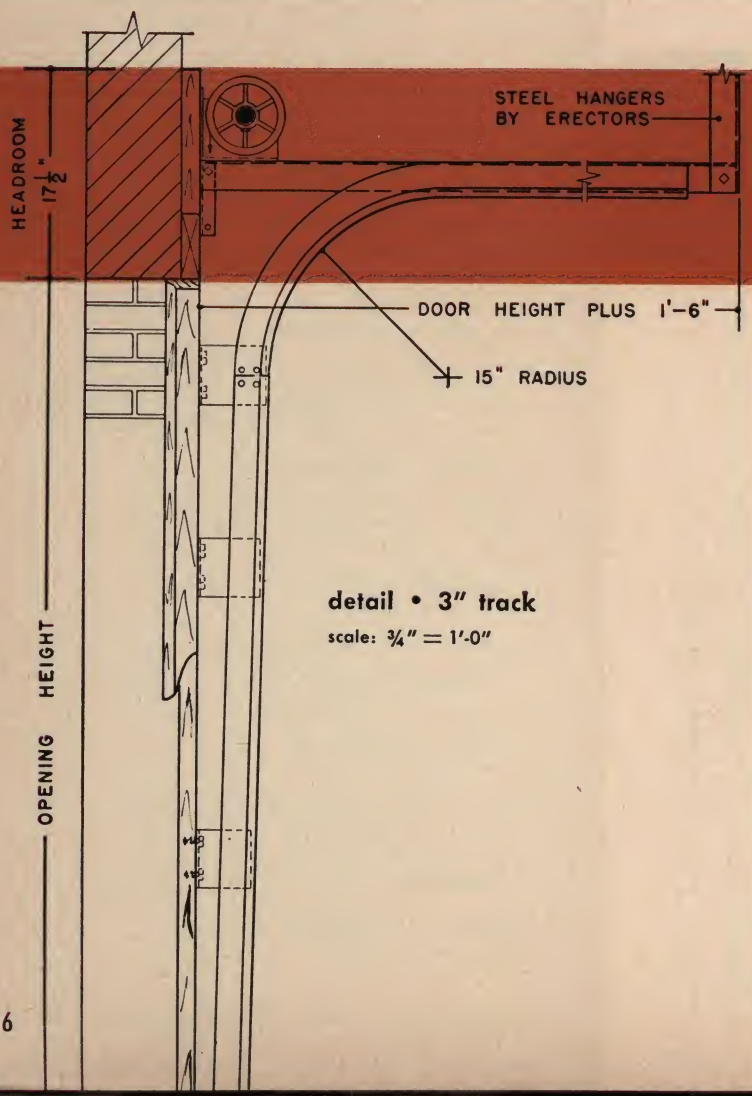


strut

track

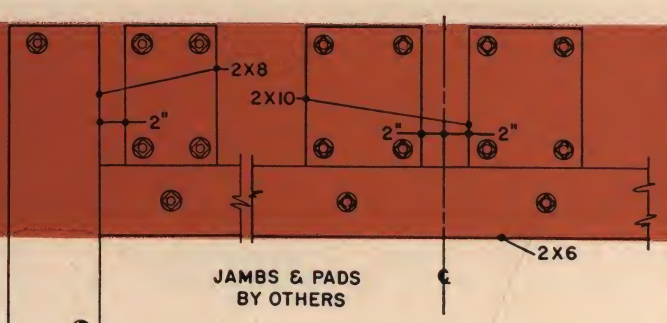
scale: 3" = 1'-0"

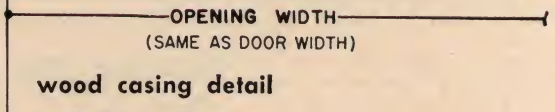




detail • 3" track

scale: ¾" = 1'-0"



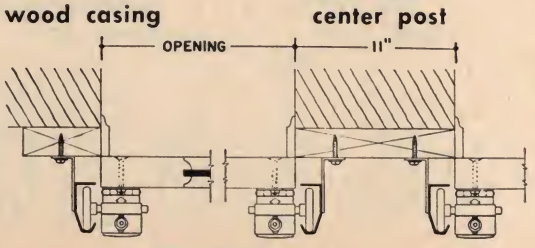


wood casing detail

scale: ¾" = 1'-0"

wood casing

minimum
center post



no scale

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial——wood

20′ x 12′ 6″

OTHER SIZES ALWAYS AVAILABLE

We make doors of any size to fit any opening.

For intermediate sizes, see pages 20–21.

stiles and rails
1¾" thick Sitka spruce or Douglas fir, mortised and tenoned, glued, steel doweled, with rebated weather joints. 9½" bottom rail. 7½" top rail. 5½" end stiles. 3½" center stiles. 2⁹⁄₁₆" center rails.

panels
¼" Hardboard is standard (see Lifetime Guarantee).

finish
Sanded and ready for paint.

glass arrangement
Any sections except bottom open for glass. Glazing mold cut to fit. For glass pattern, see page 21.

headroom
17½" minimum for 3" tracks.

sideroom
5½" for bracket mounted verticals, 9½" for chain hoist. 6½" for angle mounted verticals, 10½" for chain hoist.

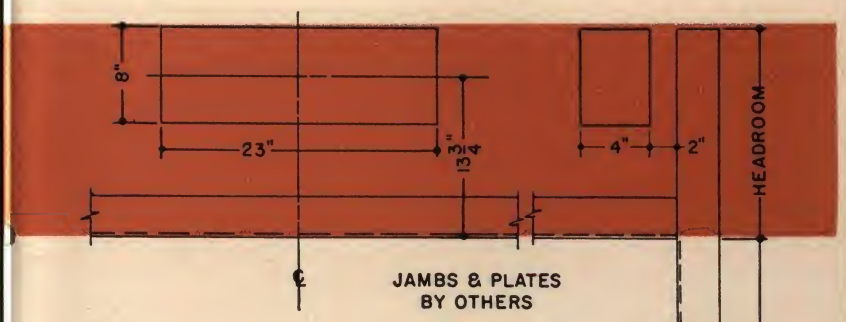
operation
Chain hoist or electric. Model L electric operator is recommended.

hardware
SALT SPRAY STEEL* heavy duty hinges and fixtures, full-floating hardened ball-bearing rollers with double ball races. Each section reinforced with steel struts. Double diagonal trusses on bottom section.

lock
5-pin tumbler lock, two keys, cremone type locking bar. Adjustable lock bar guide.

tracks
SALT SPRAY STEEL* with MIRACLE WEDGE* weathertight closure. 3" tracks curved on 15" radius. Bracket mounted verticals for wood casings (track 5). Angle mounted verticals for steel jambs (track 6). Horizontals reinforced with 2½" x 2½" x ⅛" angles.

counterbalance
Two heavy duty torsion springs on crossheader shaft. Die cast aluminum tapered drums using ³⁄₁₆" aircraft cables.



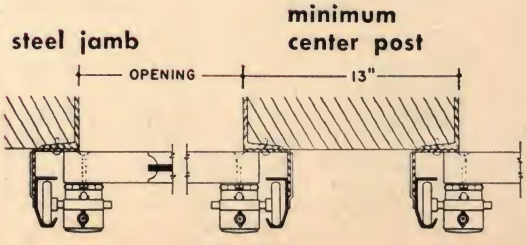
To benefit from economy in cutting lumber and to permit door to overlap 1" on either side, make door opening 2" narrower than the 2′ increments of standard door widths.

OPENING WIDTH
(SAME AS DOOR WIDTH MINUS 2")

OPENING HEIGHT

Electric operators require change in jamb and pad details. See pages 30-31.

steel jamb detail
scale: ¾" = 1′-0"



no scale

alternate specifications
Toxic treatment of wood panel sections. ⅜" exterior grade plywood in place of hardboard panels. Extension springs instead of torsion springs and tapered drums. Rubber weatherstrip for bottom rail.

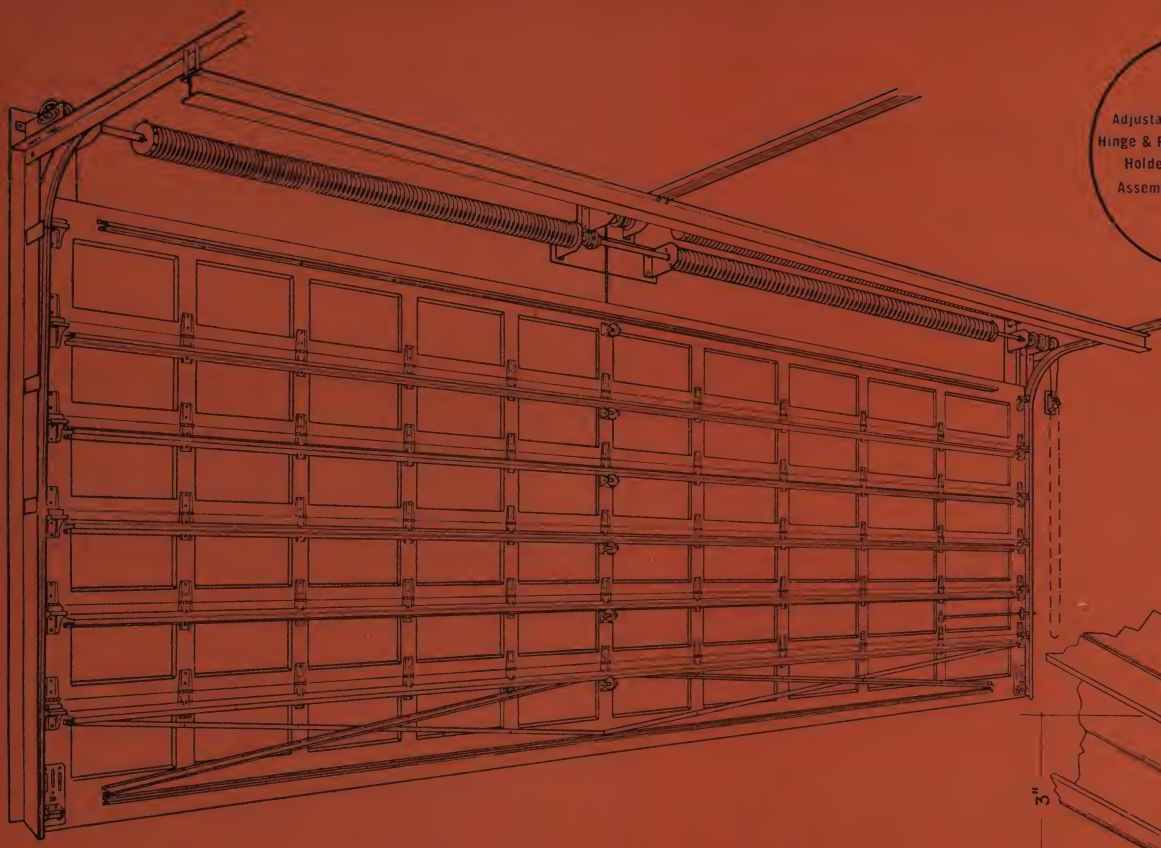
optional equipment
Refer to Table of Contents for:
Electric operator and control switches.
Low headroom equipment.
Lift clearance.
Pass doors.
Ventilating doors.

short form specification

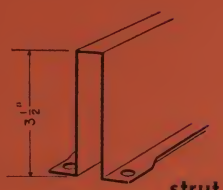
lumber	1¾" clear B&B fir
panels	¼" Hardboard
hardware	Galvanized
tracks	3"
struts	seven 2¼" high
operation	chain hoist
electric operator	L drawbar, ½ hp

Please call us if change in specification must be considered.

*TRADE MARK

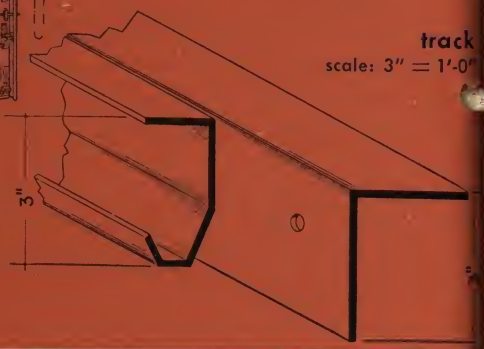


Adjustable Hinge & Roller Holder Assembly

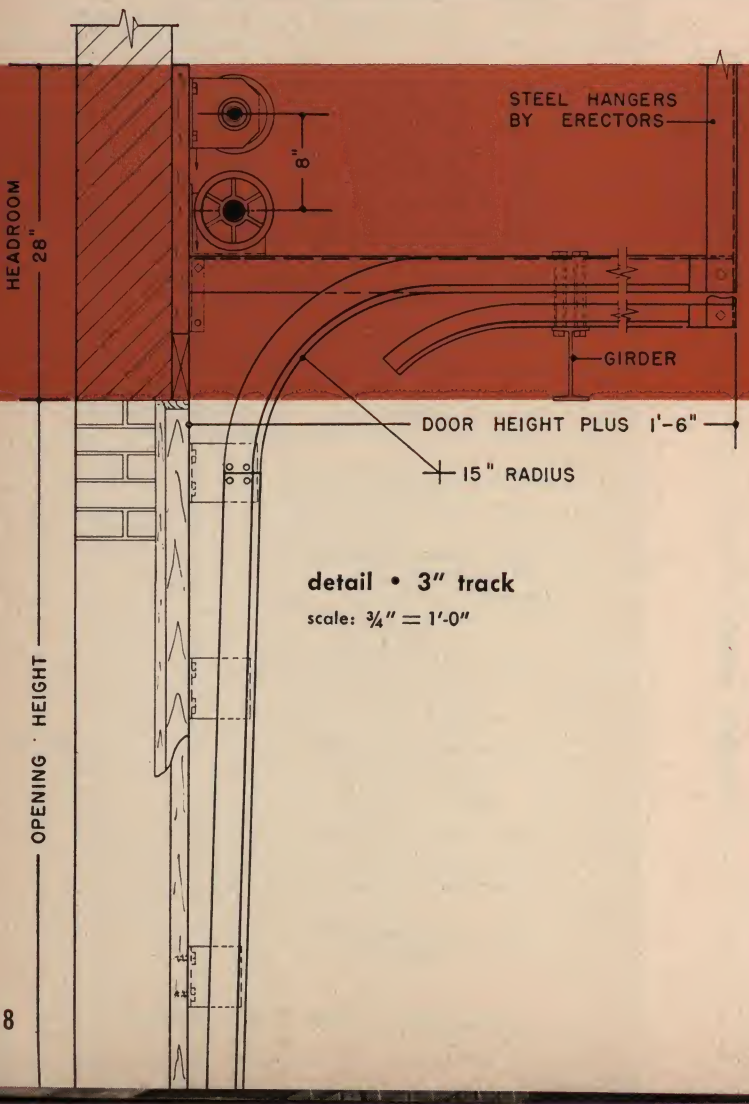


strut

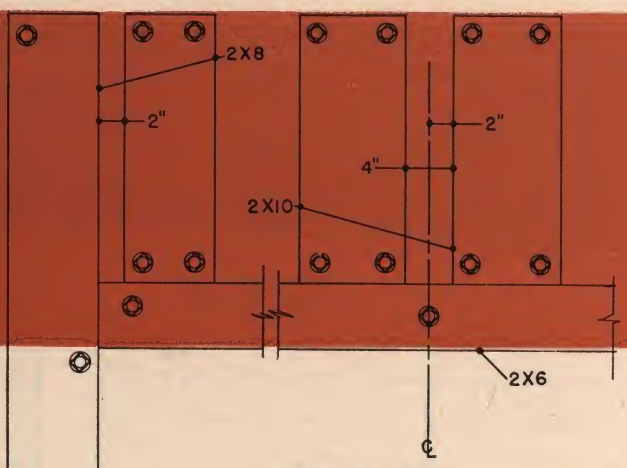
track
scale: 3" = 1'-0"



24'x12'6" door

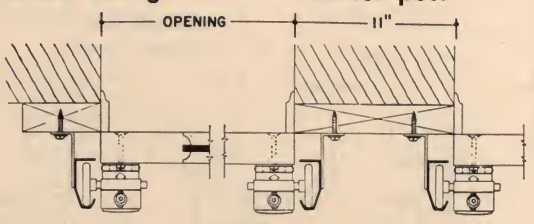


detail • 3" track
scale: ¾" = 1'-0"



wood casing detail
scale: ¾" = 1'-0"

wood casing — **minimum center post**



no scale

stiles and rails
1¾" thick Sitka spruce or Douglas fir stiles and rails, mortised and tenoned, glued, steel doweled, with rebated weather joints. 9½" bottom rail. 7½" top rail. 5½" end stiles. 3½" center stiles. 2 9/16" center rails.

panels
¼" Hardboard is standard (see Lifetime Guarantee).

finish
Sanded and ready for paint.

glass arrangement
Any sections, except the bottom, may be left open for glass. Glazing mold cut to fit. For glass pattern, see page 21.

headroom
28" minimum for 3" tracks.

sideroom
5½" sideroom for bracket mounted verticals, 9½" for chain hoist. 6½" sideroom for angle mounted verticals, 10½" for chain hoist.

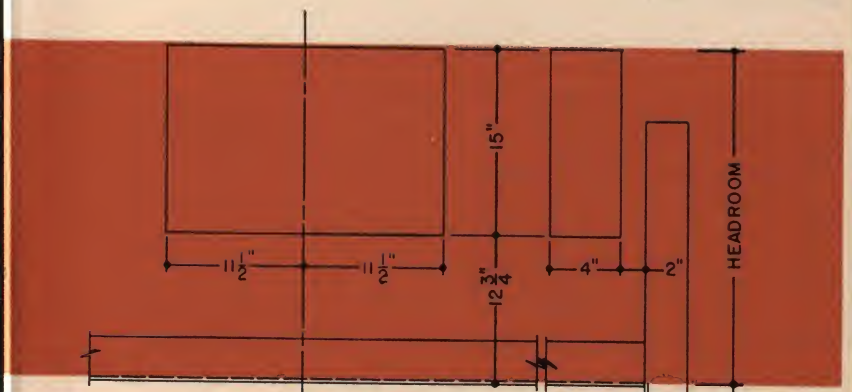
operation
Chain hoist or electric. Model L electric operator is recommended.

hardware
SALT SPRAY STEEL* heavy duty hinges and fixtures. Full-floating hardened steel ball-bearing rollers with double ball races. Sections reinforced with steel struts. Auxiliary rollers in center of door. Double diagonal trusses on bottom section.

lock
5-pin tumbler lock, two keys, cremone type locking bar. Adjustable lock bar guide.

tracks
SALT SPRAY STEEL* with MIRACLE WEDGE* weathertight closure. 3" tracks curved on 15" radius. Bracket mounted verticals for wood casings (track 5). Angle mounted verticals for steel jambs (track 6). Horizontals reinforced with 3" x 3" x ⅛" angles. Girder and auxiliary center track.

counterbalance
Two heavy duty main torsion springs with one auxiliary center spring. Die cast aluminum tapered drums with 3/16" aircraft cables.



JAMBS AND PLATES BY OTHERS

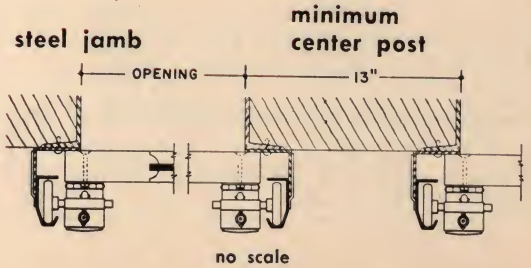
℄

To benefit from economy in cutting lumber and to permit door to overlap 1" on either side, make door opening 2" narrower than the 2' increments of standard door widths.

OPENING WIDTH
(SAME AS DOOR WIDTH MINUS 2")

steel jamb detail
scale: ¾" = 1'-0"

Electric operators require change in jamb and pad details. See pages 30-31.



no scale

OPENING HEIGHT

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial——wood

24′ x 12′ 6″
OTHER SIZES ALWAYS AVAILABLE

We make doors of any size to fit any opening.

For intermediate sizes, see pages 20–21.

standard specification
Wood sectional upward-acting doors shall be OVERHEAD DOOR CORPORATION doors of size shown on plans. To be made of clear grade B or better Sitka spruce or Douglas fir not less than 1¾" finished thickness with panels of ¼" Hardboard and to be accurately counterbalanced with torsion springs, tapered drums and galvanized aircraft-type cables. Doors shall be equipped with MIRACLE WEDGE* closing action, 3" track and hardware of SALT SPRAY STEEL* ¼" ball bearings in double ball races in all rollers, cremone type lock bar, adjustable lock bar guide and a 5-pin tumbler cylinder lock with two keys. Doors over 12'2" wide to be adequately reinforced with suitable struts with an additional diagonal strut on doors over 18'2" wide. Doors over 13' high or over 168 square feet to be equipped with hand chain hoist. Doors over 20'2" wide to be equipped with girder auxiliary track and center lift spring.

Doors shall be installed by the local distributor of The "OVERHEAD DOOR."

Doors shall be guaranteed against faulty workmanship or material for a period of one year. Door openings, jambs, pads, painting and glazing to be furnished by others.

alternate specifications
Toxic treatment of wood panel sections. ⅜" exterior grade plywood in place of hardboard panels. Extension springs instead of torsion springs and tapered drums. Rubber weatherstrip for bottom rail.

optional equipment
Refer to Table of Contents for:
Electric operator and control switches.
Low headroom equipment.
Lift clearance.
Pass doors.
Ventilating doors.

short form specification

lumber	1¾" clear B&B fir
panels	¼" Hardboard
hardware	Galvanized
tracks	3"
struts	seven 3½" high
operation	chain hoist
electric operator	L drawbar, ½ hp
center lift girder	
auxiliary center track	

Please call us if change in specification must be considered.

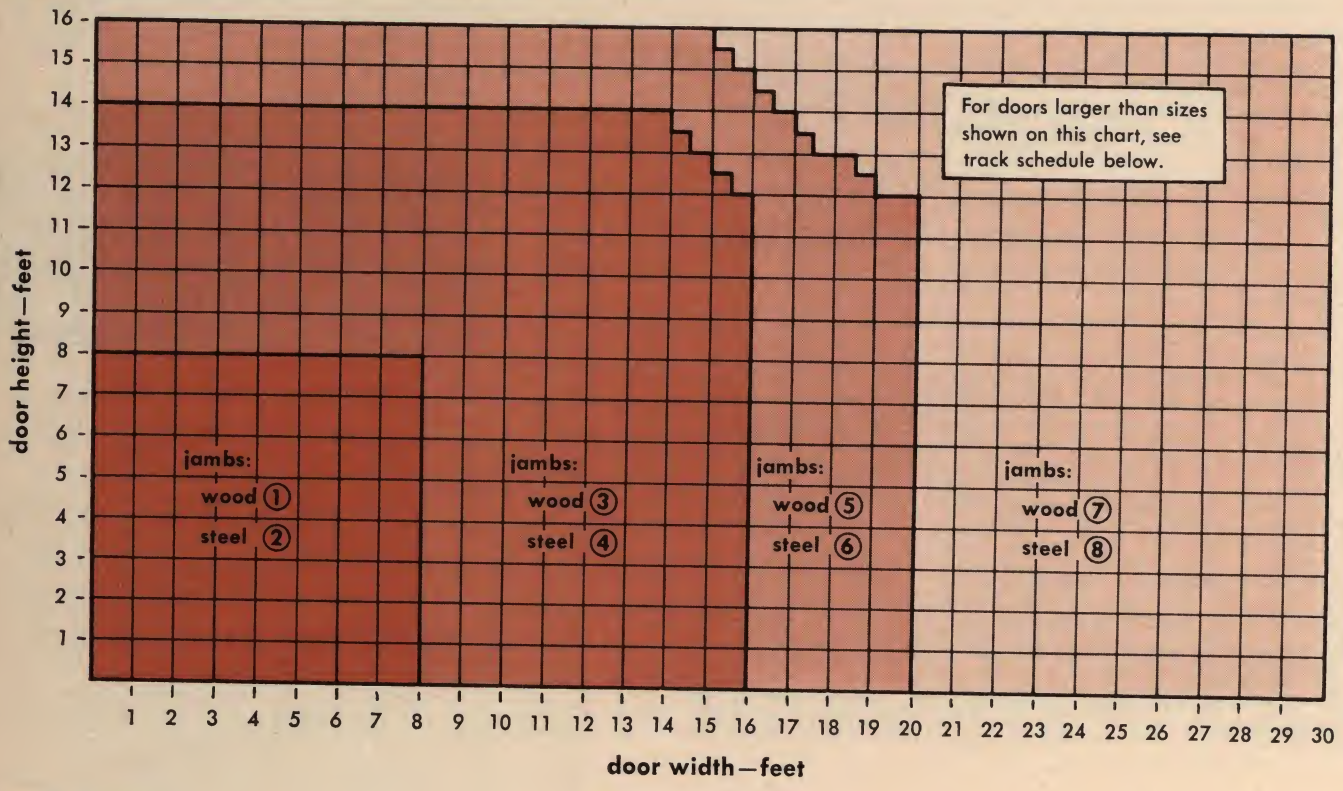
*TRADE MARK

for determining intermediate door sizes

track, section, panel, strut schedules

A track

For track description and limits, locate door size on chart and refer to indicated line number in track schedule below.



track schedule

door size limits	type of jambs: wood	type of jambs: wood side-room	type of jambs: steel	type of jambs: steel side-room	track number	track size	recommended head-room	type of vertical mounting	type of angle reinforcement on horizontals
① to 8'0" x 8'0" or 64 sq. ft.	x	3¾"	—	—	stock	2"	11½"	brackets	none
② to 8'2" wide, 8'1" high or 64 sq. ft.	*	—	x	4¾"	G	2"	11½"	2½"x2½"x⅛" angle	none
③ to 16'0" wide, 14'0" high or 196 sq. ft.	x	4¾"	—	—	1	2"	15½"	brackets	1¼"x1¼"x⅛"
④ to 16'2" wide, 14'1" high or 196 sq. ft.	*	—	x	5¾"	1B	2"	15½"	2½"x2½"x⅛" angle	1¼"x1¼"x⅛"
⑤ to 20'0" wide, 16'0" high or 240 sq. ft.	x	5½"	—	—	1A	2"	15½"	brackets	2½"x2½"x⅛"
⑥ to 20'2" wide, 16'1" high or 240 sq. ft.	*	—	x	6½"	2	2"	15½"	2½"x2½"x⅛" angle	2½"x2½"x⅛"
⑦ to 33'0" wide, 16'0" high or 500 sq. ft.	x	5½"	—	—	5	3"	†	6" brackets	††
⑧ to 33'2" wide, 25'1" high or 500 sq. ft.	*	—	x	6½"	6	3"	†	3"x3"x⅛" angle	††

* May be specified for wood casings † 17½" to 28" †† 2½"x2½"x⅛" or 3"x3"x⅛"

Note: Headroom and sideroom measurements shown are for standard installations. Additional equipment may require more room. Check special equipment pages for details.

B section schedule

door height	number of sections
6'6" to 8'6"	4
8'7" to 10'6"	5
10'7" to 12'6"	6
12'7" to 14'6"	7
14'7" to 16'6"	8
16'7" to 18'6"	9
18'7" to 20'6"	10
20'7" to 22'6"	11
22'7" to 24'6"	12

C panel schedule

door width	number of panels
up to 8'5"	2
8'6" to 11'11"	3
12'0" to 14'11"	4
15'0" to 17'11"	5
18'0" to 20'11"	6
21'0" to 23'11"	8
24'0" to 26'11"	10
27'0" to 29'11"	11
30'0" to 32'11"	12

D strut schedule

number of door sections high	door widths: 12'7" to 16'2"	door widths: 16'3" to 20'2"
4	5 struts	5 struts
5	6 struts	6 struts
6	7 struts	7 struts
7	8 struts	8 struts
8	9 struts	9 struts

Doors 18'3" wide and wider have diagonal bracing at bottom section.

Doors 20'3" wide or wider will be equipped with struts according to best engineering practice.

E girder and auxiliary track schedule

Doors 20'3" wide and wider are equipped with girder, auxiliary track and center lift spring.

F chain hoist schedule

Doors 168 square feet and more or 13'-0" high and higher are equipped with hand chain hoist (details on pages 40 and 41).

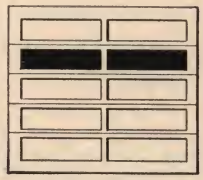
G electric operators

Details on pages 30 and 31.

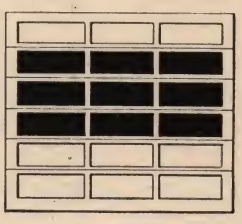
H glass patterns

Bottom section is regarded as number 1. The first numeral given should indicate how many door sections are to have glass panels; the second numeral should indicate total number of sections in door; following numerals should indicate location of glass sections in relation to total number of door sections.

Use of ¼" glass is not recommended since any door so equipped requires special engineering and a more expensive counterbalance.



Key: 154



Key: 36345

ordering data

The following information is essential to the correct interpretation of your order:

1. Exact width and height of door.
2. Exact width and height of finished opening.
3. How many doors are to fill the opening or openings.
4. Door thickness.
5. Glass thickness and location. Specify if back-puttied.
6. Available headroom.
7. Available sideroom.
8. Type of jamb construction.
9. Type of center post.
10. Type of operation—manual, chain hoist, electric.
11. If electrically operated, specify available voltage and phase.
12. Keying arrangement if two or more doors are ordered.

The information on these two pages pertains to commercial and industrial standard wood doors. If the door width and height are known, all data concerning standard headroom, sideroom, number of panels, sections, struts etc. may be obtained from these schedules for any door to 33' wide, 25' high or 500 square feet. To use schedules simply follow the key letters A, B, C, etc. in alphabetical sequence.

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial

STANDARD WOOD DOORS SCHEDULES

specifications

general

All doors shall be made of clear grade B or better lumber, not less than 1¾" finished thickness, with ¼" Hardboard panels or ⅜" exterior grade fir plywood if available.

All hardware and tracks shall have a heavy coating of galvanizing to prevent rust.

track

up to 64 sq. ft. Track channel shall be not less than 2" wide. If doors are installed on wood casings, vertical tracks shall be attached with jamb brackets. If doors are installed on steel jambs, the vertical tracks shall be mounted on not less than 2½ x 2½ x ⅛" continuous galvanized angles.

64 to 196 sq. ft. Horizontal tracks shall be reinforced with not less 1¼" x 1¼" x ⅛" galvanized steel angle. Doors more than 12'-0" high shall have rear and intermediate hangers.

196 to 240 sq. ft. Horizontal tracks shall be reinforced with not less than 2½" x 2½" x ⅛" galvanized steel angle.

more than 240 sq. ft. Track channel shall be not less than 3" wide, equipped with hardened steel ball-bearing rollers with double ball races.

If doors are installed on wood casings, vertical tracks shall be attached with extra heavy duty jamb brackets not less than 6" wide; horizontal tracks shall be reinforced with not less than 2½" x 2½" x ⅛" galvanized steel angle.

If doors are installed on steel jambs, vertical tracks shall be mounted full length on not less than 3" x 3" x ⅛" continuous galvanized angles; horizontal tracks shall be reinforced with not less than 2½" x 2½" x ⅛" galvanized angles.

strut

Doors 12'-7" to 20'-2" wide reinforced with 2¼" high struts.

Doors 20'-3" to 24'-2" wide reinforced with 3½" high struts.

girder and auxiliary track

All doors 20'-3" wide or wider shall be equipped with girder, auxiliary track and center lift spring.

chain hoist

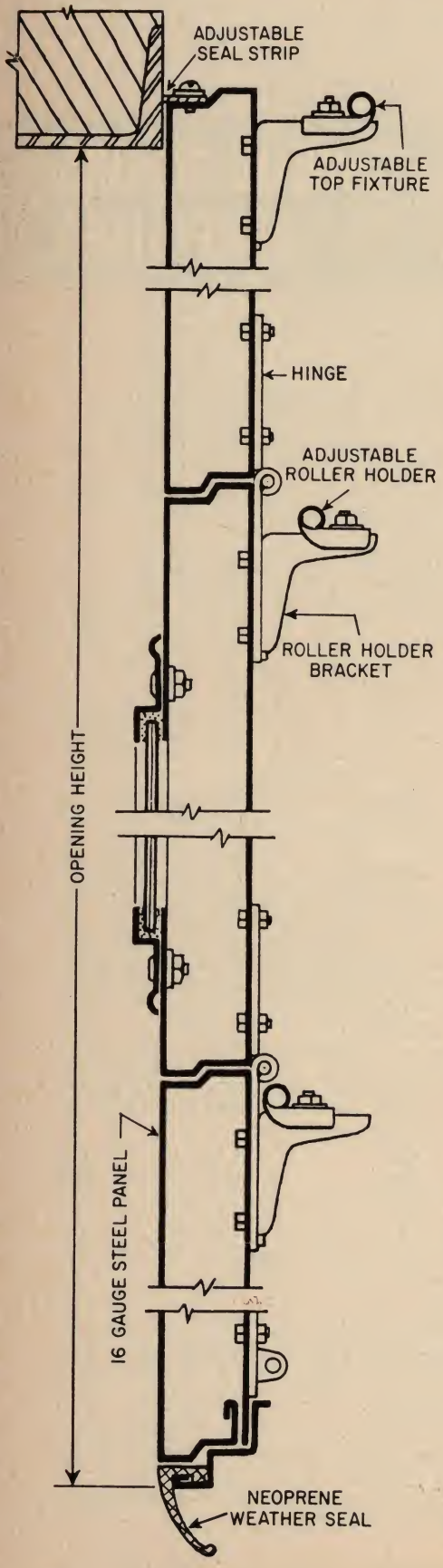
All doors 168 sq. ft. or more shall be equipped with hand chain hoist.

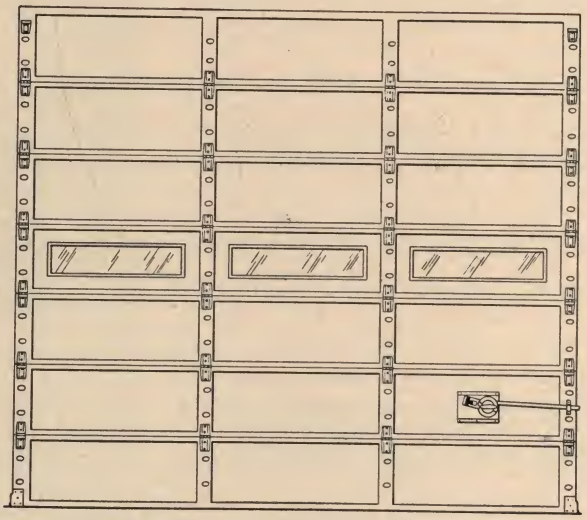
All doors 13'-0" high or higher shall be equipped with hand chain hoist.

steel flush doors • 16 gauge galvanized steel formed sections

sizes up to 500 sq. ft. not to exceed 28'-2" wide and 22'-2" high.

for doors over 24'-2" wide, 14'-1" high or 300 square feet, consult our engineering department.





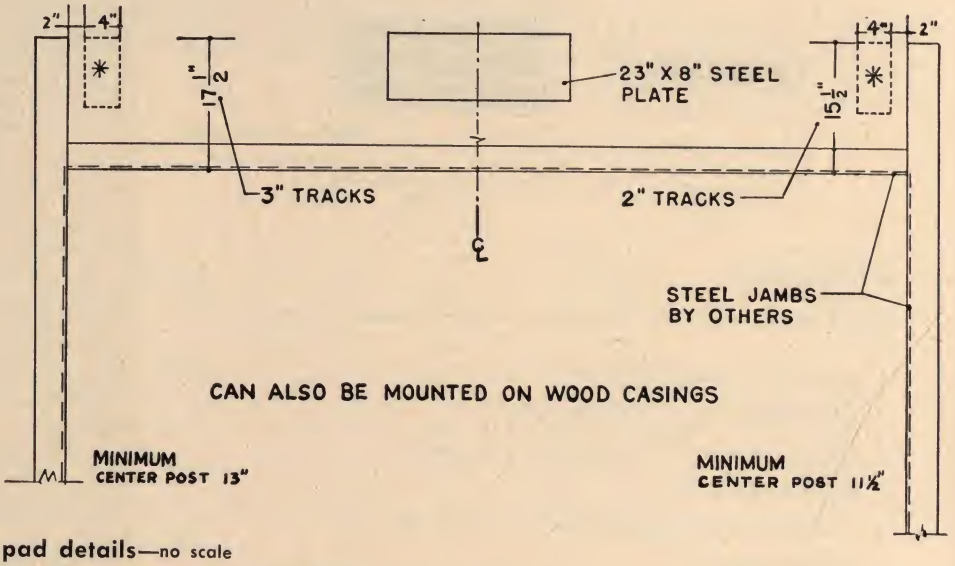
interior elevation

stile schedule

door width	no. center stiles
8'-0"—9'-11"	1
10'-0"—12'-11"	2
13'-0"—16'-1"	3
16'-2"—19'-2"	4
19'-3"—22'-4"	5
22'-5"—25'-7"	6
25'-8"—28'-2"	7

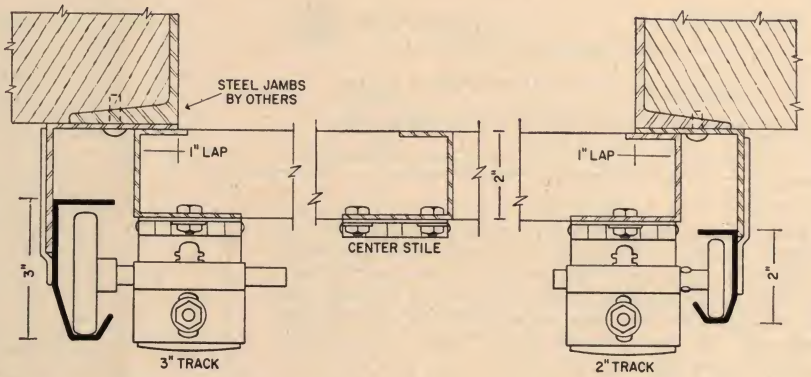
section schedule

door height	no. sections
7'-6"—8'-0"	5
8'-1"—9'-7"	6
9'-8"—11'-2"	7
11'-3"—12'-10"	8
12'-11"—14'-5"	9
14'-6"—16'-0"	10
16'-1"—17'-7"	11
17'-8"—19'-3"	12
19'-4"—20'-10"	13
20'-11"—22'-2"	14



pad details—no scale

* required with doors 16'-0" and wider and with 180 square feet or more



track details—scale: 3" = 1'-0"

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial

16 ga. STEEL DOORS

We make doors of any size to fit any opening.

steel properties

Sections rolled of 16 gauge steel and prime coated for paint adherence. End stiles and center stiles are 16 gauge steel for doors to 16'-2" wide or to 180 square feet; .108" thick for doors 16'-2" wide and wider or 180 square feet or more.

stile construction

Stiles are formed to make channels 2" deep and cut accurately to fit the contour of the rolled sections. The stiles are projection welded to the sections.

door sections

The door sections are rolled to provide a rebated weather joint. Sections are from 16 1/16" to 19 1/4" high, according to the height of the door. Generally there are more sections in a steel door than in a wood door of the same height. This adds to the strength and smoothness of operation.

weight

16 gauge steel doors weigh 1 lb. per square foot more than wood doors with Hardboard panels.

weatherstrip

The bottom sections of all steel doors are equipped with a flexible neoprene strip to provide a tight seal between the door and the floor. Steel doors cannot be scribed to fit the floor. Specially designed weatherstrip retainer also provides additional reinforcement to bottom of door.

glass arrangement

All glass openings are 24" x 7". Glass is held in place with a specially designed one-piece metal frame.

headroom

Doors to 24'-2" wide, 14'-1" high or 300 square feet require 3" more than regular headroom for specified track. Consult our engineering department for headroom for larger sizes.

sideroom

2" track requires 5 3/4" sideroom. 3" track requires 6 1/2" sideroom. Add 4 1/2" for chain hoist installation.

operation

Chain hoist recommended with doors over 131 sq. ft. or over 13'0" high. Doors up to 168 sq. ft. use L operator, 1/3 hp; over 168 sq. ft. use L operator, 1/2 hp.

hardware

Heavy duty hinges of SALT SPRAY STEEL* bolted to stiles. Case hardened single row ball bearing rollers for 2" tracks. Rollers with two rows of balls for 3" tracks. Doors over 16'2" wide reinforced with struts of SALT SPRAY STEEL*.

locks

Five pin tumbler lock with lock bar. Lock rod guide adjustable.

tracks

Tracks rolled of SALT SPRAY STEEL*.
2" tracks used on doors up to 196 sq. ft.
3" tracks on all doors 197 sq. ft. and over.

counterbalance

Heavy duty torsion springs coiled from oil tempered wire. Doors lifted in two or more places with 3/16" or larger galvanized aircraft cables. Cast drums operating on ball bearing mounted shafts.

extension springs

Any steel door with the exception of lift clearance and full vertical can be counterbalanced with extension springs.

specification

Flush steel sectional upward-acting doors shall be OVERHEAD DOOR CORPORATION doors of size shown on plans. To be made of not less than 16 gauge formed panel sections to produce a door not less than 2" thick with a flush outside face. The steel shall be prime coated with a finish to which paint will adhere without further chemical treatment. Meeting rails shall have rebated type weather joints and act as two interlocking struts full length of all sections. Doors 16'-2" wide and wider shall be further reinforced with galvanized steel struts fastened to the inside face of the door. Bottom section of all doors shall have rubber weatherstrip. Top section of all doors shall have an adjustable seal strip.

All doors to be accurately counterbalanced with torsion springs, tapered drums and galvanized aircraft-type cables. Doors up to 196 square feet shall be equipped with MIRACLE WEDGE* closing action, 2" track and hardware of SALT SPRAY STEEL* 1/4" ball bearings in all rollers, cremone type lock bars, adjustable lock bar guides and five pin tumbler lock with two keys. Doors 197 square feet and over shall be equipped with MIRACLE WEDGE* closing action, 3" track and hardware of SALT SPRAY STEEL* 1/4" ball bearings in double ball races in all rollers, cremone type lock bars, adjustable lock bar guides and five pin tumbler lock with two keys and hand chain hoist.

Doors shall be installed by the local distributor of The "OVERHEAD DOOR".

Doors shall be guaranteed against faulty workmanship or material for a period of one year.

Door openings, jambs, pads and painting to be furnished by general contractor.

alternate specifications

Extension springs instead of torsion springs.

optional equipment

Refer to Table of Contents for:

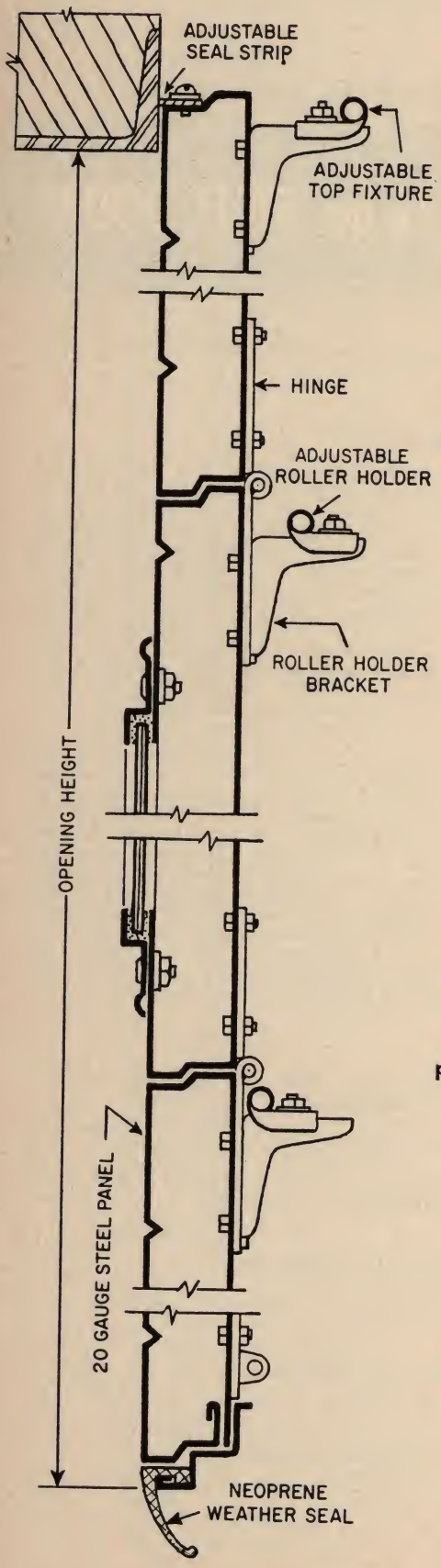
Electric operator and control switches.
Low headroom equipment.
Lift clearance.
Pass doors.

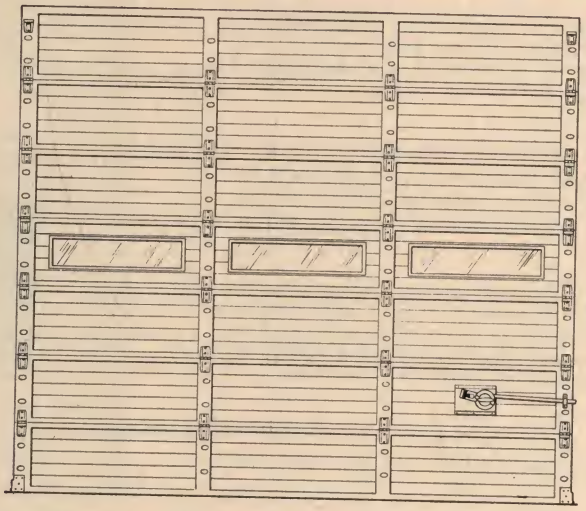
* Trade Mark

steel flush doors • 20 gauge galvanized steel formed sections

sizes up to 240 sq. ft. not to exceed 20'-2" wide and 14'-1" high. For steel doors over 240 sq. ft., specify 16 gauge door. See pages 22-23.

typical door section
scale: 3" = 1'-0"





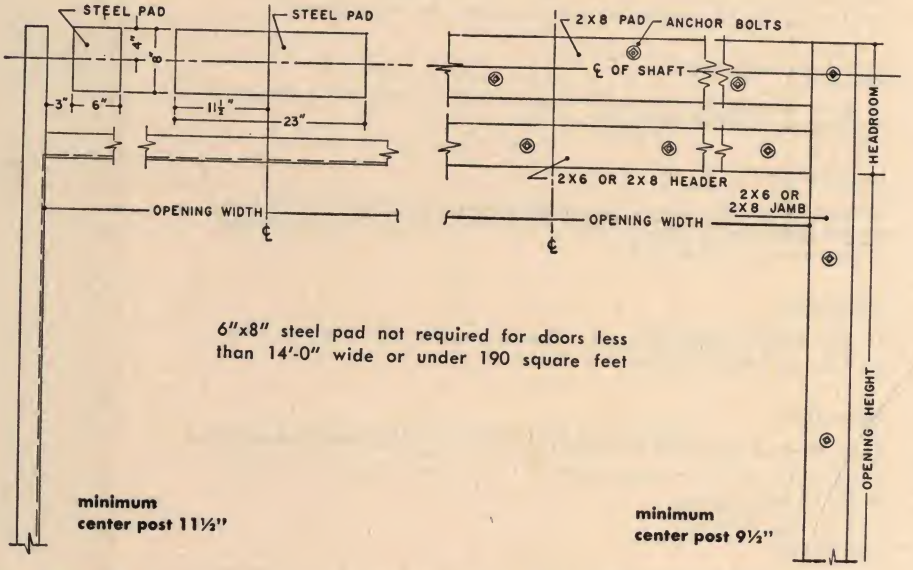
exterior elevation

stile schedule

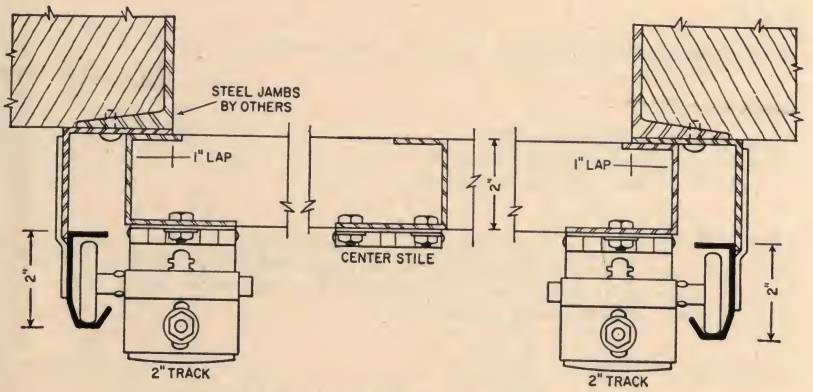
door width	no. center stiles
8'-0"— 9'-11"	1
10"-0"—12'-11"	2
13'-0"—16'-1"	3
16'-2"—19'-2"	4
19'-3"—20'-2"	5

section schedule

door height	no. sections
6'- 6"— 8'- 0"	5
8'- 1"— 9'- 7"	6
9'- 8"—11'- 2"	7
11'- 3"—12'-10"	8
12'-11"—14'- 2"	9



pad details no scale



track details scale: 3" = 1'-0"

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial

20 ga. STEEL DOORS

We make doors of any size to fit any opening.

steel properties

Sections are rolled of 20 gauge steel and prime coated for paint adherence. All stiles are formed of heavier gauge steel.

stile construction

Stiles are formed to make channels 2" deep and cut accurately to fit the contour of the rolled sections. The stiles are projection welded to the sections.

door sections

The door sections are rolled to provide a rebated weather joint. Sections are from 16 11/16" to 19 1/4" high, according to the height of the door. Generally there are more sections in a steel door than in a wood door of the same height. This adds to the strength and smoothness of operation.

weight

20 gauge steel doors weigh the same as wood doors with Hardboard panels.

weatherstrip

The bottom sections of all steel doors are equipped with a flexible neoprene strip to provide a tight seal between the door and the floor. Steel doors cannot be scribed to fit the floor. Specially designed weatherstrip retainer also provides additional reinforcement to bottom of door.

glass arrangement

All glass openings are 24" x 7". Glass is held in place with a specially designed one-piece metal frame.

headroom

Standard headroom is 15 1/2" for 2" tracks and 17 1/2" for 3" tracks.

sideroom

2" track requires 5 3/4" sideroom. 3" track requires 6 1/2" sideroom. Add 4 1/2" for chain hoist installation.

operation

Hand chain hoist is recommended for doors over 168 sq. ft. or doors over 13'-0" high.

hardware

Heavy duty hinges of SALT SPRAY STEEL* bolted to stiles. Case hardened single row ball bearing rollers. Doors 12'-6" wide and wider reinforced with struts of SALT SPRAY STEEL*.

locks

Five pin tumbler lock with lock bar. Lock rod guide adjustable.

tracks

Tracks rolled of SALT SPRAY STEEL*.
2" track is standard.
3" track optional at extra cost.

counterbalance

Heavy duty torsion springs coiled from oil tempered wire. Doors lifted in two or more places with 3/16" or larger galvanized aircraft cables. Cast drums operating on ball bearing mounted shafts.

extension springs

Any steel door with the exception of lift clearance and full vertical can be counterbalanced with extension springs.

standard specification

Flush steel sectional upward-acting doors shall be OVERHEAD DOOR CORPORATION doors of size shown on plans. To be made of not less than 20 gauge formed panel sections to produce a door not less than 2" thick with a flush outside face reinforced with V-grooves. The sections shall be prime coated.

Meeting rails shall have rebated type weather joints and act as two interlocking struts full length of all sections. Doors 12'-6" wide and wider shall be further reinforced with steel struts fastened to the inside face of the door. Bottom sections of all doors shall have rubber weatherstrip. Top section of all doors shall have an adjustable seal strip.

All doors to be accurately counterbalanced with torsion springs, tapered drums and galvanized aircraft type cables. Doors shall be equipped with MIRACLE WEDGE* opening and closing action, 2" track and hardware of SALT SPRAY STEEL*, ball bearings in all rollers, lock bar with adjustable guide and five pin tumbler lock.

Doors shall be installed by the local distributor of The "OVERHEAD DOOR."

Material and workmanship shall be guaranteed for a period of one year.

Door jambs and pads to be furnished and placed by general contractor.

alternate specifications

Extension springs instead of torsion springs. 3" track and hardware instead of 2" track and hardware. Hand chain hoist.

optional equipment

Refer to Table of Contents for:

Electric operator and control switches.
Low headroom equipment.
Lift clearance.
Pass doors.

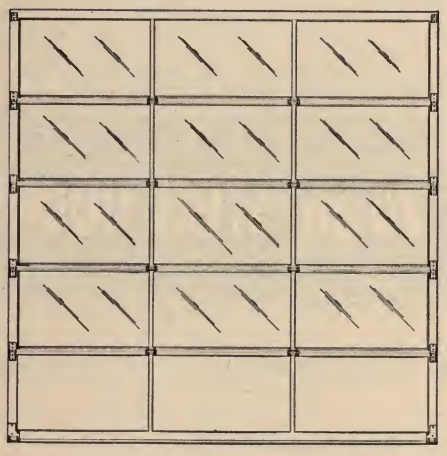
* TRADE MARK

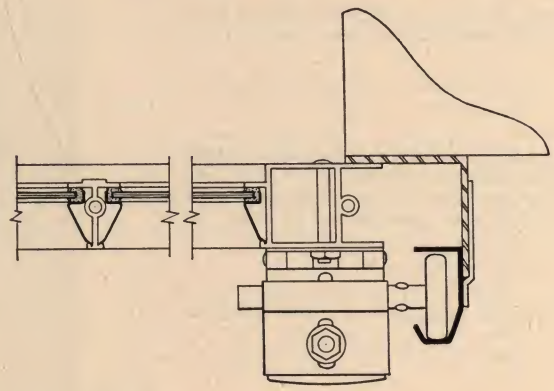
"panoramic" aluminum doors sizes up to 12'-2" wide and 12'-0" high

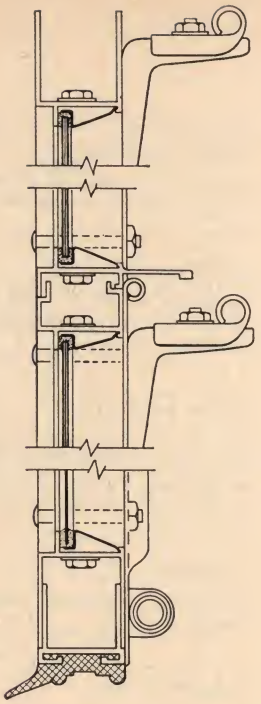
new modern design offers

- greater visibility inside and out
  Panoramic stiles and rails are narrower yet stronger than ever before
- greater flexibility through replaceable components
- blends with most modern architectural design
- costs little more than wood; needs no paint

for specifications see page 29







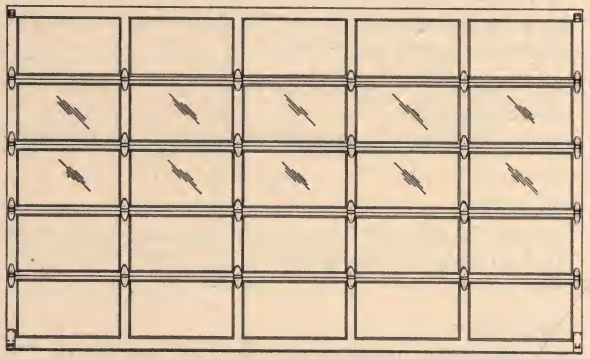
heavy-duty aluminum doors sizes up to 300 sq. ft. not to exceed 24'-2" wide and 16'-6" high

stile schedule

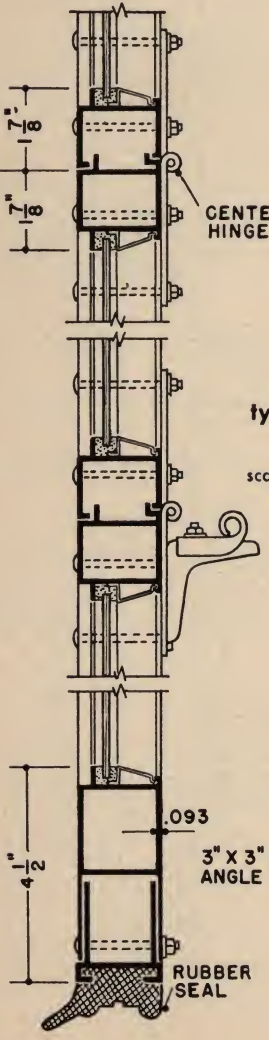
door width	no. panels	no. center stiles
up to 8'-11"	2	1
9'-0"—11'-11"	3	2
12'-0"—14'-11"	4	3
15'-0"—17'-11"	5	4
18'-0"—20'-11"	6	5
21'-0"—24'-2"	8	7

section schedule

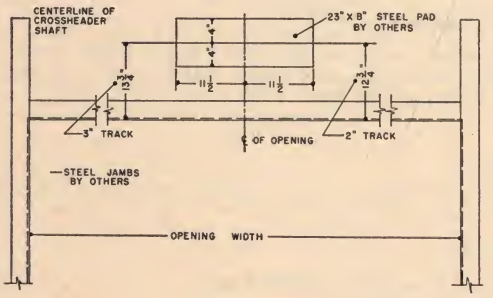
door height	no. sections
6'-0"—8'-6"	4
8'-7"—10'-6"	5
10'-7"—12'-6'	6
12'-7"—14'-6"	7
14'-7"—16'-6"	8

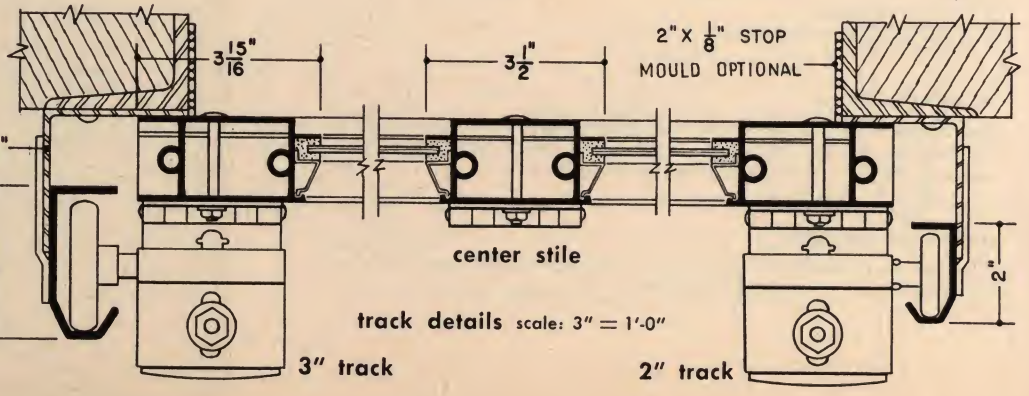


interior elevation no scale



typical door section
scale: 3" = 1'-0"





center stile

track details scale: 3" = 1'-0"

3" track

2" track

Rails and stiles of extruded #6063T6 aluminum alloy. Top and bottom rails are 2" wide and end stiles are 2⅜" wide. Center rails are 2⅜" wide per pair, designed with weather joint. Muntins 1⅛" wide. Stiles, rails, and muntins bolted together with plated 5/16" self-tapping cap screws. Bottom rail has telescoping bottom cap and rubber weatherstrip to fit floors that are not level. Top half of all meeting rails has reinforcing strut extruded as an integral part of the rail.

finish
All extrusions are anodized for permanent luster.

panels
Anodized aluminum panels 1/16" thick are set in rubber channel held with aluminum snap mould.

glass
Glass held in place with rubber channel held with aluminum snap mould.

operation
Manual or electric

hardware
Heavy SALT SPRAY STEEL* hinges bolted in place.

tracks
2" tracks mounted on brackets or angle.

counterbalance
Heavy duty torsion springs and drums. See wood door of comparable size.

---

stiles and rails
Extruded of #6063T6 aluminum alloy to produce door 1¾" thick. Top rail 4⅛" wide, bottom rail 4⅛" wide with telescoping bottom cap and weatherstrip to fit floors that are not level, making a minimum of 4½". Meeting rails designed for rebated weather joint, 3¾" wide per pair. Center stiles 3½" and end stiles 3 15/16" wide. Doors over 14'-2" are strutted with steel struts. Rails and stiles bolted together with four self-tapping 5/16" cap screws in each stile.

finish
All extrusions anodized for permanent luster.

panels
Anodized aluminum sheet 1/16" thick held in place with rubber channel held with aluminum snap mould.

glass
Any or all sections left open for glass. Glass installed with rubber channel held with aluminum snap mould.

headroom
See class of track required.

sideroom
5¾" for 2" tracks. 6½" for 3" tracks.

operation
Manual, chain hoist, or electric.

hardware
SALT SPRAY STEEL* heavy duty hinges and fixtures. Full floating hardened ball-bearing rollers.

lock
5-pin tumbler lock, two keys. Lock bar with adjustable lock bar guide.

tracks
SALT SPRAY STEEL* with MIRACLE WEDGE* weathertight closure. 2" or 3" tracks with angle mounted verticals. Use wood door schedule to determine track size.

counterbalance
Heavy duty torsion springs and drums. See wood door of comparable size.

extension springs
Doors can be furnished with extension springs and pulleys.

weatherstrip
Special neoprene weatherstrip for sealing bottom of door.

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial

ALUMINUM DOORS

We make doors of any size to fit any opening.

specifications

Aluminum sectional upward-acting doors shall be OVERHEAD DOOR CORPORATION doors of size shown on plans. To be made of 6063T6 aluminum alloy extruded shapes not less than .090" walls to produce a door 1¾" thick. Top and bottom rails to be 4⅛" wide, meeting rails 3¾" wide per pair, center stiles 3½" and end stiles 3 15/16" wide. Telescoping bottom cap and weather strip to be provided to adjust door to floor. All extrusion and 1/16" thick aluminum panels to be anodized.

All doors to be accurately counterbalanced with torsion springs, tapered drums and galvanized aircraft-type cables. Doors to 20'2" wide, 16'1" high or 240 square feet shall be equipped with MIRACLE WEDGE* closing action 2" track and hardware of SALT SPRAY STEEL* ¼" ball bearings in all rollers, lock bar, adjustable lock bar guide and five pin tumbler lock with two keys. Doors over 14'-2" wide to be additionally reinforced with steel struts and truss rods.

Doors to 24'2" wide, 16'6" high or 300 square feet shall be equipped with MIRACLE WEDGE* closing action 3" track and hardware of SALT SPRAY STEEL* ¼" ball bearings in double ball races in all races, cremone type lock bars, adjustable lock bar guides and five pin tumbler lock with two keys and hand chain hoist.

Doors shall be installed by the local distributor of The "OVERHEAD DOOR".

Doors shall be guaranteed against faulty workmanship or material for a period of one year. Door openings, jambs, pads, and glazing to be furnished by others.

alternate specifications

Extension springs instead of torsion springs and tapered drums.

optional equipment

Refer to Table of Contents for:

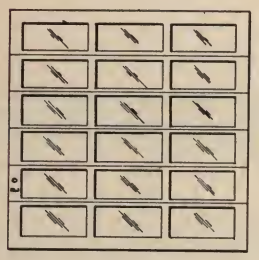
Electric operator and control switches.
Low headroom equipment.
Lift clearance.
Pass doors.

*TRADE MARK

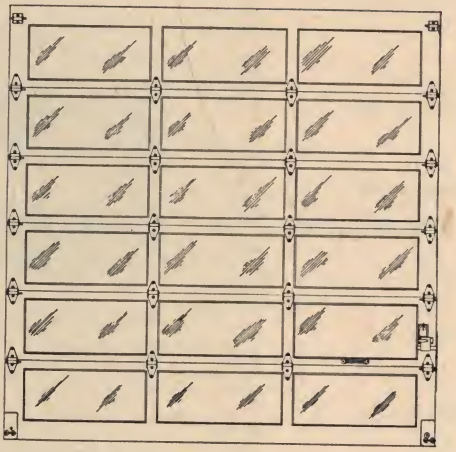
service station doors

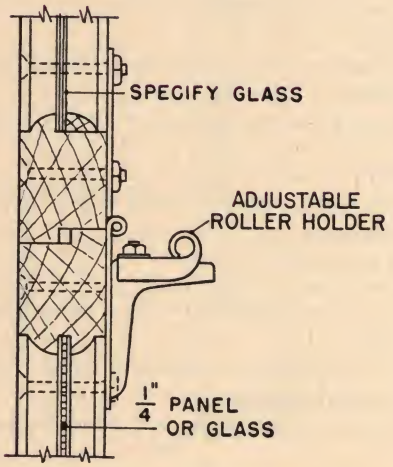
details: scale: 3" = 1'-0"

wood—regular construction

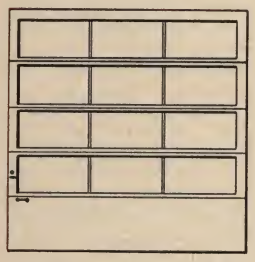


All sizes
available



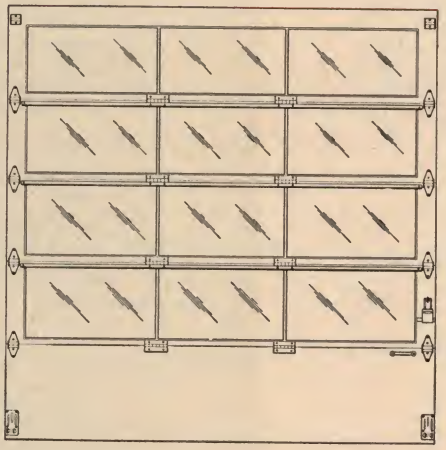


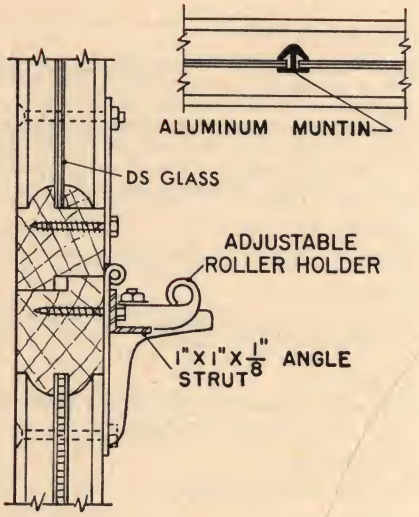
wood—thin line construction (aluminum muntins)



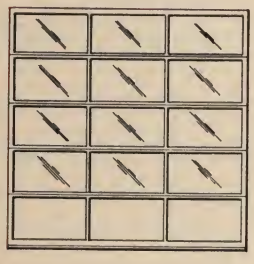
sizes

Doors up to
12'-2" wide and
12'-0" high

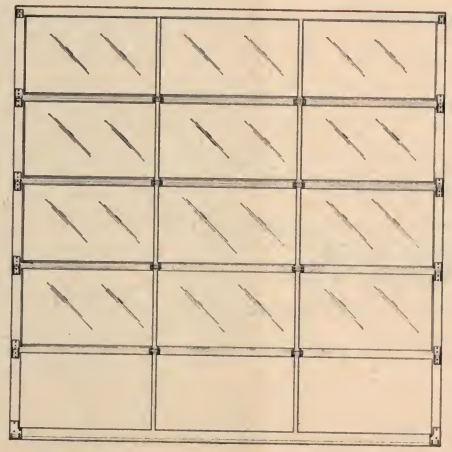


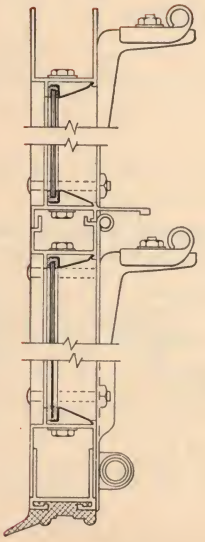


panoramic aluminum doors (extruded tubular sections)



Doors up to
12'-2" wide and
12'-0" high





THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial

SERVICE STATION DOORS

stiles and rails
1¾" thick Sitka spruce or Douglas fir, glued mortise and tenon joint, steel doweled; rebated weather joint, 3½" center stiles, 5½" end stiles, 2⁹⁄₁₆" center rails, 5½" top and bottom rails.

panels
¼" Hardboard is standard (see Guarantee). ⅜" exterior grade fir plywood is available.

finish
Sanded both surfaces, ready for paint.

glass arrangement
All sections open for glass. Any section may have panels.

weatherstrip
Rubber weatherstrip can be furnished for bottom rail.

hardware
Heavy duty SALT SPRAY STEEL* hinges, thru bolted. Top rail lock or five pin tumbler side lock.

tracks
2" tracks rolled of SALT SPRAY STEEL*, bracket mounted.

*TRADE MARK

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stiles and rails
1¾" thick Sitka spruce and Douglas fir, glued mortise and tenon joint, 5½" end stiles, 5½" top and bottom rails, 3⁹⁄₁₆" over all center rails with rebated weather joint. No center stiles.

bottom section
Solid slab construction 1¾" thick with or without weatherstrip.

finish
Both surfaces sanded and ready for paint.

glass arrangement
All sections except bottom open for glass. Three lights of glass per section with extruded aluminum muntins between them.

hardware
Heavy duty SALT SPRAY STEEL* end hinges through bolted. All center rails reinforced full length with SALT SPRAY STEEL* angles. Center hinges 6" long. Top rail lock or five pin tumbler side lock.

tracks
2" tracks rolled of SALT SPRAY STEEL*, bracket mounted.

*TRADE MARK

Rails and stiles of extruded #6063T6 aluminum alloy. Top and bottom rails and end stiles are 2⅜" wide. Center rails 2³⁄₁₆" wide per pair, designed with weather joint. Muntins 1⁹⁄₁₆" wide. Stiles, rails, and muntins bolted together with plated ⁵⁄₁₆" self-tapping cap screws. Bottom rail has telescoping bottom cap and rubber weatherstrip to fit floors that are not level. Top half of all meeting rails has reinforcing strut extruded as an integral part of the rail.

finish
All extrusions are anodized for permanent luster.

panels
Anodized aluminum panels 1⁄16" thick are set in rubber channel held with aluminum snap mould.

glass
Glass held in place with rubber channel held with aluminum snap mould.

hardware
Heavy SALT SPRAY STEEL* hinges bolted in place.

tracks
2" tracks mounted on brackets or angle.

*TRADE MARK

hardware
All hardware made of SALT SPRAY STEEL*, a zinc coated material.

tracks
2" tracks rolled of SALT SPRAY STEEL*, either angle mounted or furnished with jamb brackets. Lift clearance or standard.

counterbalance
Doors counterbalanced with one or more torsion springs. 1" shafts, cast tapered drums, galvanized aircraft cables.

extension springs
Extension springs can be used on any door with standard headroom tracks. Extension springs cannot be used with lift clearance tracks.

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optional equipment
Refer to Table of Contents for:
Lift clearance equipment.
Electric operation.

specifications—panoramic aluminum doors
Aluminum sectional upward-acting doors shall be OVERHEAD DOOR CORPORATION doors of size shown on plans. To be made of 6063T6 aluminum alloy extruded shapes not less than .075" walls to produce a door 1¾" thick. Top and bottom rails and end stiles to be 2⅜" wide, meeting rails 2³⁄₁₆" wide per pair, center stiles 1⁹⁄₁₆" wide. Telescoping bottom cap and weatherstrip to be provided to adjust door to floor line. All extrusions and 1⁄16" thick aluminum panels to be anodized.

All doors to be accurately counterbalanced with torsion springs, tapered drums and galvanized aircraft-type cables. Doors shall be equipped with MIRACLE WEDGE* closing action, 2" track and hardware of SALT SPRAY STEEL* ¼" ball bearings in all rollers.

Doors shall be installed by the local distributor of The "OVERHEAD DOOR".

Doors shall be guaranteed against faulty workmanship or material for a period of one year.

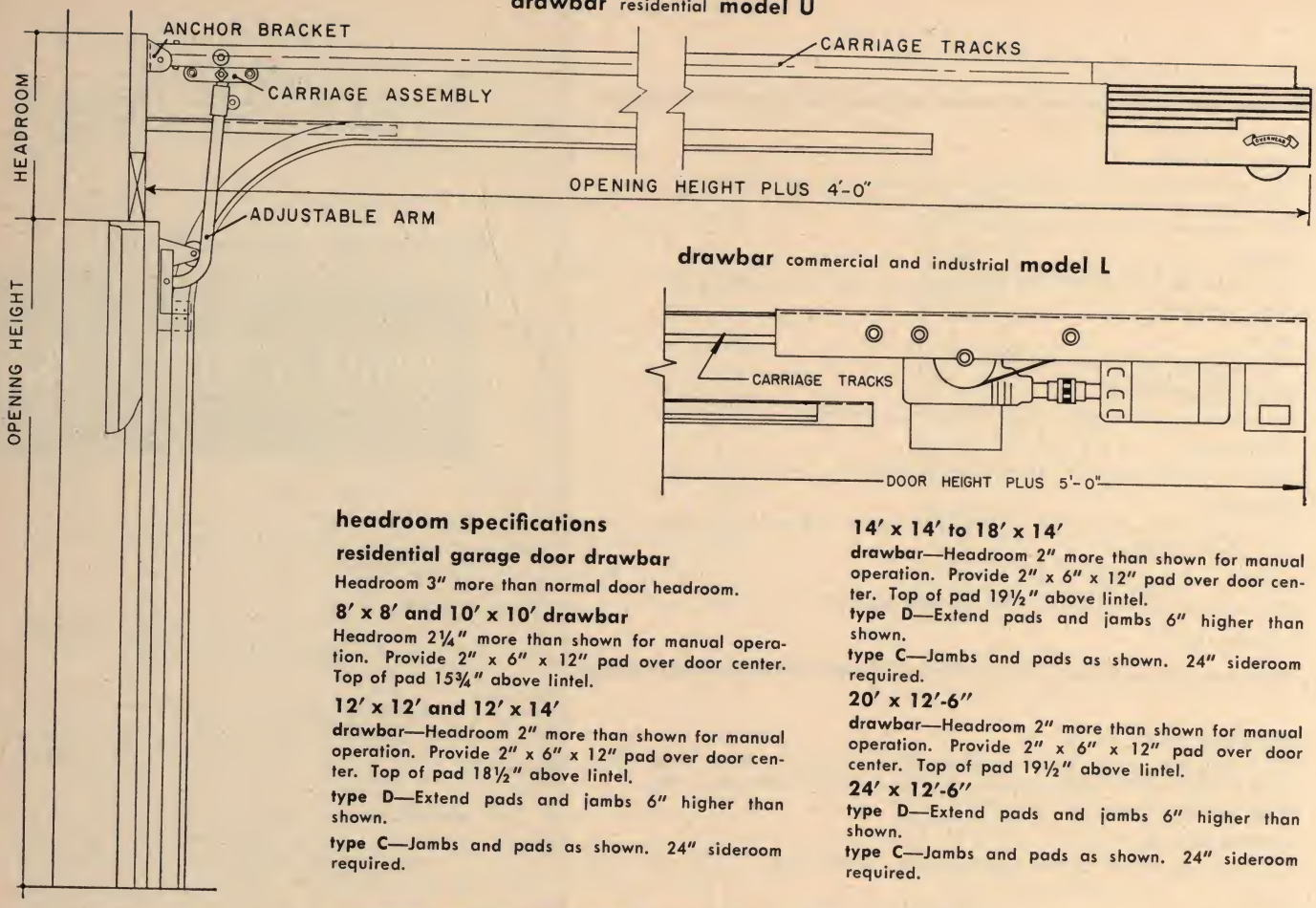
Door openings, jambs, pads, painting and glazing to be furnished by others.

alternate specifications
Extension springs instead of torsion springs and tapered drums.

optional equipment
Refer to Table of Contents for:
Electric operator and control switches.
Low headroom equipment.
Lift clearance.

*TRADE MARK

drawbar residential model U



drawbar commercial and industrial model L

headroom specifications

residential garage door drawbar

Headroom 3" more than normal door headroom.

8' x 8' and 10' x 10' drawbar

Headroom 2¼" more than shown for manual operation. Provide 2" x 6" x 12" pad over door center. Top of pad 15¾" above lintel.

12' x 12' and 12' x 14'

drawbar—Headroom 2" more than shown for manual operation. Provide 2" x 6" x 12" pad over door center. Top of pad 18½" above lintel.

type D—Extend pads and jambs 6" higher than shown.

type C—Jambs and pads as shown. 24" sideroom required.

14' x 14' to 18' x 14'

drawbar—Headroom 2" more than shown for manual operation. Provide 2" x 6" x 12" pad over door center. Top of pad 19½" above lintel.

type D—Extend pads and jambs 6" higher than shown.

type C—Jambs and pads as shown. 24" sideroom required.

20' x 12'-6"

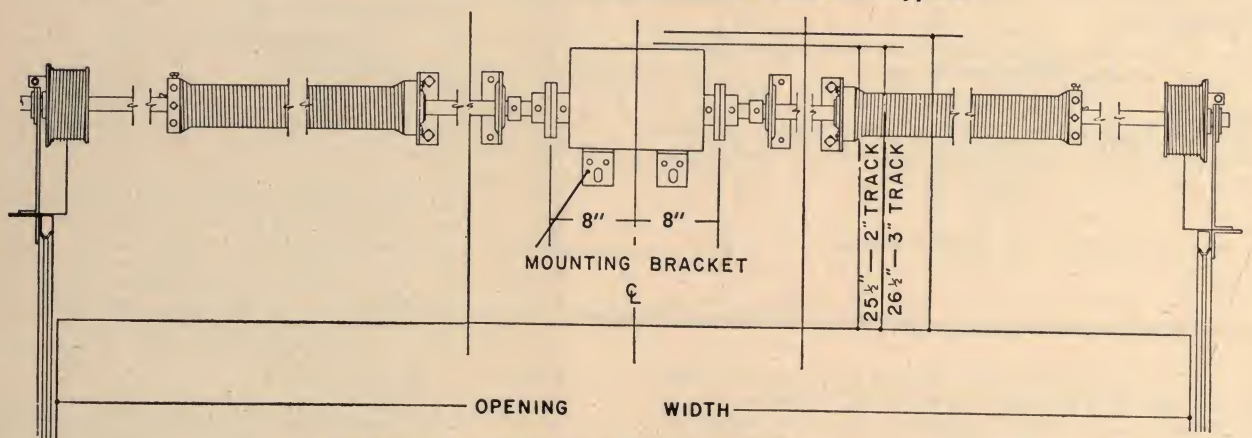
drawbar—Headroom 2" more than shown for manual operation. Provide 2" x 6" x 12" pad over door center. Top of pad 19½" above lintel.

24' x 12'-6"

type D—Extend pads and jambs 6" higher than shown.

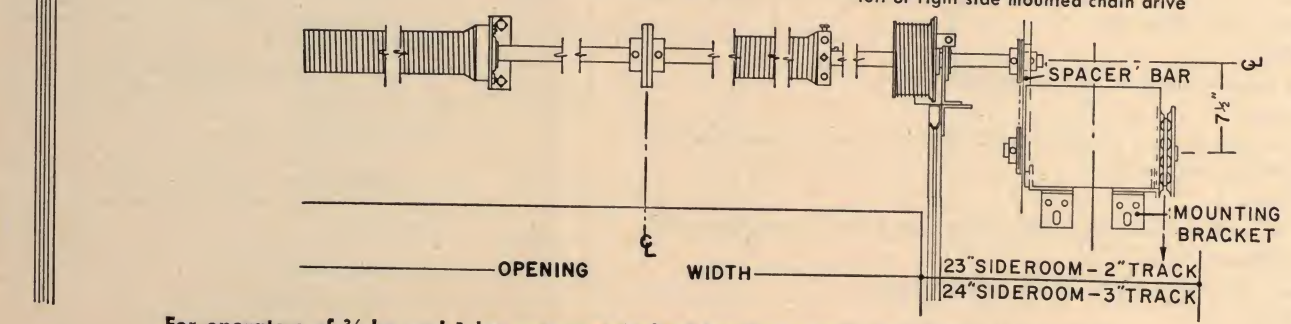
type C—Jambs and pads as shown. 24" sideroom required.

commercial and industrial center mounted model L—type D



commercial and industrial side mounted model L—type C

left or right side mounted chain drive



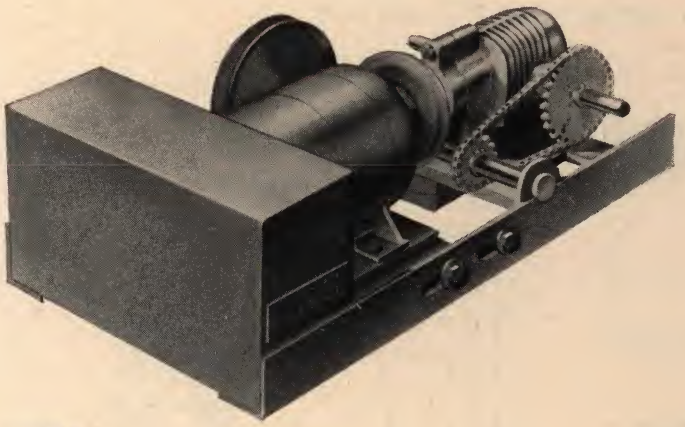
For operators of ¾ hp and 1 hp, one more inch of headroom than shown here is required.

Note: Operator can be coupled directly to crosshead shaft if type D headroom is available.

THE "OVERHEAD DOOR" TRADE MARK

commercial • industrial • residential

ELECTRIC OPERATORS



model L

fully automatic electrical operation is available for wood, aluminum and steel doors

model L
commercial and industrial operators

Drawbar or type C (side mounted) or type D (center mounted). All motors are quick and/or instant reversible with automatic type overheat and over-current protection enclosed in motor end bell. The motors available are:

single phase
Split-phase start-induction run (quick-reversing)—115 and 230 volts, ⅓ and ½ hp.
capacitor start-induction run (instant reversing)—115 and 230 volts, ⅓ and ½ hp.

three phase
208-220/440 and 550 volts—⅓, ½, ¾ and 1 hp.

Operator employs a factory-adjusted, dry clutch which offers both centrifugal and slip-clutch action to protect both motor and door. The speed reducer uses the latest gear design for maximum efficiency and power capacity with compact housing. The gears offer an anti-coasting action and this feature, combined with magnetic brake, assures accurate stopping.

The gear unit and bearing are lubricated for life. Simple adjustment of motor mounting base allows selection of NEMA 48 and 56 frame size motors. A dentil clutch is incorporated for disengaging motor and engaging hand-hoist drive. It is on all operators so that doors may be operated in event of power failure.

The electrical circuit features a driven limit switch, 24 volt Class II control circuit to avoid possible shock or fire hazard, 3 button control station and magnetic reversing contactor. Standard control action is momentary contact open and close with stop but other control actions, too numerous to list, are available. Also available is a sensitive edge safety device. Contact our Engineering Department for additional information on other types of control actions.

model U
residential ultronic operator

Drawbar operator for residential use only. 115 volt, ¼ hp instantly reversible motor. Motor has overheat and over-current protector located in motor end bell. Built-in, adjustable, finger-soft, sensitive safety stop instantly reverses door travel on contact with any obstruction. Automatic light when door is open. Quick-release door arm permits manual operation. 24 volt Class II single push button. Door travel can be reversed anywhere in its travel by the single momentary contact push button. Speed 10" per second. Other type controls also available. Ultronic radio control adaptable. Activated by signal from transmitter installed in automobile.

operator limits for doors with torsion spring counterbalance

operator model	motor size	door size: 8/4 wood 20 ga. steel aluminum	door size: 16 ga. steel	door height
U drawbar	¼ hp	up to 126 sq. ft		up to 10'-1"
L drawbar	⅓ hp	up to 210 sq. ft.	up to 165 sq. ft.	up to 15'-1"
L type C or D	⅓ hp	up to 210 sq. ft.	up to 165 sq. ft.	up to 25'-1"
L drawbar	½ hp	up to 240 sq. ft.	up to 190 sq. ft.	up to 15'-1"
L type C or D	½ hp	up to 350 sq. ft.	up to 275 sq. ft.	up to 25'-1"
L type C or D	¾ hp	350 to 500 sq. ft.	275 to 375 sq. ft.	up to 25'-1"
L type C or D	1 hp	over 500 sq. ft.	over 375 sq. ft.	up to 25'-1"

For operator information on door sizes or counterbalances not shown on this chart, consult our engineering department.

headroom requirements for electrical operation of low headroom equipment

type of equipment	counterbalance	headroom
L.H.—2" track	extension spring	11"
L.H.—2" track	extension spring and shaft	12½"
L.H.—2" track	torsion spring (rear)	11"
L.H.—3" track	extension spring	14½"
L.H.—3" track	extension spring and shaft	15"
L.H.—3" track	torsion spring (rear)	14½"

full vertical and semi-vertical doors

removable center post doors

lift clearance door

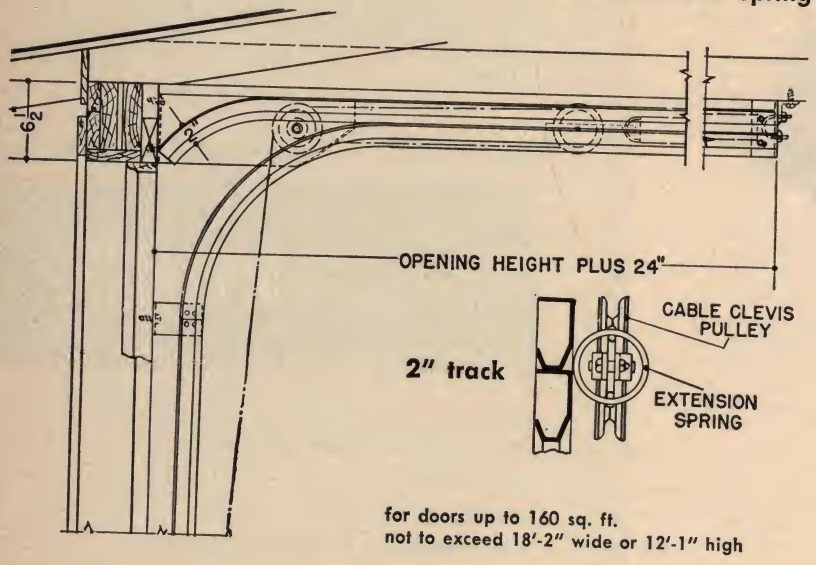
May be equipped for electrical operation by using either type C or type D commercial-industrial operators

For special types of operators, or for unusual operating conditions or limitations, please consult our Engineering Department for assistance.

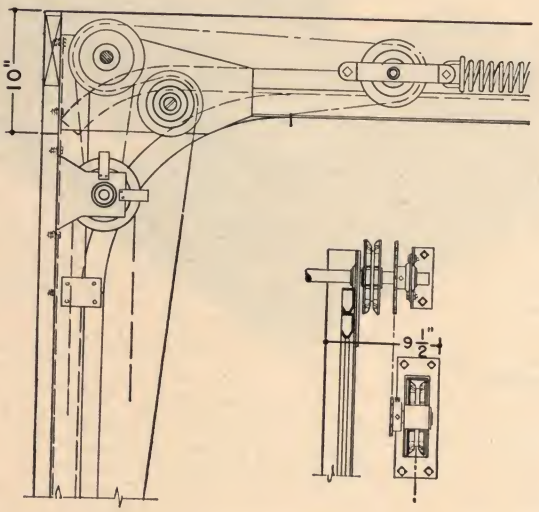
details • scale: 3/4" = 1'-0"

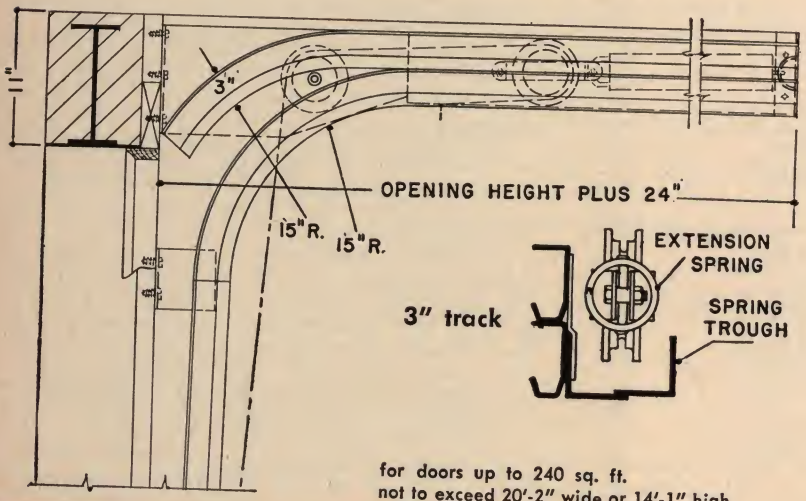
low headroom equipment

with extension spring . . . . . and hoist

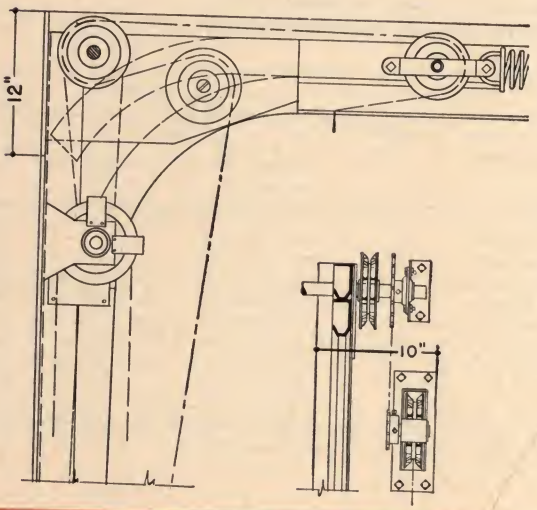


for doors up to 160 sq. ft.
not to exceed 18'-2" wide or 12'-1" high

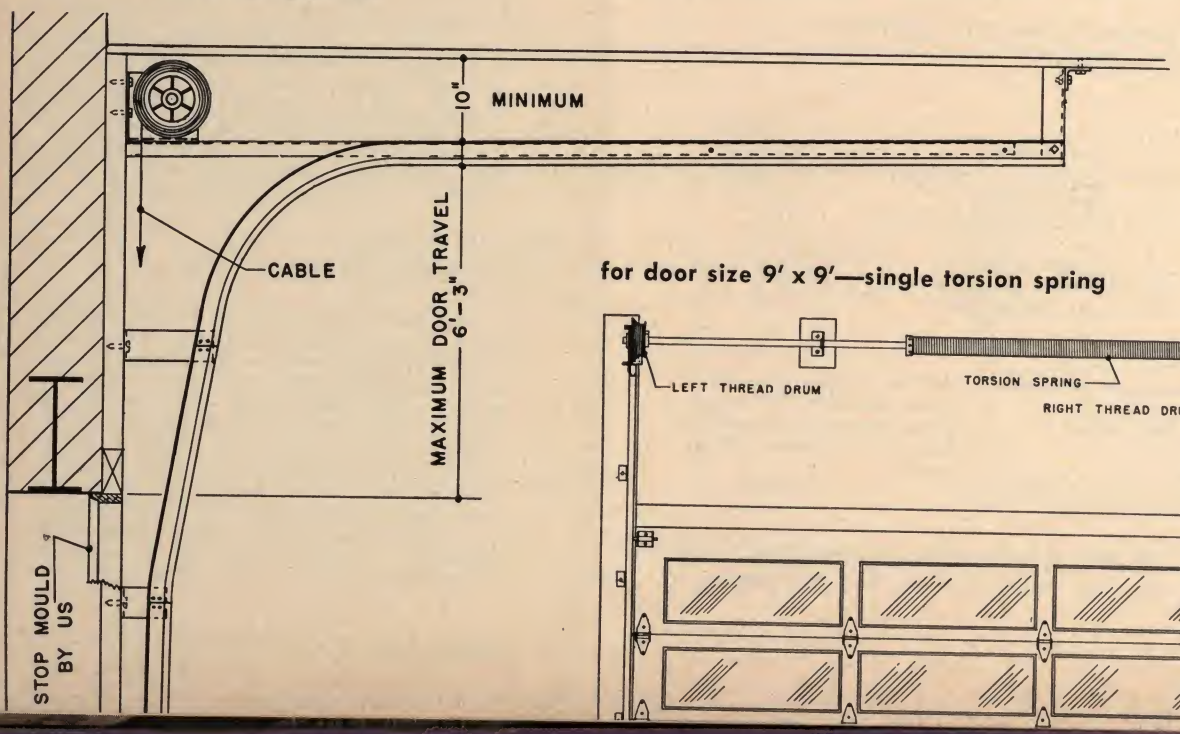




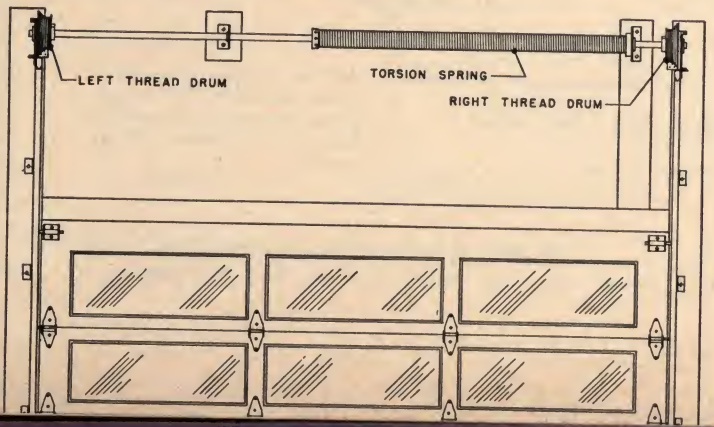
for doors up to 240 sq. ft.
not to exceed 20'-2" wide or 14'-1" high



lift clearance equipment



for door size 9' x 9'—single torsion spring

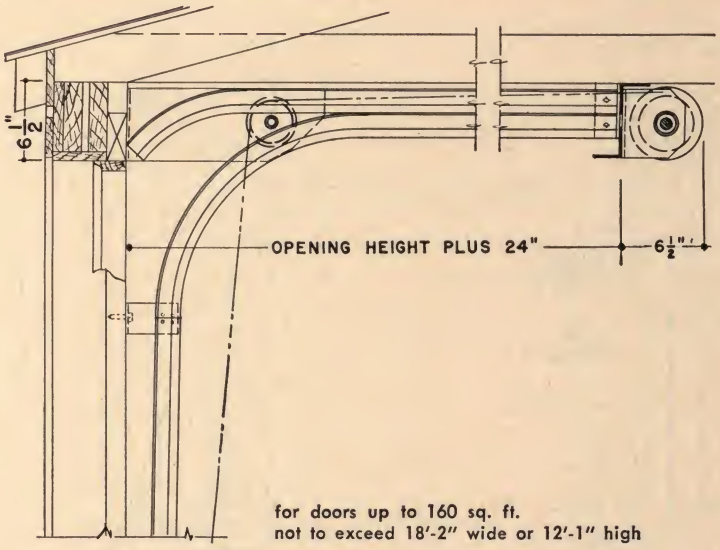


THE "OVERHEAD DOOR" TRADE MARK

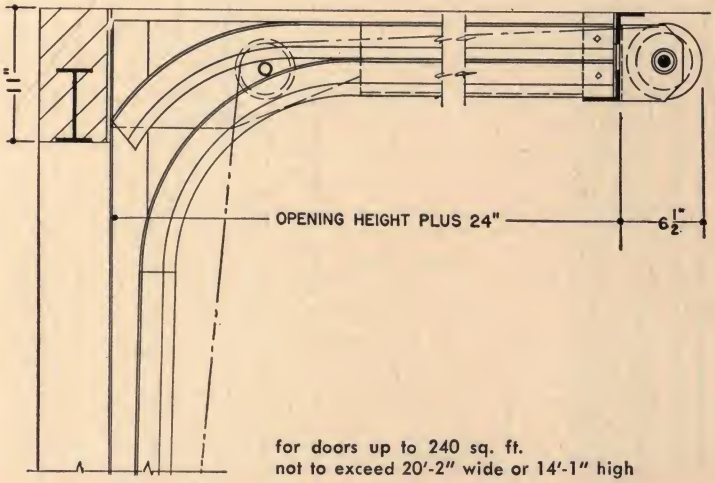
commercial and industrial

LOW HEADROOM LIFT CLEARANCE

with torsion spring



for doors up to 160 sq. ft.
not to exceed 18′-2″ wide or 12′-1″ high



for doors up to 240 sq. ft.
not to exceed 20′-2″ wide or 14′-1″ high

low headroom equipment

For use where standard headroom is not available.

Extension springs parallel to tracks or torsion springs at rear.

2″ tracks. 6½″ minimum headroom, hand operation. 10″ headroom with type C chain hoist.

3″ tracks. 11″ minimum headroom, hand operation. Steel jamb installations require 1″ more headroom than shown. 12″ headroom with type C chain hoist.

Chain hoist operation requires extension springs.

Lifting cables or chains outside the vertical tracks.

See operators for headroom for electrical operation.

Five pin tumbler side lock with 2″ tracks for torsion springs at the rear.

Cremone type locking bars for all other tracks shown.

lift clearance

For doors with extra vertical travel up to 6′-3″.

Any size up to 320 sq. ft. Not over 30′-2″ wide or 25′-1″ high.

Counterbalanced with one or more torsion springs made of oil tempered wire.

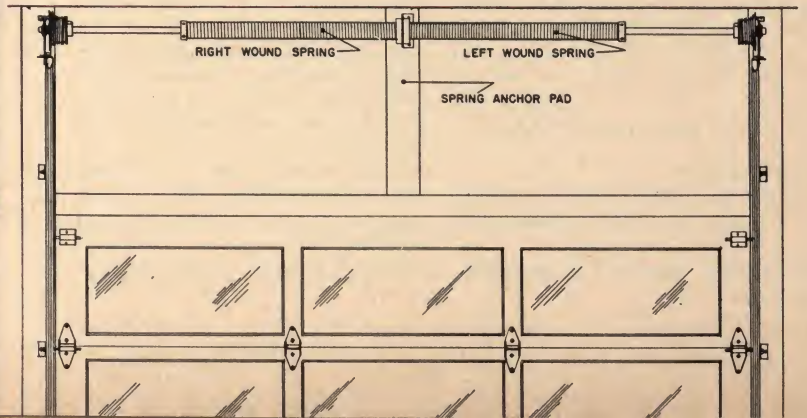
Cast tapered drums on one or more shafts mounted on ball-bearing brackets.

1″ shafts, doors up to 1000 pounds. 1¼″ shafts, heavier doors.

3/16″ galvanized aircraft cables.

Cannot use extension springs on lift clearance tracks.

for door sizes 9′ x 10′ • 10′ x 9′ • 10′ x 10′—double torsion spring

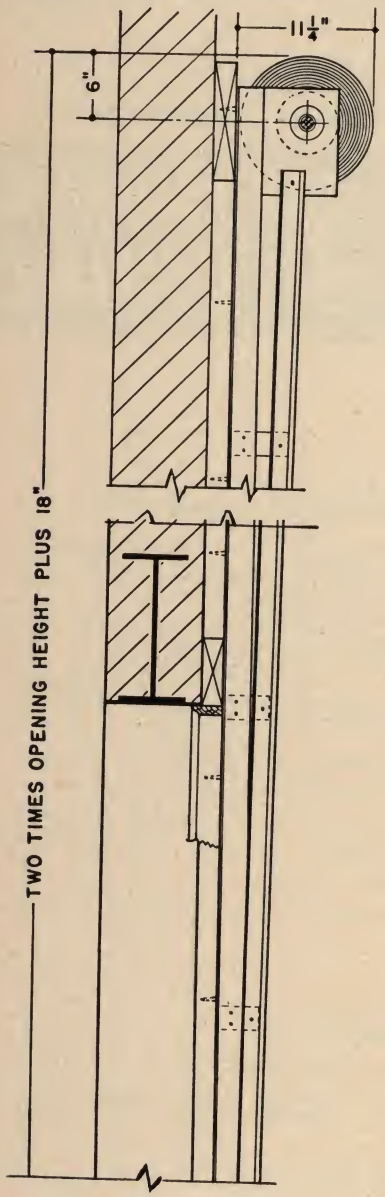


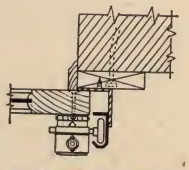
full vertical doors

scale: ¾" = 1'-0"

torsion spring

doors not to exceed 224 sq. ft.
(weight 800 lbs.) or 16'-0" high





jamb detail

Counterbalanced with one or more helical wound torsion springs made of oil tempered wire.

All-taper cast iron drums installed outside the vertical tracks.

Door lifted from bottom corners with 3/16" galvanized aircraft cables.

Doors 14'-0" wide or wider reinforced with steel struts.

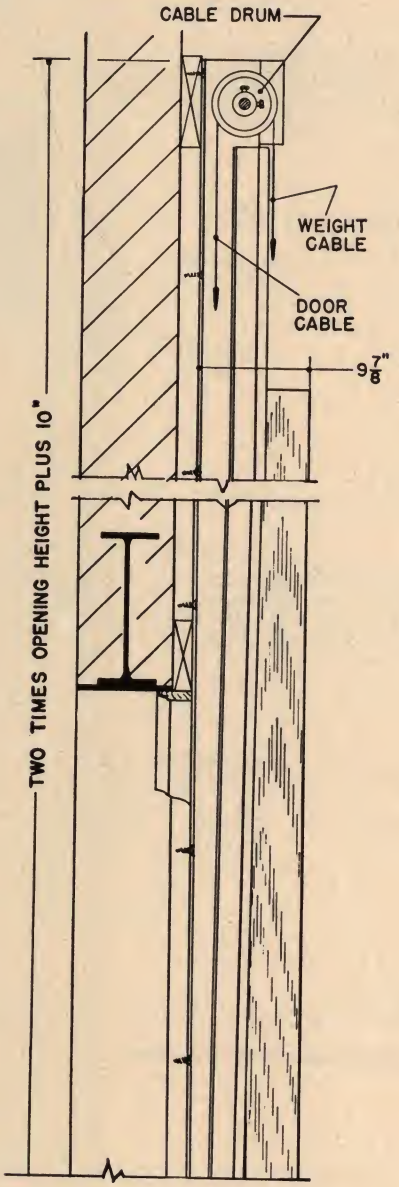
2" tracks are regular equipment.

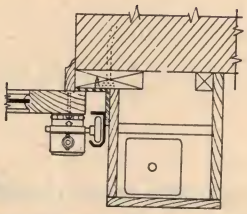
Five pin tumbler lock.

Steel shafting mounted in ball bearing plates. Standard sideroom, 7¼"; with end shaft support, 8¼".

drums and weights

doors not to exceed 625 sq. ft.





jamb detail

Counterbalanced with cast iron weights at one side or at each side. One or more weight columns per side of door.

Straight cast drums on steel shafts, ball-bearing mounted.

Door lifted in two or more places with galvanized aircraft cables.

2" or 3" tracks according to door size.

Doors 14'-0" wide or wider reinforced with steel struts.

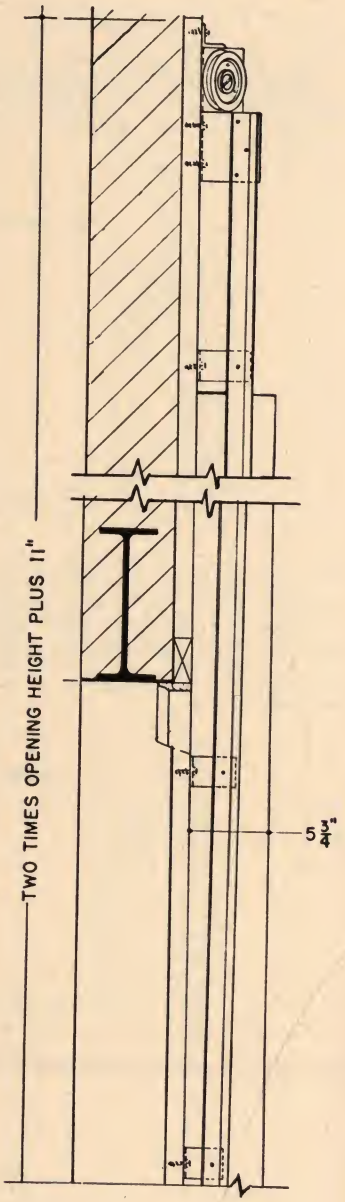
Five pin tumbler side lock for 2" tracks; cremone for 3" tracks.

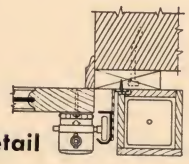
Doors 13'-0" high or higher equipped with chain hoist.

Sideroom, 13" each side.

with weights and pulleys

doors not to exceed 144 sq. ft.





jamb detail

Counterbalanced with cast iron weights at each side of door.

Door lifted from bottom corners with chains operating over case hardened ball-bearing pulleys.

2" tracks are regular equipment. 3" tracks can be used.

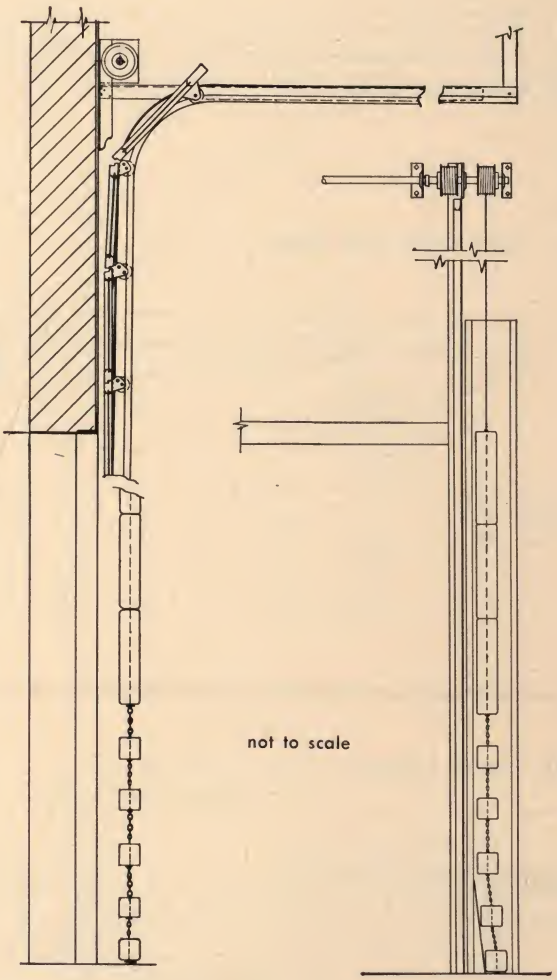
Five pin tumbler lock for 2" tracks, with cremone type lock bars.

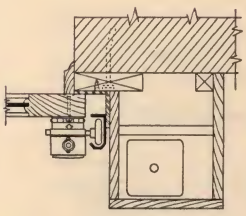
Doors 14'-0" wide or wider reinforced with steel struts.

Sideroom, 8"; with 1" door lap, 9".

semi-vertical doors

doors not to exceed 550 sq. ft.





jamb detail

Door with extra vertical rise, more than 6'-6".

Counterbalanced with two or more columns of cast iron "drop-off" weights at one or both sides of door.

Straight cast drums on steel shafts, ball-bearing mounted.

Door lifted from two or more places with galvanized aircraft cables.

Doors 12'-3" wide or wider reinforced with steel struts.

Five pin tumbler side lock for 2" tracks; cremone type for 3" tracks.

Doors 13'-0" high or higher equipped with chain hoist. Sideroom, 13" each side.

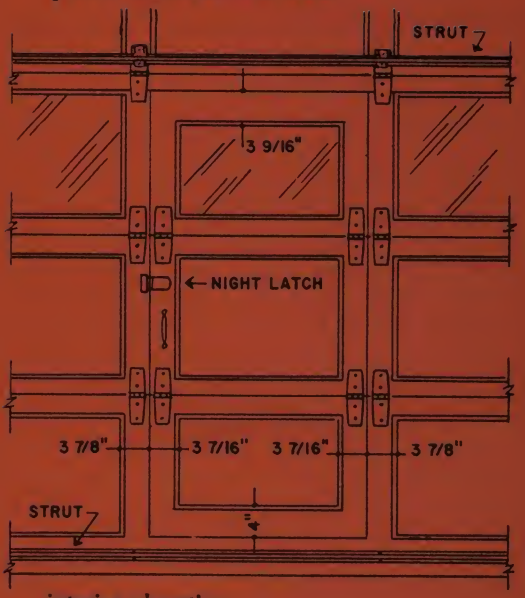
Consult our Engineering Department on all these doors.

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial

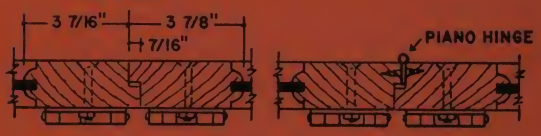
FULL & SEMI-VERTICAL and PASS DOORS

pass doors—wood



interior elevation

—no scale



section through pass door

—no scale

stiles and rails 1¾" thick Sitka spruce or Douglas fir, mortised and tenoned construction, glued and steel doweled.

panels ¼" Hardboard is standard. ⅜" exterior grade fir plywood is available.

finish Sanded and ready for paint.

glass arrangement To match glass in main door.

hardware Sections joined together with heavy duty SALT SPRAY STEEL* hinges, through bolted. Continuous hinges for swinging pass door. Five pin tumbler night latch. Torsion spring type door closer.

limitations No pass door over 32" wide. Can be from three to five sections high. Must have at least one normal door section above pass door. All pass doors swing "out" except full vertical doors which swing "in."

note Doors 12'-3" wide and over with pass door require girder and auxiliary track. Doors 15'-0" wide and over with pass door require girder and auxiliary track with center-lift.

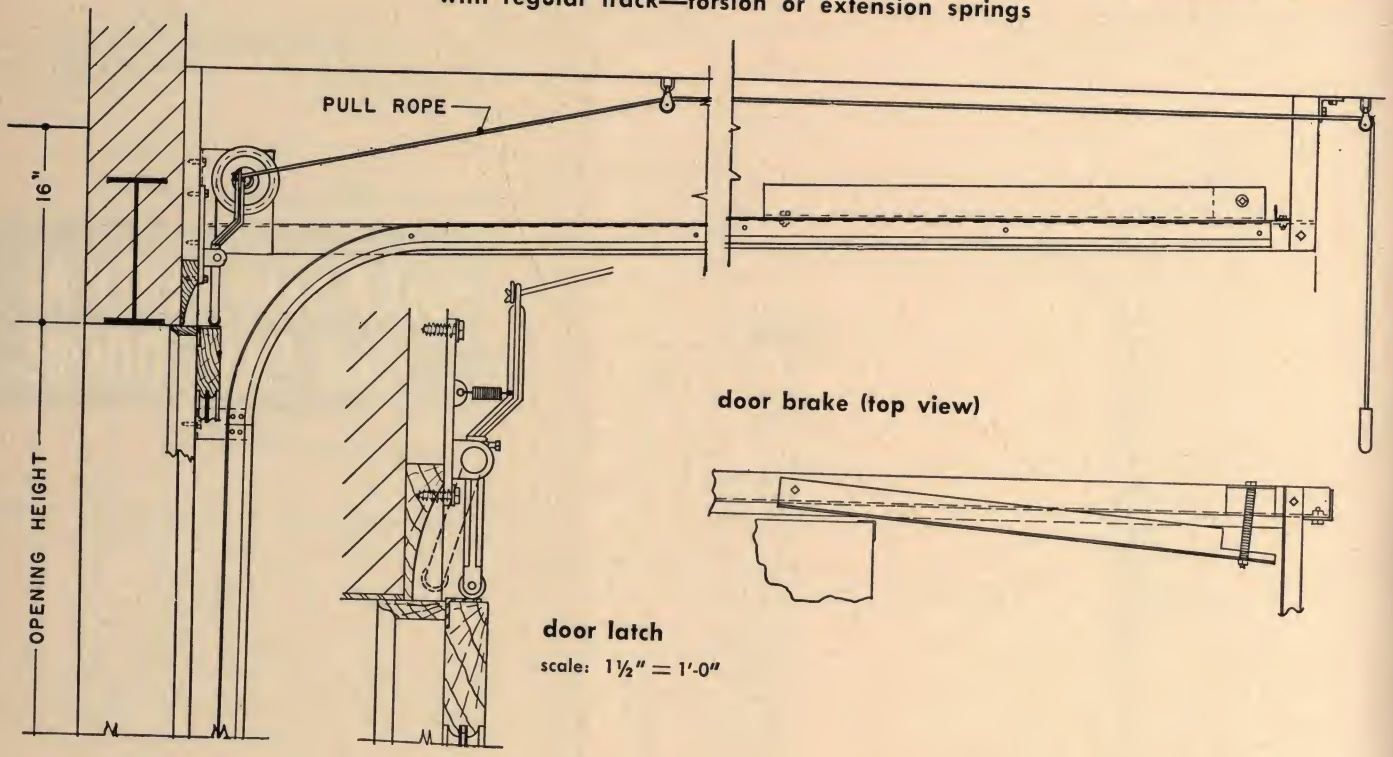
For pass doors for aluminum or steel doors, consult our engineering department.

* TRADE MARK

automatic opening

track details—scale: 3/4" = 1'-0"

with regular track—torsion or extension springs



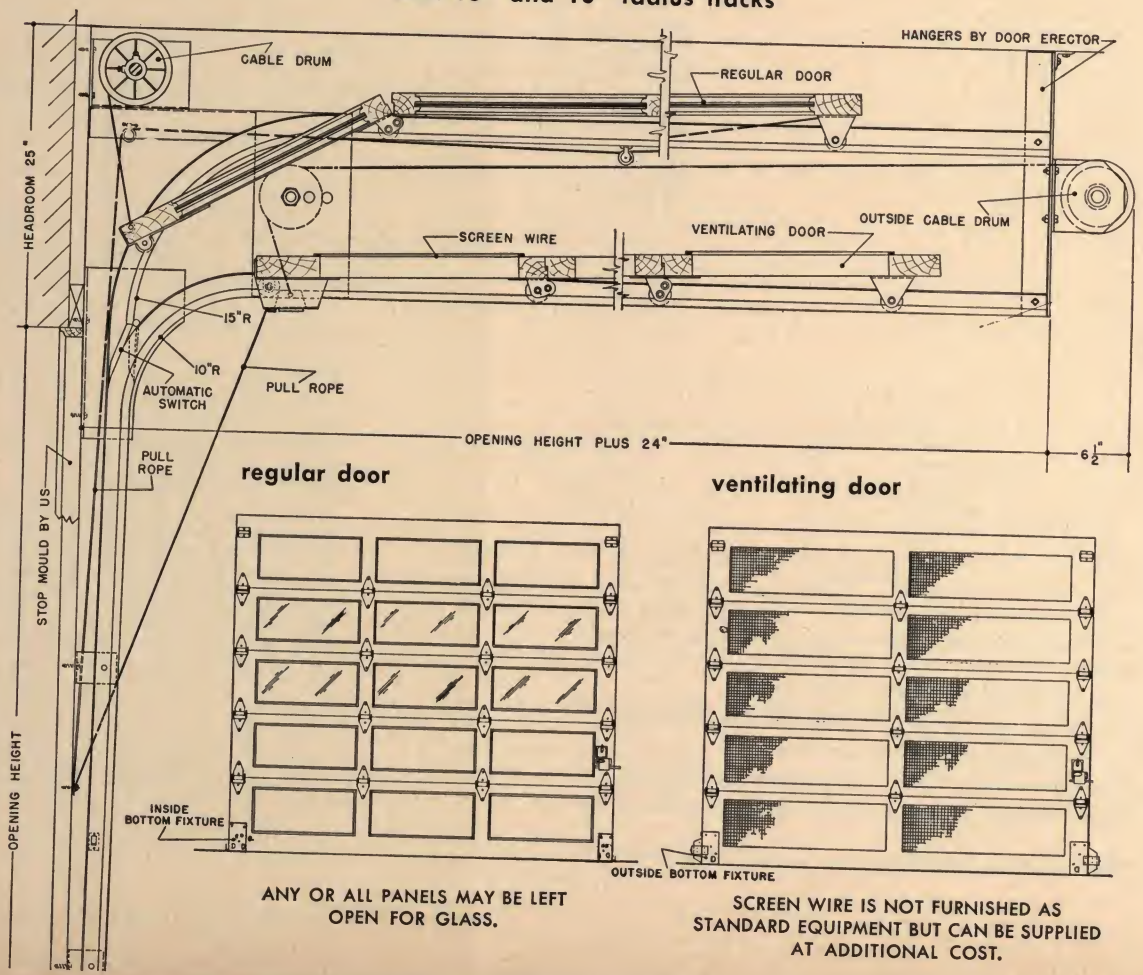
door brake (top view)

door latch

scale: 1½" = 1'-0"

ventilating door

with 15" and 10" radius tracks



regular door

ventilating door

ANY OR ALL PANELS MAY BE LEFT OPEN FOR GLASS.

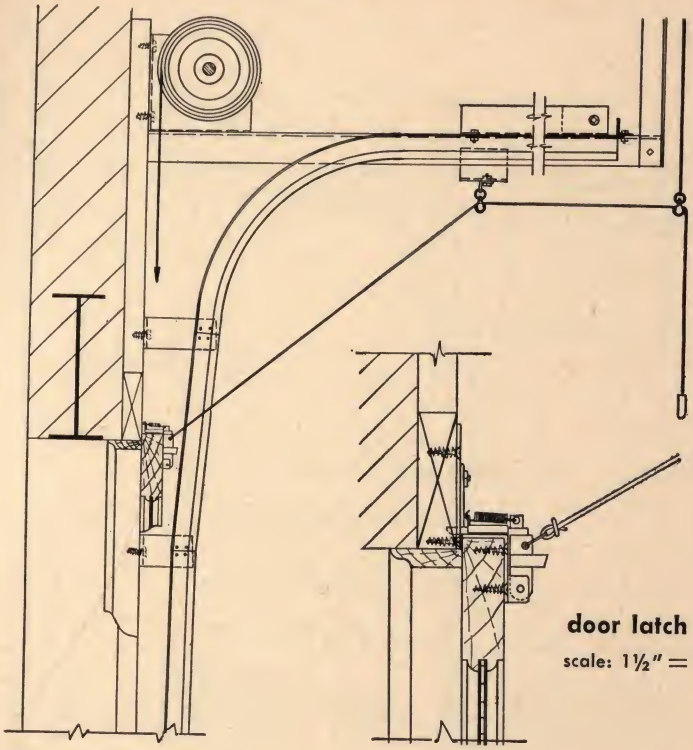
SCREEN WIRE IS NOT FURNISHED AS STANDARD EQUIPMENT BUT CAN BE SUPPLIED AT ADDITIONAL COST.

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial

AUTOMATIC OPENING VENTILATING DOOR

with lift clearance track—torsion springs



door latch

scale: 1½" = 1'-0"

automatic opening

Doors opened mechanically with pull rope release.

For doors up to 160 square feet, not to exceed 16'-2" wide or 12'-1" high.

Used in fire stations and other emergency buildings.

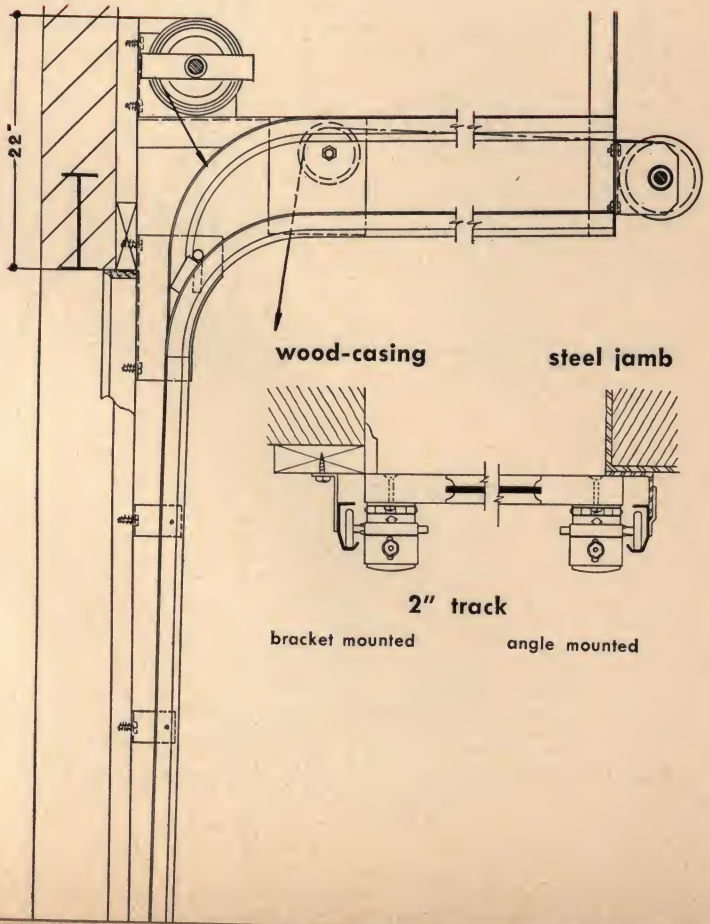
Device consists of special door lifting springs, trip arm, rope, pulleys, pull handle and brake for stopping door and holding it in head.

Horizontals reinforced with 2½" continuous angle.

Headroom and sideroom regular for kind of tracks used. Not adaptable to low headroom tracks.

Torsion or extension springs available for regular tracks. Torsion springs only for doors with extra vertical rise.

with two 10" radius tracks



2" track

bracket mounted angle mounted

ventilating doors

Designed for laundries, bakeries, bottling plants, dairies, etc.

The unit consists of a regular door and a screen door, both operating in the same vertical track.

An automatic switch at the junction of the two horizontal tracks guides each door without interference with the other.

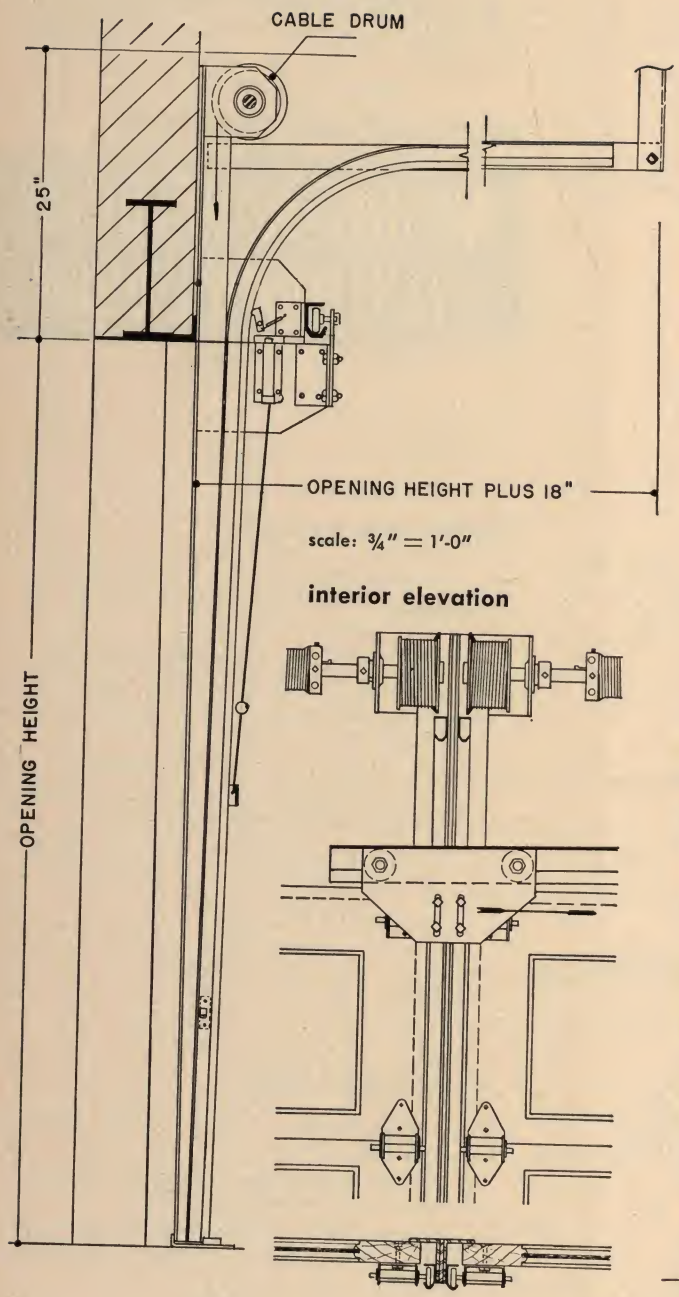
Regular locking device on each door.

The upper or regular door can be chain hoist operated. Chain hoist is not adaptable to the screen door.

Torsion or extension springs can be used. Cremone type lock used with extension spring.

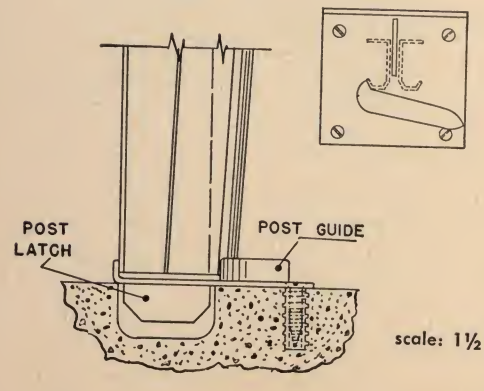
4¾" sideroom for bracket mounted verticals, 5¾" for angle mounted verticals.

rolling



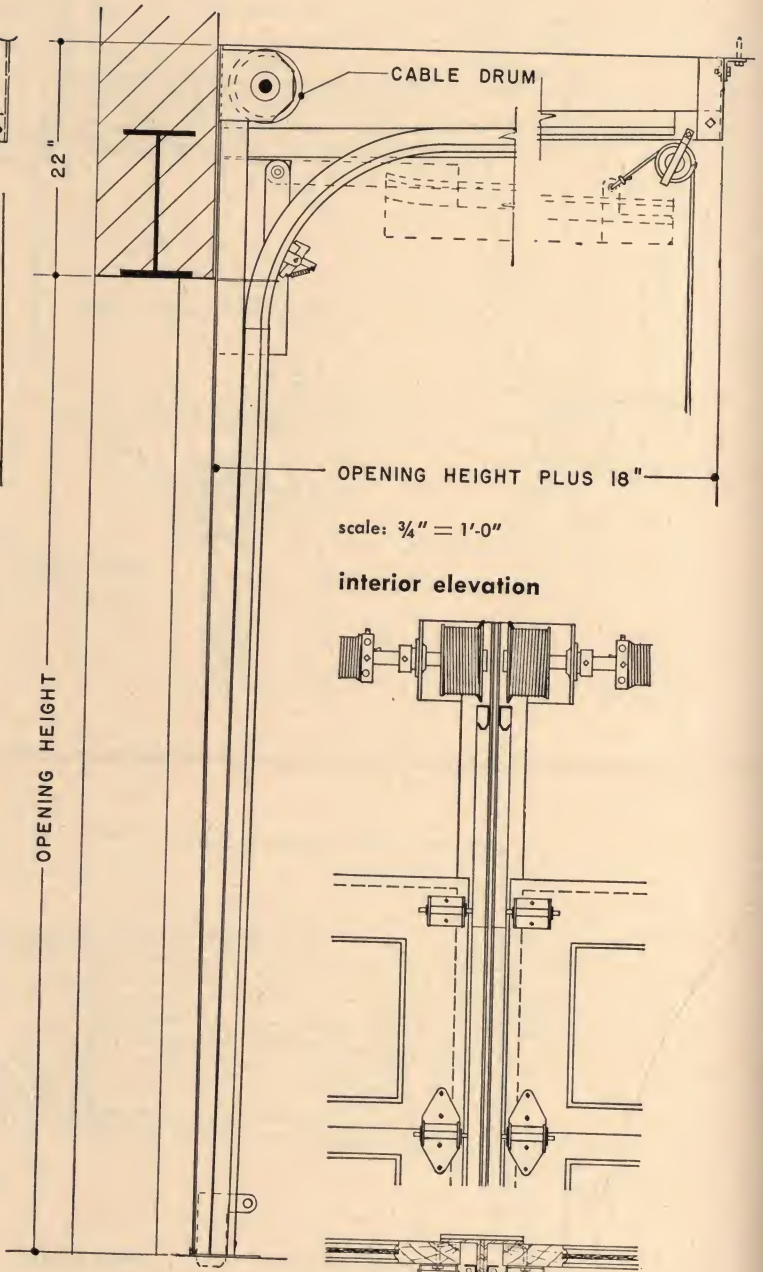
scale: 3/4" = 1'-0"

interior elevation



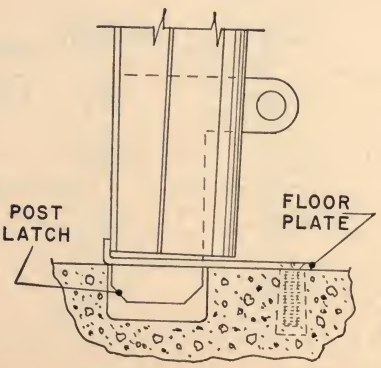
scale: 1½" = 1'-0"

swing-up



scale: 3/4" = 1'-0"

interior elevation



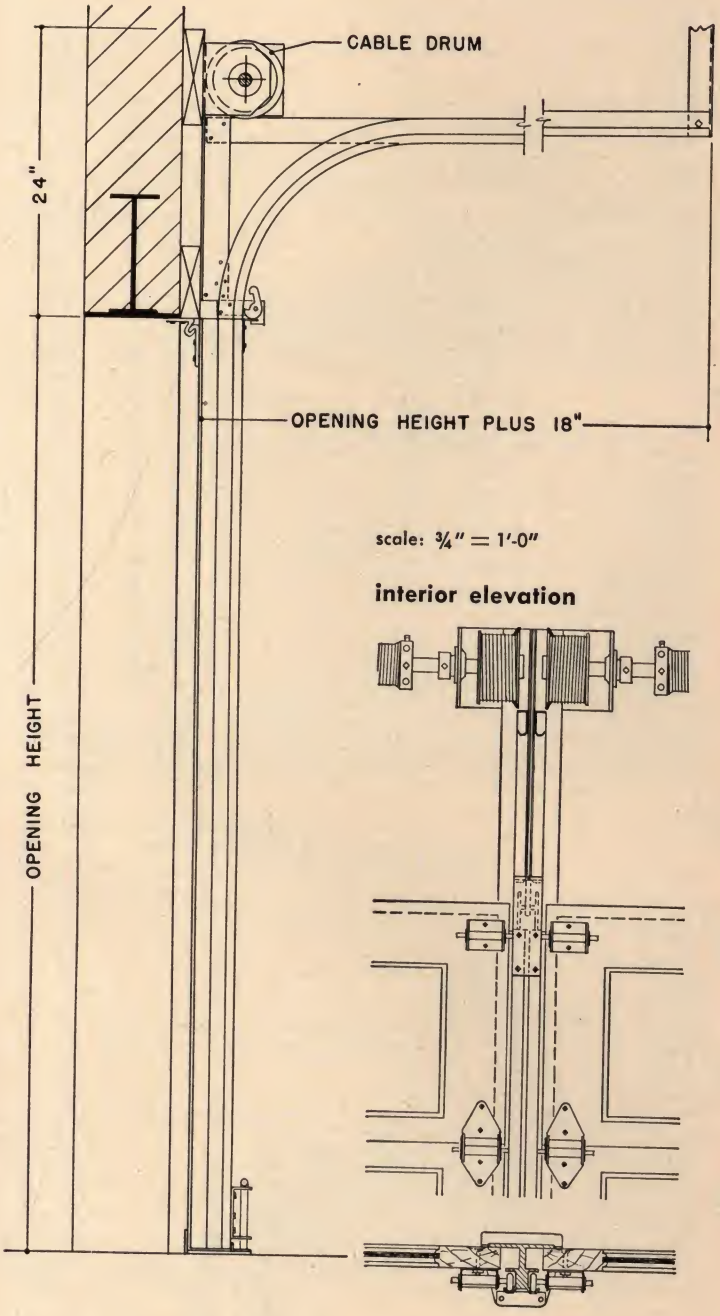
scale: 1½" = 1'-0"

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial

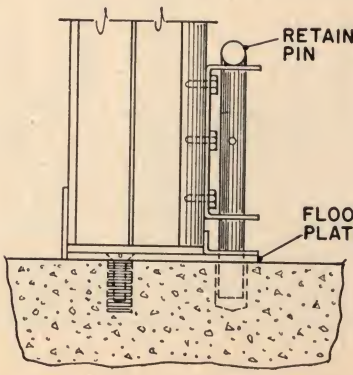
REMOVABLE CENTER POSTS

carry-away • aluminum



scale: ¾" = 1'-0"

interior elevation



scale: 1½" = 1'-0"

rolling

Removable posts roll on cross header tracks to position behind side tracks.

Four rolling center posts maximum per opening. (2 right, 2 left.)

Individual doors not over 16'-2" wide or 14'-1" high.

2" tracks. Angle or bracket mounted side tracks.

Posts securely locked at top and bottom.

Automatic safety catches prevent lowering of doors when posts are removed.

Torsion or extension springs.

swing-up

Posts unlatch at floor and can be swung up to meet horizontal tracks.

Any number of posts can be used per opening.

Doors not to exceed 20'-2" wide or 14'-1" high.

2" tracks. Angle or bracket mounted side tracks.

Automatic safety catches prevent lowering of doors when posts are out of position.

Torsion or extension springs.

carry away

Light weight extruded aluminum center post (2½ lbs. per ft.)

Limited to one post per opening.

Doors not to exceed 18'-2" wide or 14'-1" high.

2" tracks. Angle or bracket mounted side tracks.

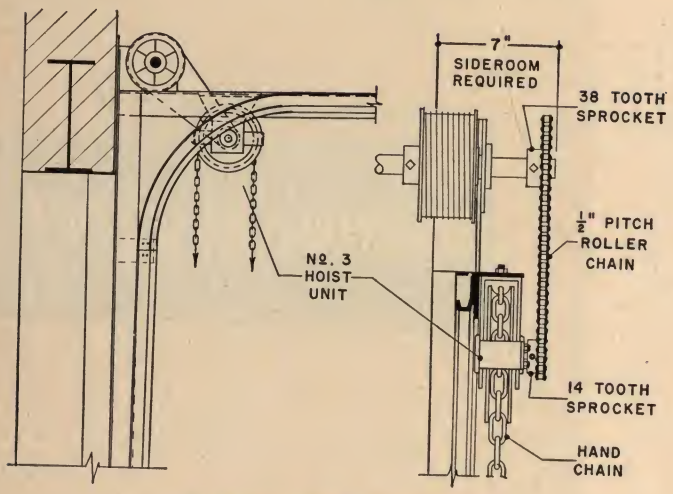
Latched securely at head and floor.

Easily unlatched and carried away.

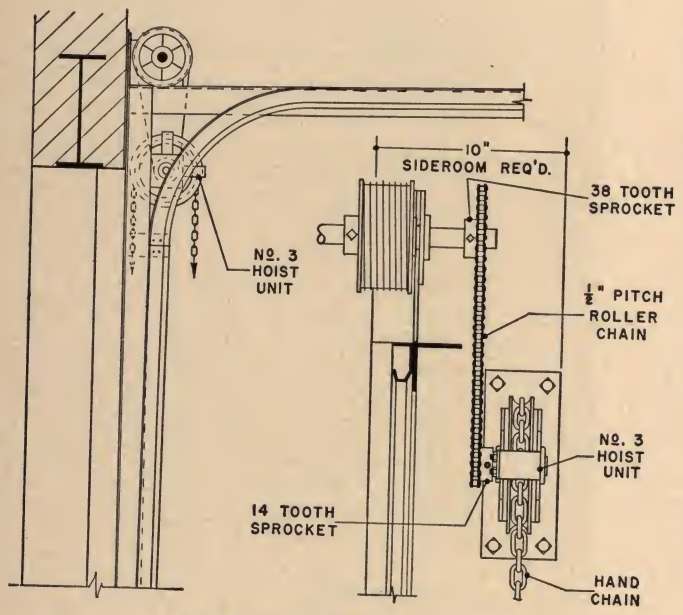
Safety catches prevent lowering of door when post is out.

Torsion springs or extension springs.

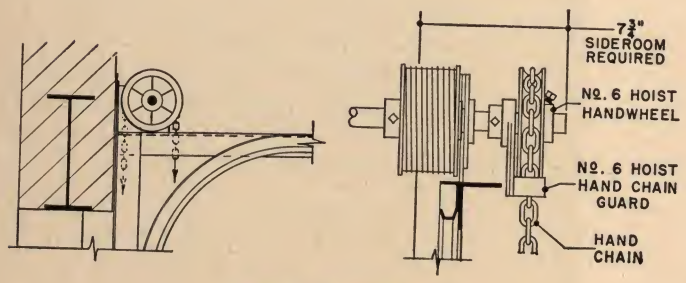
chain hoists • for heavy or high doors



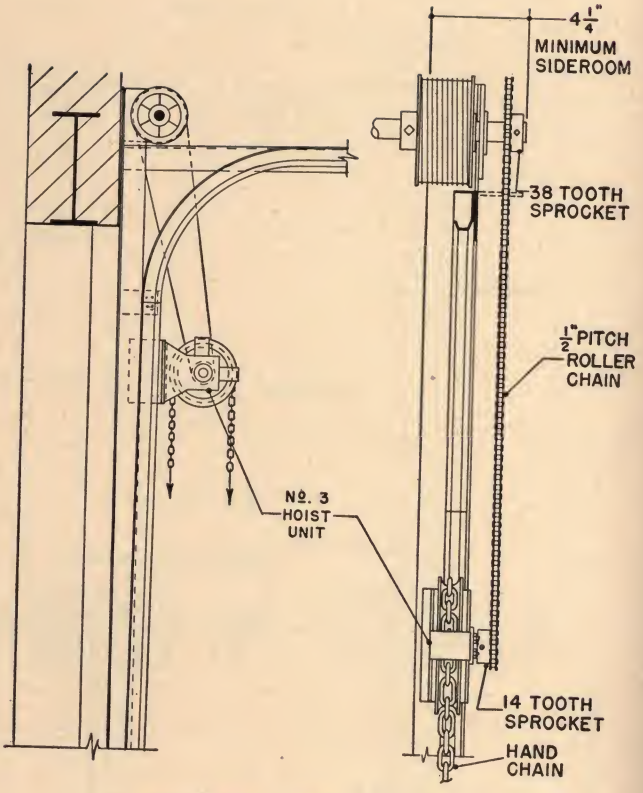
no. 3, type "A", chain hoist



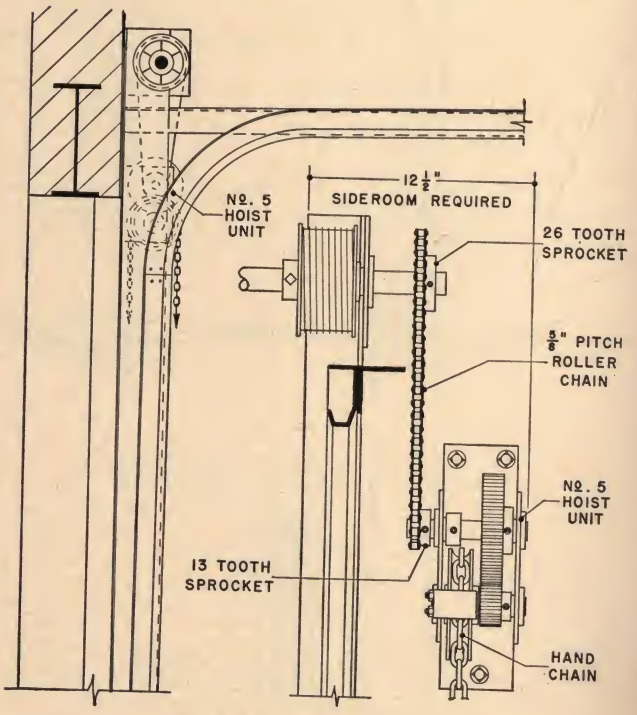
no. 3, type "C", chain hoist



no. 6, chain hoist
for doors not over 168 sq. ft.



no. 3, type "B", chain hoist



no. 5, type "C", chain hoist
6 to 1 reduction for extra heavy or extra large doors.

recommended chain hoist schedule

torsion springs

wood, aluminum and 20 ga. steel doors

DOOR WIDTH	DOOR HEIGHT												
	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"
8'-0"													
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16'-0"													
16'-6"													
17'-0"													
17'-6"													
18'-0"													

16 ga. flush steel doors

DOOR WIDTH	DOOR HEIGHT												
	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"
8'-0"													
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15'-0"													
15'-6"													
16'-0"													
16'-6"													

extension springs

wood, aluminum and 20 ga. steel doors

DOOR WIDTH	DOOR HEIGHT												
	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"
8'-0"													
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16'-0"													
16'-6"													
17'-0"													
17'-6"													
18'-0"													

16 ga. flush steel doors

DOOR WIDTH	DOOR HEIGHT												
	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	12'-6"	13'-0"
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16'-0"													
16'-6"													

THE "OVERHEAD DOOR" TRADE MARK

commercial and industrial

CHAIN HOISTS

for heavy or high doors

The size and weight of the door governs the use of a chain hoist to facilitate operation. Generally speaking, all doors 13′ 0″ high or higher should be equipped with a chain hoist, because the hand rope is too high to be within easy reach of the average person. Any door, regardless of size, may be equipped with a chain hoist upon request of the customer.

no. 3, type "A"

No. 3, Type "A" chain hoist unit is attached to the horizontal angle. It requires 6″ sideroom for bracket mounted 2″ track, 7″ sideroom for angle mounted 2″ track, and 7½″ sideroom for angle mounted 3″ track.

no. 3, type "B"

No. 3, Type "B" chain hoist has the reduction unit attached to the vertical track. It requires 4½″ sideroom for 2″ track, and 4¾″ sideroom for 3″ track.

no. 3, type "C"

No. 3, Type "C" chain hoist has the reduction unit mounted on the front wall. It requires 9″ sideroom for 2″ bracket mounted track, 10″ sideroom for 2″ angle mounted track and 10½″ sideroom for 3″ angle mounted track.

no. 5, type "C"

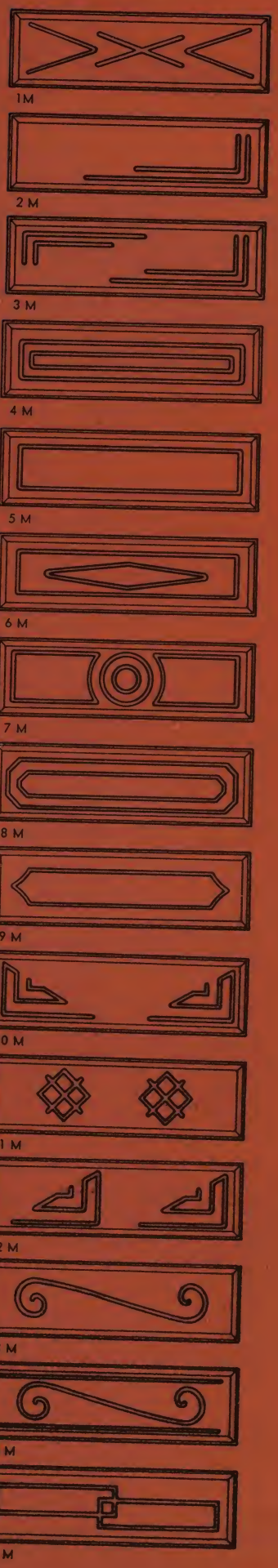
No. 5, Type "C" chain hoist has a heavy unit with extra reduction gears. The chain hoist unit is mounted on the front wall. 12½″ sideroom is required for 3″ track. This chain hoist is used for extra heavy or extra large doors.

no. 6

No. 6 chain hoist consists of a pocket pulley and chain guard mounted directly to the end of a cross-header shaft. It is used on high, narrow doors not over 168 square feet. It requires 6¾″ sideroom for bracket mounted 2″ track, and 7¾″ sideroom for 2″ angle mounted track.

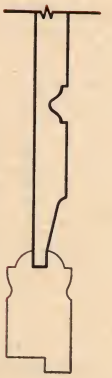
routed designs

When ordering, designate your design by code number.



ENGRAVED and DORCEL DOORS

raised panels with routed design



For home garage doors five sections high.

Door panels are ¾" thick and raised on one side. The designs are routed out of the solid wood and may be any of the 15 designs shown at left. Routed panels may be combined with plain, raised panels to form a different pattern.

Width of router bit is ⅝" and greatest depth is ⅜".

flush panel doors

5 sections high; flush both sides

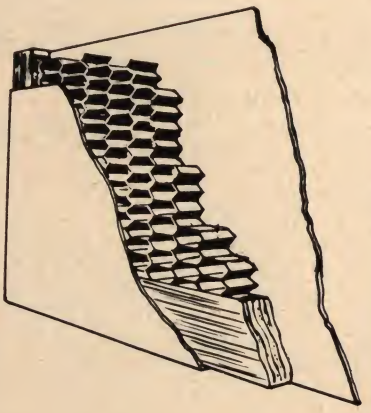
heights 6′-6″, 7′-0″.

widths 8′-0″, 9′-0″ and 15′-0″, 16′-0″ and 18′-0″.

Clearance limits, operation, hardware, track, lock and counterbalances same as for Custom Door except two-car Dorcel Doors require only three struts.

material

⅛" hardboard secured with waterproof adhesive on both sides of 1⅛" sash to provide smooth, even surfaces inside and out.



lifetime guarantee

Hardboard composition is guaranteed for life not to split, splinter or crack due to any natural weather conditions.

inner construction

Pressure bonded between its hardboard walls is a tough honeycomb construction which not only adds greatly to door compression strength but insulates. Dor-Cel honeycomb core creates a dead air trap for excellent thermal and acoustical insulation.

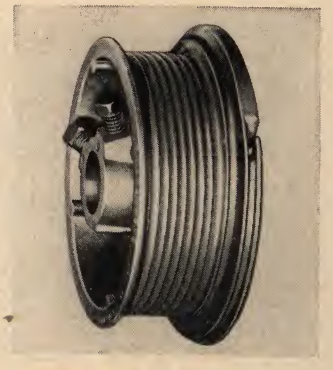
THE "OVERHEAD DOOR" TRADE MARK

residential

FEATURES

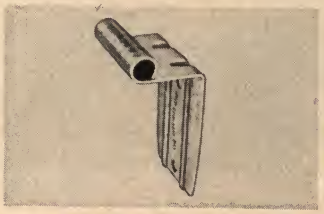
counterbalances

Doors counterbalance with single or double torsion springs and drums or with extension springs and pulleys. All springs heavy-duty type made of oil-tempered steel wire. Each door is weighed to determine the correct spring.

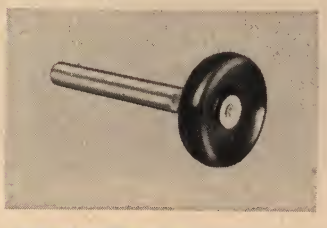


tapered drums Die cast aluminum or cast iron.

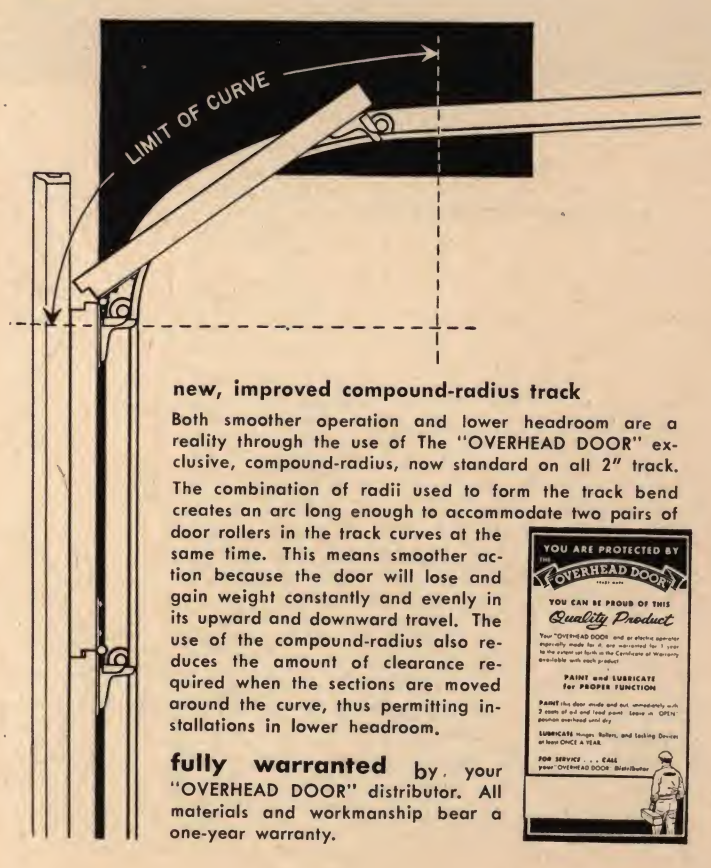
cables Galvanized aircraft type. 3/32" for single car doors and 1/8" for two car doors.



one-piece roller holders of progressively graduated sizes made of heavy-gauge, embossed steel.



nylon rollers with stainless steel inserts are standard on all residential doors.



new, improved compound-radius track

Both smoother operation and lower headroom are a reality through the use of The "OVERHEAD DOOR" exclusive, compound-radius, now standard on all 2" track.

The combination of radii used to form the track bend creates an arc long enough to accommodate two pairs of door rollers in the track curves at the same time. This means smoother action because the door will lose and gain weight constantly and evenly in its upward and downward travel. The use of the compound-radius also reduces the amount of clearance required when the sections are moved around the curve, thus permitting installations in lower headroom.

fully warranted by your "OVERHEAD DOOR" distributor. All materials and workmanship bear a one-year warranty.

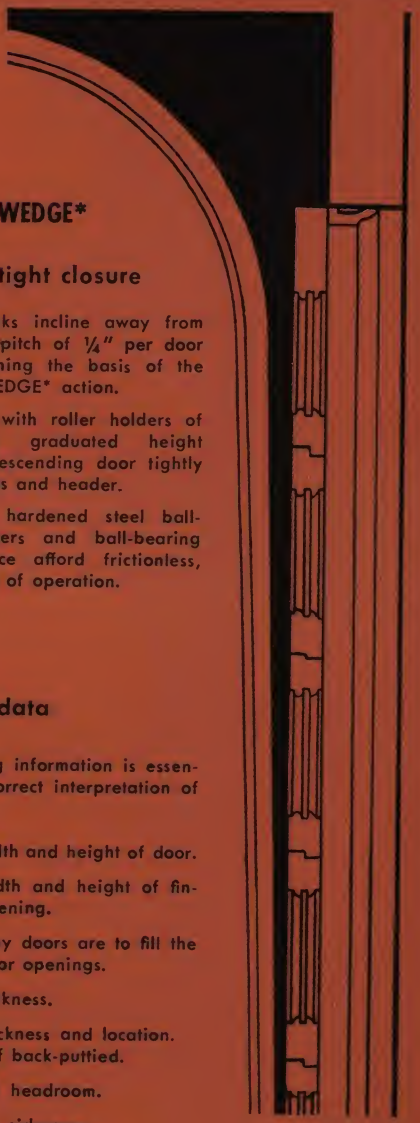
MIRACLE WEDGE*

weather tight closure

Vertical tracks incline away from jambs at a pitch of 1/4" per door section, forming the basis of the MIRACLE WEDGE* action.

End hinges with roller holders of progressively graduated height guide the descending door tightly against jambs and header.

Full-floating hardened steel ball-bearing rollers and ball-bearing counterbalance afford frictionless, positive ease of operation.



section not to scale

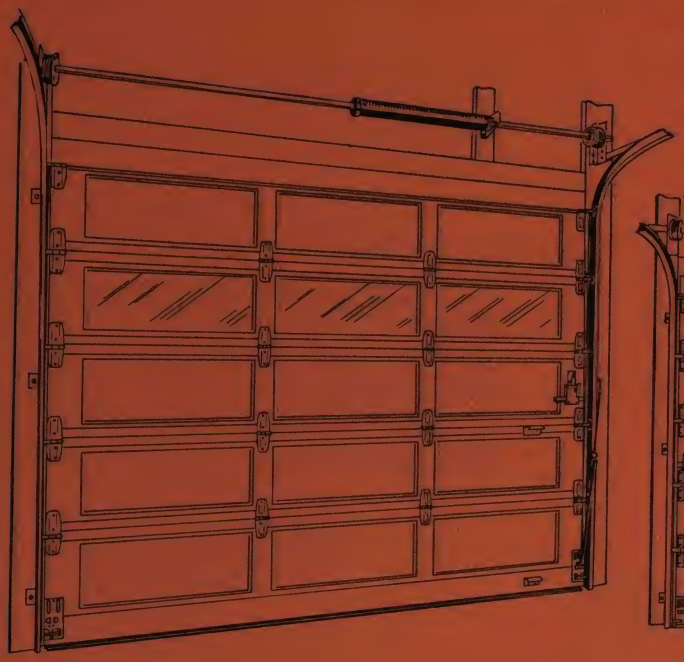
ordering data

The following information is essential to the correct interpretation of your order:

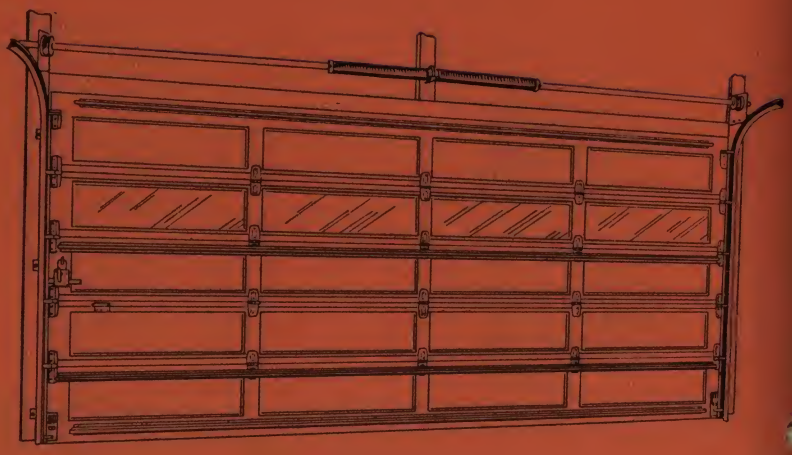
1. Exact width and height of door.
2. Exact width and height of finished opening.
3. How many doors are to fill the opening or openings.
4. Door thickness.
5. Glass thickness and location. Specify if back-puttied.
6. Available headroom.
7. Available sideroom.
8. Type of jamb construction.
9. Type of operation—manual, electric, radio.
10. If electrically operated, specify available voltage and phase.
11. Keying arrangement if two or more doors are ordered.

*TRADE MARK

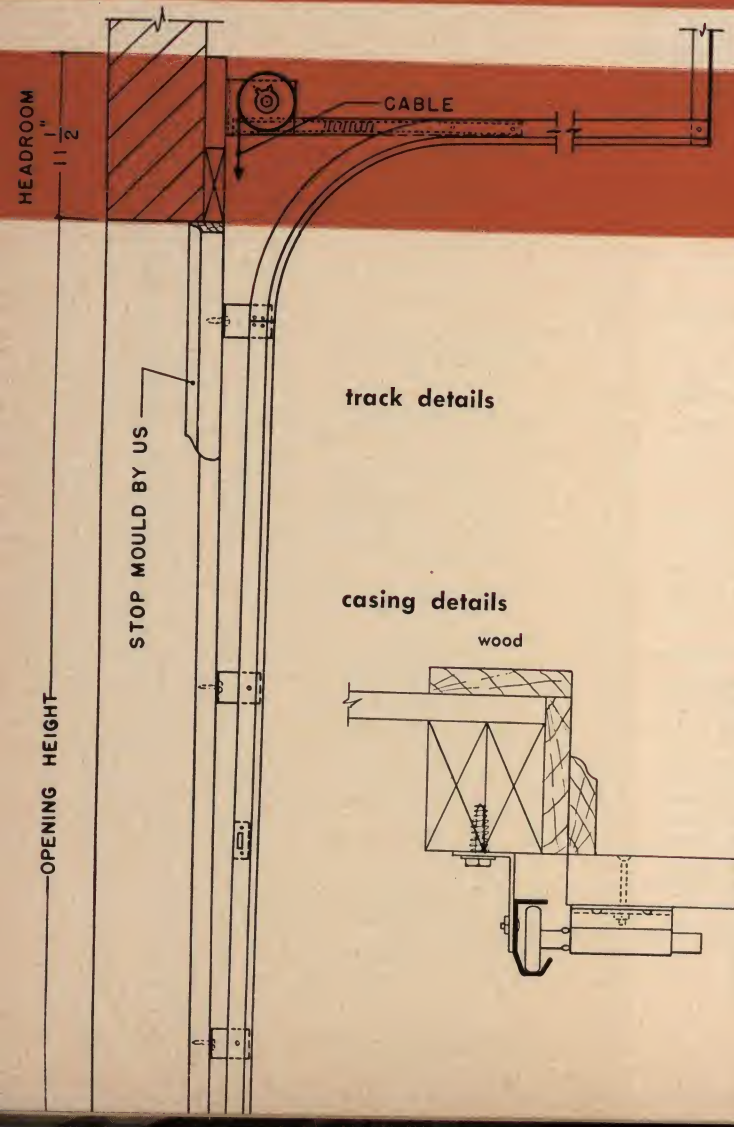
OVERHEAD DOOR CORPORATION'S custom line of quality single and double garage doors



No. 10-35 single torsion spring



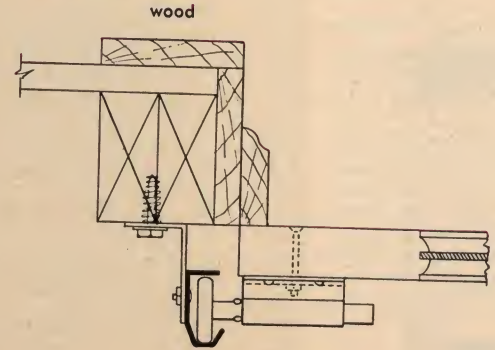
No. 10-45 right and left torsion springs



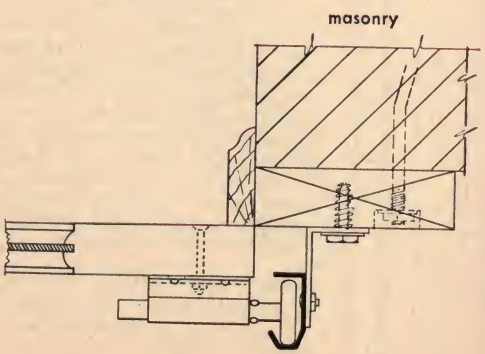
track details

casing details

wood



masonry



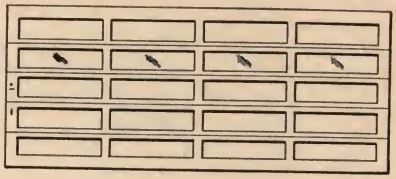
THE "OVERHEAD DOOR" TRADE MARK

residential

CUSTOM GARAGE DOORS

We make doors of any size to fit any opening.

exterior elevations scale: 1/8" = 1'-0"



sizes	panels wide	sizes	panels wide
8'-0"x7'-6"	3	15'-0"x6'-6"	4
9'-0"x7'-0"	3	15'-0"x7'-0"	4
10'-0"x7'-0"	3	16'-0"x7'-0"	4
		18'-0"x6'-6"	4
		18'-0"x7'-0"	4

other sizes available

stiles and rails

1 3/8" thick Sitka spruce or Douglas fir, mortised and tenoned, glued and steel doweled. Rebated weather joint. 5 1/2" wide end stiles, top and bottom rails. 3 1/2" center stiles. 2 9/16" center rails, 4 13/16" per pair.

panels

1/4" Hardboard is standard (see Guarantee). 1/4" exterior grade fir plywood is available.

finish

Sanded and ready for paint.

glass arrangement

Fourth section open for glass. Glazing mold furnished cut to size.

headroom

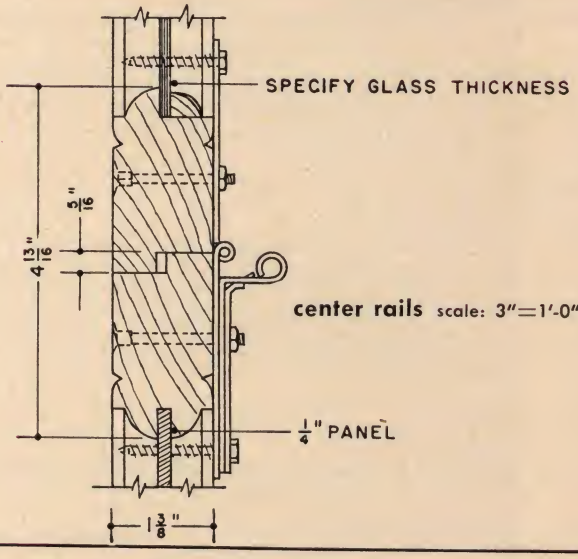
11 1/2" with compound-radius tracks.
Electric operators require 3" more headroom.

sideroom

3 1/4" at jamb. 2" along horizontal tracks.

center post

7" minimum.



center rails scale: 3"=1'-0"

hardboard panel — guarantee

Guaranteed for Life of Door. The panels of this door are genuine Hardboard. Selected for quality and service, these panels are guaranteed not to split, splinter, check, crack or delaminate, due to natural conditions of weathering or exposure. Overhead Door Corporation will furnish a replacement section if a Hardboard Panel does not comply with this guarantee.

operation

Manual or electric. Model U Ultronic operator is recommended.

hardware

Hinges and fixtures embossed SALT SPRAY STEEL*.

Sections of two car doors reinforced full length with struts rolled of SALT SPRAY STEEL*.

lock

5-pin tumbler side lock, chromium plated lock handle.

tracks

Tracks of 2" SALT SPRAY STEEL*, bracket mounted to form MIRACLE WEDGE* closure.

Two car doors have full length angle reinforcing of the horizontal tracks.

counterbalances

One car doors—single torsion spring, die cast aluminum drums with cone, 16 gauge tube shaft, 3/32" aircraft lifting cables.

Two car doors—right and left torsion springs, die cast aluminum drums, 16 gauge tube shaft, 1/8" aircraft cables.

Extension springs can be furnished for both one car and two car doors. 5-pin tumbler lock with cremone type locking bars used with extension springs.

optional equipment

Refer to Table of Contents for:

Low headroom equipment.
Lift clearance.
Electric operation.

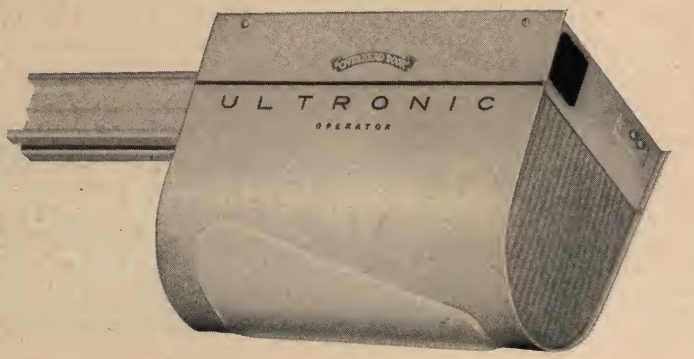
short form specification

lumber	1 3/8" clear B&B fir
panels	1/4" Hardboard
hardware	galvanized
tracks	2"
struts	Two car doors require four struts.
operation	manual
electric operator	U drawbar, 1/4 hp

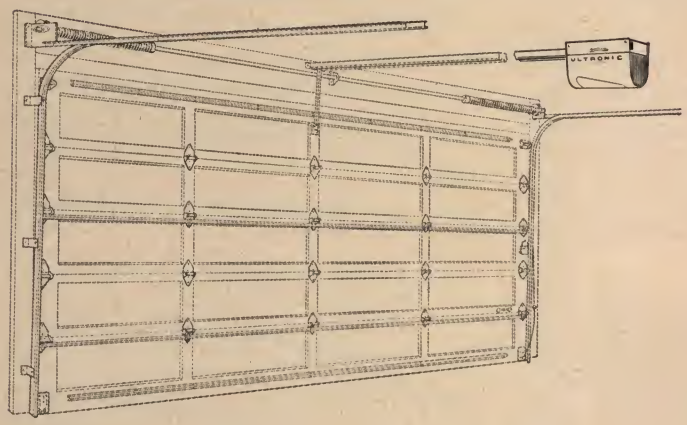
Please call us if change in specification must be considered.

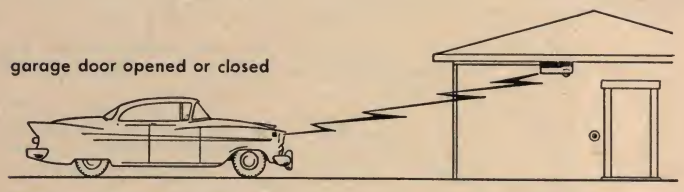
*TRADE MARK

ULTRONIC door operator



electric drawbar and electronic receiver unit with cover





garage door opened or closed

from radio transmitter in car

from button on garage wall

installation includes

Model U Ultronic door opener. Quick release arm. One push button switch with 25′ of two strand plastic covered hook-up wire. One transmitter and transmitter button for car. One receiving unit.

electrical requirements

115 volt electric current must be available. Designate whether car has 6 volt or 12 volt system, negative or positive ground.

comparatively low cost

The entire control system completely installed *actually costs less* than an automatic washer or drier. This includes the electric operator, electronic receiver in garage, electronic transmitter in car, dash button and wall button.

THE "OVERHEAD DOOR" TRADE MARK

residential

ULTRONIC OPERATOR

ULTRONIC operator features

convenience

No more getting out of your car into cold winds, rain, or snow to open and close your garage door. You save 29,000 steps a year . . . save getting in and out of your car 3,000 times . . . with the magic control button of the ULTRONIC Door Opener on your car dash! Just turn into your drive, stay in your car—and *press a button!*

positive finger-tip control

You have *complete* control of your garage door and garage light at your finger-tip! Open the door, close it, stop it at any partially open position. The garage light comes on when the door opens, and turns off when it closes. Other type control circuits also available.

self-protection

Rain or shine, night or day, winter or summer . . . you are protected from the weather. In snowstorms, downpours, dust, wind or icy cold, just drive up to your garage and *press the magic button* on your car dash! You have sure protection for yourself and your shoes and clothes.

safety

When you drive out of your garage, your door can be closed by pressing the dash button in your car. In the closed position it is locked and tamperproof, so there is no invitation to pilferers. Night drivers are safe when they can drive a locked car into a lighted garage, just *by pressing a dash button!*

clearance

Headroom 3″ more than normal door headroom. Overall length 4′ more than opening height.

THE "OVERHEAD DOOR" TRADE MARK

DISTRIBUTORS

ALABAMA
Birmingham 9—Overhead Door Co. of Birmingham, 210 Columbiana Rd., P.O. Box 5747
Mobile—Overhead Door Co. of Mobile 2504 Old Shell Road, Drawer E, Crichton Sta.
Montgomery—Overhead Door Co. of Montgomery, 3953 S. Court St.

ALASKA
Fairbanks—Overhead Door Co. of Fairbanks, 720 College Rd.
Spenard—Overhead Door Co. of Anchorage, 3003 Doris, P.O. Box 4397

ARIZONA
Phoenix—Overhead Door Co. of Phoenix, 1133 E. Gardinia, P.O. Box 961
Tucson—Overhead Door Co. of Tucson, 1745 E. Lester Street

ARKANSAS
Ft. Smith—Overhead Door Co. of Ft. Smith, 1509 N. 36th St.
Little Rock—Overhead Door Co. of Little Rock, 901 E. 7th St.

CALIFORNIA
Arcata—Overhead Door Co. of Eureka-Arcata, 1685 Sutter Rd.
Los Angeles—Overhead Door Co. of So. Los Angeles, 15748 South California, Paramount
Red Bluff—Overhead Door Co. of Red Bluff, P.O. Box 23, Los Molinos
Sacramento 22—Overhead Door Co. of Sacramento, 2140 Sutterville Rd.
San Diego—Overhead Door Co. of San Diego, 534 Broadway, El Cajon
San Francisco—Overhead Door Co. of San Francisco, Inc., 913 Airport Blvd., P.O. Box 247, So. San Francisco
Santa Rosa—Overhead Door Co. of Santa Rosa, 4720 Petaluma Hill Rd.
San Jose—Overhead Door Co. of Santa Clara Valley, Lawrence Station Rd. & Elko Drive, P.O. Box 696, Sunnyvale

CANADA
Alberta—Overhead Door Sales (Calgary) Ltd., 3631 Blackburn Rd., Calgary
Overhead Door Sales (Edmonton) Ltd., 10042 109th St., Edmonton
British Columbia—Overhead Door Sales (Vancouver) Ltd., 5707 S. Beresford St., Burnaby 1,
New Brunswick—Overhead Door Co. of Moncton, Ltd., P.O. Box 501, Shediac
Newfoundland—Dominion Distributors, Ltd., 426 Water St., W., St. John's
Nova Scotia—Overhead Door Sales (Halifax) Ltd., 190 Russell St., Halifax
Ontario—Overhead Door Co. of Hamilton, Ltd., 589 Cannon St., East, Hamilton
Overhead Door Sales (London) Ltd., 300 William St., London
Overhead Door Co. of North Bay, 108 Main St., East, North Bay
Overhead Door Co. of Ottawa, Ltd., 1555 St. Laurent Blvd., Ottawa
Overhead Door Sales (Toronto) Ltd., 289 Bering Ave., Toronto 18
Quebec—Overhead Door Sales (Montreal), 7949 Dante St., Ville St. Michel, Montreal 38
Overhead Door, Metropolitan Quebec, Reg'd., 55-57 Commerciale St., Levis

CAROLINAS
Charlotte 3, N. C.—Overhead Door Co. P.O. Box 1654
Columbia, S. C.—Overhead Door Co. of Columbia, 1002 Drake St., P.O. Box 5055
Greenville, S. C.—Overhead Door Co. of Greenville, Park Place, P.O. Box 3593
Raleigh, N. C.—Overhead Door Co. of Raleigh, Inc., Highway 401 N. at New Hope Rd., P.O. Box 2901
Wilmington, N. C.—Overhead Door Co. of Wilmington, P.O. Box 1144
Winston-Salem, N. C.—Overhead Door Co. of Winston-Salem, 1017 North Liberty, P.O. Box 3038

COLORADO
Colorado Springs—Overhead Door Co. of Colorado Springs, P.O. Box 2391
Denver 16—Overhead Door Co. of Denver, 4555 Brighton Blvd.

CONNECTICUT
Bridgeport—Overhead Door Co., Inc., Boston Post Road, Orange
Danbury—Overhead Door Sales Co., Federal Road, P.O. Box 1016
East Haven—Overhead Door Sales Co., 39 Pennsylvania Avenue
Hartford—Overhead Door Co., Inc., 303 Locust St.
New Haven—Overhead Door Sales Co., Boston Post Road, Orange
Norwalk—Overhead Door Sales Co., 28 Friendly Road, P.O. Box 766

DELAWARE
Wilmington—Overhead Door Sales Co., Inc., 3001 Todds Lane

DIST. OF COLUMBIA
Arlington 9—Overhead Door Sales Co., Inc., P.O. Box 9264, Rosslyn Station

FLORIDA
Daytona Beach—Overhead Door Company of Daytona Beach, 415 Orange Avenue
Fort Lauderdale—Overhead Door Co. of Fort Lauderdale, Inc., 1925 S.E. 6th Avenue
Jacksonville 1—Overhead Door Co. of Jacksonville, Inc., 4811 Bowden Rd.
Miami 38—Overhead Door Co. of Miami, Inc., 7501 N.E. 3 Place
Orlando—Overhead Door Co. of Orlando, 9008 Lake Charity Dr., Druid Hills, Maitland, Fla.
Pensacola—Overhead Door Co. of Pensacola, P.O. Box 127
Tallahassee—Overhead Door Co. of Tallahassee, P.O. Box 908, Mill Ave.
Tampa 3—Overhead Door Company of Tampa, 4407 Suwannee Avenue, P.O. Box 7006
West Palm Beach—Overhead Door Co. of West Palm Beach, 1607 N. Military Trail

GEORGIA
Atlanta 15—Overhead Door Co. of Atlanta, Inc., 39 Weyman Ave., S.W.
Augusta—W. E. Raines Co., Inc., 14 7th Street, P. O. Box 878
Columbus—Overhead Door Co. of Columbus, 1230 Morris Rd., P.O. Box 827

HAWAII
Honolulu 11—Overhead Door Co. of Hawaii, P.O. Box 3560

IDAHO
Boise—Overhead Door Co. of Southwestern Idaho, 5023 Emerald St.
New Plymouth—Overhead Door Co. of Southwestern Idaho, c/o Stunz Lumber Company
Pocatello—Overhead Door Co. of Pocatello, 3550 Highway #30 West, P.O. Box 95

ILLINOIS
Aurora—Overhead Door Co. of Aurora 25 S. River St., P.O. Box 377
Chicago 36—Overhead Door Co. of Chicago, 1430 W. 74th St.
Danville—Overhead Door Co. of Danville, P.O. Box 816, Fithian, Ill.
Decatur—Overhead Door Co. of Decatur, 2801 N. Woodford St., P.O. Box 93
Elk Grove Village—Overhead Door Co. of North Cook Co., 70 Scott St.
Elmhurst—Overhead Door Co. of Du Page Co., 247 W. Lake St.
Kankakee—Overhead Door Co. of Kankakee, 780 N. Entrance Ave.
Mt. Vernon—Overhead Door Co. of Mt. Vernon, 35 Normandy Heights, R.R. 6
Oglesby—Overhead Door Co. of Tri Cities, 200 N. Columbia Avenue
Peoria—Overhead Door Co. of Peoria, 1027 Swords Ave.
Quincy—Overhead Door Co. of Quincy, 7200 State Street
Rockford—Overhead Door Co. of Rockford, 803 Parkside Dr.
Springfield—Overhead Door Co. of Springfield, 1244 Mossman Ave.
Waukegan—McKinney Steel & Sales Co., 8 Madison Street

INDIANA
Columbus—Overhead Door Co. of Columbus, Rear of 622 Franklin St., P.O. Box 224
Evansville—Overhead Door Co. of Evansville, 905 S. 8th St.
Fort Wayne—Overhead Door Co. of Fort Wayne, Inc., 3808 S. Calhoun St.
Gary—Overhead Door Co., of Lake-Porter 8708 Oak Avenue, P.O. Box 577
Hartford City—Overhead Door Co. of Hartford City, Inc.
Indianapols 18—Overhead Door Co. of Indianapolis, Inc., 3401 N. Shadeland Avenue
Lafayette—Overhead Door Sales of Lafayette, 1100 Canal Rd., P.O. Box 86
LaPorte—Overhead Door Co. of LaPorte 450 Pine Lake Ave.
Mishawaka—Overhead Door Co. of South Bend-Mishawaka, 510 N. Cedar St.
Richmond—Overhead Door Co. of Richmond, 341 Henley Road, South
Syracuse—Overhead Door Co. of Syracuse Inc., P.O. Box 625
Terre Haute—Overhead Door Co., Inc., Terre Haute, 533 N. 15th St.

IOWA
Bettendorf—Overhead Door Co. of Bettendorf, 2602 State Street
Cedar Rapids—Overhead Door Co. of Cedar Rapids, 1920 Fourth Ave., S.E.
Des Moines 12—Overhead Door Co. of Des Moines, Inc., 3829 70th St.
Dubuque—Overhead Door Co. of Dubuque, 44 Main St.
Fort Dodge—Overhead Door Co. of Fort Dodge, 201 First Ave., N. P.O. Box 372
Ottumwa—Overhead Door Co. of Ottumwa, 231 N. Davis Street
Sioux City—Overhead Door Co. of Sioux City, 2212 S. Palmetto
Waterloo—Overhead Door Co. of Waterloo, 311 W. Mullan Ave.

KANSAS
Hays—Overhead Door Co. of Hays 113 E. 7th St.
Pittsburg—Overhead Door Co. of Pittsburg, 1401 S. College, P.O. Box 365
Topeka—Overhead Door Co. of Topeka, 2322 W. 6th St., P.O. Box 53
Wichita 2—Overhead Door Co. of Wichita, Inc., 700 S. Emporia P.O. Box 2254

KENTUCKY
Bowling Green—Overhead Door Co. of Bowling Green, Morgantown Rd. P.O. Box 644
Campbellsville—Overhead Door Co. of Cambellsville, Lebanon Highway R.R. 3
Covington—Overhead Door Co. of Covington, 29 Virginia Avenue South Fort Mitchell
Lexington—Overhead Door Co. of Lexington, Inc., 231 N. Limestone St.
Louisville 17—Overhead Door Co. of Louisville, Inc., 710 Locust Lane Shelby Station, Box 11
Marion—Overhead Door Co. of Mexico U.S. Highway 641, So., RR. #2
Owensboro—Overhead Door Co. of Owensboro, 2830 Allen St.

LOUISIANA
Alexandria—Flynn Building Specialties, Inc., 140 Wheelock Ave. P.O. Box 668
Baton Rouge—J. Paul Smith, Building Specialties, 1604 N. 21st St.
Lake Charles—Mutersbaugh Building Specialties, 1305 Kirkman St. P.O. Box 136
New Orleans 25—Overhead Door Co. of New Orleans, 1401 S. Broad St.
Shreveport—Overhead Door Co. of Shreveport, 3112 Hollywood

MAINE
Auburn—Overhead Door Co. of Maine, 26 North Main St.

MARYLAND
Baltimore 18—Overhead Door Co. of Baltimore, Inc., 2440 Greenmount Ave.
Gaithersburg—Overhead Door Co. of Gaithersburg, Redland-Norbeck Rd. Derwood
Hagerstown—Overhead Door Co. of Hagerstown, 45 W. Franklin St.

MASSACHUSETTS
Chicopee—William C. Fraser 895 Meadow Street
Needham 94—Overhead Door Co., Inc., 55 Franklin Street, Needham Heights
New Bedford—Acushnet Saw Mills Co. 54 Mill Road
Pittsfield—Charles F. Klitsch, Jr. Pittsfield & Lenox Rd., P.O. Box 465
Somerset—Overhead Door Company 101 County St., P.O. Box 7
West Barnstable—Barnstable County Supply Co., Lombard Avenue
Worcester—Overhead Door Co., Inc. 102 West Boylston St.

MICHIGAN
Adrian—Harold W. Reed, R.R. 2
Detroit 38—Overhead Door Co. of Detroit, 6340 Fenkell
Flint 7—Overhead Door Co. of Flint G-3333 S. Dort Highway
Grand Rapids 8—Overhead Door Co. of Grand Rapids, 3033 Madison Ave., S.E.
Kalamazoo—Overhead Door Co. of Kalamazoo, 2403 Winters Drive P.O. Box 701
Lake City—Overhead Door Co. of Lake City, R.R. 1
Lansing—Overhead Door Co. of Lansing, 108 Howard Avenue, P.O. Box 2242
Marquette—C. T. DeHaas Co., P.O. Box 89, Kaufman Building
Monroe—D & G Bldg. Specialties Co. 2070 S. Custer Rd.
Port Huron—Overhead Door Co. of Port Huron, 3920 Pine Grove
Saginaw—Overhead Door Co. of Saginaw, Inc., 1105 S. Water St., P.O. Box 729

MINNESOTA
Duluth 6—Overhead Door Co. of Duluth, 2309 W. Superior St.
Fergus Falls—Overhead Door Co. of Fergus Falls, 623 Hampden Ave., E., P.O. Box 294
Mankato—Overhead Door Co. of Mankato, R.R. 3, P.O. Box 522
Minneapolis—Overhead Door Co. of Minneapolis-St. Paul, 6500 Oxford
Rochester—Overhead Door Co. of Rochester, 921 Fifth St. N.E.
St. Cloud—Overhead Door Co. of St. Cloud, 535 E. St. Germain, P.O. Box 60

MISSISSIPPI
Jackson—Overhead Door Co. of Jackson, 5058 N. State St., P.O. Box 9662

MISSOURI
Jackson—Overhead Door Co. of S. E. Missouri, Michael Anna St.
Kansas City—Overhead Door Co. of Kansas City, 4500 Belleview
Moberly—Overhead Door Co. of Moberly, 541 West Reed Street
Sedalia—Overhead Door Co. of Sedalia, 415 S. Lamine St.
Springfield—Overhead Door Co. of Springfield, 1112 E. Central St.
St. Joseph—Overhead Door Co. of St. Joseph, 2324 Locust Street
St. Louis 17—Overhead Door Co. of Missouri, Inc., 8416 Manchester Rd.

MONTANA
Billings—Overhead Door Co. of Billings, 513 N. 31st St.
Great Falls—Overhead Door Co. of Great Falls, 507 Fifth Ave., S.E., P.O. Box 894
Missoula—Overhead Door Co. of Missoula, 540 East Kent

NEBRASKA
Hastings—Overhead Door Co. of Hastings, Inc., W. Highway 6
Lincoln—Overhead Door Co. of Lincoln, 510 Washington St., P.O. Box 3232, Stn. B
Omaha 2—Overhead Door Co. of Omaha, Inc., 701 North 20th St.
Scottsbluff—Overhead Door Co. of Scottsbluff, P.O. Box 901

THE "OVERHEAD DOOR"
TRADE MARK

NEVADA
Las Vegas—Overhead Door Co. of Southern Nevada, 1307 South "A" St.
Reno—Overhead Door Co. of Reno, 1270 Palisade Dr.

NEW HAMPSHIRE
Gonic—Overhead Door Sales Co. Harding St.
Nashua—Overhead Door Products Corp., 17 Broadview Ave.

NEW JERSEY
Hillside—Overhead Door Sales & Service Co., 630 Ramsey Ave.
Jersey City—Overhead Door Sales Co. of Hudson, 3220 Hudson Blvd.
Lebanon—Overhead Door Sales Co., Main St., P.O. Box 168
Merchantville—Merchantville Overhead Door Co., Inc., 7519 Maple Ave.
Metuchen—Overhead Door Sales Co. of Middlesex, P.O. Box 449
Millville—Overhead Door Sales & Service Co., 129 W. Broad St.
Morristown—Overhead Door Sales Co., Ridgedale Avenue
Oakland—Overhead Door Sales Co., 294 W. Oakland
Red Bank—Overhead Door Products Corp. 465 Shrewsbury Avenue, Box 468
Trenton—Merchantville Overhead Door Co., Inc., 117 N. Montgomery Ave.

NEW MEXICO
Albuquerque—Overhead Door Co. of Albuquerque, P.O. Box 727
Farmington—Overhead Door Co. of Farmington

NEW YORK
Albany—Overhead Door Sales Co., Rt. 7, P.O. Box 505, 2 mi. W. of the circle, Latham
Amsterdam—Overhead Door Sales Co., 189 Brookside Ave.
Auburn—Overhead Door Sales Co., 407 Metcalf Bldg.
Batavia—Overhead Door Sales Co., Lewiston Rd., P.O. Box 29
Binghamton—Overhead Door Sales Co., 118 Eldredge Street
Buffalo—Overhead Door Sales Co., 1935 Genesee Street
Canandaigua—Overhead Door Sales Co., 400 Genesee Street, Avon
Canisteo—Overhead Door Sales Co., 36 West Main Street
Cortland—Overhead Door Sales Co., 19 Squires Street, P.O. Box 1352
Elmira—Overhead Door Sales Co., 1251 College Avenue
Glens Falls—Overhead Door Sales Co., Cansevort & Greenway Rd.
Jamestown—Overhead Door Sales Co., 342 Crossman St.
Kingston—Overhead Door Sales Co., 212 Albany Avenue Ext.
Massena—Overhead Door Sales Co., Andrews St. Rd.
Middletown—M. S. Forgatch Pilgrim Corners
Niagara Falls—Overhead Door Sales Co., Box 304, La Salle Stn.
Olean—Overhead Door Sales Co., 612 South Union St.
Plattsburgh—Overhead Door Sales Co., 13 Lynde Street
Poughkeepsie—Met. Overhead Door Co., Inc., Manchester Road, R.R. 3
Rochester—Overhead Door Sales Co., 899 Atlantic Avenue
Spencertown—Overhead Door Sales Co., Route 203
Syracuse—Overhead Door Sales Co., 207 Jackson Street
Troy—Overhead Door Sales Co., 2008 Fifth Ave.
Unadilla—Overhead Door Sales Co., Martin Brook St., P.O. Box 529
Utica—Overhead Door Sales Co., Oriskany Blvd., Whitesboro
Watertown—Overhead Door Sales Co., Black River Road

NEW YORK CITY AREA
Brooklyn 19—Overhead Door Co. of Brooklyn, 1069—60th St.
Fulton—Overhead Door Sales Company, 113 E. Broadway
Maspeth 78—Overhead Door Sales Co. of Queens, 58-42 Maspeth Ave.
Mineola—Nassau Overhead Sales Corp., 355 Willis Avenue, Mineola, L. I.
Mount Vernon—Metropolitan Overhead Door Co., Inc., 60-64 S. Terrace Avenue
Staten Island—Diehner Lumber & Bldg. Supplies Corp., 166 Clove Rd., West Brighton
Suffolk—Mid-Island Overhead Door Co., Inc., P.O. Box 178, Route 25 & Pine Bark Rd., Ridge, L. I.

NORTH DAKOTA
Fargo—Overhead Door Co. of North Dakota, 2500 Main Ave., P. O. Box 708

OHIO
Archbold—Overhead Door Sales & Service
Ashtabula—Overhead Door Co. of Ashtabula, 423 W. 48th St.
Canton—Overhead Door Co. of Canton, 112 West Park Ave., Meyers Lake
Celina—Celina Lumber & Supply Co., 508 W. Logan St., P.O. Box 259
Cincinnati 29—Overhead Door Co. of Cincinnati, Inc., 3328 Reading Rd.
Cleveland 3—Overhead Door Co. of Cleveland, Inc., 2028 E. 71st St.
Columbus 8—Overhead Door Co. of Columbus, 1145 W. Goodale Blvd.
Cuyahoga Falls—Overhead Door Co. Inc., 1783 Front St., P.O. Box 54
Danville—C. V. Banbury & Son
Dayton 6—Overhead Door Co. of Dayton, Inc., 2800 Salem Ave.
Defiance—Overhead Door Co. of Defiance 1700 Spruce St.
Elyria—Overhead Door Co. of Lorain County, 145 S. Abbe Rd.
Findlay—Overhead Door Co. of Findlay, 212 E. Crawford St., P.O. Box 612
Fremont—Overhead Door Co. of Fremont, R.R. 4
Glouster—Overhead Door Sales of Glouster, P.O. Box 111
Hamilton—Overhead Door Co. of Hamilton, Inc., P.O. Box 511, #6 Arbor Court
Lima—Overhead Door Sales of Lima, 132 E. High St.
Mansfield—Overhead Door Co. of Mansfield, 4 East Marshall Ave.
Marietta—Overhead Door Sales Co. of Marietta—1004 Lancaster St.
Pemberville—Overhead Door Co. of Pemberville, R.R. 2
Portsmouth—Overhead Door Co. of Portsmouth, 930—10th St.
Springfield—Overhead Door Co. of Springfield, 18 W. Glenwood Ave.
Toledo 6—Overhead Door Co. of Toledo, Inc., 1940 W. Central Ave., P.O. Box 113
Warren—Overhead Door Sales & Service 1437 Grove St., N. W.
Youngstown—Overhead Door Co. of Youngstown, 6192 Southern Blvd.
Zanesville—Overhead Door Co. of Zanesville—P.O. Box 307, 216 Hazlett Court

OKLAHOMA
Ardmore—Overhead Door Co. of Ada-Ardmore, P.O. Box 1214, 1608—4th St., S.W.
Lawton—Overhead Door Co. of Lawton, 724 F St.
Oklahoma City—Overhead Door Co. of Oklahoma City, Inc., 1740 N.W. Fourth St.
Ponca City—Overhead Door Co. of Ponca City, 119 West Detroit, Box 664
Tulsa—Overhead Door Co., Inc. of Eastern Oklahoma, 5732 E. Admiral Place

OREGON
Bend—Overhead Door Co. of Bend, 947 Newport Avenue
Eugene—Overhead Door Co. of Eugene, 1783 Linwood St.
Klamath Falls—Overhead Door Co. of Klamath Falls, 4360 Homedale Rd.
Pendleton—Overhead Door Co. of Pendleton, 715 N.W. 12th St.
Portland—Overhead Door Co. of Portland, Inc., 1212 S. E. Powell Blvd.
Salem—Overhead Door Co. of Salem, 2055 Oxford St.
Tillamook—Overhead Door Co. of Tillamook, 1315 First St.

PENNSYLVANIA
Clearfield—Overhead Door Co. Inc., 217 West Pine Street, Box 826
Forty Fort—Overhead Door Co. Inc., 146-148 Welles Avenue
Harrisburg—Overhead Door Co. Inc., 650 Division Street
Lewistown—Overhead Door Co. Inc., 566 S. Juniata Street
Meadville—Overhead Door Co. Inc., Conneaut Lake Rd., R.D. 4, Box 198
Philadelphia 25—Overhead Door Co. Inc., 205 East Lehigh Ave.
Pittsburgh 34—Overhead Door Co. Inc., 3571 Valley Drive
Reading—Overhead Door Co. Inc., 2300 N. 11th St.

RHODE ISLAND
Providence—Overhead Door Sales Co., 618 Cranston Street

SOUTH DAKOTA
Aberdeen—Overhead Door Co. of Aberdeen, 217 First Ave., S.W.
Rapid City—Overhead Door Co. of Rapid City, P.O. Box 1486
Sioux Falls—Overhead Door Co. of Sioux Falls, P.O. Box 482, 415 So. Minnesota Ave.

TENNESSEE
Chattanooga—Overhead Door Co. of Chattanooga, 1077 Duncan Ave., P.O. Box 426
Kingsport—Overhead Door Co. of Kingsport, 407 E. Market Street, P.O. Box 243
Knoxville—William S. Trimble Co., Inc. 622 Atchley St., P.O. Box 154
Memphis 6—Overhead Door Co. Memphis, Inc., 2080 South Bellevue
Nashville—Overhead Door Co. of Nashville, 1806 Eighth Ave., S.

TEXAS
Abilene—Overhead Door Sales Co. of West Texas, 909 So. 1st
Amarillo—Overhead Door Co. of Texas Panhandle Inc., 4615 Bushland Blvd.
Austin 4—Overhead Door Co. of Austin, 1011 S. Congress
Beaumont—Overhead Door Co. of Beaumont, 1232 Euclid
Bellaire 10—Overheal Door Co. of Houston, Inc., 6922 S. Alder, P.O. Box 3308
Bryan—Overhead Door Co. of Bryan, 523 North Coulter, P.O. Box 863
Corpus Christi—Overhead Door Co. of Corpus Christi, 4835 S. Staples
Dallas 7—Overhead Door Sales Co., 1403 Dragon St.
El Paso—Overhead Door Co. of El Paso, Box 1175
Fort Worth—Overhead Door Sales Co. 5424 E. Lancaster
Galveston—Overhead Door Co. of Galveston, 5301 Avenue "Q" ½
Harlingen—Overhead Door Co. of the Valley, ½ Mile S. Palm Drive Rd., P.O. Box 1924
Lubbock—Overhead Door Sales Co. of West Texas, 1005 29th St.
Midland—Overhead Door Co. of Midland, P.O. Box 390
San Angelo—Overhead Door Co. of San Angelo, 3205 N. Chadbourne
San Antonio—Overhead Door Co. of San Antonio, P.O. Box 6543, Alamo Hts. Station
Texarkana—Overhead Door Co. of Texarkana, 909 New Boston Rd., Box 161
Victoria—Overhead Door Co. of Victoria, 4903 Lilac
Wichita Falls—Overhead Door Co. of Wichita Falls, 606 Scott St.

UTAH
Salt Lake City 1—Overhead Door Co. of Salt Lake City, 1000 S. State St.

VERMONT
Burlington—Overhead Door Sales Co. 745 North Avenue
Rutland—Overhead Door Sales Co., 13 Pine Street

VIRGINIA
Arlington 9—Overhead Door Sales Co., Inc., P.O. Box 9264, Rosslyn Sta.
Luray—Overhead Door Co. of Luray, 209 Hawkshill Heights Dr., P.O. Box 147
Norfolk 2—Overhead Door Co. of Norfolk, 530 Military Highway, South
Richmond 23—Overhead Door Co. of Richmond—4400 Williamsburg Ave.
Roanoke—Overhead Door Co. of Roanoke 2739 Wilshire Ave., S. W.

WASHINGTON
Longview—Overhead Door Co. of Longview, 2519 36th Ave.
Moses Lake—Overhead Door Co. of Moses Lake, 1364 West Highway #10
Seattle—Overhead Door Co. of Seattle 3409 Stone Way
Spokane—Overhead Door Company of Spokane, E. 3310 Sprague Ave.
Tacoma 99—Overhead Door Co. of Tacoma, 27 Crescent Circle, S. W.
Walla Walla—Overhead Door Co. of Walla Walla, 521 West Rose St., P.O. Box 889
Yakima—Overhead Door Co. of Yakima, Route #5, Box 272

WEST VIRGINIA
Bluefield—Bailey Lumber Co., 1118 Bluefield Ave., P.O. Box 847
Charleston—Overhead Door Co., of Charleston, 4216 McCorkle, S.W., P.O. Box 251, South Charleston
Clarksburg—Overhead Door Co. of Clarksburg, 122 Marshall Street, P.O. Box 241
Huntington—Overhead Door Co. of Huntington, 255 Nova St., P.O. Box 1631
Wheeling—Overhead Door Co. of Wheeling, 502 Stone Blvd., P.O. Box 981

WISCONSIN
Appleton—Overhead Door Co. of Appleton, P.O. Box 764
Arcadia—Overhead Door Company of Arcadia, 851 E. Main St.
Green Bay—Overhead Door Co. of Green Bay, 316 N. Adams St.
Madison—Overhead Door Co. of Madison, 1005 Colby St.
Milwaukee 16—Overhead Door Co. of Milwaukee, 3012 W. Capitol Drive
Sheboygan—Overhead Door Co. of Sheboygan, 1524 Seamann Ave.

OVERHEAD DOOR CORPORATION
general offices
Hartford City, Indiana

manufacturing distributors
Cortland, N.Y. • Hillside, N.J.
Lewiston, Pa. • Nashua, N.H.

manufacturing divisions
Dallas, Texas • Portland Oregon
in Canada: **Oakville, Ontario**

PRINTED IN U.S.A.

A.I.A. File Number 16-D

RAYNOR

Overhead Type

DOORS

INDUSTRIAL — COMMERCIAL — RESIDENTIAL

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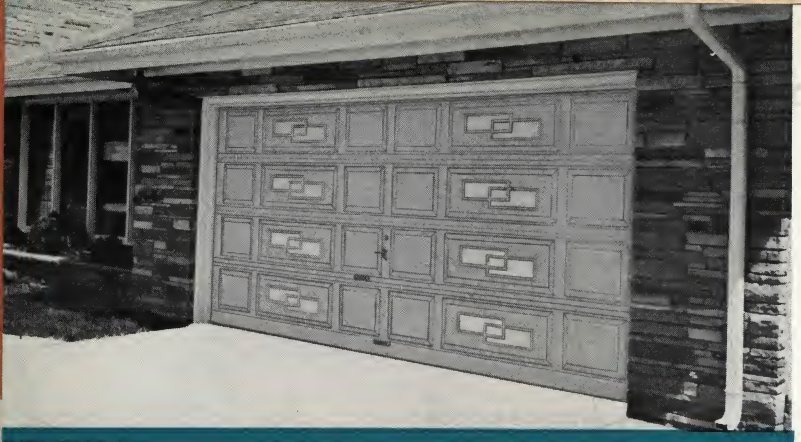
RAYNOR MFG. CO., DIXON, ILLINOIS • HAMMONTON, NEW JERSEY

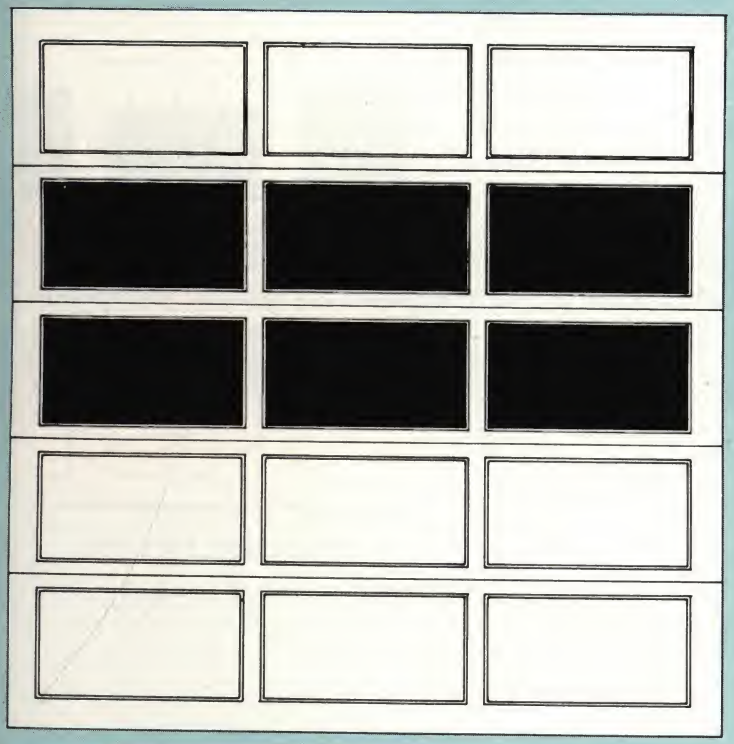


RAYNOR FEATURES

- Mortise and Tenon Construction
- "Graduated Seal" for Weather-tight Closing
- Galvanized Hardware
- "Ray-Cor" Flush Doors
- "Floating Carved Panel" Doors
- Lifetime Guarantee Dorlux Panels
- Quality Controlled Production
- Manufactured Under One Roof
- A Complete Line . . . Residential, Commercial, Industrial

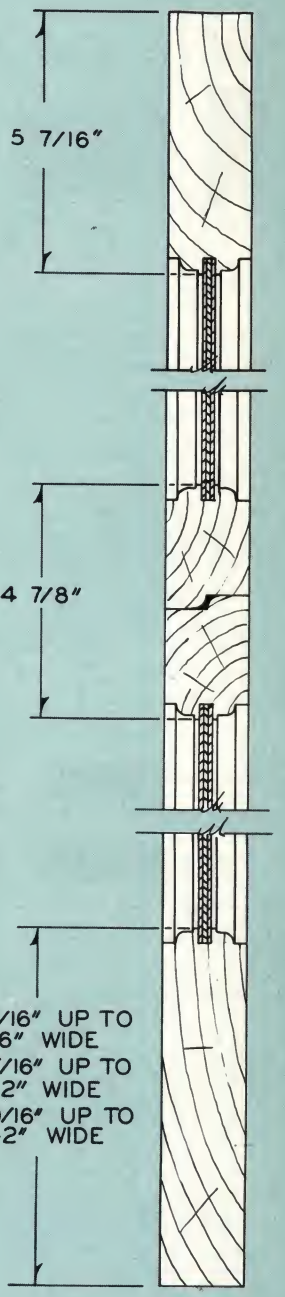
The Mark *of Quality*

COMMERCIAL AND INDUSTRIAL DOOR DETAILS

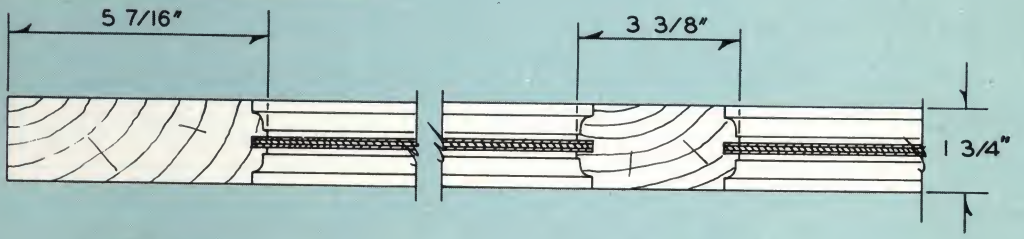


PANEL DOORS

Stiles and rails are of the finest quality kiln dried Sitka spruce or Douglas fir 1¾" thick. Section joints are blind mortised and tenoned, steel dowelled and waterproof glued. Panels are ¼" Dorlux with lifetime guarantee. Panels of ⅜" exterior fir plywood available on request. All sections sanded ready for paint. Stop moulding ¾" x 2⅝" and glass moulding furnished as standard equipment. Any or all sections may be left open for glass. Special section and panel arrangements available as required.



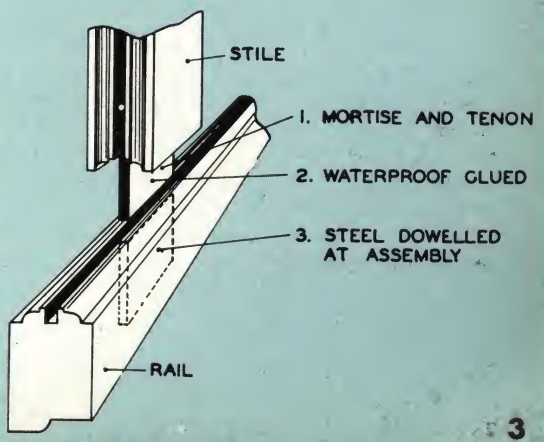
DOOR WIDTH	PANELS WIDE	DOOR HEIGHT	SECTIONS HIGH
UP TO 8'–6"	2	UP TO 8'–6"	4
8'–7" TO 11'–11"	3	8'–7" TO 10'–6"	5
12'–0" TO 14'–11"	4	10'–7" TO 12'–6"	6
15'–0" TO 17'–11"	5	12'–7" TO 14'–6"	7
18'–0" TO 20'–11"	6	14'–7" TO 16'–6"	8
21'–0" TO 26'–2"	8	OVER 16'–6"	9
OVER 26'–2"	10		



EXTERIOR GRADE DORLUX
Lifetime Guarantee
The panels of this door are Exterior Grade Dorlux, a product of Masonite Corporation. Dorlux is a wood product selected by the manufacturer of this door to give you the best in quality, beauty, and service. These panels are guaranteed not to split, splinter, delaminate or crack due to any natural conditions of weathering. If a Dorlux panel fails in any of these ways, notify Masonite Corporation, giving conditions of failure and name of door manufacturer. After verification of the failure, Masonite Corporation will furnish a new door section or an entire new door, depending on the circumstances, at its expense.
MASONITE CORPORATION
CHICAGO 2, ILLINOIS

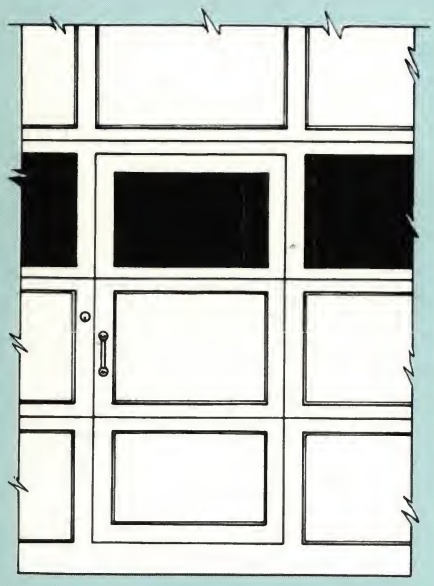
All Raynor commercial and industrial doors furnished with ¼" Masonite Dorlux panels with Lifetime Guarantee.

"THREE WAY STRESS" CONSTRUCTION



COMMERCIAL AND INDUSTRIAL

PASS DOORS



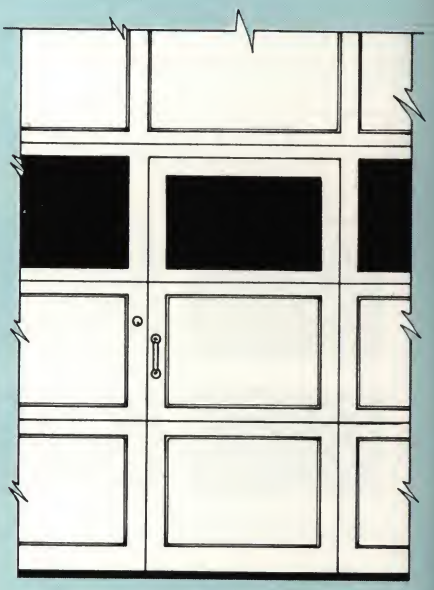
WOOD BOTTOM RAIL

WOOD BOTTOM RAIL

Furnished complete with spring hinges, air check, snubber chain and Yale lock. Pass door rabbetted at sides and top for ½" lap assuring Weather-tite seal. Threshold is covered with ⅛" steel strip. Doors over 14'–2" wide are furnished with center support track. Doors over 15'–2" wide are furnished with center lift cable. Parent door not to exceed 20'–2" wide. Pass door maximum 32" wide, 3 or 4 sections high. Average height from floor 68". All pass doors swing out.

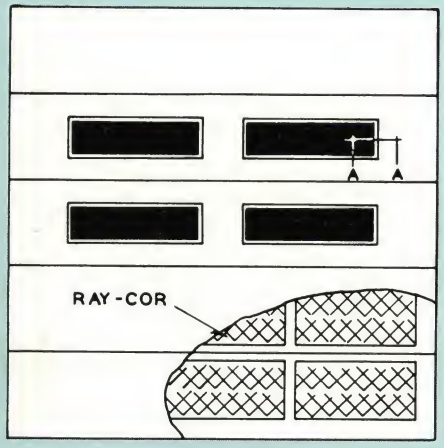
STEEL BOTTOM RAIL

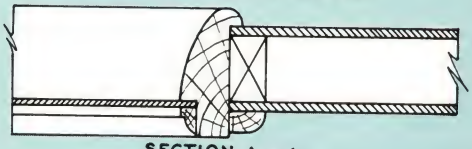
Furnished complete with spring hinges, air check, snubber chain and Yale lock. Bottom rail of main door is cut through to allow passage of shop trucks and small vehicles. A ⅝" x 1¾" bar applied to the full width of door. Pass door rabbetted on sides and top for ½" lap assuring Weather-tite seal. Doors over 12'–2" wide furnished with center support track. Doors over 15'–2" wide are furnished with center lift cable. Parent door not to exceed 16'–2" wide. Pass door maximum 32" wide, 3 or 4 sections high. Average height 68" from floor. All pass doors swing out.



STEEL BOTTOM RAIL

FLUSH DOORS

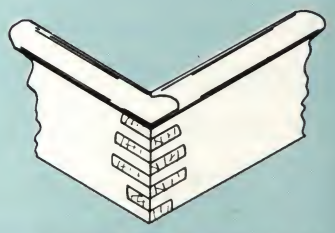




SECTION A –A
SCALE – 3" = 1'-0"

All Raynor Industrial flush doors are 1¾" thick and constructed with the exclusive Ray-Cor grid design. Ray-Cor consists of ¼" interlocking strips of wood inside a stile and rail frame. Face material may be either Dorlux with lifetime guarantee of ¼" exterior grade fir plywood. Either face material bonded to frame and core with waterproof glue under heat and pressure. No nails to mar the surface of the door.

Flush doors are not to exceed 18' wide or 216 sq. ft. on 2" tracks.

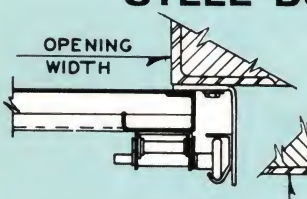


FINGER JOINT CORNER OF GLASS INSERT FRAME.

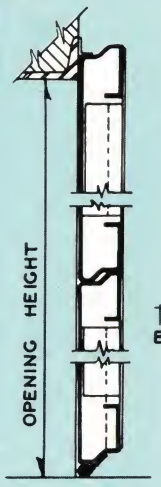
Interlocking finger joints guarantee against any parting or opening of corner. The contour of the moulding assures complete drainage of water.

HARDWARE LIMITS WITH STEEL SECTIONS			
OPENING SIZE			HARDWARE MODEL
WIDTH	HEIGHT	SQ. FT.	
10'-0"	10'-0"	90	T15-T24-TL65
16'-0"	16'-0"	180	T16-T25
24'-0"	16'-0"	300	T18-T26

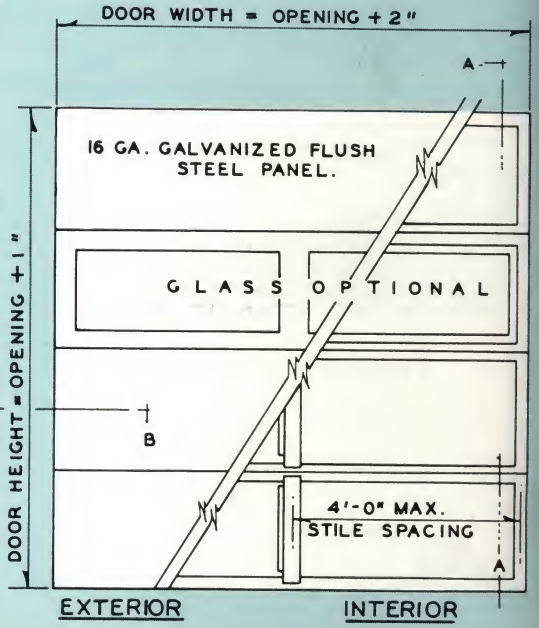
STEEL DOORS



SECTION B–B



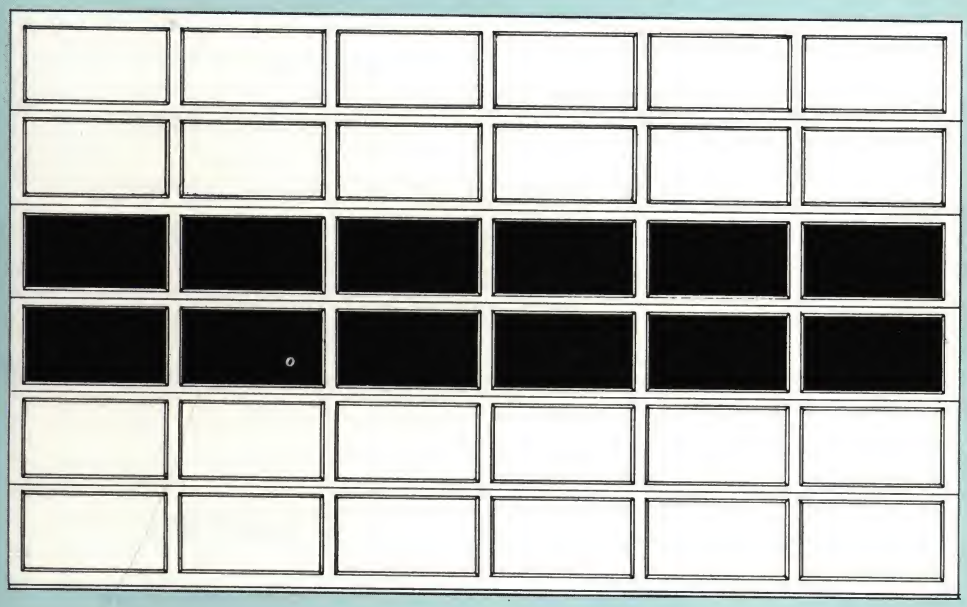
SECTION A–A

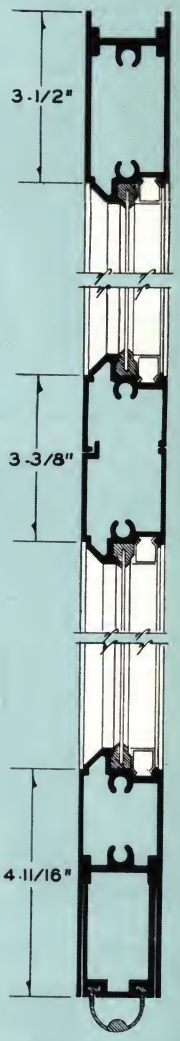


Raynor flush steel doors are fabricated from 16 gauge galvanized steel having a coating of 1.75 ounce per square foot as per ASTM standards and chemically treated to insure paint adhesion. Doors are 1¾" thick and edges are formed to produce a Weather-tite shiplap joint. All doors adequately reinforced to withstand a wind pressure of 20 pounds per square foot. Doors furnished with sealing strip at top and continuous rubber astragal at bottom. Glass installed with Weather-tite continuous rubber sealing strip.

DOOR DETAILS

ALUMINUM Regular Construction

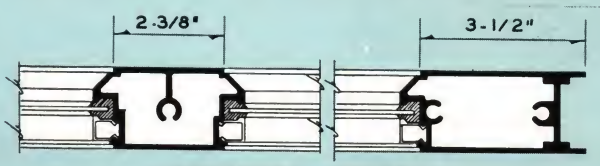




VERTICAL SECTION

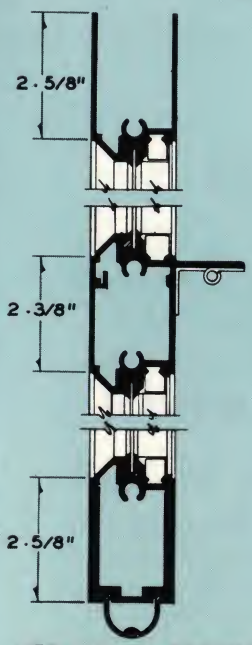
DOOR WIDTH	PANELS WIDE	DOOR HEIGHT	SECTIONS HIGH
UP TO 8'–6"	2	UP TO 8'–6"	4
8'–7" TO 11'–11"	3	8'–7" TO 10'–6"	5
12'–0" TO 14'–11"	4	10'–7" TO 12'–6"	6
15'–0" TO 17'–11"	5	12'–7" TO 14'–6"	7
18'–0" TO 20'–2"	6	14'–7" TO 16'–1"	8

Raynor aluminum doors are made of 6063T6 extruded aluminum alloy, heat treated. All parts anodized for permanent luster. Glass and .062 aluminum panels are encased in vinyl moulding and are securely locked in place with a snap-in aluminum bead. Adjustable vinyl astragal is applied to bottom rail of door. 240 square feet maximum. 20'-2" maximum width, 16'-1" maximum height.

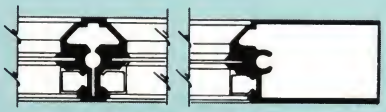


HORIZONTAL SECTION

ALUMINUM Narrow Line Construction

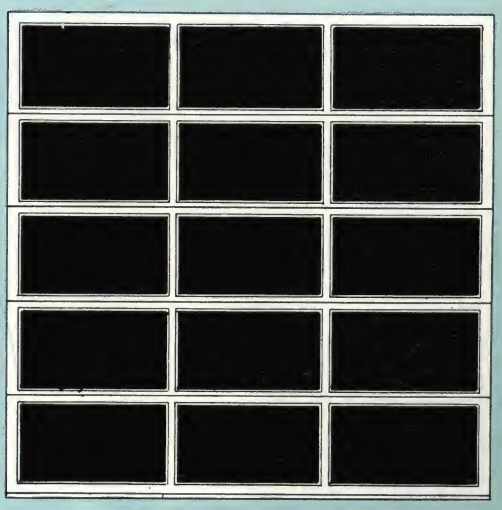


VERTICAL SECTION



HORIZONTAL SECTION

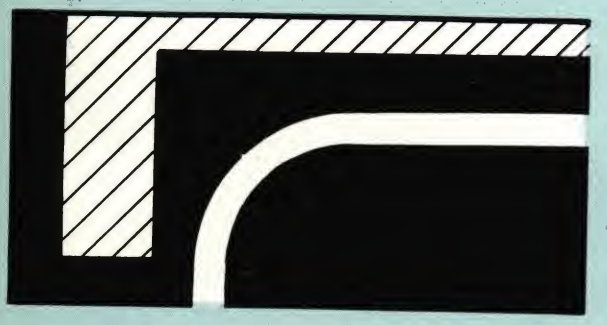
Raynor aluminum narrow line doors are made of 6063T6 extruded aluminum alloy, heat treated. All parts anodized for permanent luster. Glass and .062 aluminum panels are encased in vinyl moulding and are securely locked in place with a snap-in aluminum bead. Adjustable vinyl weatherstrip is applied to bottom rail of door. 1⅜" high reinforcing web is a part of the weathertite meeting rails.
144 square feet maximum. 12'-2" maximum width, 12'-1" maximum height.



EXTERIOR ELEVATION

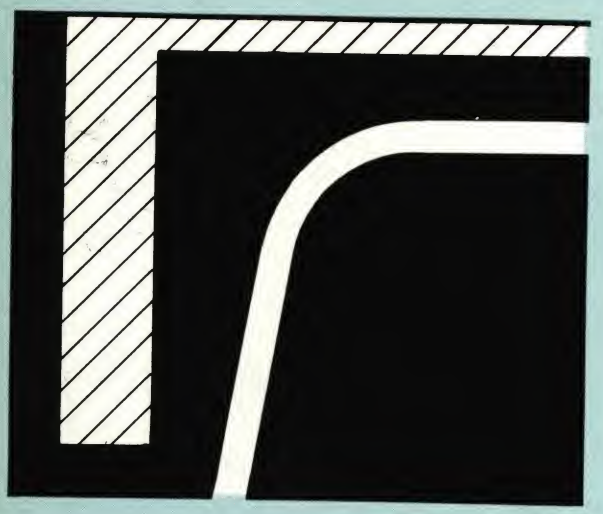
Selection Chart for RAYNOR COMMERCIAL AND INDUSTRIAL DOORS

Your Guide for Selecting the Right Door for Any Type Installation



NORMAL HEADROOM

This hardware used on the majority of installations. See models T15, T16 and T18; pages 7, 8 and 9.



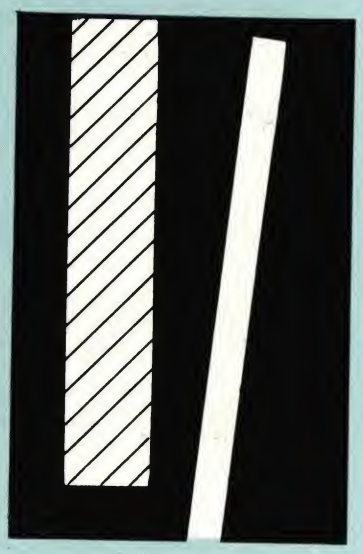
LIFT CLEARANCE

This hardware used where more than normal clearance under horizontal track is required. Especially desirable in service stations, truck docks and some warehouse installations. See models T24, T25 and T26; pages 10, 11 and 12.

LOW HEADROOM

This hardware used on limited headroom installations.

See Model TL65, TL9, TL11; page 13.



VERTICAL LIFT

This hardware used wherever ceiling is high and depth is limited or where horizontal tracks would form an obstruction. Model VL22; page 14.

SPECIAL APPLICATION

Hardware can be manufactured to follow roof contour or to fit special conditions. See page 15.

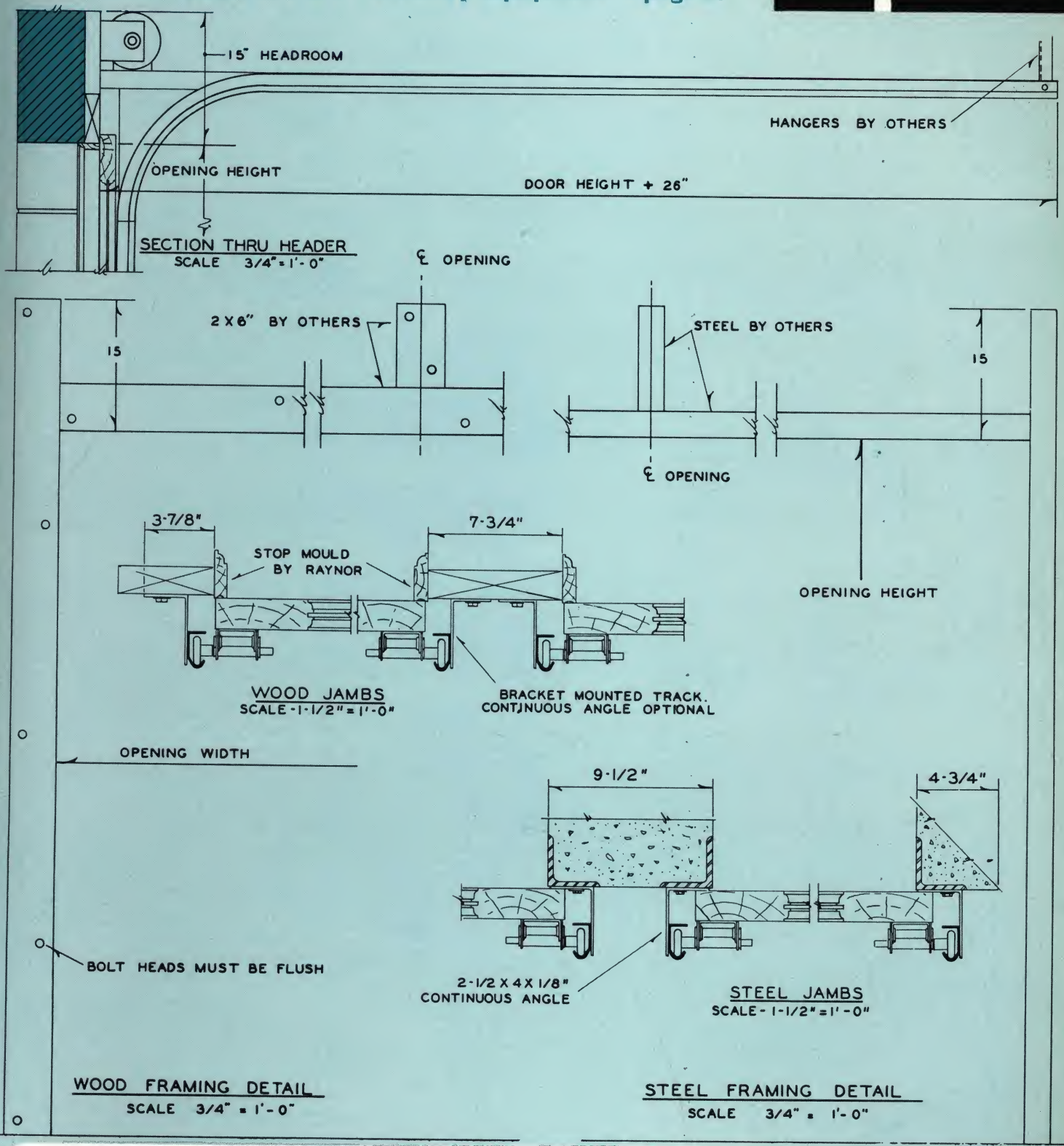
SMALL COMMERCIAL and INDUSTRIAL

128 sq. ft. max. — model T15

Not to exceed 18′–2″ wide — Not to exceed 10′–7″ high

Door Details — pages 3, 4 & 5 Auxiliary Equipment — page 16

16i Ray NORMAL HEADROOM



SPECIFICATIONS: Doors shall be Raynor Model T15, 1¾″ thick, clear Sitka spruce or Douglas fir. Panels shall be ¼″ Dorlux.

Heavy gauge 2″ galvanized steel track with GRADUATED SEAL for Weather-tite closing. All hinges, brackets, etc., of heavy gauge galvanized steel. Vertical track mounted with brackets or continuous angle to wood jambs, mounted with continuous angle to steel jambs. Continuous angle size 2½″ x 4″ x ⅛″. Horizontal track reinforced with 2″ x 2″ x ⅛″ angle.

Doors shall be counterbalanced with heavy duty torsion springs on continuous, ball bearing cross header shaft.

Five pin tumbler cylinder side lock, right or left side installation.

Rollers shall be heavy duty ball bearing type with hardened races.

Doors shall be guaranteed for one year against defective material or workmanship.

Manual or electric operation.

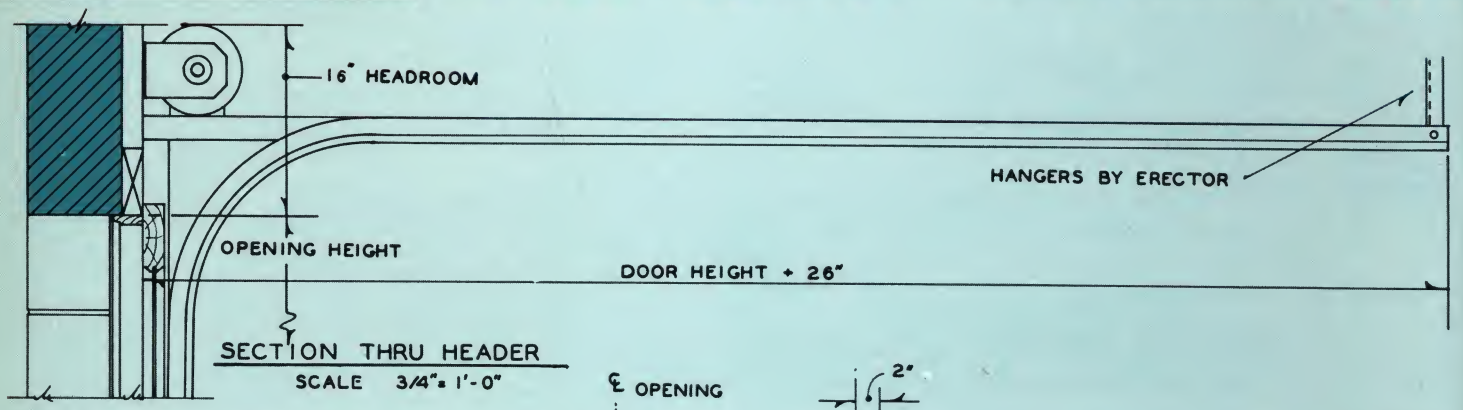
NORMAL HEADROOM

MEDIUM COMMERCIAL and INDUSTRIAL

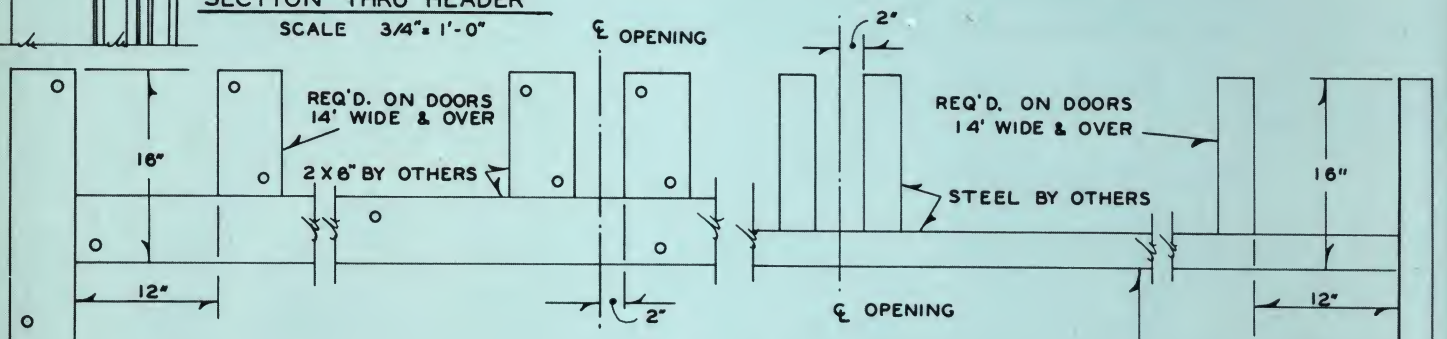
240 sq. ft. max. — model T16

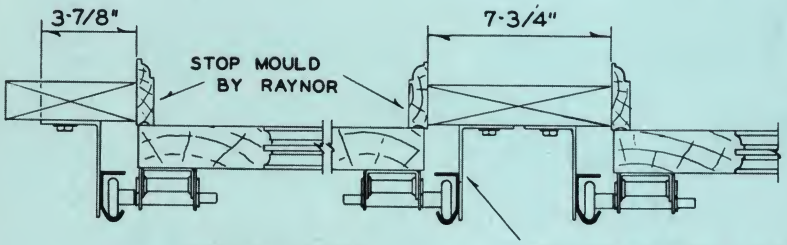
Not to exceed 20′–2″ wide — Not to exceed 16′–1″ high

Door Details — pages 3, 4 & 5 — Auxiliary Equipment — page 16



SECTION THRU HEADER
SCALE 3/4" = 1'-0"



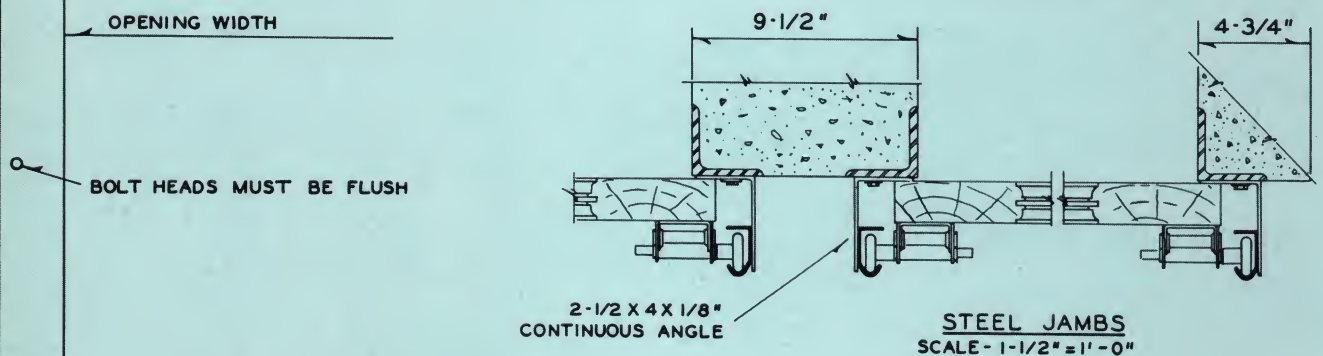


WOOD JAMBS
SCALE - 1-1/2" = 1'-0"

OPENING HEIGHT

CHAIN HOIST

MAY BE MOUNTED ON EITHER SIDE.
SIDEROOM REQ'D. ON HOIST SIDE:
WOOD JAMB - 5-3/4"
STEEL JAMB - 6-3/4"
SEE DETAILS - PAGE 16



WOOD FRAMING DETAIL
SCALE 3/4" = 1'-0"

STEEL JAMBS
SCALE - 1-1/2" = 1'-0"

STEEL FRAMING DETAIL
SCALE 3/4" = 1'-0"

SPECIFICATIONS: Doors shall be Raynor Model T16, 1¾″ thick, clear Sitka spruce or Douglas fir. Panels shall be ¼″ Dorlux.

Heavy gauge 2″ galvanized steel track with GRADUATED SEAL for Weather-tite closing. All hinges, brackets, etc., of heavy gauge galvanized steel. Vertical track mounted with brackets or continuous angle to wood jambs, mounted with continuous angle to steel jambs. Continuous angle size 2½″ x 4″ x ⅛″. Horizontal track reinforced with 2½″ x 2″ x 3/16″ angle.

Doors shall be counterbalanced with heavy duty torsion springs on continuous, ball bearing solid cross header shaft.

Five pin tumbler cylinder side lock, right or left side installation.

Rollers shall be heavy duty ball bearing type with hardened races.

Doors shall be guaranteed for one year against defective material or workmanship.

Manual, chain hoist or electric operation.

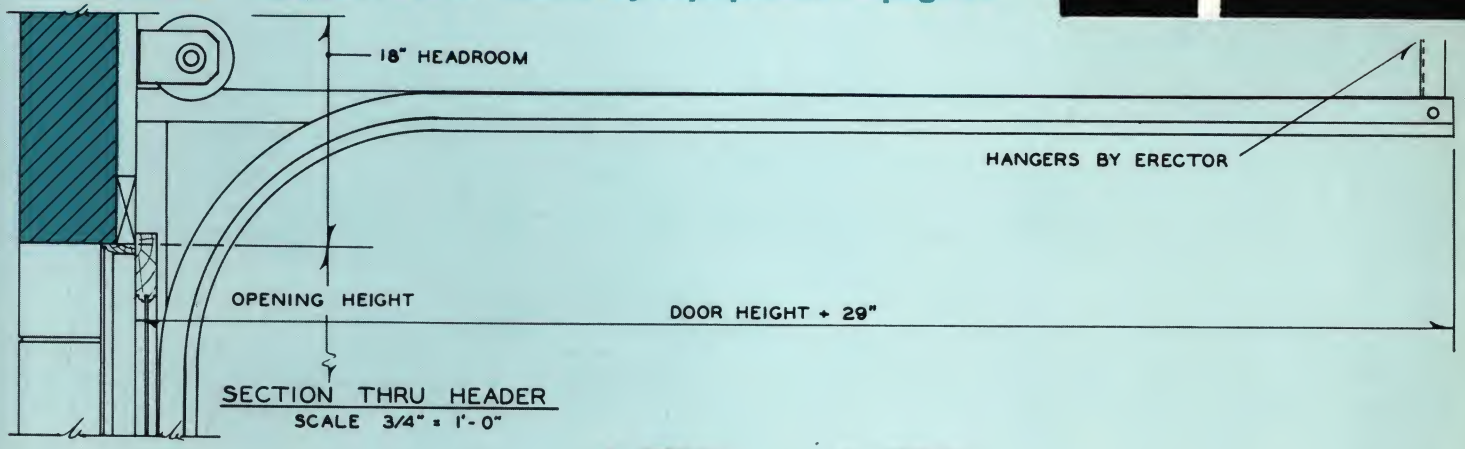
LARGE COMMERCIAL and INDUSTRIAL

500 sq. ft. max. model T18

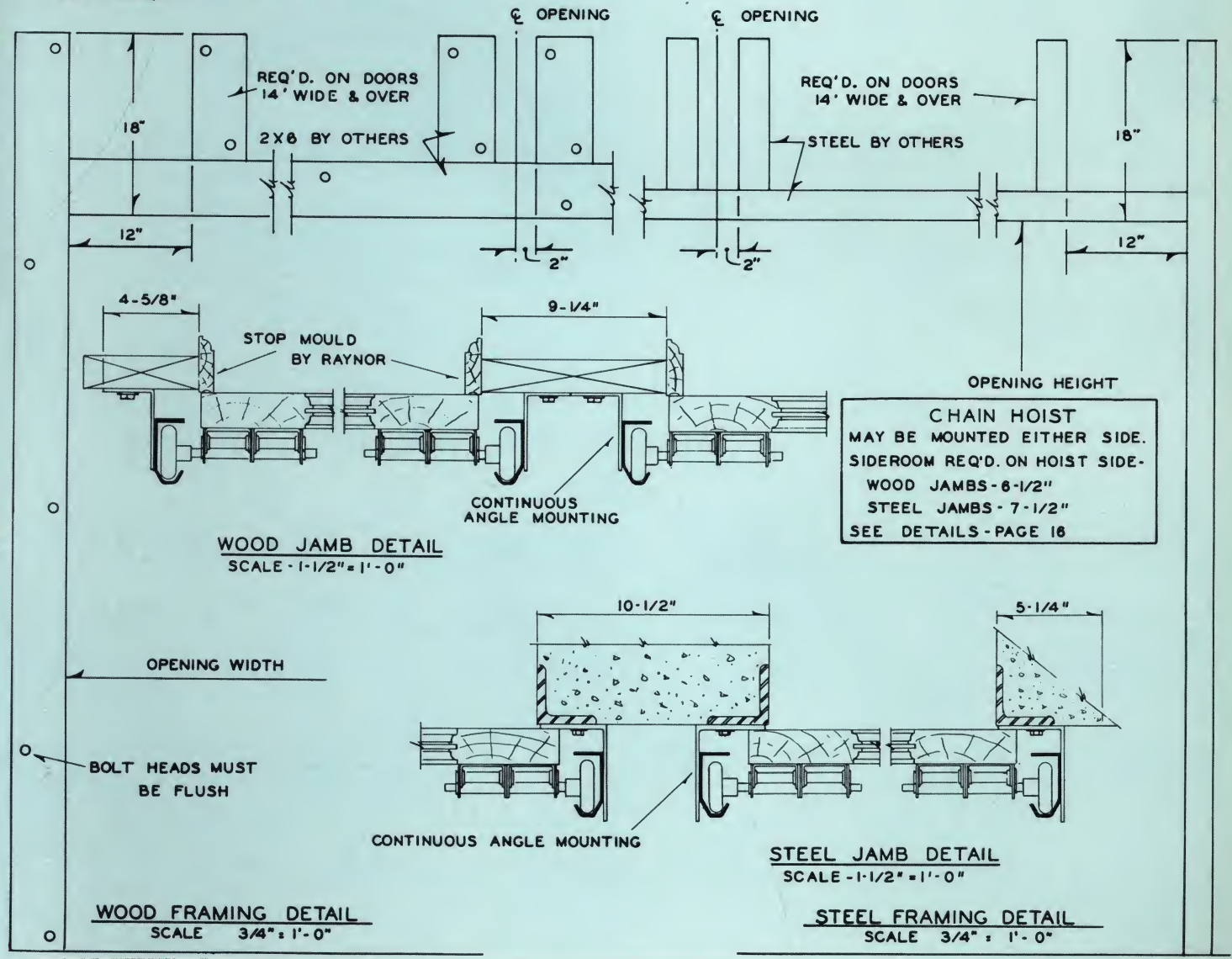
Not to exceed 32′–2″ wide Not to exceed 18′–1″ high

Door Details — pages 3, 4 & 5 Auxiliary Equipment — page 16

16i Ray NORMAL HEADROOM



SECTION THRU HEADER
SCALE 3/4" = 1'-0"



WOOD JAMB DETAIL
SCALE - 1-1/2" = 1'-0"

STEEL JAMB DETAIL
SCALE - 1-1/2" = 1'-0"

WOOD FRAMING DETAIL
SCALE 3/4" = 1'-0"

STEEL FRAMING DETAIL
SCALE 3/4" = 1'-0"

SPECIFICATIONS: Doors shall be Raynor Model T18, 1¾″ thick, clear Sitka spruce or Douglas fir. Panels shall be ¼″ Dorlux.

Heavy gauge 3″ galvanized steel track with GRADUATED SEAL for Weather-tite closing. All hinges, brackets, etc., of heavy gauge galvanized steel. Vertical track mounted to steel or wood jambs with 3⅜″ x 5″ x ⅛″ angle. Horizontal track reinforced with 2½″ x 2″ x 3/16″ angle.

Doors shall be counterbalanced with heavy duty torsion springs on continuous ball bearing solid cross header shaft.

Doors shall be furnished with the necessary trusses, stiffeners, center track, etc., according to manufacturer's specifications.

Five pin tumbler cylinder lock.

Rollers shall be 3″ heavy duty ball bearing type with hardened races.

Doors shall be guaranteed for one year against defective material or workmanship.

Chain hoist or electric operation.

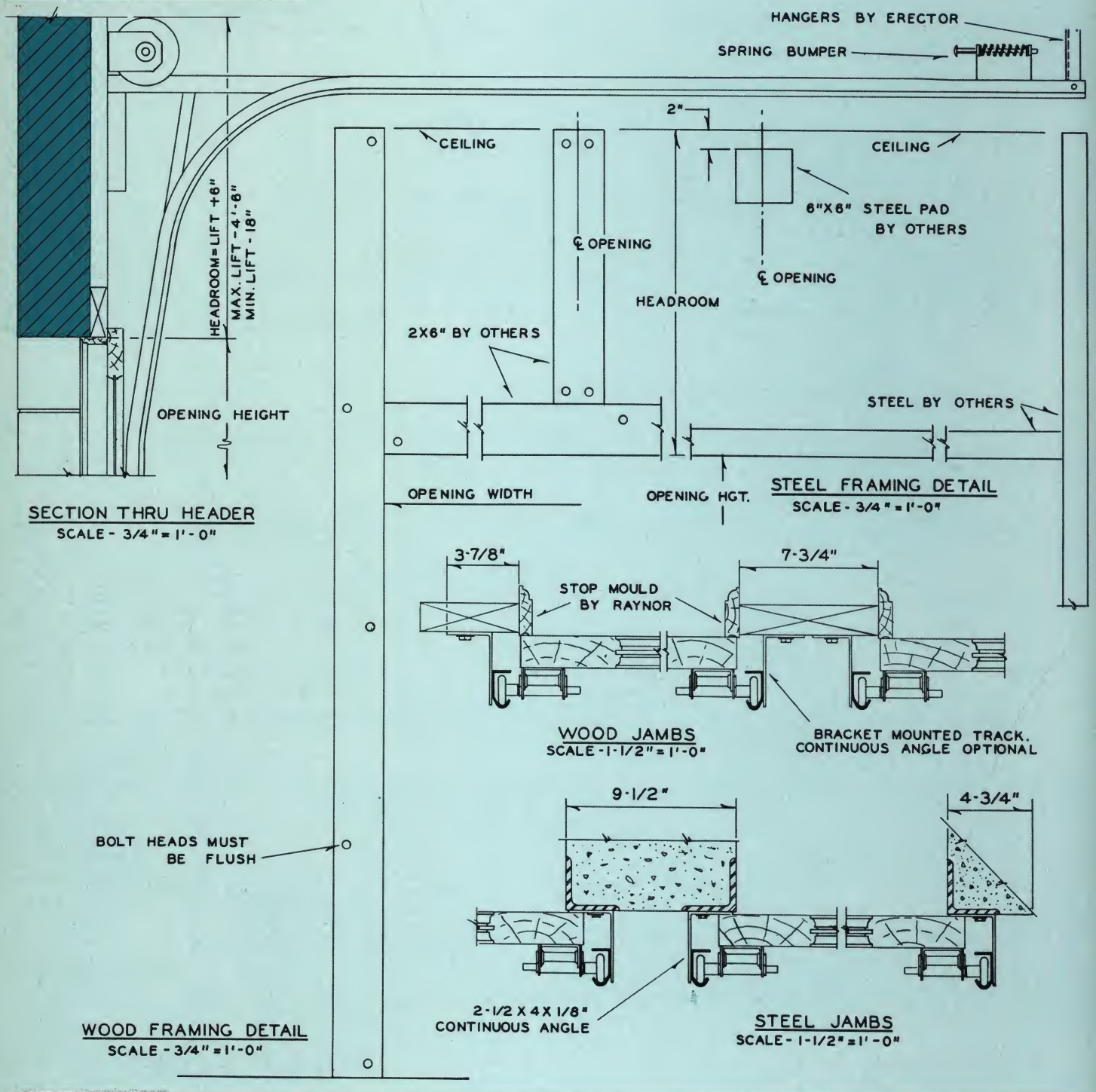
SMALL COMMERCIAL and INDUSTRIAL

128 sq. ft. max. model T24

Not to exceed 18′–2″ wide **Not to exceed 10′–7″ high**

Section Details — pages 3, 4 & 5 **Auxiliary Equipment — page 16**

LIFT CLEARANCE



SPECIFICATIONS: Doors shall be Raynor Model T24, 1¾″ thick, clear Sitka spruce or Douglas fir. Panels shall be ¼″ Dorlux.

Heavy gauge 2″ galvanized steel track with GRADUATED SEAL for Weather-tite closing. All hinges, brackets, etc., of heavy gauge galvanized steel. Vertical track mounted with brackets or continuous angle to wood jambs, mounted with continuous angle to steel jambs. Continuous angle size 2½″ x 4″ x ⅛″. Horizontal track reinforced with 2″ x 2″ x ⅛″ angle.

Doors shall be counterbalanced with heavy duty torsion springs on continuous, ball bearing cross header shaft. Differential cable drums.

Five pin tumbler cylinder side lock, right or left side installation.

Rollers shall be heavy duty ball bearing type with hardened races.

Doors shall be guaranteed for one year against defective material or workmanship.

Manual or electric operation.

MEDIUM COMMERCIAL and INDUSTRIAL

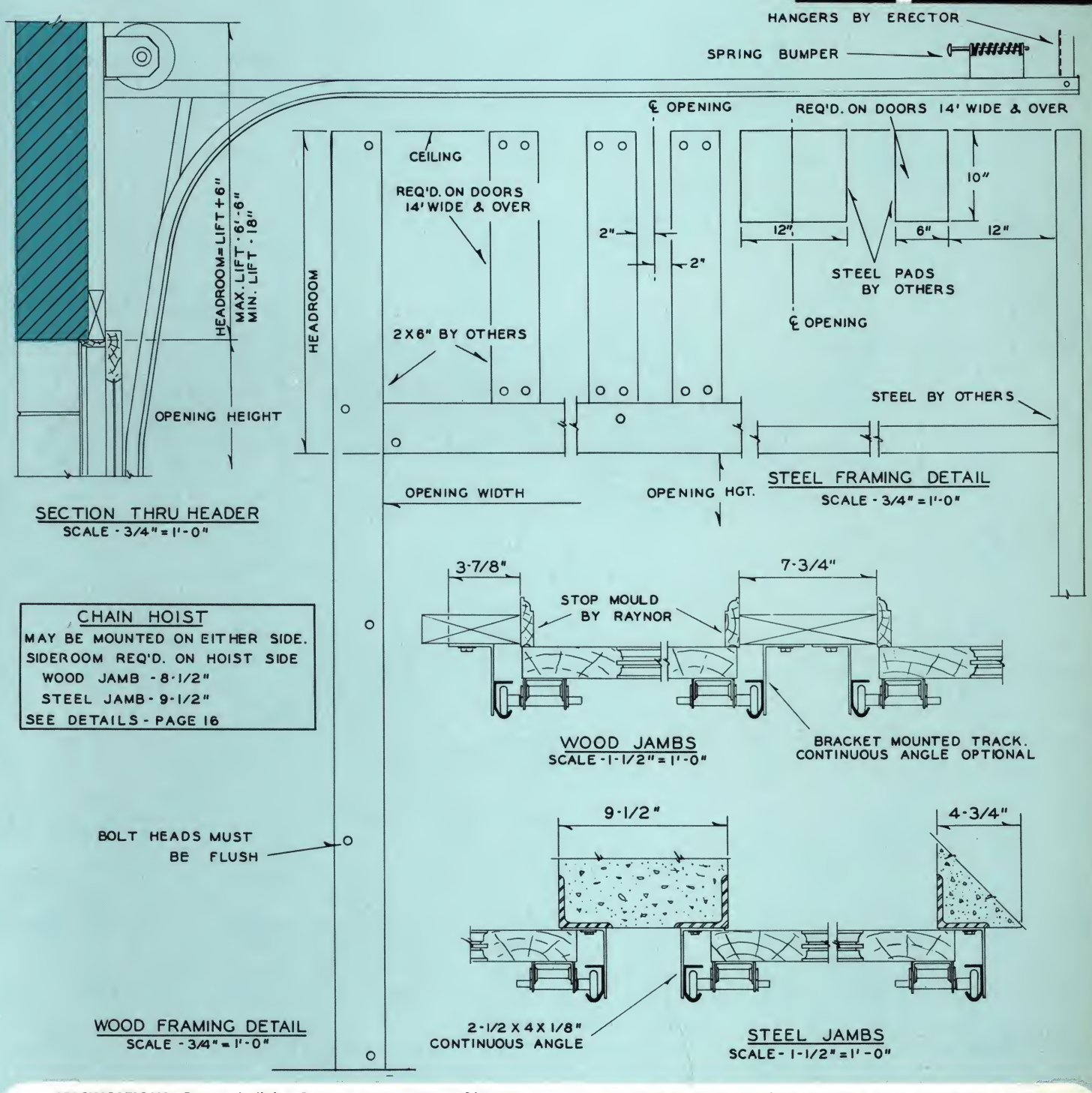
240 sq. ft. max. model T25

Not to exceed 20′–2″ wide **Not to exceed 16′–1″ high**

Door Details — pages 3, 4 & 5 **Auxiliary Equipment — page 16**

16i Ray

LIFT CLEARANCE



SPECIFICATIONS: Doors shall be Raynor Model T25, 1¾″ thick, clear Sitka spruce or Douglas fir. Panels shall be ¼″ Dorlux.

Heavy gauge 2″ galvanized steel track with GRADUATED SEAL for Weather-tite closing. All hinges, brackets, etc., of heavy gauge galvanized steel. Vertical track mounted with brackets or continuous angle to wood jambs, mounted with continuous angle to steel jambs. Continuous angle size 2½″ x 4″ x ⅛″. Horizontal track reinforced with 2½″ x 2″ x 3/16″ angle.

Doors shall be counterbalanced with heavy duty torsion springs on continuous, ball bearing solid cross header shaft. Differential cable drums.

Five pin tumbler cylinder side lock, right or left side installation.

Rollers shall be heavy duty ball bearing type with hardened races.

Doors shall be guaranteed for one year against defective material or workmanship.

Manual, chain hoist or electric operation.

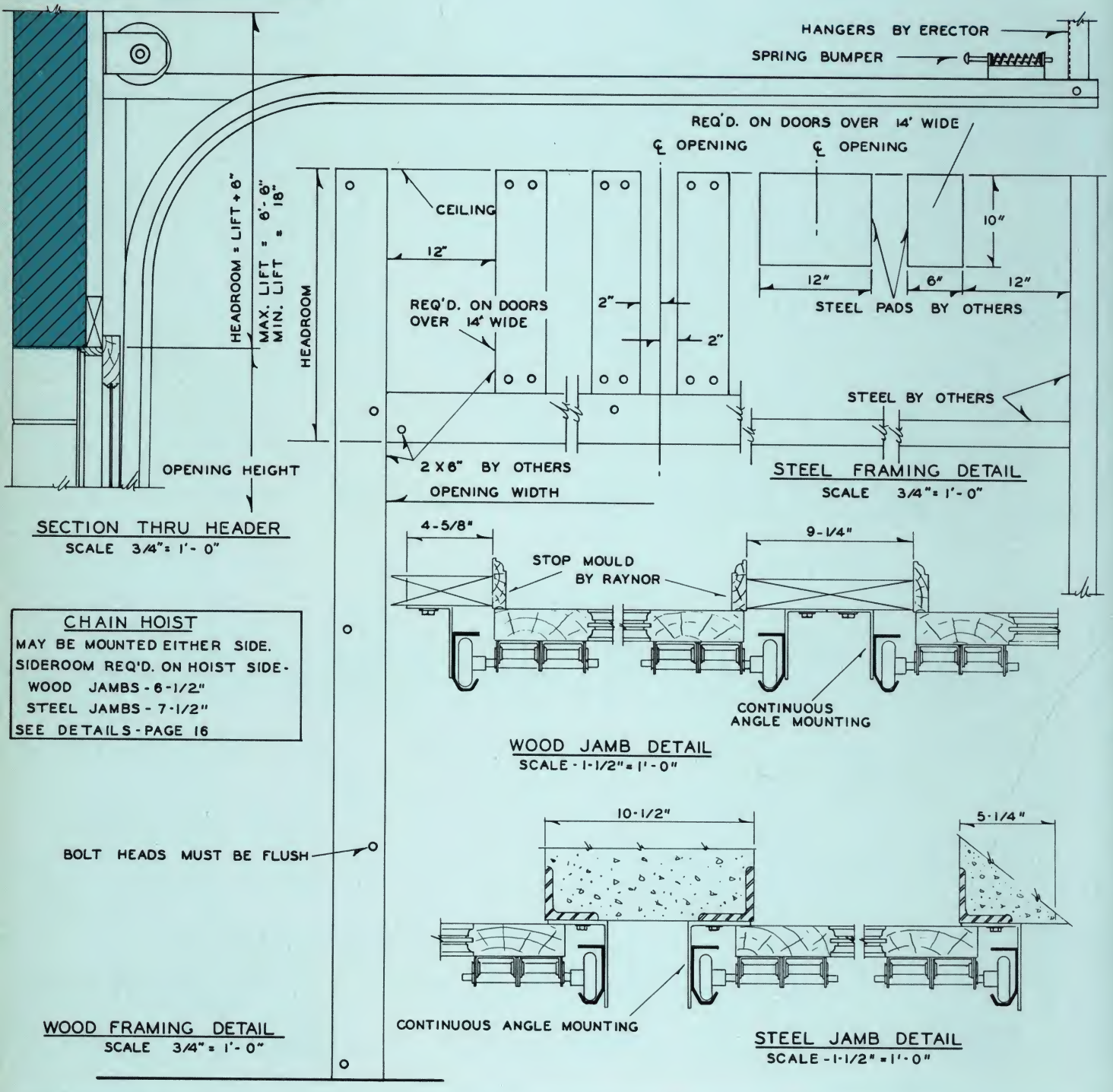
LARGE COMMERCIAL and INDUSTRIAL

325 sq. ft. max. model T 26

Not to exceed 32′–2″ wide **Not to exceed 18′ 1″ high**

Door Details — pages 3, 4 & 5 **Auxiliary Equipment — page 16**

LIFT CLEARANCE



SPECIFICATIONS: Doors shall be Raynor Model T26, 1¾″ thick, clear Sitka spruce or Douglas fir. Panels shall be ¼″ Dorlux.

Heavy gauge 3″ galvanized steel track with GRADUATED SEAL for Weather-tite closing. All hinges, brackets, etc., of heavy gauge galvanized steel. Vertical track mounted to steel or wood jambs with 3⅜″ x 5″ x ⅛″ angle. Horizontal track reinforced with 2½″ x 2″ x 3⁄16″ angle.

Doors shall be furnished with the necessary trusses, stiffeners, center track, etc., according to manufacturer's specifications.

Doors shall be counterbalanced with heavy duty torsion springs on continuous ball bearing solid cross header shaft. Differential cable drums.

Rollers shall be 3″ heavy duty ball bearing type with hardened races.

Doors shall be guaranteed for one year against defective material or workmanship.

Chain hoist or electric operation.

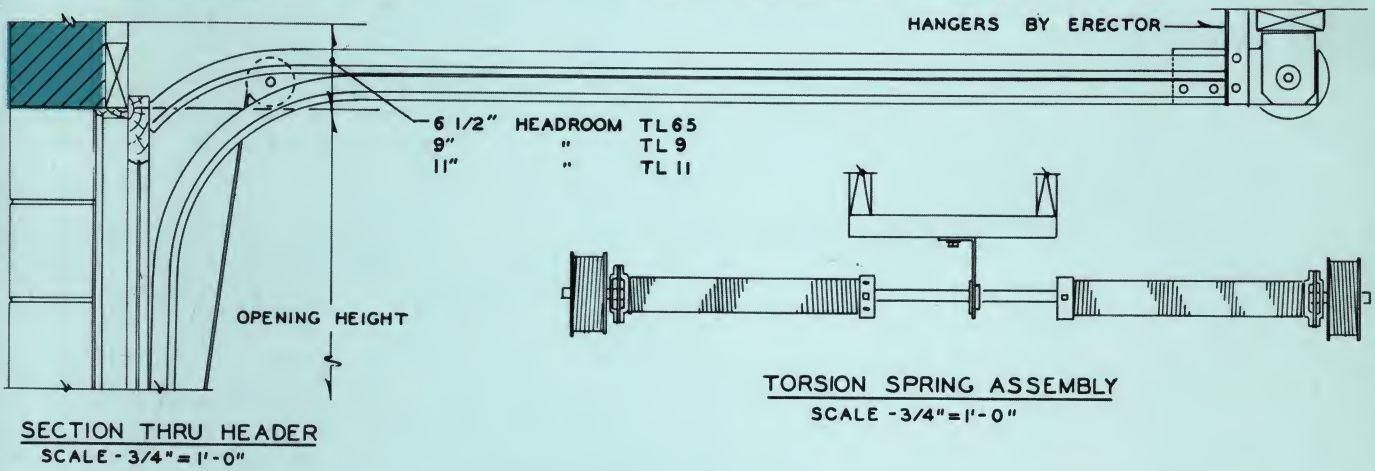
COMMERCIAL and INDUSTRIAL

144 sq. ft. max. — **model TL65**
Not to exceed 20′ 2″ wide — Not to exceed 12′-1″ high

200 sq. ft. max. — **model TL9**

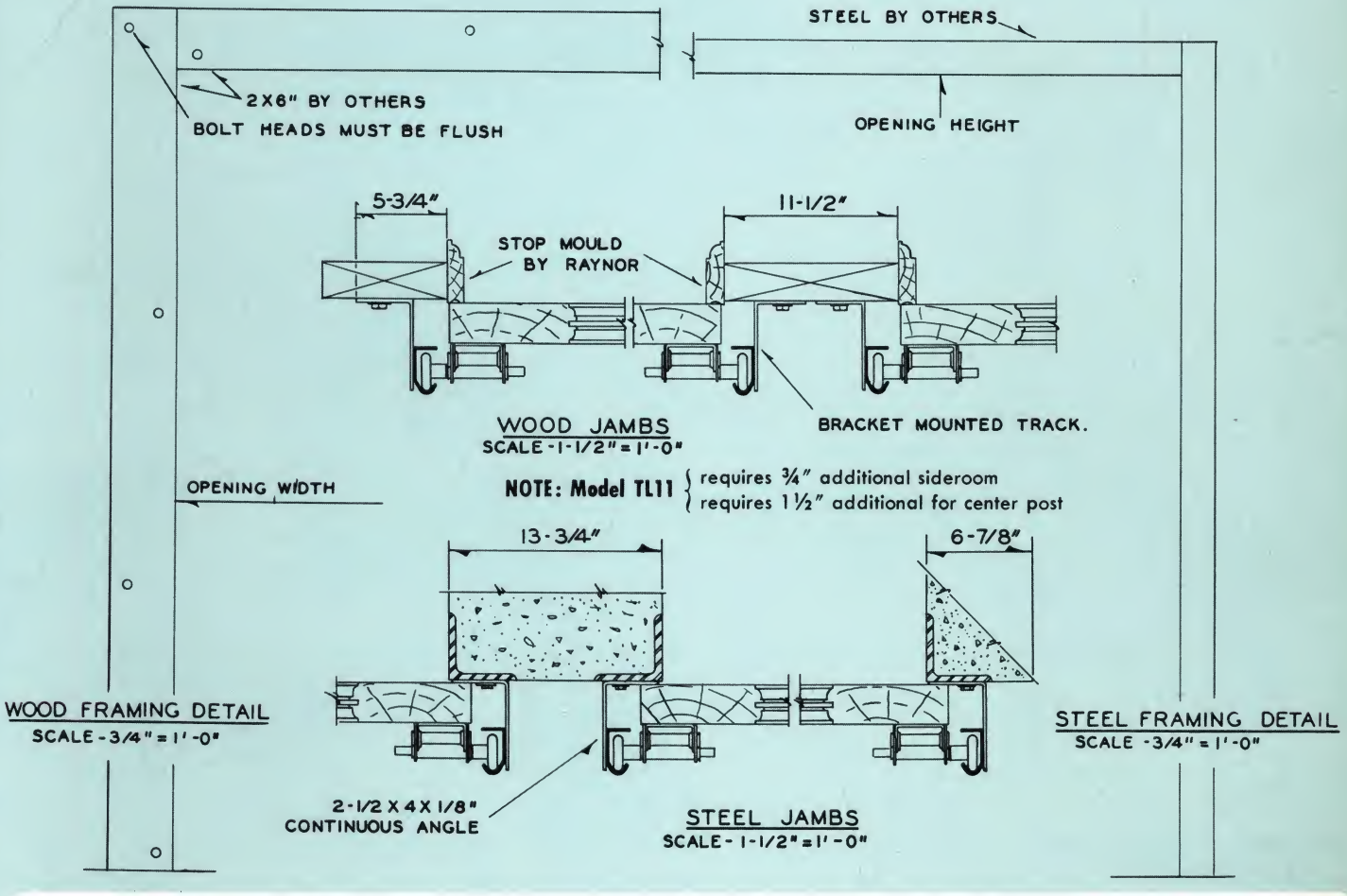
Door Details — pages 3, 4 & 5
Auxiliary Equipment — page 16

Also Available in 3″ Track — 280 Sq. Ft. Max. — MODEL TL11
Not to exceed 20′ 2″ wide — Not to exceed 14′-1″ high



SECTION THRU HEADER
SCALE - 3/4" = 1'-0"

TORSION SPRING ASSEMBLY
SCALE - 3/4" = 1'-0"



WOOD JAMBS
SCALE - 1-1/2" = 1'-0"

STEEL JAMBS
SCALE - 1-1/2" = 1'-0"

WOOD FRAMING DETAIL
SCALE - 3/4" = 1'-0"

STEEL FRAMING DETAIL
SCALE - 3/4" = 1'-0"

SPECIFICATIONS: Doors shall be Raynor Model TL65 (2″ track) TL11 (3″ track) 1¾″ thick, clear Sitka spruce or Douglas fir. Panels shall be ¼″ Dorlux.

Heavy gauge galvanized steel track with GRADUATED SEAL for Weather-tite closing. All hinges, brackets, etc., of heavy gauge galvanized steel. Vertical track mounted with brackets or continuous angle to wood jambs, mounted with continuous angle to steel jambs.

Doors shall be counterbalanced with heavy duty torsion springs on continuous, ball bearing solid cross header shaft.

Five pin tumbler cylinder side lock, right or left side installation.

Rollers shall be heavy duty ball bearing type with hardened races.

Doors shall be guaranteed for one year against defective material or workmanship.

Manual or electric operation.

VERTICAL
LIFT

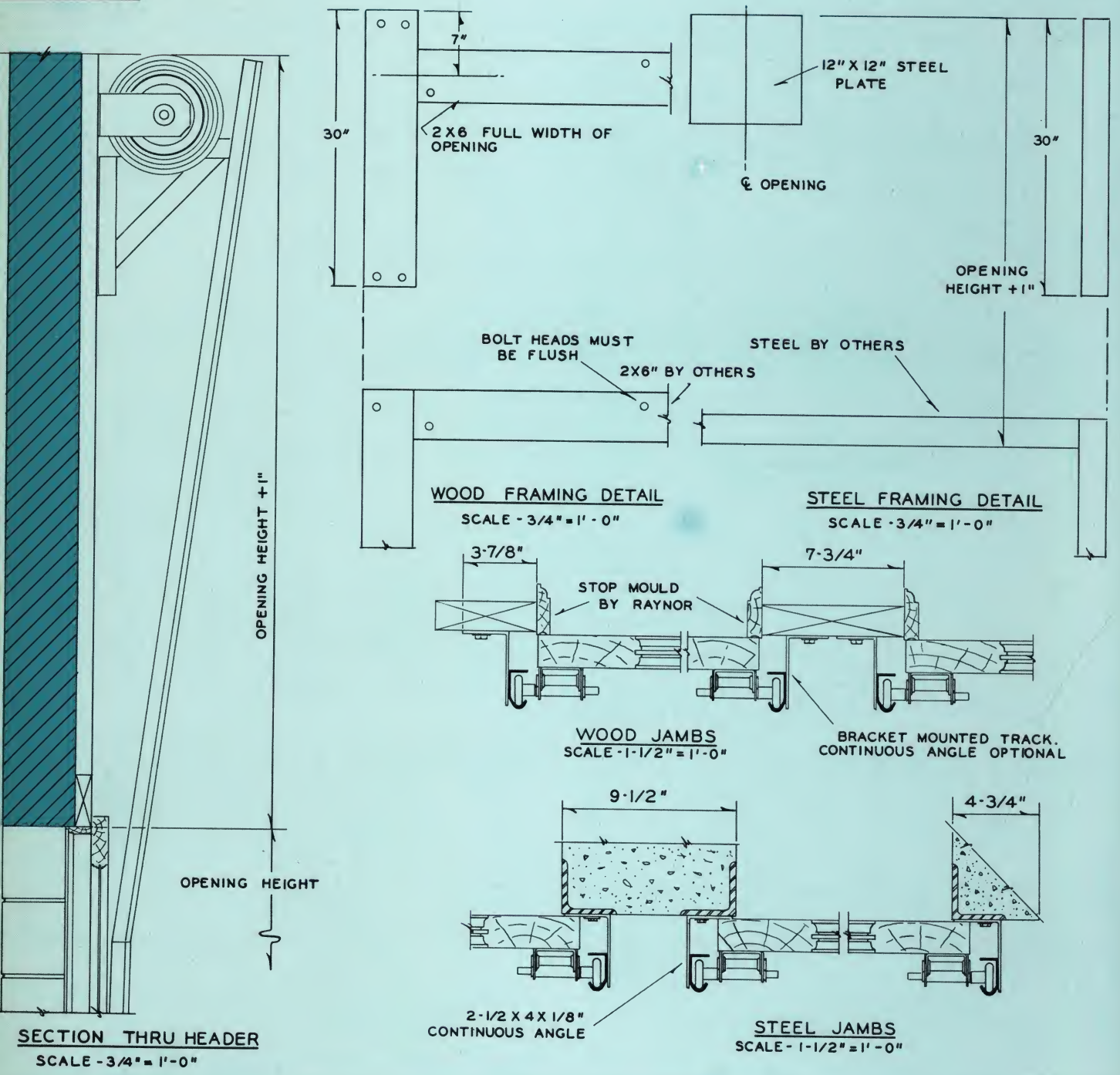
COMMERCIAL and INDUSTRIAL

168 sq. ft. max. model VL22

Not to exceed 20′–2″ wide **Not to exceed 14′–1″ high**

Weight Counterbalance Doors Available To 500 Sq. Ft.

Door Details — pages 3, 4 & 5 **Auxiliary Equipment — page 16**



SPECIFICATIONS: Doors shall be Raynor Model VL22, 1¾″ thick, clear Sitka spruce or Douglas fir. Panels shall be ¼″ Dorlux.

Heavy gauge 2″ galvanized steel track with GRADUATED SEAL for Weather-tite closing. All hinges, brackets, etc., of heavy gauge galvanized steel. Vertical track mounted with brackets or continuous angle to wood jambs, mounted with continuous angle to steel jambs. Continuous angle size 2½″ x 4″ x ⅛″.

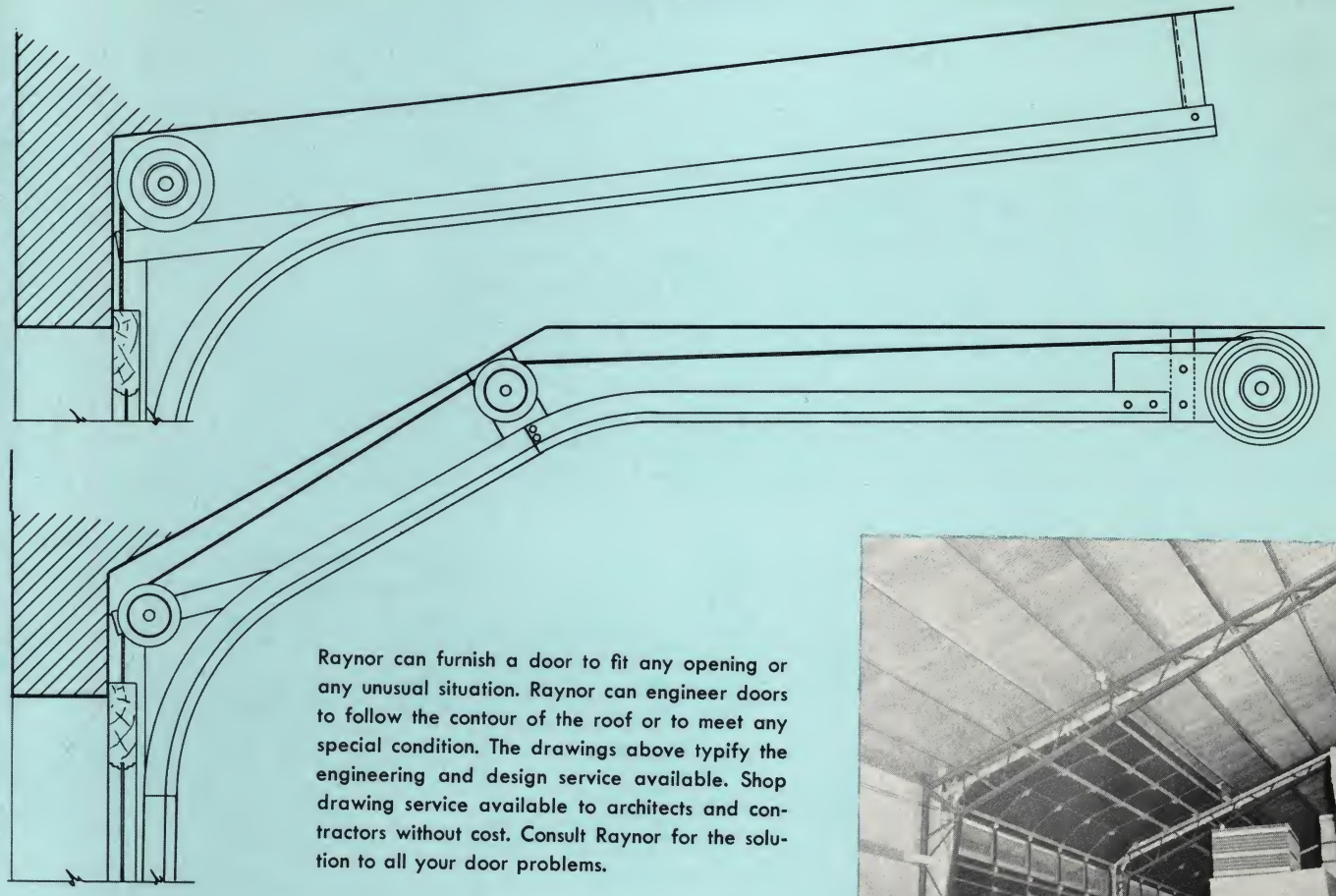
Doors shall be counterbalanced with heavy duty torsion springs on continuous ball bearing solid cross header shaft. Differential cable drums.

Five pin tumbler cylinder side lock, right or left side installation. Rollers shall be heavy duty ball bearing type with hardened races.

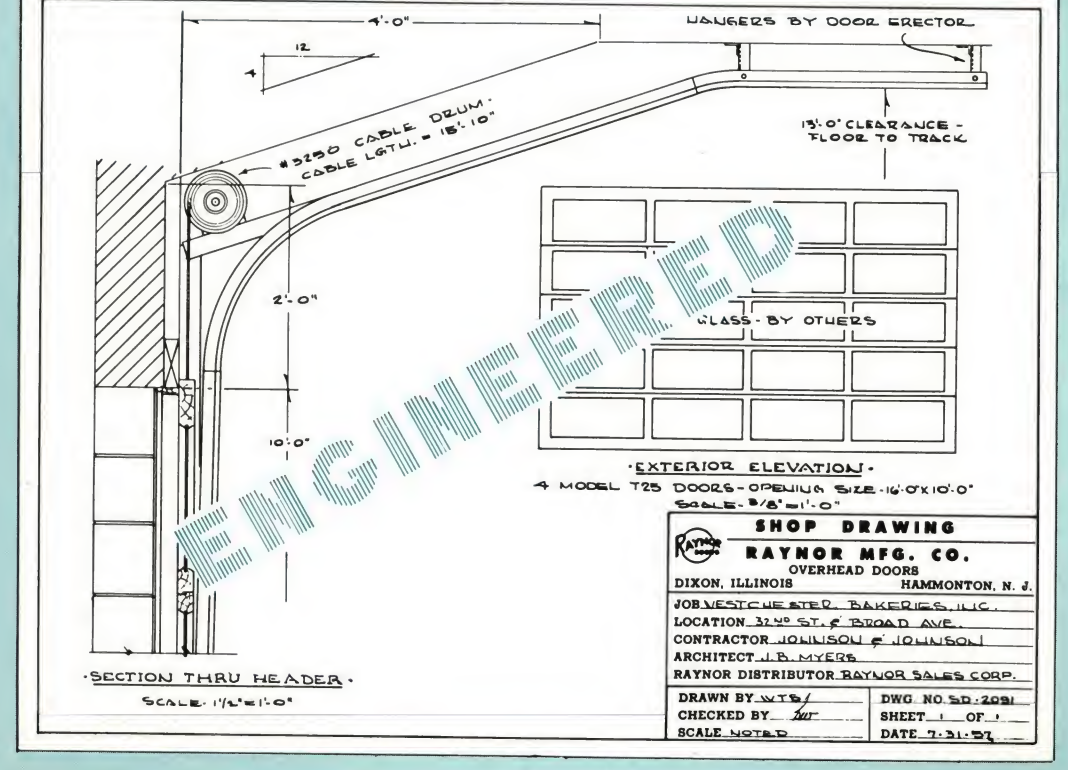
Doors shall be guaranteed for one year against defective material or workmanship.

Manual, chain hoist or electric operation.

SPECIAL APPLICATIONS

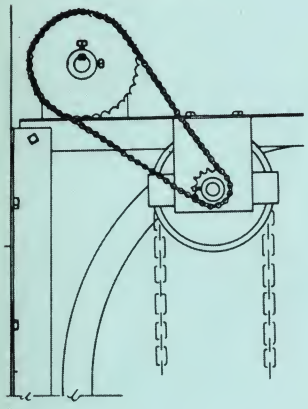


Raynor can furnish a door to fit any opening or any unusual situation. Raynor can engineer doors to follow the contour of the roof or to meet any special condition. The drawings above typify the engineering and design service available. Shop drawing service available to architects and contractors without cost. Consult Raynor for the solution to all your door problems.



Chain Hoist

TYPE C



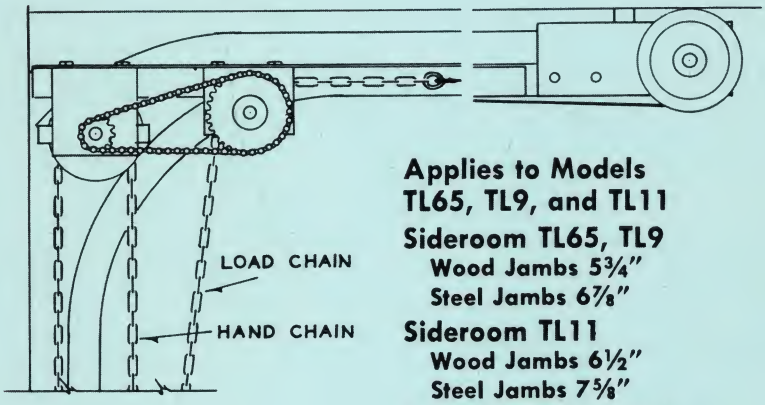
Applies to Models T16, T18, and T26

Sideroom T16
Wood Jamb 5¾"
Steel Jamb 6¾"

Sideroom T18 and T26
Wood Jamb 6½"
Steel Jamb 7½"

No additional headroom required.

TYPE L



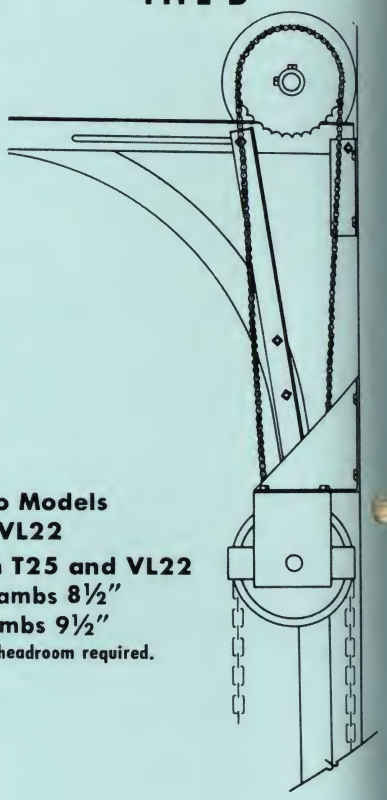
Applies to Models TL65, TL9, and TL11

Sideroom TL65, TL9
Wood Jambs 5¾"
Steel Jambs 6⅞"

Sideroom TL11
Wood Jambs 6½"
Steel Jambs 7⅝"

No additional headroom required.

TYPE D



Applies to Models T25 and VL22

Sideroom T25 and VL22
Wood Jambs 8½"
Steel Jambs 9½"

No additional headroom required.

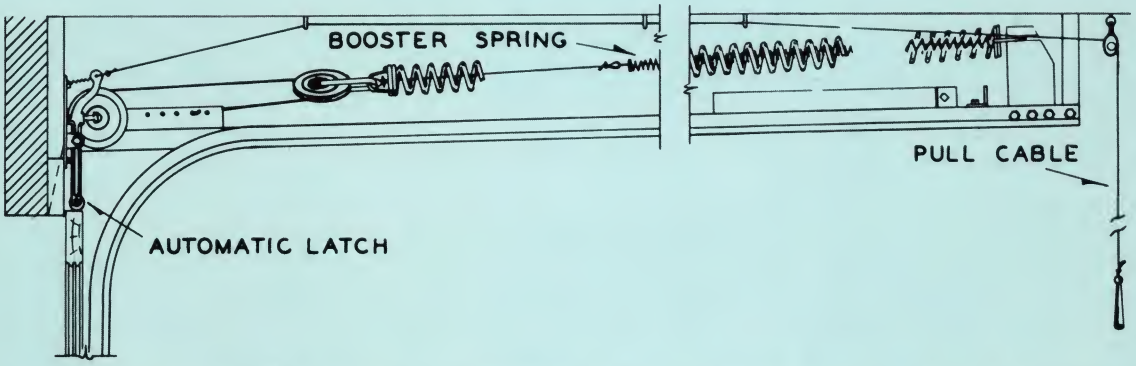
CHAIN HOIST

Chain hoists are recommended on doors over 13′ high or over 168 square feet. All hoists are equipped with ball bearing hand wheel and zinc plated hand chain. Reduction ratio is 3 to 1. Doors over 400 square feet supplied with Type C5 chain hoist with reduction ratio of 5 to 1.

QUICK RELEASE MECHANISM

Used in conjunction with trolley type electric operators, permitting easy switch to chain hoist operation in the event of power failure. See page 21 for details.

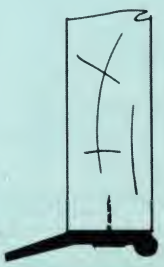
Automatic Door Opener



Recommended for use in fire stations or other installations where quick manual opening is desired. The door is released from a pull handle located conveniently at the rear of a fire truck or any other location. An inner spring within the main spring gives the door a quick start upward and cuts out about three feet from the floor. A friction brake at the rear of the horizontal track stops the upward motion of the door. The door must be pulled down manually and locks automatically when it reaches the floor. Recommended for use with extension spring counterbalance. Maximum door size 144 Sq. Ft.

Astragal

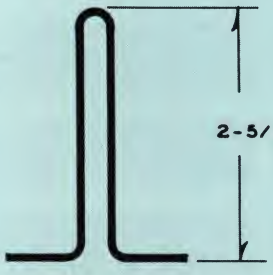
Rubber astragal is designed to conform to any slight uneveness in floor, forming a Weather-tite seal against rain and snow. Astragal also cushions the closing of the door. Raynor furnishes two types, as illustrated, and recommends the use of astragal on all doors.



DOUBLE CONTACT

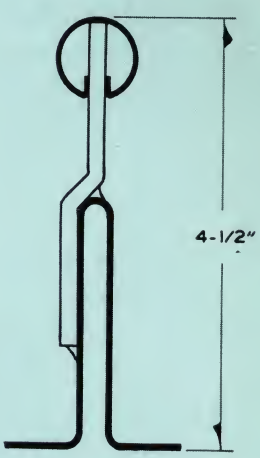
SINGLE CONTACT

COMMERCIAL and INDUSTRIAL
DOOR REINFORCING DETAILS

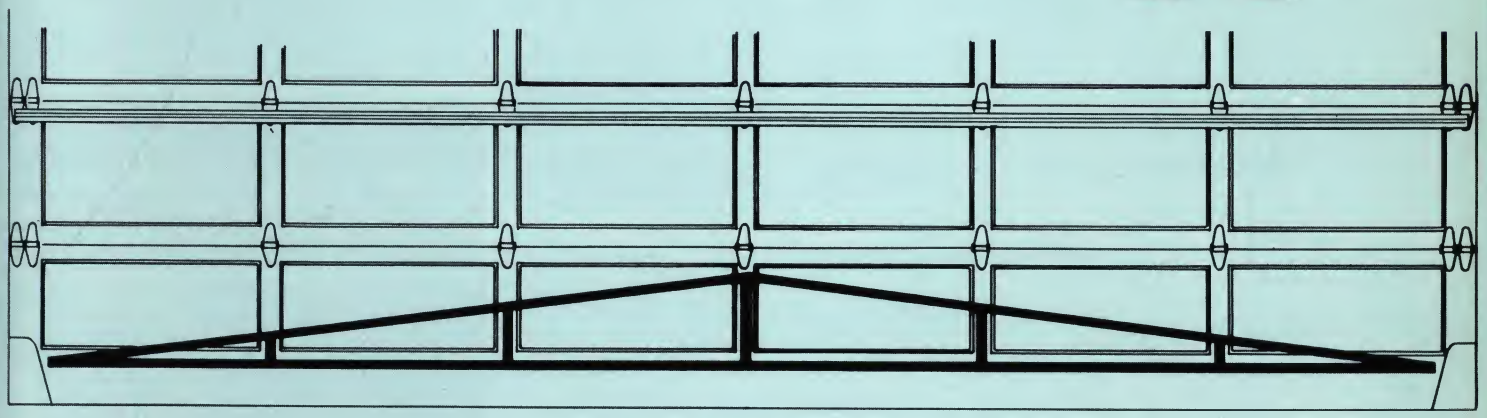


U-BAR STIFFENER

U-bar stiffeners are formed of 16 gauge galvanized steel, 2⅝" high for maximum rigidity. U-bar stiffeners are furnished on each section of doors over 12'-6" wide. Doors 20'-3" wide and wider are reinforced with a 4½" deep rigid truss on each section.

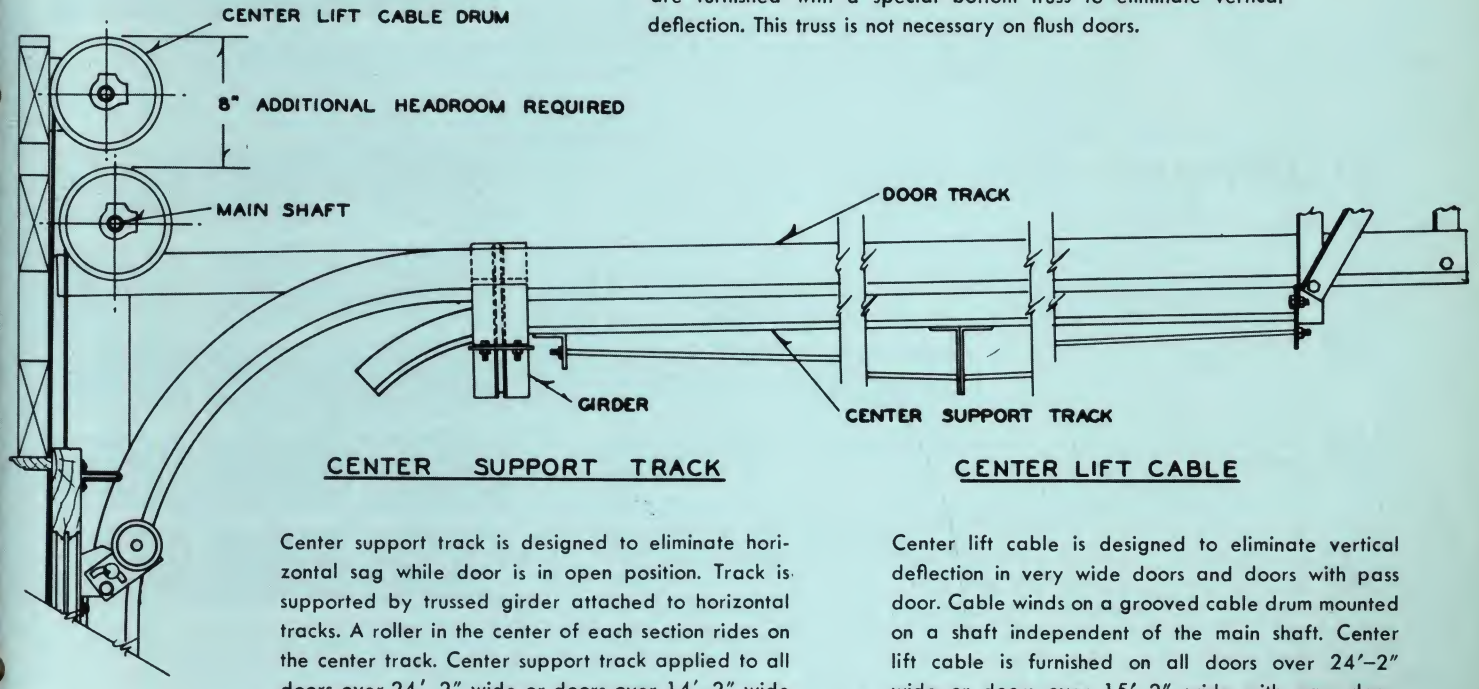


RIGID TRUSS



RIGID BOTTOM TRUSS

Raynor Commercial and Industrial doors 17'-6" to 24'-2" wide are furnished with a special bottom truss to eliminate vertical deflection. This truss is not necessary on flush doors.



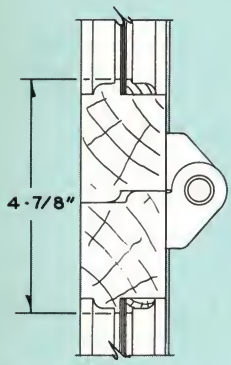
CENTER SUPPORT TRACK

Center support track is designed to eliminate horizontal sag while door is in open position. Track is supported by trussed girder attached to horizontal tracks. A roller in the center of each section rides on the center track. Center support track applied to all doors over 24'–2" wide or doors over 14'–2" wide with pass door and steel bottom rail. Requires no additional sideroom or headroom. Doors over 24' - 2" require 3" additional headroom.

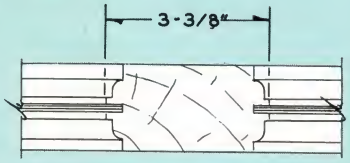
CENTER LIFT CABLE

Center lift cable is designed to eliminate vertical deflection in very wide doors and doors with pass door. Cable winds on a grooved cable drum mounted on a shaft independent of the main shaft. Center lift cable is furnished on all doors over 24'–2" wide or doors over 15'–2" wide with pass door. Requires 8" additional headroom.

WOOD CONSTRUCTION
Regular—Type 2

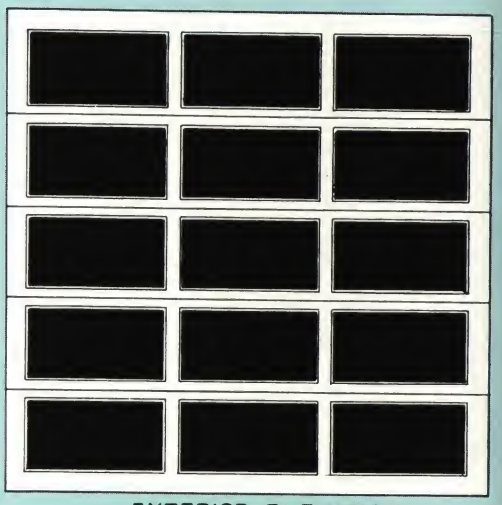


MEETING RAIL



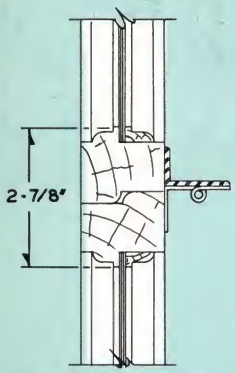
MUNTIN

Regular Construction, Type 2 — Stiles and rails are of the finest quality kiln dried Sitka Spruce or Douglas Fir, 1¾" thick. Section joints are mortised and tenoned, steel dowelled and waterproof glued. All sections sanded ready for paint. Stop moulding ¾" x 2⅝" and glass moulding furnished as standard equipment. If flush bottom section is required, see page 19. Specify type "A" or type "B" hardware.

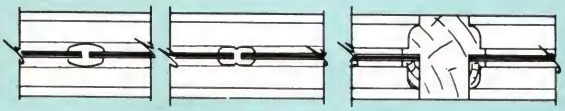


EXTERIOR ELEVATION

WOOD CONSTRUCTION
Narrow Line—Type 1



MEETING RAIL



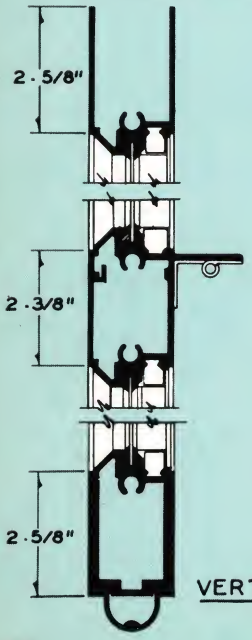
TYPES OF MUNTINS

PLASTIC ALUMINUM 1" WOOD

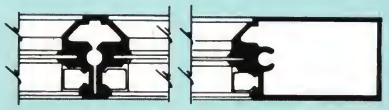
Narrow Line Construction, Type 1 — Stiles and rails are of the finest quality kiln dried Sitka Spruce or Douglas Fir, 1¾" thick. Section joints are mortised and tenoned, steel dowelled and waterproof glued. All sections sanded, ready for paint. Stop moulding ¾" x 2⅝" and glass moulding furnished as standard equipment. Specify type of muntin required. If flush bottom section is required, see page 19. Specify type "A" or type "B" hardware.

EXTERIOR ELEVATION

ALUMINUM CONSTRUCTION



VERTICAL SECTION



HORIZONTAL SECTION

Aluminum Construction — Raynor aluminum service station doors are made of 6063T6 extruded aluminum alloy, heat treated. All parts anodized for permanent luster. Glass and .062 aluminum panels are encased in vinyl moulding and are securely locked in place with a snap-in aluminum bead. Adjustable vinyl astragal is applied to bottom rail of door. 1⅜" high reinforcing web is a part of the weathertite meeting rails. Fixed sections, transom sections and pass doors can be furnished, made of extruded aluminum to match overhead type door. Use "A" type hardware only.

EXTERIOR ELEVATION

DOOR DETAILS

HARDWARE TYPE A
Interior Lock

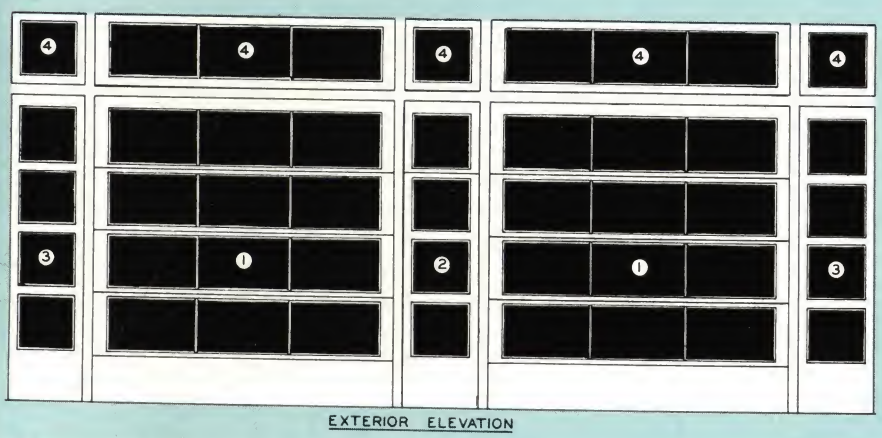
Interior Lock — Raynor type "A" service station door hardware is designed for use where no exterior lock is required. Interior type end stile lock may be mounted either side. Lock bar engages slot in track, with hole for padlock if required.

HARDWARE TYPE B
Exterior Lock

Exterior Lock — Raynor type "B" service station door hardware is designed for use where exterior locking is required. End stile lock with 5-pin tumbler brass cylinder may be mounted on either side. Lock bar engages slot in track.

Raynor Service Station Hardware Features

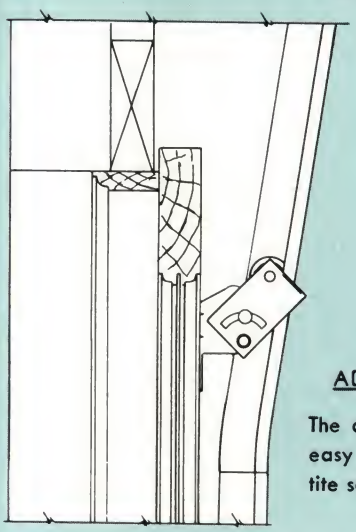
Vertical tracks — 2". 13 gauge galvanized steel with "GRADUATED SEAL" mounted to 10 gauge brackets or 2½" x 4" x ⅛" continuous angle.
Horizontal tracks — reinforced with 2" x 2" x ⅛" or 1½" x 1½" x ⅛" angle.
Counterbalance — heavy duty torsion springs on a continuous, ball-bearing gross header shaft. Lifting cables are 5/32" diameter preformed galvanized, combined breaking strength 4400 lbs.
Small Hardware — all hinges and other small hardware are fabricated from heavy gauge galvanized steel. All nuts, bolts, etc., are zinc plated.



EXTERIOR ELEVATION

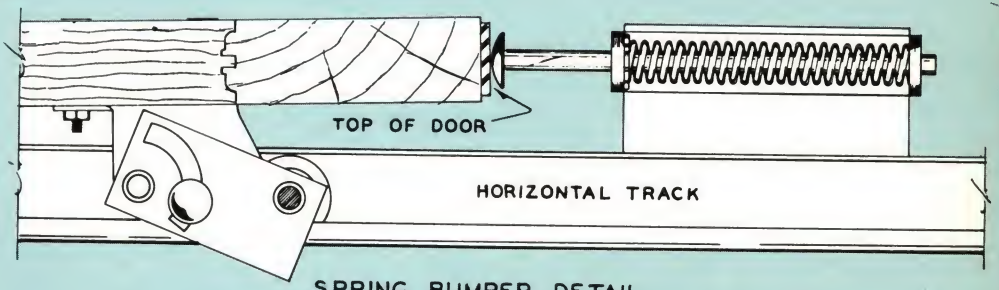
COMPLETE STATION FRONTS

Raynor furnishes complete service station fronts to meet specifications. Typical installation at left shows (1) overhead doors, (2) pass or access door with fixed transom above, (3) fixed panel and (4) transom sections. A pass door within the overhead door is also available as required.



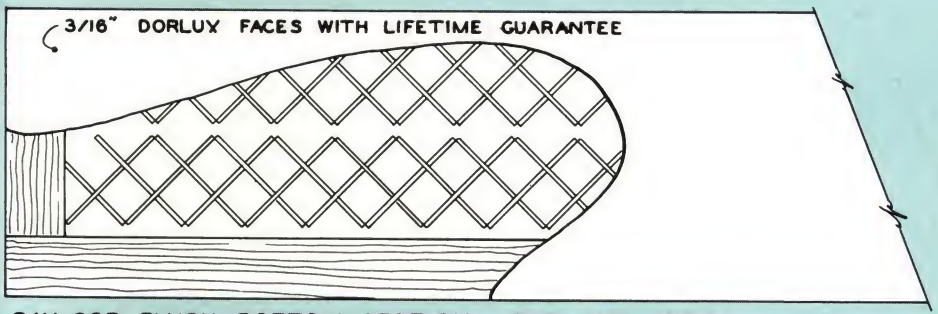
ADJUSTABLE TOP FIXTURE

The adjustable top fixture provides an easy method of maintaining a Weather-tite seal.



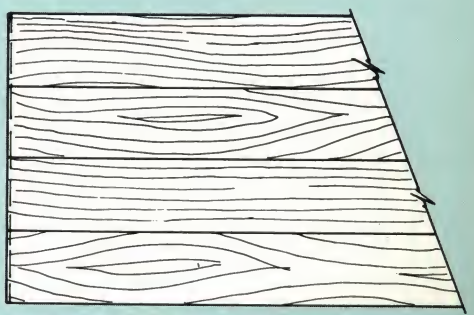
SPRING BUMPER DETAIL

Raynor compression type spring bumpers smoothly retard the upward motion of the door. They are furnished as standard equipment on all lift clearance doors.



RAY-COR FLUSH BOTTOM SECTION - CUT AWAY VIEW

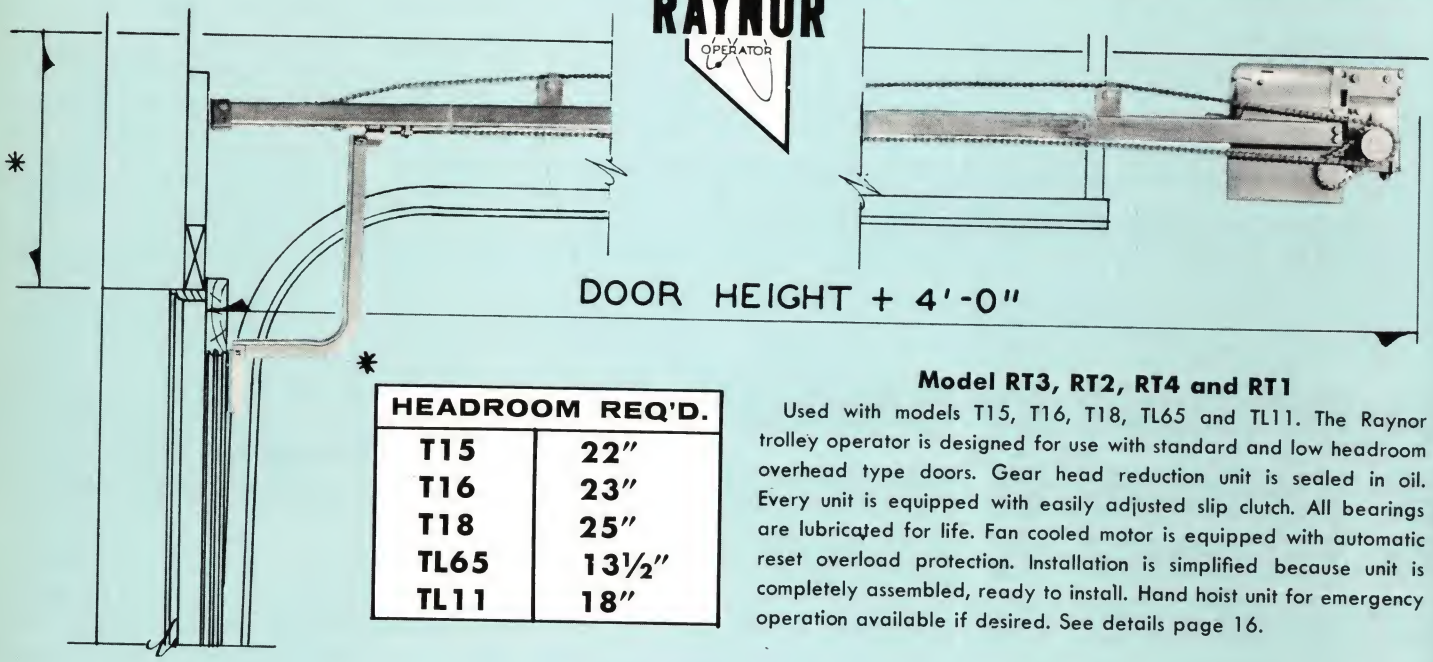
Service station flush bottom sections are made with the exclusive "Ray-Cor" design. Face material may be either Dorlux with lifetime guarantee, or ¼" exterior grade fir plywood. Face material is bonded to frame with waterproof glue under heat and pressure.



PLANK BOTTOM SECTION

Service station plank bottom sections are made of Sitka Spruce, 1¾" thick, edge glued and reinforced at each end with metal bars to prevent warping.

ELECTRIC
COMMERCIAL



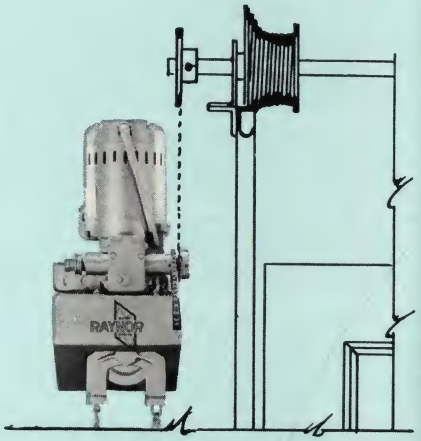
HEADROOM REQ'D.	
T15	22"
T16	23"
T18	25"
TL65	13½"
TL11	18"

Model RT3, RT2, RT4 and RT1

Used with models T15, T16, T18, TL65 and TL11. The Raynor trolley operator is designed for use with standard and low headroom overhead type doors. Gear head reduction unit is sealed in oil. Every unit is equipped with easily adjusted slip clutch. All bearings are lubricated for life. Fan cooled motor is equipped with automatic reset overload protection. Installation is simplified because unit is completely assembled, ready to install. Hand hoist unit for emergency operation available if desired. See details page 16.

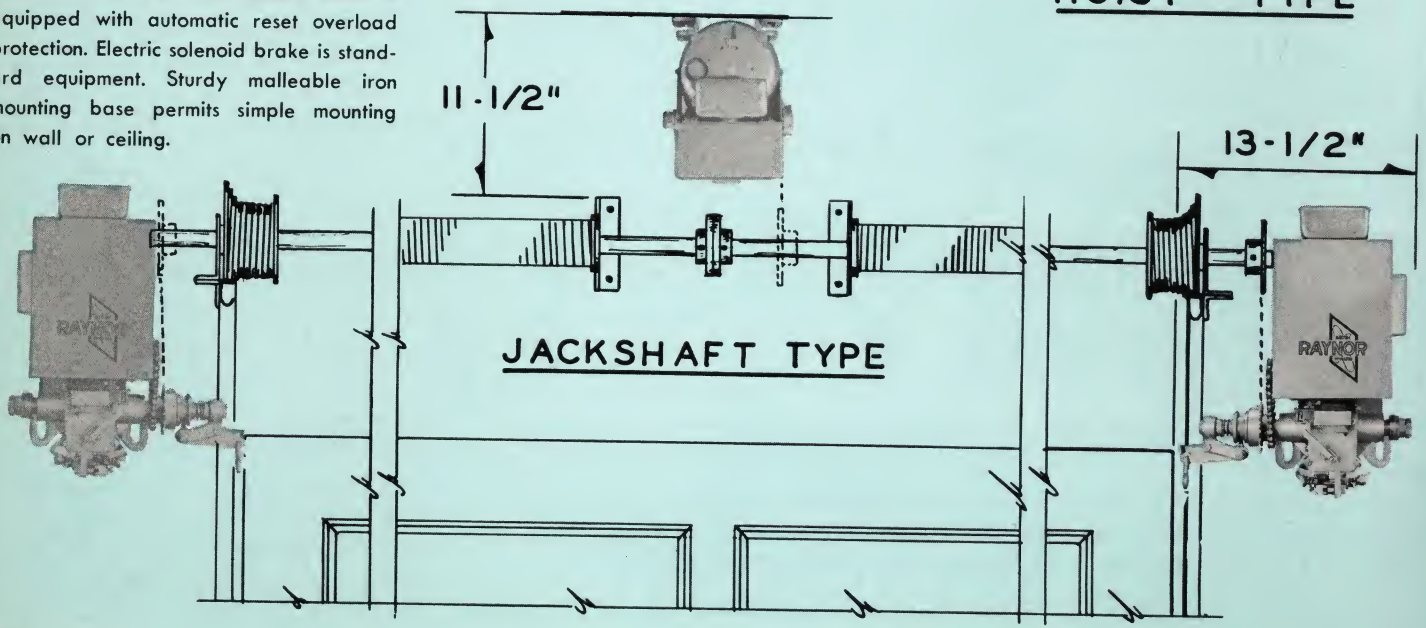
Model RJH3, RJH2, RJH4, and RJH1

Used with models T24, T25, T26, VL22 and WVL12. The Raynor hoist type operator is used with hy-lift or vertical lift doors where emergency hand hoist operation is desired. Unit is same as jackshaft type except for built-in hand hoist. Electric power is automatically shut off when hand hoist is engaged.



Model RJ3, RJ2, RJ4 and RJ1

Used with models T24, T25, T26, VL22 and WVL12. The Raynor jackshaft type operator is designed for use with hy-lift or vertical lift doors. Gearhead reduction unit is sealed in oil. Every unit is equipped with easily adjusted slip clutch. All bearings are lubricated for life. Fan cooled motor is equipped with automatic reset overload protection. Electric solenoid brake is standard equipment. Sturdy malleable iron mounting base permits simple mounting on wall or ceiling.



OPERATOR
and INDUSTRIAL

TYPES OF CONTROLS

***RA** Momentary contact (single button) STARTS on first press of button, STOPS on second press if door is moving, REVERSES on third press.

***RAD** Constant pressure (single button) REVERSES direction every time button is pushed, but button must be held in to keep running.

RB Momentary contact (three button) OPEN, CLOSE, STOP.

RC Momentary contact (three button) on OPEN and STOP, constant pressure on CLOSE.

RD Constant pressure (two button) both OPEN and CLOSE.

RE Momentary contact (two button) on OPEN, constant pressure on CLOSE, release of "close" button before full closing automatically reverses door to open position.

RR Momentary contact (single button) Instantly reversible, reverses direction every time button is pushed even if in motion.

***Control types RA & RAD are available only on RT3 operators, 110 volts single phase.**

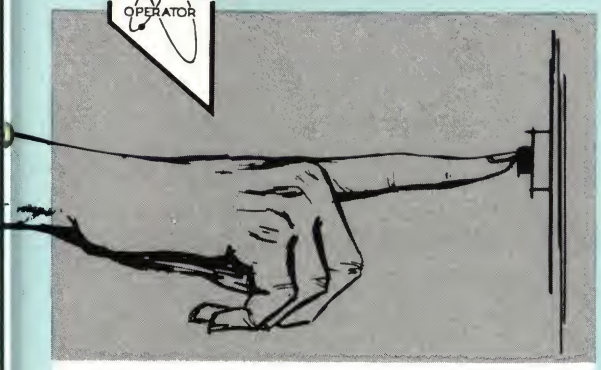
MAX. DOOR SIZE	OPERATOR MODEL	USED ON DOOR MODELS	VOLTAGE & PHASE	H.P.
200 SQ. FT.	RT3	T15 T16 TL65 TL11	110V-S 220V-S 220V-3 440V-3 550V-3	1 / 3
	RJ3 RJH3	T24 T25 VL22		
300 SQ. FT.	RT2	T16 T18 TL11	110V-S 220V-S 220V-3 440V-3 550V-3	1 / 2
	RJ2 RJH2	T25 T26 WVL12		
400 SQ. FT.	RT4	T18	220V-S 220V-3 440V-3 550V-3	3 / 4
	RJ4 RJH4	T26 WVL12		
500 SQ. FT.	RT1	T18	220V-3 440V-3 550V-3	1
	RJ1 RJH1	WVL12		

Specify operator model, voltage and phase, type of control and door height.

Electronic DOOR OPERATORS

FOR RESIDENTIAL USE

ELECTRIC RAYNOR OPERATOR

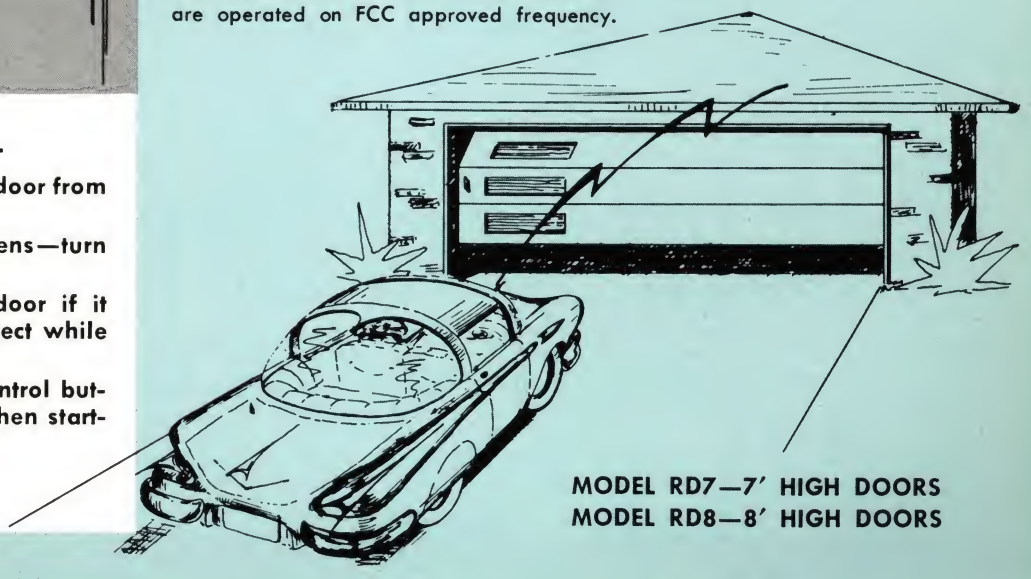


Raynor electric operators are equipped with enclosed gear head motors. Upper and lower limits of travel are positively controlled. Closing of door is cushioned by hydraulic cylinder and compression springs. Unit is furnished with button for control from inside garage and may be supplied with or without radio control.

Radio control may be supplied with tube type car transmitter or transistor hand unit. Both are operated on FCC approved frequency.

AUTOMATICALLY . . .

- V Open and close your Raynor door from inside your car.
- V Turn light on when door opens—turn light off when door is closed.
- V Stop and instantly reverse door if it comes in contact with an object while closing.
- V Stop in any position from control button—will reverse direction when started again.
- V Locks garage door closed.



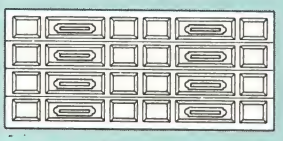
MODEL RD7—7′ HIGH DOORS
MODEL RD8—8′ HIGH DOORS

Presidential Line CARVED PANEL

Carved Panel Door construction is unique in that it allows the home owner to actually design his own garage door, yet receive the benefits of production line factory costs.

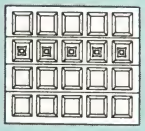
The Presidential names apply to the standard panel arrangements as illustrated below. The carved panel "Washington" design, for example, is contrived by using square panels keyed "N" and "Z." Carved designs can be selected and placed in any pattern to form your own original design.

15′ & 16′ wide



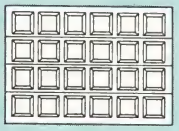
Fillmore

8′ wide

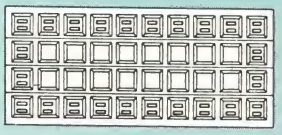


Washington

9′ & 10′ wide

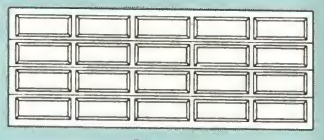


Adams



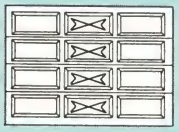
Jefferson

17′ & 18′ wide

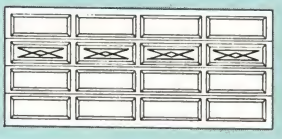


Pierce

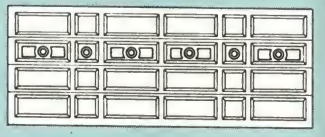
Madison



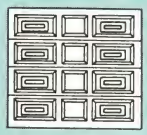
Monroe



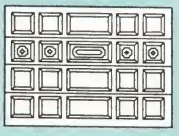
Jackson



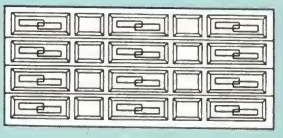
Buchanan



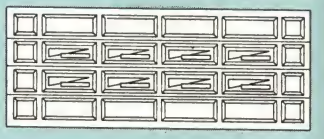
Van Buren



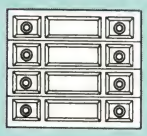
Harrison



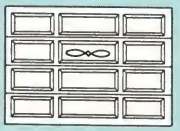
Tyler



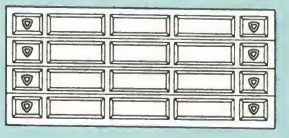
Lincoln



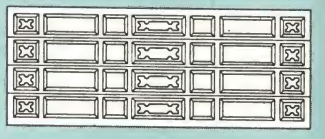
Polk



Polk

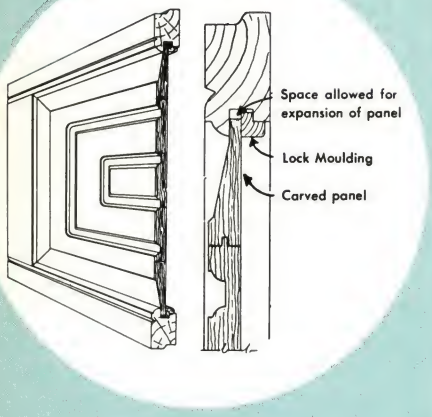


Taylor



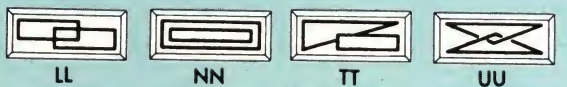
Grant

FLOATING PANEL

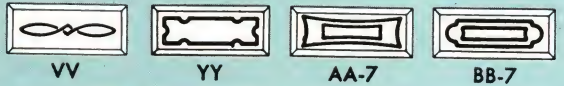


An exclusive feature . . . allows the panels to expand or contract due to varying moisture conditions without separating or distorting the stiles and rails. Each panel is held from in or out movement by the lock moulding.

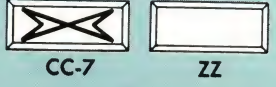
AA BB EE FF



LL NN TT UU



VV YY AA-7 BB-7



CC-7 ZZ

A E F N P Q R

T U V W X Y A-7

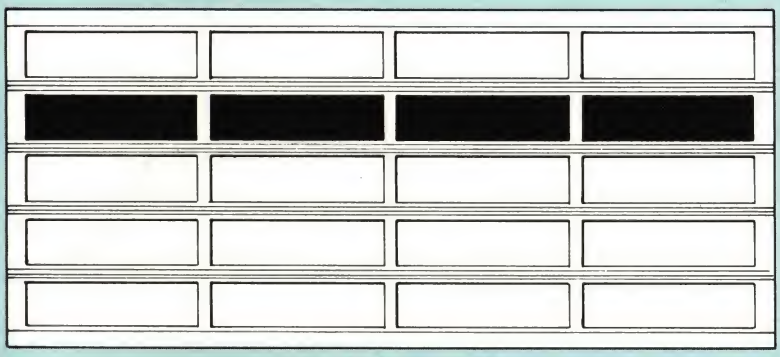
Z

RAYNOR - originator of the carved panel door

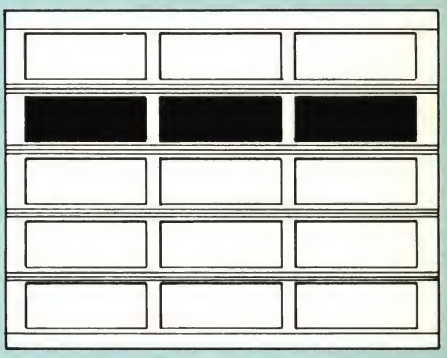
RANCH DOORS

The horizontal sweep of the handsome ranch style door is ideally suited for the long lines of modern homes. Built rugged for long, hard use, yet designed to provide easy, gentle operation in all kinds of weather.

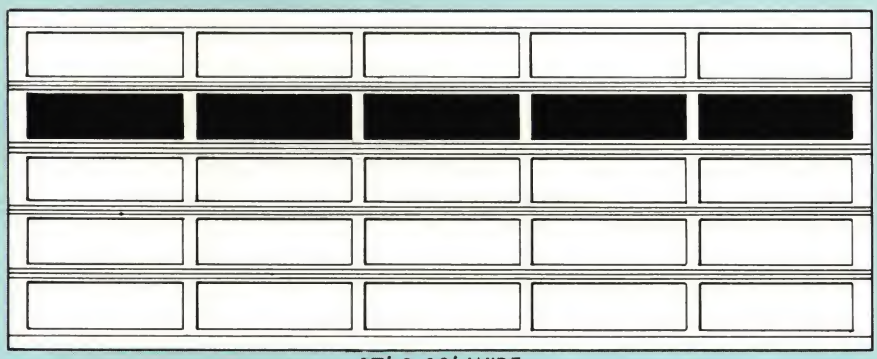
All quality construction — stiles and rails are 1⅜" or 1¾" Douglas Fir, Sitka Spruce or equal. Panels are of ¼" Ray-Lux with a lifetime guarantee or ¼" exterior 3-ply Fir plywood. All joints are blind-mortised and tenoned, steel dowelled and waterproof glued. Doors sanded both sides, ready to paint. Stop moulding and glass moulding furnished.



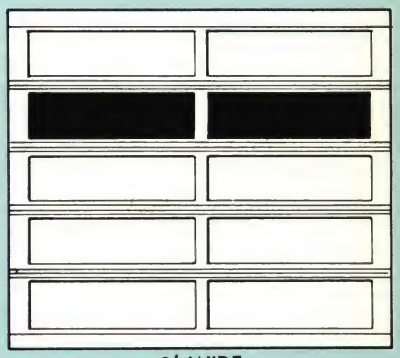
14', 15' & 16' WIDE



9' & 10' WIDE



17' & 18' WIDE



8' WIDE

Ray-Lux Lifetime Guarantee

The Raynor Manufacturing Company selected these door panels to give you the best in quality, beauty and service. These panels are guaranteed not to split, splinter, delaminate, or crack due to any natural conditions of weathering or exposure. If any Ray-Lux panels fail in this way, notify The Raynor Manufacturing Company giving conditions of failure. After verification of failure The Raynor Manufacturing Company will furnish a new door section or the entire door at its expense.

RAYNOR MANUFACTURING COMPANY
DIXON, ILLINOIS

STOCK SIZES

one-car	two-car
8'-0" X 6'-6"	15'-0" X 6'-6"
8'-0" X 7'-0"	15'-0" X 7'-0"
8'-0" X 8'-0"	16'-0" X 6'-6"
9'-0" X 6'-6"	16'-0" X 7'-0"
9'-0" X 7'-0"	16'-0" X 8'-0"
9'-0" X 8'-0"	17'-0" X 7'-0"
10'-0" X 7'-0"	18'-0" X 7'-0"

Special Sizes Available in All Doors

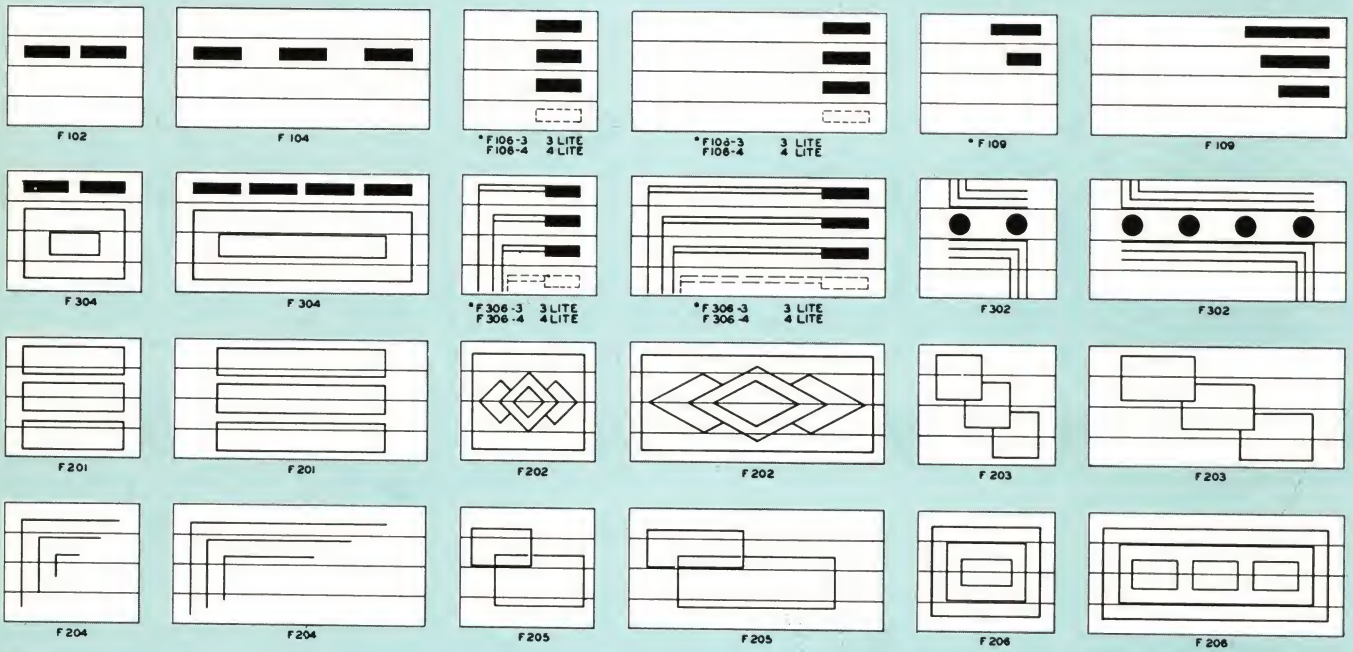
RAYNOR MFG. CO., DIXON, ILLINOIS

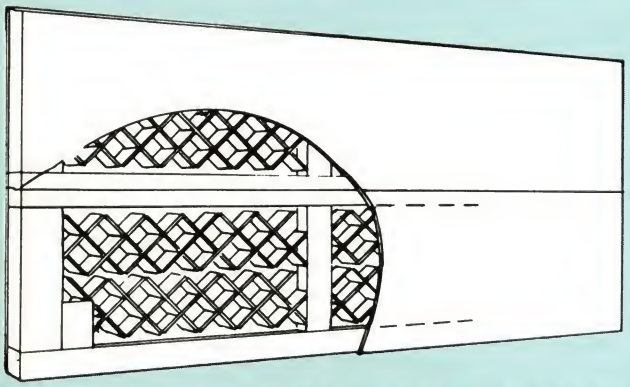
FLUSH DOORS

Raynor flush doors are constructed with rigid RAY-COR grid design. This special construction provides greater strength and durability and supplies a stronger foundation for the application of mouldings, rosettes or other designs. RAY-COR is constructed of sturdy ¼" interlocking strips of wood for a greater area of glue bond between the surface of the section and the core. Ray-Lux or exterior grade plywood is bonded to both sides of frame and grid with waterproof glue under great heat and pressure. No nails are used in Raynor flush doors to mar the beauty or cause unsightly rust stains.

EXTERIOR ELEVATIONS

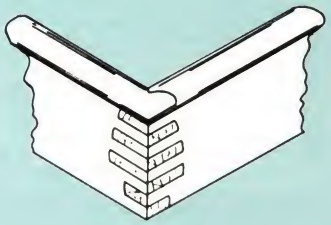
* These designs standard with lights on right side, specify "Lights left side" if desired.





RAY-COR CONSTRUCTION

Interlocking finger joints guarantee against any parting or opening of corners — the shape of the moulding assures adequate drainage, never allowing water to stand on the frame to cause rot.

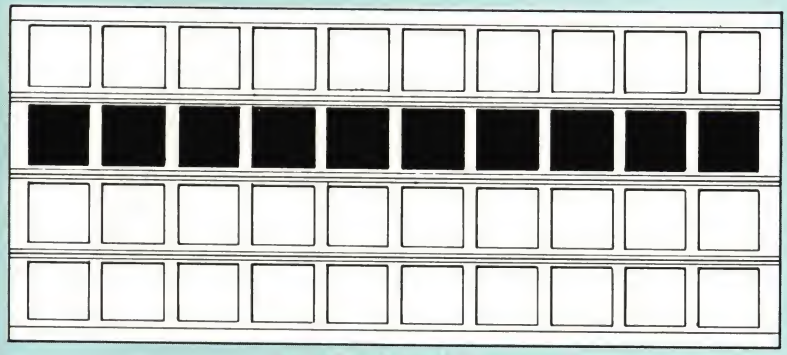


RAY-COR is a Raynor exclusive

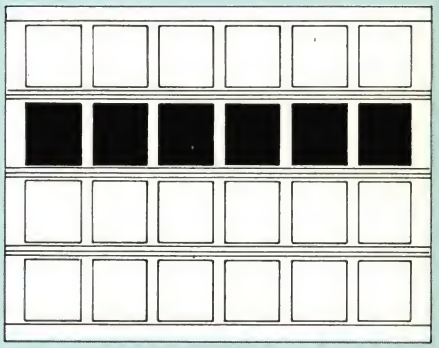
COLONIAL DOORS

Noted for its wide range of adaptability, the Colonial style is a favorite with home owners from coast to coast. Designed to give years of trouble-free service . . . easy to raise or lower in any weather.

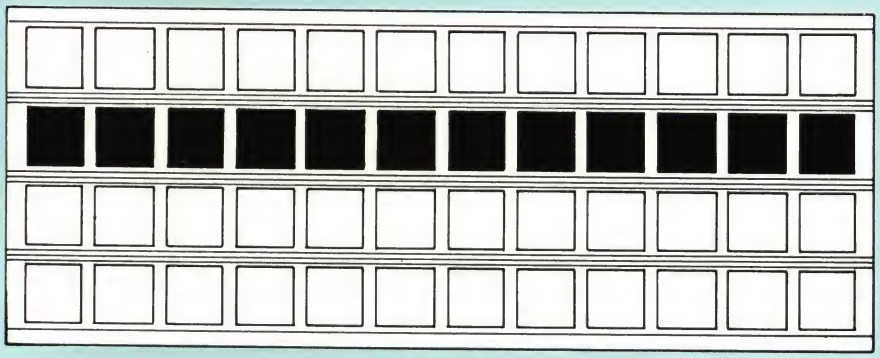
All quality construction — stiles and rails are 1⅜" Douglas Fir, Sitka Spruce or equal. Panels are of ¼" Ray-Lux with a lifetime guarantee or ¼" exterior 3-ply Fir plywood. All joints are blind-mortised and tenoned, steel dowelled and waterproof glued. Doors sanded both sides, ready to paint. Stop moulding and glass moulding furnished.



14', 15' & 16' WIDE

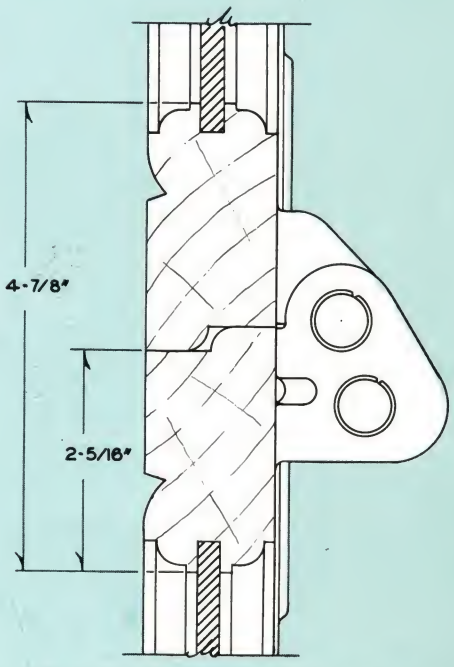


8', 9' & 10' WIDE



17' & 18' WIDE

RAYNOR
RAY-LUX
SEE US
RAY-LUX Lifetime Guarantee
The Raynor Manufacturing Company selected these door panels to give you the best in quality, beauty and service. These panels are guaranteed not to split, splinter, delaminate, or crack due to any natural conditions of weathering or exposure. If any Ray-Lux panels fail in this way, notify The Raynor Manufacturing Company giving conditions of failure. After verification of failure The Raynor Manufacturing Company will furnish a new door section or the entire door at its expense.
RAYNOR MANUFACTURING COMPANY
DIXON, ILLINOIS



SECTION THRU MEETING RAIL

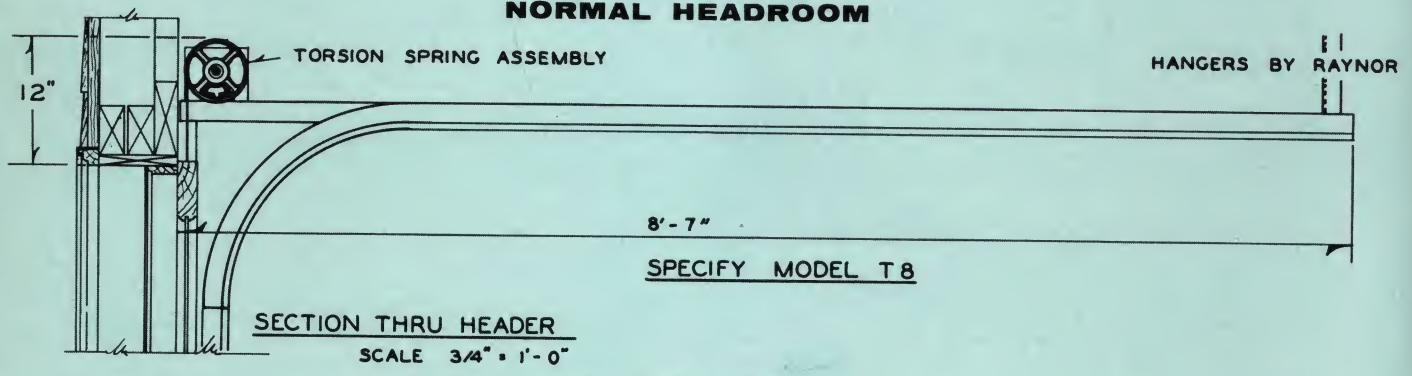
RAY-LUX Panels with Lifetime Guarantee

RAYNOR MFG. CO., DIXON, ILLINOIS

ONE CAR torsion spring model T8

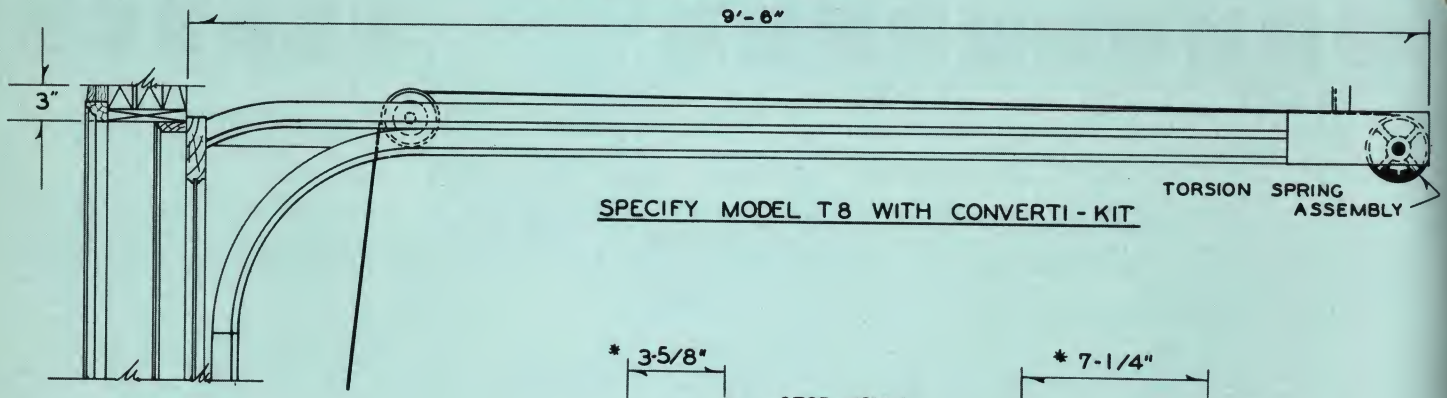
Available With Extension Springs Specify Model 70

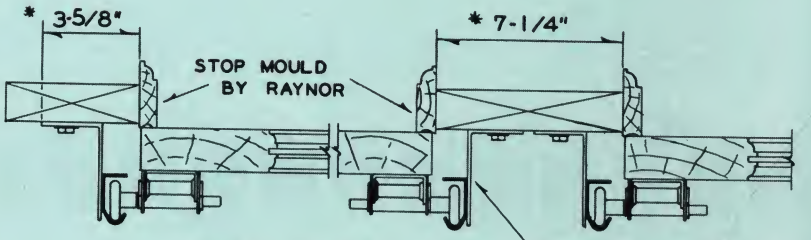
NORMAL HEADROOM



SECTION THRU HEADER
SCALE 3/4" = 1'-0"

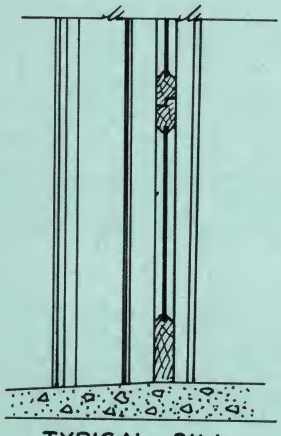
LOW HEADROOM





WOOD JAMBS
SCALE - 1-1/2" = 1'-0"

* WITH CONVERTI-KIT, SIDEROOM 4" CENTER POST 8"



TYPICAL SILL

Weatherstripping is recommended for application to the bottom rail of all doors. It seals any minor irregularities in the floor and acts as a cushion in closing. Specify "Astragal."

SPECIFICATIONS: Doors shall be Raynor Model T8 1 3/8" thick, clear Douglas fir or equal. Panels shall be 1/4" Ray-Lux with lifetime guarantee.

2" galvanized steel track with GRADUATED SEAL for Weather-tite closing. All hinges, brackets, etc., of heavy gauge galvanized steel. Vertical track bracket mounted for wood jambs.

Doors shall be counterbalanced with heavy duty torsion springs on continuous ball bearing cross header shaft.

Five pin tumbler cylinder side lock or center lock. Side lock may be installed on right or left side.

Rollers shall be full ball bearing type.

Doors shall be guaranteed for one year against defective material or workmanship.

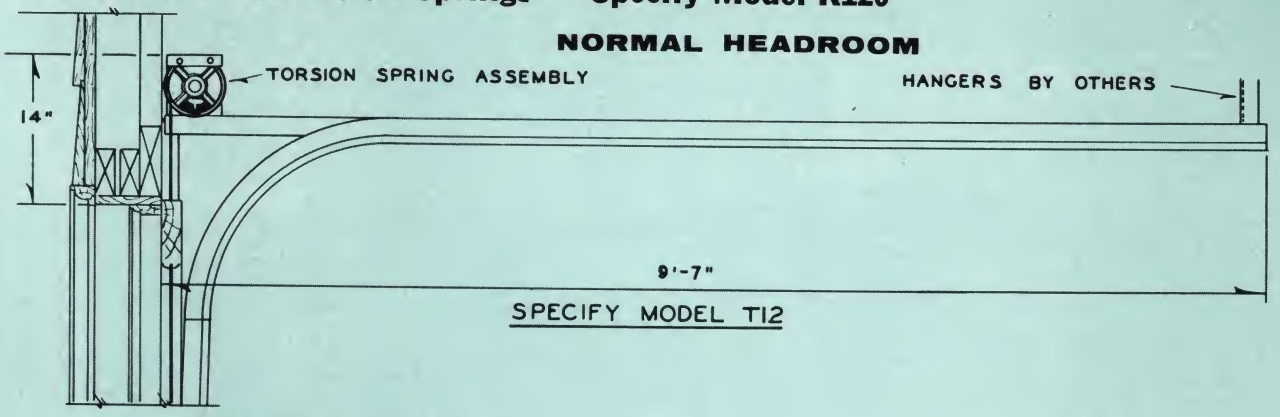
Manual or electrically operated.

HARDWARE

TWO CAR torsion spring model T12

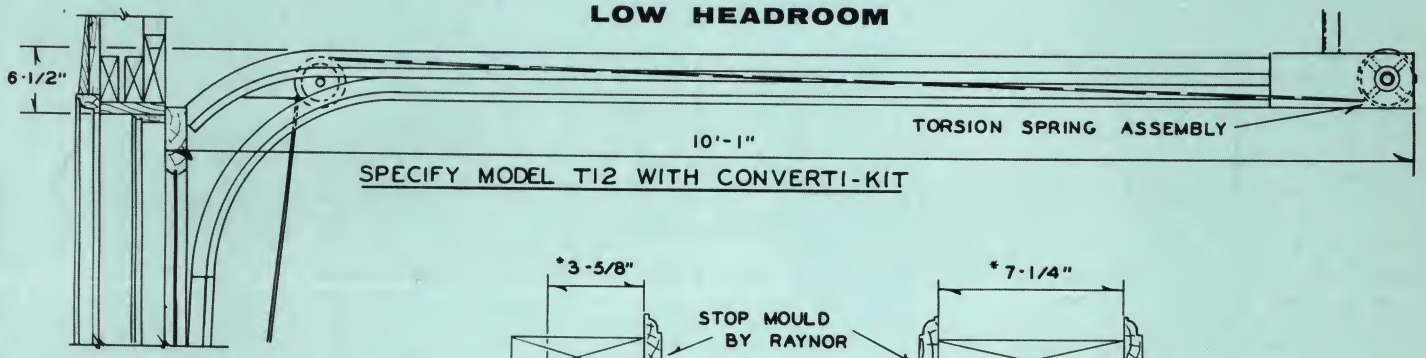
Available With Extension Springs **Specify Model R120**

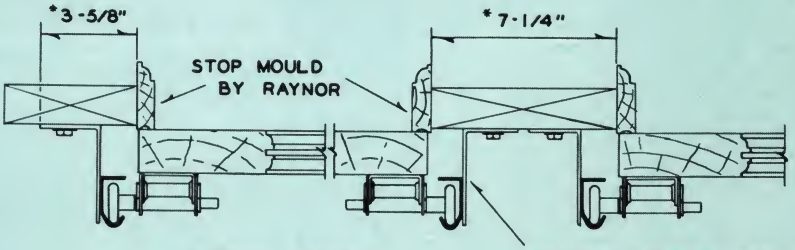
NORMAL HEADROOM



SECTION THRU HEADER
SCALE - 3/4" = 1'-0"

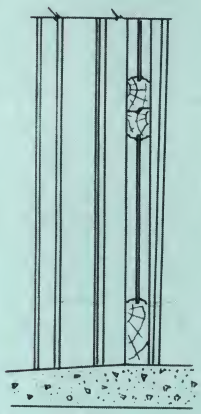
LOW HEADROOM



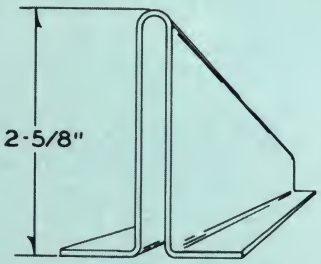


WOOD JAMBS
SCALE - 1-1/2" = 1'-0"

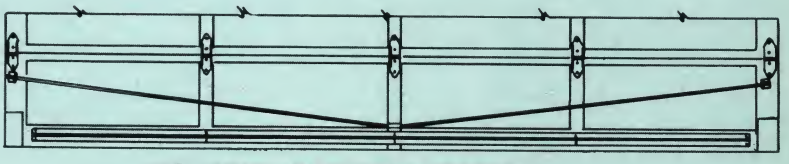
* WITH CONVERTI-KIT, SIDEROOM 5" - CENTERPOST - 10"



TYPICAL SILL



U-BAR STIFFENER



TRUSSED BOTTOM SECTION

SPECIFICATIONS: Doors shall be Raynor Model T12 1⅜" thick, clear Douglas fir or equal. Panels shall be ¼" Ray-Lux with lifetime guarantee.

2" galvanized steel track with GRADUATED SEAL for Weather-tite closing. All hinges, brackets, etc., of heavy gauge galvanized steel. Vertical track bracket mounted for wood jambs.

Doors shall be counterbalanced with heavy duty torsion springs on continuous ball bearing cross header shaft.

Five pin tumbler cylinder side lock, right or left side installation.

Rollers shall be heavy duty ball bearing type with hardened races.

Doors shall be reinforced with at least three U bar stiffeners, minimum 2⅝" deep, of galvanized steel.

Doors having wide panel construction are furnished with a special truss rod to prevent vertical deflection.

Doors shall be guaranteed for one year against defective material or workmanship.

Manual or electrically operated.

RAYNOR SALES OUTLETS

ALASKA
Fairbanks—*R. A. Davenny & Assoc.*

ALABAMA
Birmingham—*Barton Building Products Co.*
Montgomery—*Southern Sash of Montgomery*
Sheffield—*Southern Sash Wholesale*

ARIZONA
Phoenix—*Beach Building Specialties Inc.*

ARKANSAS
Fort Smith—*Morgan Supply Co.*
Jonesboro—*Carr-Adams Mfg. Co.*

CALIFORNIA
Carmichael—*Valley Overhead Door Co.*
Palmdale—*Edward's Overhead Garage Door Co.*
San Luis Obispo—*Croker-Raynor Door Sales*

COLORADO
Denver—*Ankmar Door Co.*
Fort Collins—*Wilkinson Lumber Company*
Grand Junction—*Wholesale Building Supply Co.*
Pueblo—*The Building Material Center, Inc.*

CONNECTICUT
Trumbull—*Kenneth Berchem*
Middlebury—*Waterbury Door Co.*
Plantsville—*Wood & Wood's, Inc.*

DISTRICT OF COLUMBIA
Washington, D.C.—*James Cassidy Company*

FLORIDA
Fort Lauderdale—*Floridale Products Inc.*
Jacksonville—*Builders Products Co.*
Panama City—*Panama Machinery & Supply*
Pensacola—*City Steel & Supply*
Sarasota—*Steiner Bldg. Supply Co.*
Tampa—*Denton & Company*

GEORGIA
Augusta—*Slusky Builders Supply, Inc.*
Savannah—*McCarthy, Inc.*
Tifton—*Short & Paulk Company*
Valdosta—*J. N. Bray Company*

IDAHO
Boise—*Idaho Acoustical & Bldg. Specialties*

ILLINOIS
Bloomington—*Weeks Raynor Door Sales*
Elgin—*William E. Kerchenfaut*
Peoria—*N. W. Miller Door Co.*
Rockford—*Mott Bros. Company*
Skokie—*Chicago Door Corp.*
Springfield—*Springfield Builders Supply Co.*

INDIANA
Bedford—*Bedford Building Supply Co.*
Evansville—*Lensing Wholesale Inc.*
Fort Wayne—*Great Lakes Distributing Corp.*
Gary—*Roy E. Appleton*
Indianapolis—*Keystone Distributors, Inc.*
Logansport—*Great Lakes Distributing Corp.*
South Bend—*Great Lakes Distributing Corp.*

IOWA
Bettendorf—*Raynor Door Sales*
Clinton—*Builders Supply Company*
Des Moines—*Raynor Door Company*
Sioux City—*Burke Engineering Sales*
Hawkeye Building Supply Co.

KANSAS
Topeka—*Topeka Builders Supply, Inc.*
Wichita—*Wichita Builders Supply Co.*

KENTUCKY
Lexington—*Eubank Lumber Co.*
Louisville—*Raynor Door Sales of Louisville*

LOUISIANA
Lake Charles—*Bahnsen Supply Company*
New Orleans—*A. F. Livaudais Co.*

MAINE
Portland—*Maine Home Insulation Co.*

MARYLAND
Baltimore—*Raynor Sales Company, Div. of Associated Building Specialists*
Cumberland—*Valley Lumber Co., Inc.*

MASSACHUSETTS
Avon—*South Shore Door Company*
East Hampton—*Charles J. Barkowski*
Worcester—*A. R. Woll Company*

MICHIGAN
Battle Creek—*Felix J. Brown & Sons*
Detroit—*Raynor Door Sales of Detroit*
Flint—*Quality Door & Lumber Company*
Grand Rapids—*G & K Distributing Co., Inc.*
Rapid River—*Anderson Lumber Company*
Saginaw—*Quality Door & Lumber Company*

MINNESOTA
Duluth—*Scott Graff Company*
Minneapolis—*George A. Clark & Son*
St. Paul—*Midway Lumber Company*

MISSISSIPPI
Jackson—*Mississippi Metal Products, Inc.*

MISSOURI
Eldon—*Simmons Supply & Mfg. Co.*
Joplin—*Joplin Cement Company*
Kansas City—*R. L. Sweet Lumber Co.*
Springfield—*Southwestern Insulation & Material Co.*
St. Louis—*Huttig Sash & Door Co.*
Maplewood—*Maplewood Planing Mill & Stair Co.*

MONTANA
Bozeman—*Empire Building Material, Inc.*
Havre—*Havre Builders Supply Company*

NEBRASKA
Lincoln—*Hawkeye Building Supply Co.*
Lincoln—*Holland Engineering Sales Co.*
North Platte—*R. S. Storm & Company*
Omaha—*Holland Engineering Sales Co.*
Omaha—*Holland Lumber Co.*
Scottsbluff—*Waite Lumber Company*

NEW JERSEY
Hammonton—*Perrone Door Company*
Paramus—*Murray & McKay*
Trenton—*Martens*

NEW MEXICO
Albuquerque—*Rose Door Company*
Farmington—*Construction Supply Company*
Sante Fe—*Sante Fe Builders Supply*

NEW YORK
Albany—*Richards Overhead Door Sales Co.*
Binghamton—*Raynor Overhead Door Co.*
Buffalo—*Hawkes Supply Company*
Cortland—*Roland Nye*
Elmira—*Robinson Building Materials, Inc.*
Liberty—*Carl Hamlin*
Liverpool—*Raynor Overhead Door Sales*
Long Island—*Raynor Door Sales, Div. of Meteor Sales Corp., Mineola, L. I.*
Newburgh—*Musco Door Sales Company*
Niagara Falls—*Frank Vaughan Company*
Orchard Park—*Stewart Door Company*
Sauquoit—*Miller Overhead Door Company*
South Glens Falls—*Marino-Raynor Overhead Door Sales*
Staten Island—*Elgin Supply Company*

NORTH CAROLINA
Charlotte—*Atlas Building & Erection Co.*
Wilmington—*Queensboro Steel Corp.*

NORTH DAKOTA
Bismarck—*Builders Supply Co.*
Fargo—*Structural Products, Inc.*
Minot—*Minot Builders Supply*

OHIO
Akron—*Akron Garage Doors by Raynor*
Canton—*A. L. Callahan Door Sales*
Columbus—*Columbus Coal & Lime Co.*
Dayton—*Raynor-Dayton, Inc.*
Elyria—*Elyria Enterprises*
Mansfield—*City Builders Supply Company*
Springfield—*C. W. Stewart*
Toledo—*Acme Automatic Door Co.*
Youngstown—*L. D. Sheffield & Sons*
Zanesville—*V. H. Roush*

PENNSYLVANIA
Bethlehem—*General Supply Company*
Philadelphia—*Belmont Raynor Door Co.*
Pittsburgh—*J. J. Englert Company*
Reading—*Merritt Lumber Yards*
Scranton—*Muldoon Brothers*

SOUTH CAROLINA
Columbia (Cayce)—*Steel Fabricators, Inc.*

SOUTH DAKOTA
Sioux Falls—*Lumbermen's Supply Company*

TENNESSEE
Chattanooga—*Valley Supply Company*
Knoxville—*Knoxville Structural Steel Co., Inc.*
Memphis—*Modern Doors and Windows, Inc.*
Morristown—*Morristown Supply Co.*
Nashville—*Nashville Sash and Door Co.*

TEXAS
Abilene—*Hyde & Company*
Corpus Christi—*Custom Door Company*
Dallas—*Glide-A-Way Overhead Door Co.*
El Paso—*Hunt Building Marts*
Fort Worth—*Cains Builders Supply Co.*
Houston—*California Overhead Door Co.*
McAllen—*Palmer Building Supplies & Specialties*

UTAH
Salt Lake City—*Western Overhead Door Co.*

VERMONT
Winooski—*Vermont Construction Supply Co.*

VIRGINIA
Richmond—*J. S. Archer Company*
Roanoke—*Skyline Lumber Co., Inc.*

WASHINGTON
Seattle—*Standard Door Company*
Spokane—*Garceau Steel Structures*

WEST VIRGINIA
Huntington—*Portal Shutter Co.*
Martinsburg—*Thorn Lumber Co.*
Weirton—*Raymond A. Crum*
Wheeling—*Karr Supply*

WISCONSIN
Green Bay—*Barry Raynor Garage Doors*
La Crosse—*Lumbermen's Service*
Madison—*Ace Door Company*
Menasha—*G. R. Schommer*
Milwaukee—*Raynor Door Sales, Inc.*
Wausau—*George H. Urban Co.*
Wisconsin Rapids—*Tri City Ins. & Doors Co.*

WYOMING
Casper—*Rex Robertson Co.*

CANADA

ALBERTA
Calgary—*Westcon Concrete Products Ltd.*
Edmonton—*Westcon Concrete Products Ltd.*

BRITISH COLUMBIA
Vancouver—*F. T. Clarke & Son*

MANITOBA
Winnipeg—*Westcon Concrete Products Ltd.*

ONTARIO
Ottawa—*Ambassador Sales of Ottawa County Ltd.*
Ottawa—*G. T. Green Hardware, Ltd.*
Windsor—*Standard Equipment Co.*

QUEBEC
Montreal—*R. J. Stampings Co., Ltd.*

SASKATCHEWAN
Regina—*Westcon Concrete Products Ltd.*
Saskatoon—*Westcon Concrete Products Ltd.*

SOUTH AFRICA
Capetown—*K. R. Sales (Pty.) Ltd.*

RAYNOR MFG. CO., DIXON, ILLINOIS • HAMMONTON, NEW JERSEY

Form No. 460

Printed in U.S.A.

A.I.A. File No. 16-D

16i
Rid

Ridge

OVERHEAD DOORS

- industrial
- commercial
- service station

wood • and • aluminum

RIDGE DOOR COMPANY

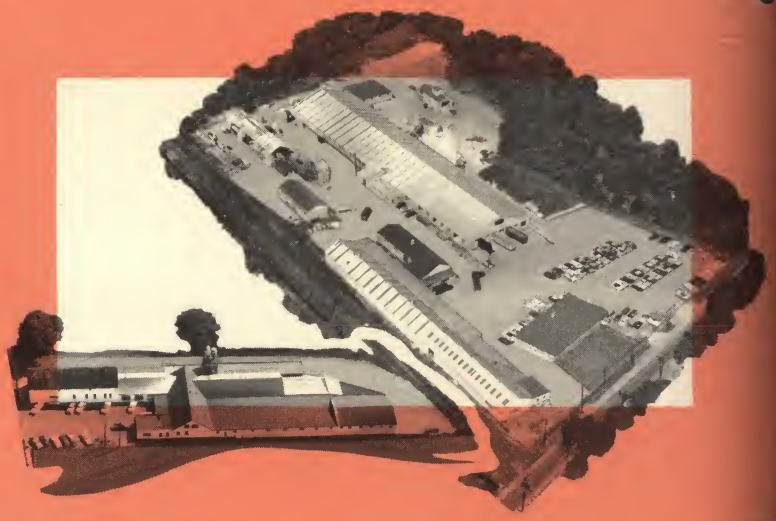
MONMOUTH JUNCTION, NEW JERSEY

DIVISION OF MUSKEGON MOTOR
SPECIALTIES CO., JACKSON, MICH.

THE *Ridge* DOOR

company

For years, The Ridge Door Company, a leading manufacturer of a complete line of residential, commercial, and industrial overhead doors and accessories, has maintained a program of continual development and expansion. This constant progress better enables us to serve the needs of the building and contracting fields.



facilities

Facilities include the most modern and scientific production equipment and methods to assure the highest quality in all components of The Ridge Door.

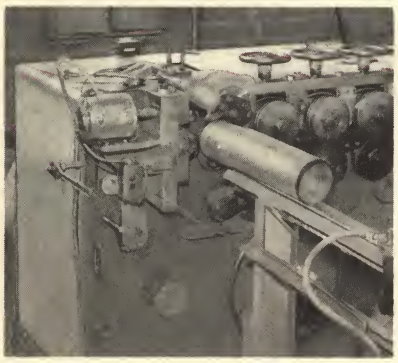
These components, including springs, track, hardware, and electric motor operators, are manufactured directly by us under the rigid quality control of our highly skilled technicians.

distribution

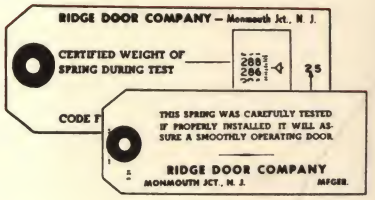
Beginning with state-wide facilities, we now offer national and export distribution of all Ridge Door products. Warehouses, maintained throughout the country, and our distributors in all principal cities combine with our staff to assist in the most efficient answers to all your needs.

features

• certified tension and torsion springs



All springs are helically wound from oil tempered spring wire on modern coiling machines. After coiling, all springs are heat treated to assure a quality product. Each spring is tested and the pounds pull is recorded on a tag stamped by the scale. The spring is then matched with a door by careful weight calculation which assures the maximum efficiency of door operation.


RIDGE DOOR COMPANY – Monmouth Jct., N. J.
CERTIFIED WEIGHT OF SPRING DURING TEST
288
286
CODE
THIS SPRING WAS CAREFULLY TESTED IF PROPERLY INSTALLED IT WILL ASSURE A SMOOTHLY OPERATING DOOR
RIDGE DOOR COMPANY
MONMOUTH JCT., N. J.
MFGR.

This tag is your assurance of quality controlled springs to give you a better operating door.

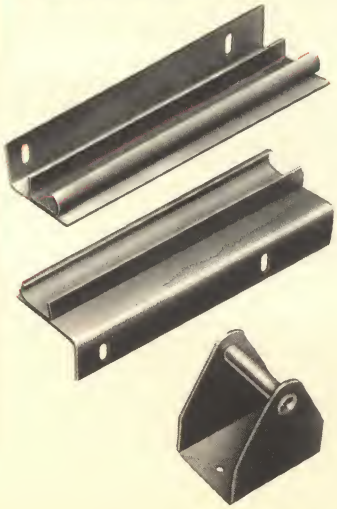
• support stiffeners

Stiffeners are furnished on all doors over 12′ wide. 2″ stiffeners on doors up to 16′ wide; 2½″ on all doors 16′-1″ to 18′ wide; 3½″ on doors over 18′ wide to 24′; On doors over 24′ wide, special truss type stiffeners.

• wedge type closing action

The vertical track is mounted to provide a gradual taper with the door jambs. Special graduated hinges, with roller sleeves, are attached to the door. With this wedge type action, the door is quickly free and easily opened.

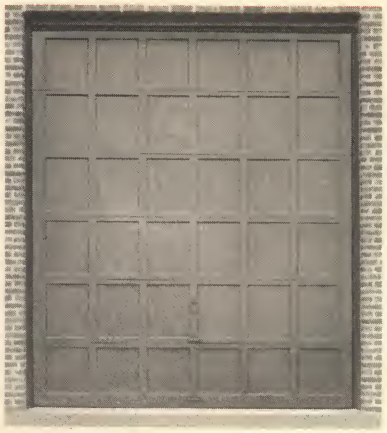
• track and hardware



All Ridge track is rolled from high quality hot dipped galvanized steel. Where required, all track is reinforced with rolled steel angle. Ridge Golden Hardware is heavy gauge steel, zinc chromate plated, which will stand a 125 hour salt spray test.

OVERHEAD DOORS

INDUSTRIAL, COMMERCIAL, SERVICE STATION DOORS



industrial

Industrial doors for factories, terminals and many other types of installations are available in a variety of styles. Various types of operators and accessories are engineered for maximum efficiency and durability.

commercial

Commercial doors for fire stations, auto display rooms, maintenance garages and many other types of buildings are designed in wood and aluminum to conform with the most modern style. Special accessories can be furnished to meet any operational requirements.

service station

Service Station doors to meet the specifications of almost all major oil companies are available for the various types of operation. Plastic and aluminum muntins, as well as matching fixed panels and transoms can be supplied.

Blueprints on the Service Station doors will be furnished upon request.

general specifications

wood industrial doors

general — Doors shall be of the type operating in vertical and horizontal tracks substantially parallel to the ceiling when fully open and generally known as upward acting or overhead type.

wood sections Rails and stiles shall be 1¾″ thick clear Sitka Spruce, Douglas Fir or equal. All joints shall be blind doweled, glued with water proof glue and steel pinned. Adjacent edges of sections shall be rabbeted to make a shiplap joint.

Hardboard panels shall be as manufactured by U. S. Plywood Corp., Masonite Corp. or the Georgia-Pacific Corp. and guaranteed for the life of the door by the above firms which furnish the panels. Raised wood panels shall be western pine ¾″ thick, glued with water proof glue.

track and hardware -Track and angles shall be hot dipped galvanized and not less than 13 gauge cold rolled steel. The vertical track shall be supported by means of clips or continuous steel angles securely spot welded to the track. Horizontal tracks on doors exceeding 70 sq. ft. shall be reinforced for their entire length with steel angles of ample size to support door when open. A combination of offset hinges and a gradual slope in the vertical track (¼″ in 2 ft) effects wedge tight closing of the doors.

Hinges shall be of steel not less than 13 gauge with a bearing area of not less than 2.5 square inches. A sufficient number of hinges shall be used per section to insure holding sections rigidly together, in no case less than three. Each hinge shall be fastened with not less than four bolts through door. Track rollers shall be ball bearing with hardened steel balls and races. The roller assembly shall be held by a one piece tire formed on the outside of the bearing. All small hardware shall have zinc chromate finish which will stand 125 hours salt spray test.

The sheaves or winding drums shall be cast iron or steel with anti-friction bearings. Cables shall not be less than ⅛″ diameter and of 7 x 19 construction (minimum breaking strength 2500 lbs.). In all cases, cables shall be of sufficient strength to provide an ample factor of safety.

Bolts shall be cremone type, which engages both sides of track. Doors over 12′ 0″ wide shall be sufficiently reinforced to withstand reasonable wind pressure and to eliminate sagging in open position.

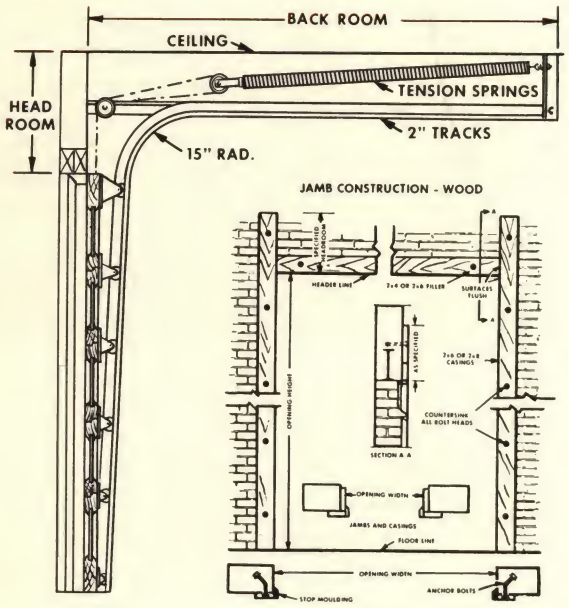
Doors shall be counterbalanced with torsion or extension springs as specified. All doors and hardware are weighed and springs are designed to balance each specific door.

aluminum industrial doors

These doors shall be extruded tubular aluminum which is available for most all commercial and industrial requirements. The sections are bolted through the muntins and stiles from rail to rail. The meeting rails are extruded to form a weather proof joint. A special rubber astragal is furnished for the bottom. Glass can be furnished as required.

track and hardware – Aluminum doors shall be supplied with the same track and hardware as specified under our wood industrial doors.

tension springs



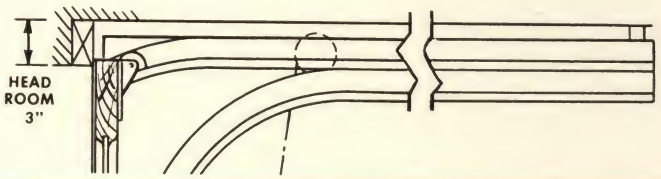
All Ridge Industrial Doors can be furnished with Extension Springs matched carefully with the door for smooth operation. On extremely heavy doors, special spring arrangements are supplied to meet the requirements of the particular door.

space requirements

Standard headroom is 12½″. Limited headrooms of 10″, 8½″, 6″, and 3″ are available, subject to engineering limitations. Side Room 4″

special 3″ head room

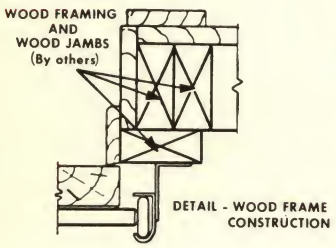
3″ headroom is supplied with double horizontal tracks. Recommended with doors not exceeding one hundred square feet. The sideroom is 5″ with this type of track.

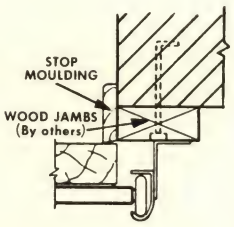


track installation details

wood jamb construction

The vertical tracks either have special brackets welded to the tracks or are mounted on a 12 gauge angle with the leg turned away from the door openings. Both the brackets and angle mountings are fastened to the jambs by means of lag bolts. Wood stop mouldings are used as a trim around the prepared opening to ensure tight door closure.

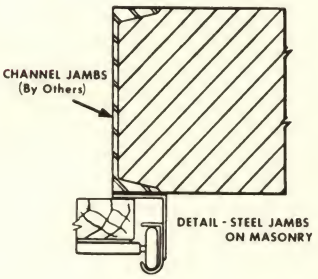


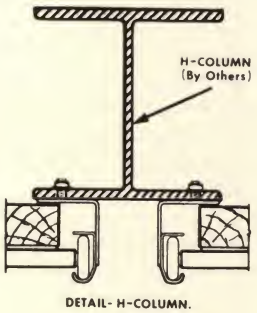


steel jamb construction

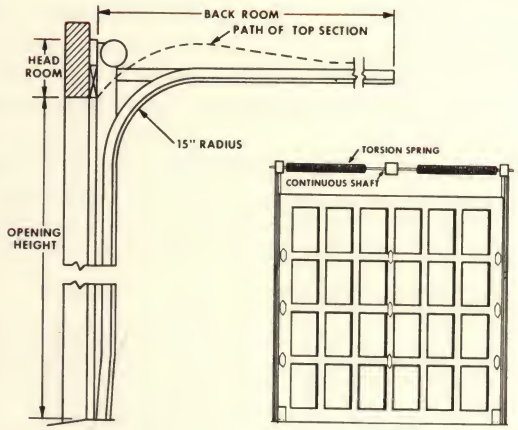
The inside face of the opening must have a flush surface unless it is above the minimum headroom requirement and outside the required amount of side space. Standard construction for steel jambs should conform with diagram below.

For steel construction overlapping jambs. Inclined vertical tracks are mounted on a 12 gauge angle with leg turned in toward door opening. Angle mounting is fastened to jambs by tapped holes or through bolt fasteners, depending on type of jamb construction.





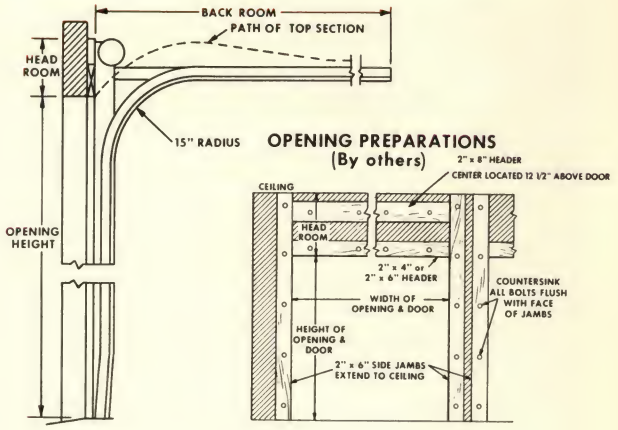
full shaft torsion springs



space requirements

Through shaft torsion springs are furnished with inside lift drums. 16″ headroom and 4″ sideroom are required. Backroom required is height of door plus 1′-6″. Special low headroom applications are available.

twin type torsion springs

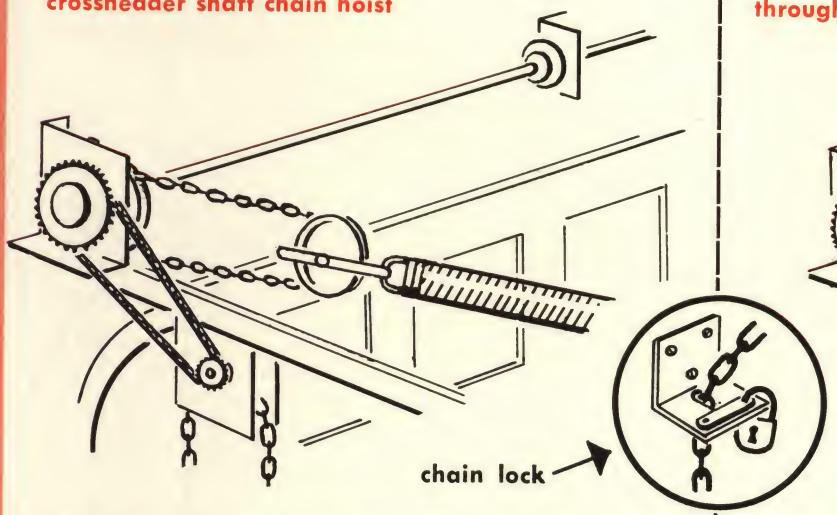


space requirements

Standard headroom is 16½″, sideroom 4″. Backroom is height of door plus 1′ 6″. Special low headroom applications are available.

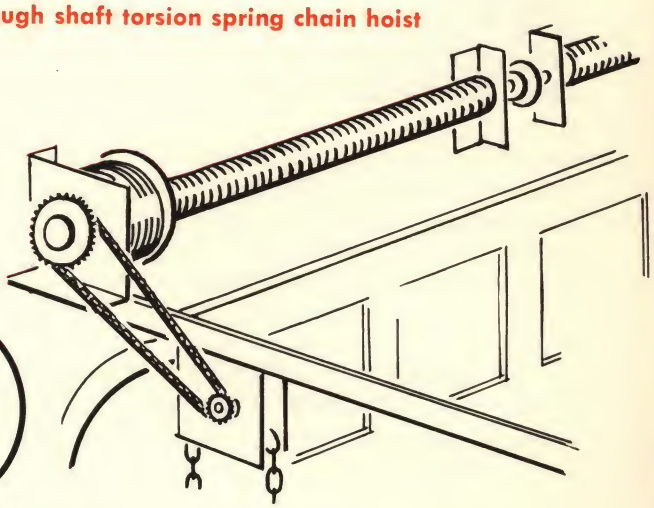
methods of operation

crossheader shaft chain hoist



For use only on doors equipped with extension type springs and load chain lift. Headroom required 16″, sideroom 7″.

through shaft torsion spring chain hoist

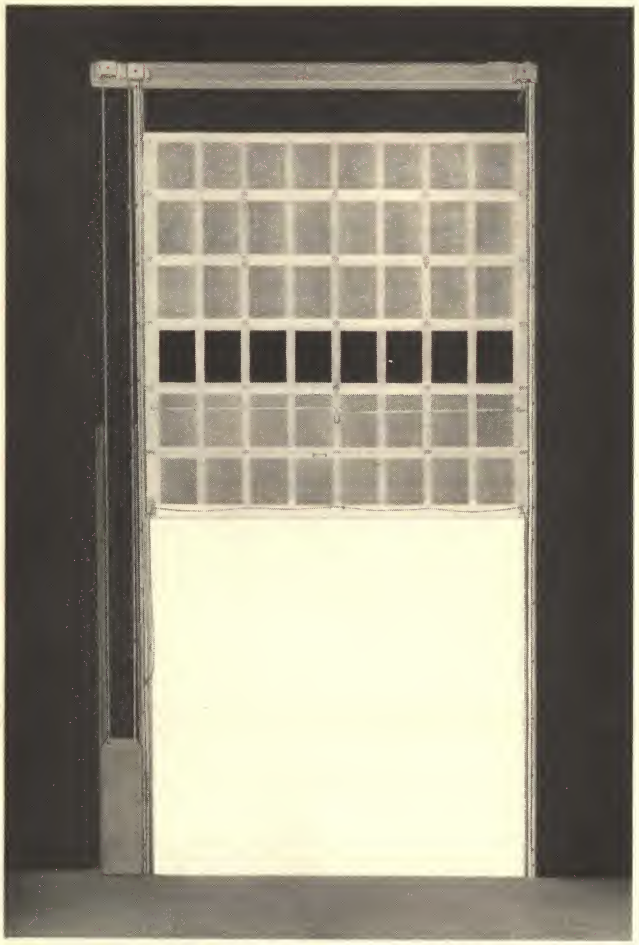


Through shaft torsion spring chain hoist are available for use on doors with through shaft torsion springs. Requires 16″ headroom and 7″ sideroom.

trolley type chain hoist

Trolley type (draw bar) chain hoist can be used in the operation of doors equipped with extension springs or torsion springs. Requires 18″ head room and 7″ sideroom.

for industrial electric operators,
see back cover



vertical lift

In factories and warehouses with high ceilings or where cranes are used, vertical lift doors are ideal. Door sections, hardware, tracks, and rollers are similar to those supplied with other models of Ridge Doors. Vertical lift doors are made with weight or through shaft torsion spring counter balancing.

high lift

High lift doors can be utilized where it is necessary to have the door clear vehicles and other equipment. These high clearance doors are furnished in all types of counter balance.

All high lift, as well as vertical lift doors, are available in the sizes of standard industrial doors. Extremely large doors are subject to approval by the engineering department.

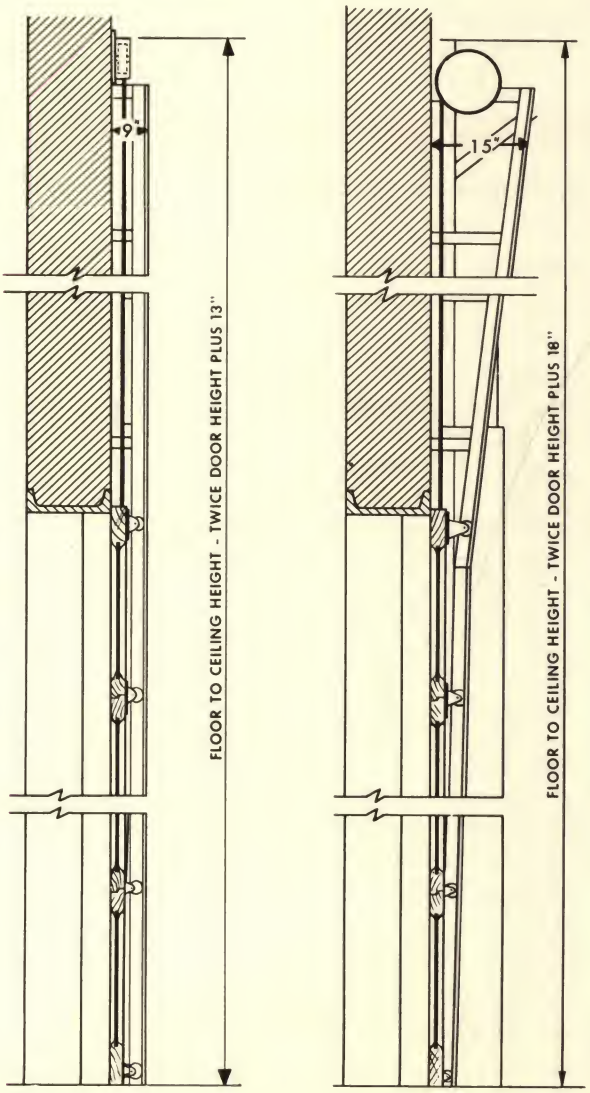
vertical lift

weight counterbalance

Used on manually operated doors where the area does not exceed 160 square feet. The lift cables, attached to each side of the door, are mechanically interlocked through sheaves to a single counterweight mounted at the side of the door. Sideroom required is 16″.

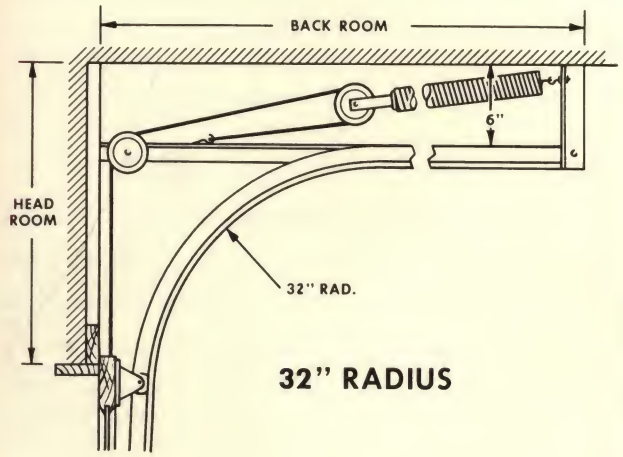
torsion spring counterbalance

For doors where area does not exceed two hundred square feet, and sideroom is limited, through shaft torsion springs should be used.



high lift 32″ radius

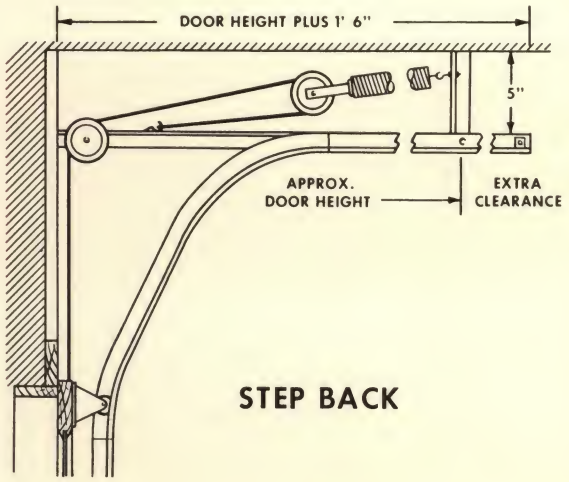
This track is used where extra clearance up to 2′ maximum is needed and may be no closer to the ceiling than 6″. This high lift equipment is generally used in gas stations to clear the automobile lift. It is also extensively used in warehouses where extra headroom is necessary for lift trucks and other equipment. This extremely efficient type of high lift is counter balanced by tension or torsion springs and requires no dummy sections. (Not over 100 sq. ft.)



32" RADIUS

high lift over 2′

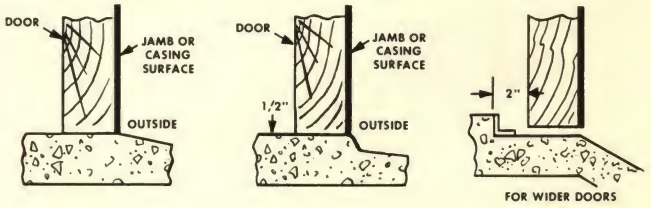
This track is used for high lifts exceeding 2′ with the following counter balance arrangements. Through shaft torsion springs can be used on doors with a vertical clearance of 8′ above the header. Doors with extension or twin type torsion springs with a vertical clearance of over 2′ but not exceeding 8′ will require dummy sections.



STEP BACK

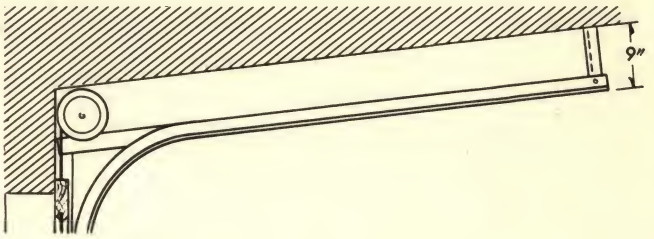
• threshold arrangements

The threshold should be designed to drain water away from the door. This will largely prevent water leakage into the building and freezing at bottom of the door in cold weather. If a step threshold is used, the door should close on the upper level. When possible, threshold footings should extend below the frost line.



• doors to follow the slope of roof

Doors following the slope of a roof can be furnished with twin type or through shaft torsion springs. These doors can be furnished with a maximum slope of 20 degrees. This type of door is required in many prefabricated steel buildings. Consult our engineers for requirements.



• wicket doors

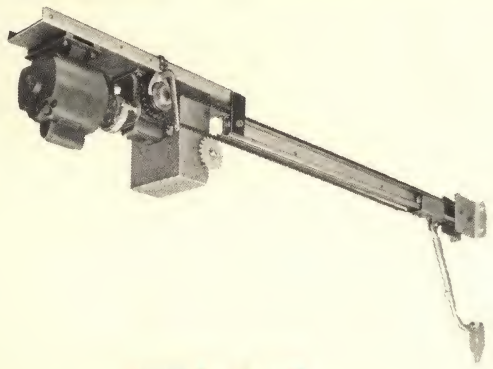
A wicket door can be supplied with any 5 section door up to 14′ wide. This service door can be built into industrial doors giving ample opening to pass in or out of the building without opening the large door. When not in use it is automatically kept closed by spring hinges.

RIDGE INDUSTRIAL ELECTRIC OPERATORS

general specifications

Instantly reversing motor—centrifugal clutch—quiet, oil-type ball bearing gear reducer—solenoid brake —ball bearing mounted driven micro limit switches—floor operated, quick release clutch for manual operation in case of power failure — quick adjusting door arm — mechanically interlocked reversing contactor—ball bearing roller trolley—full chain drive.

Three button control station, up-down-stop or two button control station, up-down. These are normally supplied for momentary contact or may be furnished with down button wired for constant contact. This compels the person operating the button to stand by during the entire closing of the door as a safety feature. All operators furnished with one control station; however, any number of control stations may be wired to operator.



trolley type

For use with doors having extension springs, twin type torsion springs and through shaft torsion springs, except high lift doors without dummy sections. For high lift doors with a crossheader shaft, refer to the jack shaft type operator.

The overall length is height of door plus 5′ 2″. Limited backroom type, height of door plus 3′ 7″. The minimum headroom is 4″ above the highest turning point of the door.

MODEL T-311

3 button control station, up-down-stop
110 v., 60 cycle, single phase only
¼ h.p. for doors up to 175 sq. ft.
1/3 h.p. for doors up to 250 sq. ft.
½ h.p. for doors up to 400 sq. ft.

MODEL T-331

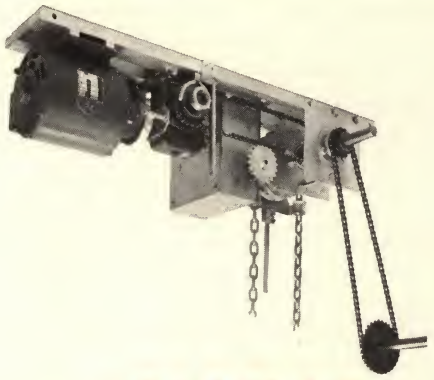
3 button control station, up-down-stop
208/220 v., 60 cycle, three phase
¼ h.p. for doors up to 175 sq. ft.
1/3 h.p. for doors up to 250 sq. ft.
½ h.p. for doors up to 400 sq. ft.

MODEL T-211

Same as Model T-311 except with two button control station, up-down.

MODEL T-231

Same as Model T-331 except with two button control station, up-down.



jack shaft type

Designed for doors where it is necessary to drive a crossheader shaft. The jack shaft operator is equipped with a quick disconnect device which enables a person at floor level to disconnect the driving mechanism so that the door or equipment may be operated manually. Limit switches will not go out of timing when door is operated manually. Jack shaft operators are for horizontal side mounting, either right or left side (specify). If the door or equipment normally requires a chain hoist for manual operation, a built in chain hoist must be ordered with the operator.

The overall length is 34⅝″ and the minimum sideroom is 16″.

MODEL JS-311

3 button control station, up-down-stop
110 v., 60 cycle, single phase only
¼ h.p. for doors up to 175 sq. ft.
1/3 h.p. for doors up to 250 sq. ft.
½ h.p. for doors up to 400 sq. ft.

MODEL JS-331

3 button control station, up-down-stop
208/220 v., 60 cycle, three phase
¼ h.p. for doors up to 175 sq. ft.
1/3 h.p. for doors up to 250 sq. ft.
½ h.p. for doors up to 400 sq. ft.

MODEL JS-211

Same as Model JS-311 except with two button control station, up-down.

MODEL JS-231

Same as Model JS-331 except with two button control station, up-down.

THE Ridge DOOR COMPANY

MONMOUTH JUNCTION, NEW JERSEY

DIVISION OF MUSKEGON MOTOR SPECIALTIES CO., JACKSON, MICH.

warehouses

Fort Lauderdale, Florida
Lawrence, Kansas
Elkridge, Maryland
Waltham, Massachusetts
Hackensack, New Jersey
Babylon, New York
Syracuse, New York
Philadelphia, Pennsylvania
Pittsburgh, Pennsylvania
Norfolk, Virginia
Milwaukee, Wisconsin
Neptune, New Jersey

Printed in U.S.A.

The door with
TAPER-TITE TRACK
and SEAL-A-MATIC HINGES

RŌ-WAY DOORS

WOOD AND STEEL
MOTOR OPERATORS

COMMERCIAL AND INDUSTRIAL BUILDINGS

ROWE MANUFACTURING COMPANY, GALESBURG, ILLINOIS, U. S. A.

THE HOME OF RO-WAY OVERHEAD DOORS:

Here at One Location all Wood and Steel Parts are fabricated.

THE FIVE PRINCIPLES OF RO-WAY LEADERSHIP

MODERN DESIGN:

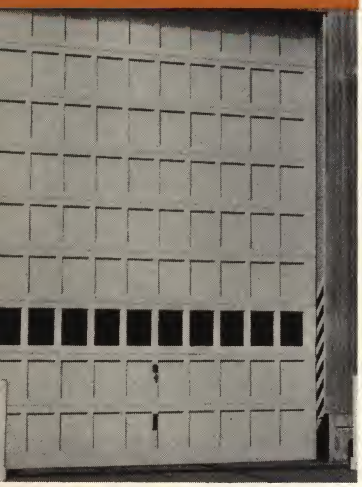
Our policy is one of continual improvement. Ro-Way engineers constantly are experimenting — always seeking new designs which may make good Ro-Way Doors still better.

FINE QUALITY:

Complete fabrication under one roof insures a uniformly high quality of manufacture. All millwork, as well as hardware is made in the Ro-Way Plant. We do not subcontract. We fabricate completely in our own factory.

PRECISION MANUFACTURING:

Fine Ro-Way Doors require fine equipment for their fabrication— and we have it including:



High speed woodworking equipment, including multiple chain mortises, molders, double-end tenoners, 48″ drum sanders.

Metal working equipment, including: stamping machines for fabricating hinges, corner brackets, track rollers, etc. Rolling machines for forming 2″ and 3″ tracking. Spring coilers for winding springs. Automatic screw machines efficiently produce sheaves and roller shafts.

EFFICIENT INSTALLATION:

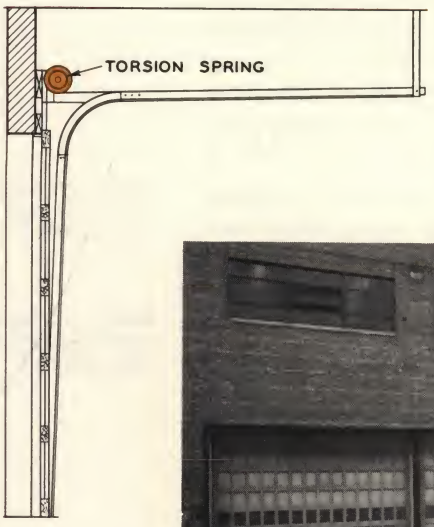
Ro-Way Doors are sold by distributors who use especially trained, skilled mechanics for erection. Efficient installation service insures quality erection at fair costs.

PRICE:

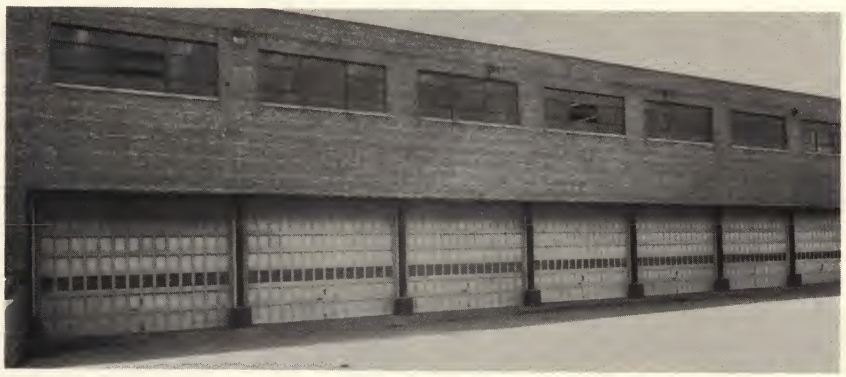
Our policy is to make the best door possible — and then, by engineering and production skills, establish manufacturing costs that permit reasonable selling prices. When quality is considered in relation to cost, Ro-Way Doors are top values.

Rō-WAY OVERHEAD DOORS

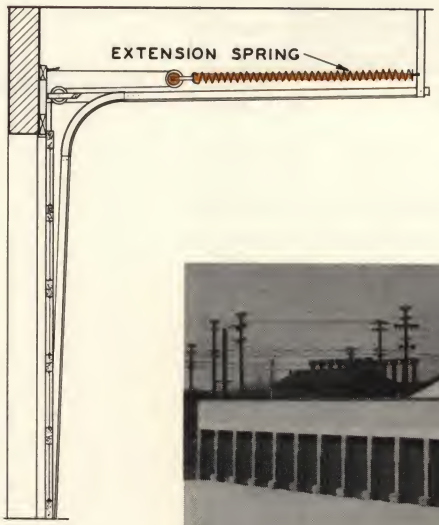
TORSION SPRING DOORS



Rowe "Twist Lift" torsion springs develop their power from a twisting or rotating action of the coils as they unwind. The springs in turn transmit power to a live or revolving ball bearing spring shaft. Spring shafts then convey lifting power to die cast grooved cable drums which are pinned to shaft. Each door is weighed to receive the proper customized spring. All galvanized Ro-Way Door hardware and torsion springs are fabricated at the Rowe plant.

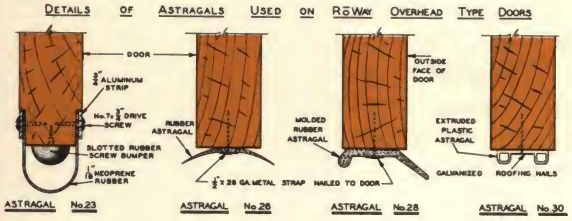


EXTENSION SPRING DOORS



The "Stretch Lift" extension type springs are power metered to fit every Ro-Way Overhead Door. They can be mounted above or below the horizontal tracks depending upon the amount of available headroom. Springs are fabricated, tempered and tested in our own plant along with Taper-Tite Friction-Reducing Track, hinges, corner brackets, double tread rollers, sheaves, latches and other galvanized parts.

SEALING ASTRAGALS



No. 23 CUSHION RUBBER ASTRAGAL compresses to seal door on contact with sill.

No. 26 DOUBLE CONTACT RUBBER ASTRAGAL. Each edge of rubber contacts the floor when in closed position.

No. 28 MOLDED RUBBER TYPE ASTRAGAL makes tight squeezing contact with floor when door is closed.

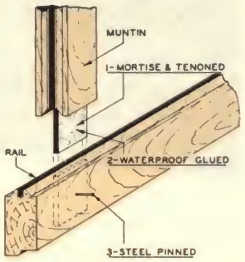
No. 30 EXTRUDED PLASTIC TYPE ASTRAGAL provides a double compression seal when door is closed.

FEATURES

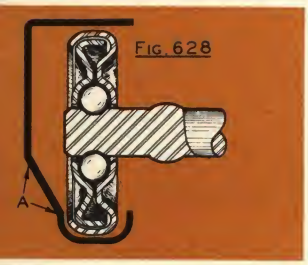
Astragals seal against water, wind and cold and eliminate minor irregularities in the floor or door sill; also act as a cushion when door closes.

TRIPLE STRENGTH MILLWORK SECTIONS

Millwork is made triple strong by (1) Mortise and tenon construction (2) Waterproof Gluing (3) Steel Pins to securely lock tenon.



FRICTION REDUCING TRACK

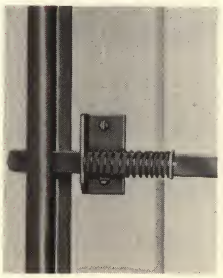


The patented SLANT RIB TRACK illustrated at "A" (Fig. 628) is an important improvement over common stock track. The extra rib prevents the track roller from rubbing against the inside back wall of the track to cause friction and drag.

The slanted rib "A" provides space to permit the use of extra strong truss-head holts for joining the vertical and horizontal track to the radius curve section. Truss-head bolts hold the track sections in perfect alignment, and eliminate loose track joints.

POSITIVE ACTING SAFETY LOCK

The No. 660 Ro-Way Latch is made so the plunger never fails to catch in notch of the $4\frac{3}{16}$" diameter cam. The lock rod is sure to go through the slot in each vertical track as it has $2\frac{3}{8}$" of locking travel.



Rō-WAY OVERHEAD DOORS

HOW TO ORDER RO-WAY DOORS

1. Model Required.
2. Quantity Required.
3. Size of Finished Opening.
4. Kind of Jambs (Wood or Steel).
5. Amount of Headroom.
6. Amount of Sideroom.
7. Amount of Depth.
8. Are Tracks to be Bracket or Angle Mounted?
9. No. of Panels and Sections.
10. Sections open for Glass.
11. Kind of Glass.
12. Who will Furnish Glass?
13. Is Factory Priming Required?
14. Is Chain Hoist Required?
15. Is Astragal Required?
16. Kind of Astragal.
17. Is Pass Door Required?
18. Is High Lift Door Required?
19. Amount of Clearance Required.

HOW TO ORDER TROLLEY TYPE OPERATORS

1. Model of Operator.
2. Door Size.
3. Available Electric Current — Voltage, Phase, Cycle.
4. Extra Control Stations — 3-Button; 1-Button; Key Switch; Pull Switch.

HOW TO ORDER JACKSHAFT TYPE OPERATORS

1. Model of Operator.
2. Door Size.
3. Is Operator Wall Mounted or Ceiling Operated?
4. Is Operator at Right Side, Left Side, or Center of Door?
5. Available Electric Current — Voltage, Phase, Cycle.
6. Extra Control Stations — 3-Button; 1-Button; Key Switch; Pull Switch.

NOTE: Operators ¾ H.P. or larger are regularly furnished for 3-phase current to comply with electrical codes.

SELECTOR INDEX:

TYPE SPRING	AREA MAX.	HEAD-ROOM	SIDEROOM C1	C2	C3	C4	MILLWORK Panels	Sections Thick	MODEL NO.	PAGE NO.
Torsion	224 Sq. Ft.	6½"	4⅞"	6"			See	See	831-DT	7
"	224 Sq. Ft.	15"	4"	5"					831	8
"	224 Sq. Ft.	18"	4"	5"					811	8
"	224 Sq. Ft.	21¼"	4"	5"					851	9
"	224 Sq. Ft.	Dr. Ht. + 27"	4"	5"			Schedule	Section	891	10
"	400 Sq. Ft.	22½"			5½"	6¼"			911	11
"	400 Sq. Ft.	31½"			5½"	6¼"			951	9
Extension	80 Sq. Ft.	10½"	3⅞"	4⅞"					441	13
"	80 Sq. Ft.	15"	3⅞"	4⅞"			on	A-A	401	13
"	224 Sq. Ft.	6½"	4¾"	5⅞"					731-DT	14
"	224 Sq. Ft.	11¼"	4¾"	5⅞"					731	15
"	224 Sq. Ft.	15"	4¾"	5⅞"					701	15
"	224 Sq. Ft.	26"	4⅛"	5"			Page	Page	781	16
"	224 Sq. Ft.	16"	4⅛"	5"					791	20
"	400 Sq. Ft.	22"			5½"	6¼"			931	17
"	400 Sq. Ft.	36"			5½"	6¼"	21	21	900	17

ACCESSORIES INDEX:

Astragal	4
Cable Truss	29
Center Spring Lifts	34
Chain Hoist — Models 10-A and 15-A With and Without Clutch	19
Chain Hoist — Model 20 Trolley Type, Also 10-A and 15-A Limited Headroom	20
Chain Hoist — Model 50 for Torsion Spring Doors	9
Chain Lift — Model 55 for Torsion Spring Doors	8
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Steel Doors — Custom	22
Steel Doors — Narrow Line	28
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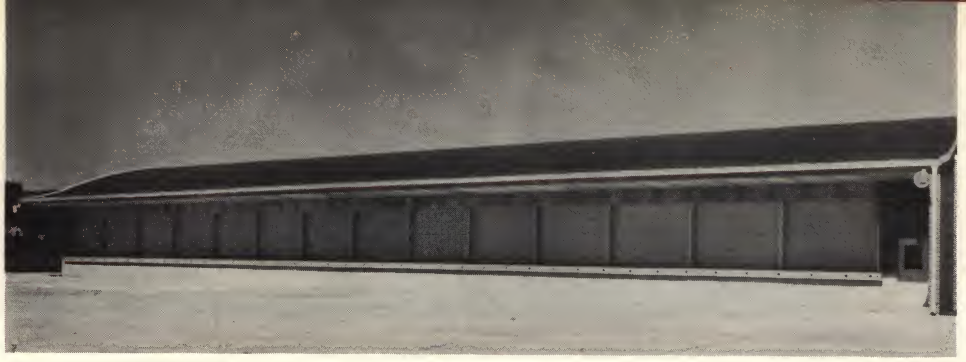
Torsion Spring — Product and Architectural Specifications	6
Transoms	35

HEAVY DUTY RO-WAY DOORS FOR COMMERCIAL AND INDUSTRIAL BUILDINGS

Torsion Spring Type



MILLWORK: 1¾" thick, stiles and rails Douglas Fir or Sitka Spruce — our option. Joints mortised and tenoned, waterproof glued, steel pinned. Panels ¼" Masonite Dorlux.

GLASS SECTIONS: Any or all sections may be left open for glass or all sections closed if preferred.

SPRINGS: One or more torsion springs on full length revolving shaft.

CABLES: Lifting cables are $\frac{5}{32}$" 7 × 19 preformed aircraft cables.

TRACKS: With the exception of Model 911 and 951, all models have 2" "Taper Tite" construction on vertical tracks and are mounted on brackets or continuous angles. Curved tracks — 15" radius — are made as separate units for extra strength and ease of installation. Horizontal tracks have full length reinforcing angle.

Models 911 and 951, "Taper Tite" track construction for weather-proof installation. 3" wide No. 11 gauge, ⅛" thick. Mounted on continuous angle iron. Horizontal tracks have full length reinforcing angle. Curved tracks — 20" radius — are made as separate units for extra strength and ease of installation.

TRACK ROLLERS: $1\frac{13}{16}$" diameter for 2" tracking door.
$2\frac{13}{16}$" diameter for 3" tracking doors.

HINGES: Seal-A-Matic graduated type for weatherproof closing arranged for full floating roller shafts.

BOLTS AND SCREWS: Cadmium plated.

LOCKING EQUIPMENT: Cylinder lock keyed from outside — spring latch inside. Full width Cremone bolt locking bars engage both vertical tracks. Lock on one side only if door has all sections glass.

RUST PROOF HARDWARE: All hardware, with the exception of springs and bearings, is galvanized.

ARCHITECTS SPECIFICATIONS: Overhead type doors shall be Ro-Way (Model_____) Torsion Spring Type as manufactured by Rowe Manufacturing Company, Galesburg, Illinois. Door Sections shall have 1¾" Douglas Fir stiles and rails. All joints mortised and tenoned, waterproof glued and steel pinned. Panels ¼" Masonite Dorlux.

Track rollers and sheaves shall be full ball bearing on hardened shafts. "Taper-Tite" track and Seal-A-Matic hinges shall guide the closing door tightly against the jamb — yet free the opening to provide frictionless, easy operation.

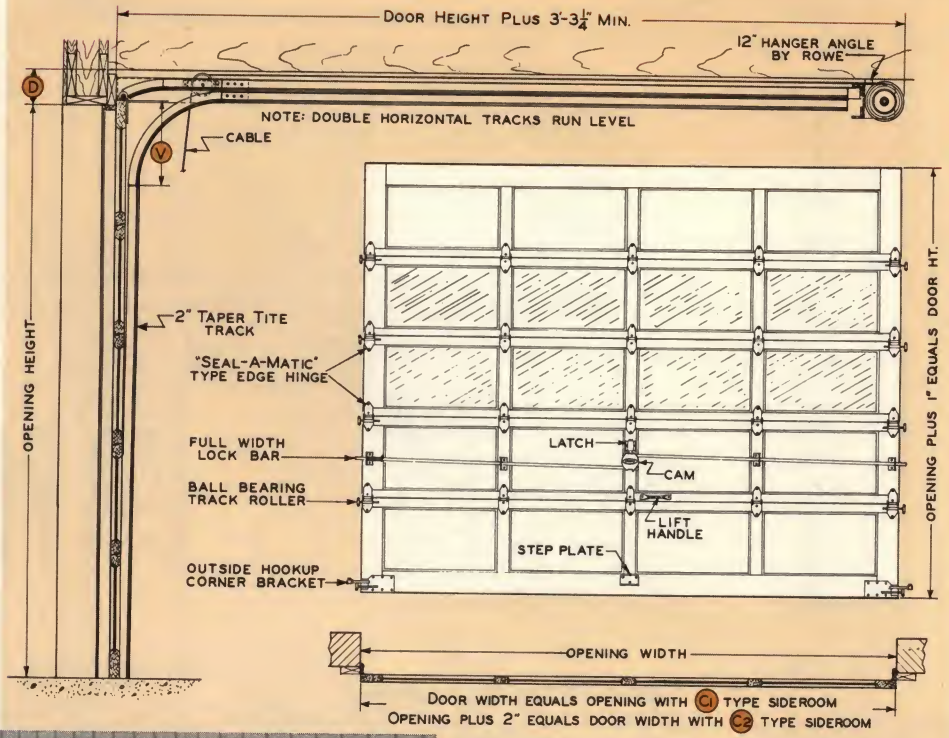
Locking equipment shall be Cremone bolt type engaging tracks at both sides of door. Controlled by thumb latch on inside of door and cylinder lock on outside.

All hardware, including tracking, shall be rustproofed by galvanizing. Bolts and screws cadmium plated.

MODEL 831-DT

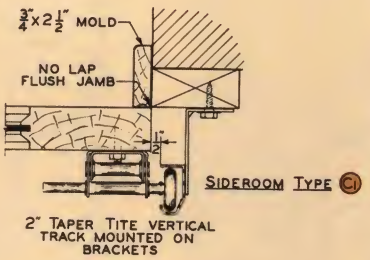
Rō-WAY OVERHEAD DOORS

TYPICAL SECTION THRU DOOR AND OPENING

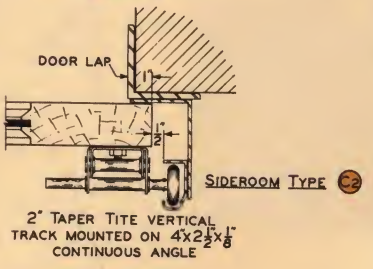


TYPICAL INTERIOR ELEVATION OF DOOR

PLAN VIEW



FLUSH JAMB



LAPPED JAMB

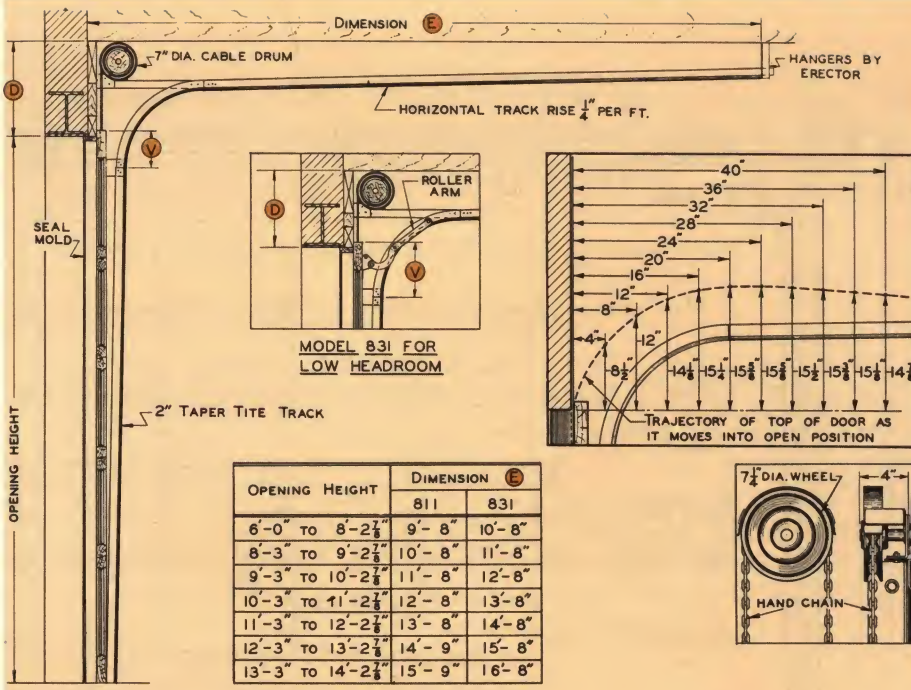
MODEL SELECTOR

MODEL NO.	AREA MAX.	MILLWORK PANELS SECTIONS THICKNESS	SIDEROOM C1	SIDEROOM C2	HEADROOM D	TRACK JOINT V
831-DT	224 Sq. Ft.	See Page 21	4⅞"	6"	6½"	15⁹⁄₁₆"

MODELS 831 AND 811

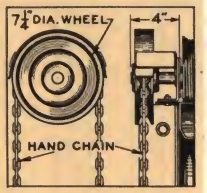
NO. 55 CHAIN LIFT

TYPICAL SECTION THRU DOOR AND OPENING

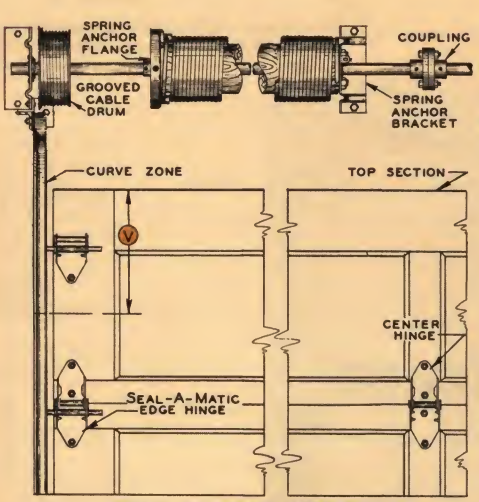


TRAJECTORY CHART MODEL 811

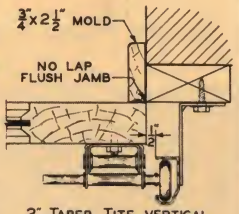
OPENING HEIGHT	DIMENSION E	
	811	831
6'-0" TO 8'-2 7/8"	9'- 8"	10'- 8"
8'-3" TO 9'-2 7/8"	10'- 8"	11'- 8"
9'-3" TO 10'-2 7/8"	11'- 8"	12'- 8"
10'-3" TO 11'-2 7/8"	12'- 8"	13'- 8"
11'-3" TO 12'-2 7/8"	13'- 8"	14'- 8"
12'-3" TO 13'-2 7/8"	14'- 9"	15'- 8"
13'-3" TO 14'-2 7/8"	15'- 9"	16'- 8"



NO. 55 CHAIN LIFT SHOWN IN RELATION TO CABLE DRUM



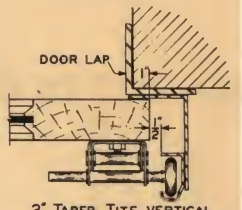
DETAIL OF SPRING ASSEMBLY IN RELATION TO TOP OF DOOR



2" TAPER TITE VERTICAL TRACK MOUNTED ON BRACKETS

SIDEROOM TYPE C1

FLUSH JAMB



2" TAPER TITE VERTICAL TRACK MOUNTED ON 4"x2 1/2"x1/8" CONTINUOUS ANGLE

SIDEROOM TYPE C2

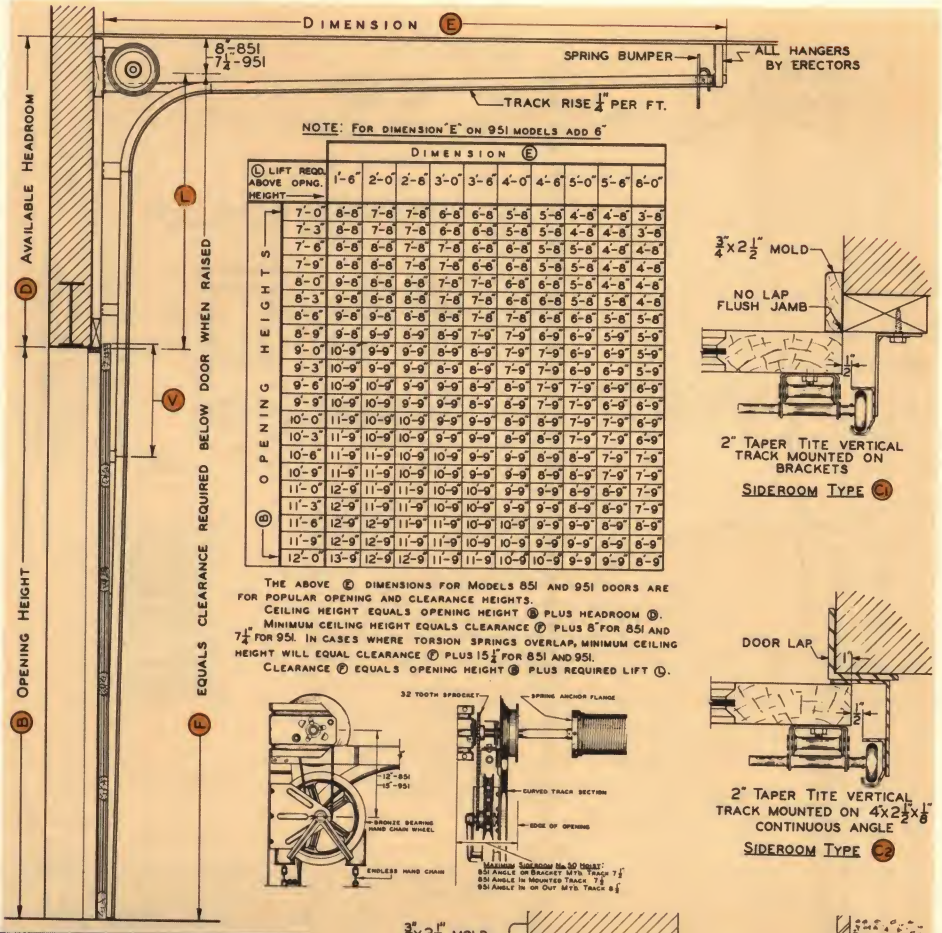
LAPPED JAMB

MODEL SELECTOR

MODEL NO.	AREA MAX.	MILLWORK PANELS SECTIONS THICKNESS	SIDEROOM C1	SIDEROOM C2	HEADROOM D	TRACK JOINT V
831	224 Sq. Ft.	See Page 21	4"	5"	15"	10¼"
811	224 Sq. Ft.	See Page 21	4"	5"	18"	7"

MODELS 851, 951 AND NO. 50 CHAIN HOIST

Rō-WAY OVERHEAD DOORS



NOTE: FOR DIMENSION "E" ON 951 MODELS ADD 6"

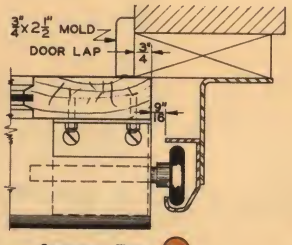
L LIFT REQD. ABOVE OPNG. / OPENING HEIGHTS B	DIMENSION E 1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"
7'-0"	6'-8"	7'-8"	7'-8"	6'-8"	6'-8"	5'-8"	5'-8"	4'-8"	4'-8"	3'-8"
7'-3"	6'-8"	7'-8"	7'-8"	6'-8"	6'-8"	5'-8"	5'-8"	4'-8"	4'-8"	3'-8"
7'-6"	6'-8"	6'-8"	7'-8"	7'-8"	6'-8"	6'-8"	5'-8"	5'-8"	4'-8"	4'-8"
7'-9"	8'-8"	6'-8"	7'-8"	7'-8"	6'-8"	6'-8"	5'-8"	5'-8"	4'-8"	4'-8"
8'-0"	9'-8"	8'-8"	6'-8"	7'-8"	7'-8"	6'-8"	6'-8"	5'-8"	4'-8"	4'-8"
8'-3"	9'-8"	8'-8"	8'-8"	7'-8"	7'-8"	6'-8"	6'-8"	5'-8"	5'-8"	4'-8"
8'-6"	9'-8"	9'-8"	8'-8"	8'-8"	7'-8"	7'-8"	6'-8"	6'-8"	5'-8"	5'-8"
8'-9"	9'-8"	9'-9"	8'-9"	8'-9"	7'-9"	7'-9"	6'-9"	6'-9"	5'-9"	5'-9"
9'-0"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"	7'-9"	7'-9"	6'-9"	6'-9"	5'-9"
9'-3"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"	7'-9"	7'-9"	6'-9"	6'-9"	5'-9"
9'-6"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"	7'-9"	7'-9"	6'-9"	6'-9"
9'-9"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"	7'-9"	7'-9"	6'-9"	6'-9"
10'-0"	11'-9"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"	7'-9"	7'-9"	6'-9"
10'-3"	11'-9"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"	7'-9"	7'-9"	6'-9"
10'-6"	11'-9"	11'-9"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"	7'-9"	7'-9"
10'-9"	11'-9"	11'-9"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"	7'-9"	7'-9"
11'-0"	12'-9"	11'-9"	11'-9"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"	7'-9"
11'-3"	12'-9"	11'-9"	11'-9"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"	7'-9"
11'-6"	12'-9"	12'-9"	11'-9"	11'-9"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"
11'-9"	12'-9"	12'-9"	11'-9"	11'-9"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"	8'-9"
12'-0"	13'-9"	12'-9"	12'-9"	11'-9"	11'-9"	10'-9"	10'-9"	9'-9"	9'-9"	8'-9"

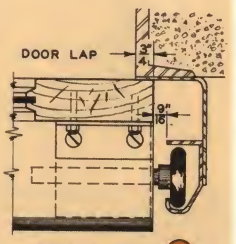
THE ABOVE E DIMENSIONS FOR MODELS 851 AND 951 DOORS ARE FOR POPULAR OPENING AND CLEARANCE HEIGHTS.
CEILING HEIGHT EQUALS OPENING HEIGHT B PLUS HEADROOM D.
MINIMUM CEILING HEIGHT EQUALS CLEARANCE F PLUS 8" FOR 851 AND 7½" FOR 951. IN CASES WHERE TORSION SPRINGS OVERLAP, MINIMUM CEILING HEIGHT WILL EQUAL CLEARANCE F PLUS 15¼" FOR 851 AND 951.
CLEARANCE F EQUALS OPENING HEIGHT B PLUS REQUIRED LIFT L.

FLUSH JAMB

LAPPED JAMB

TRACK MOUNTED ON ANGLE OUT AND ANGLE IN





MODEL SELECTOR

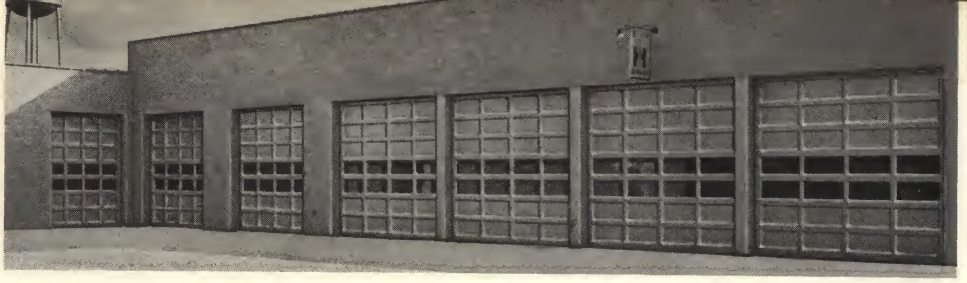
MODEL NO.	AREA MAX.	MILLWORK PANELS SECTIONS THICKNESS	SIDEROOM C1	C2	C3	C4	HEADROOM D	TRACK JOINT V
851	224 Sq. Ft.	See Page 21	4"	5"			21¼"	21½"
951	400 Sq. Ft.	See Page 21			6¼"	6¼"	31½"	21½"

NO. 50 HOIST SPECIFICATIONS

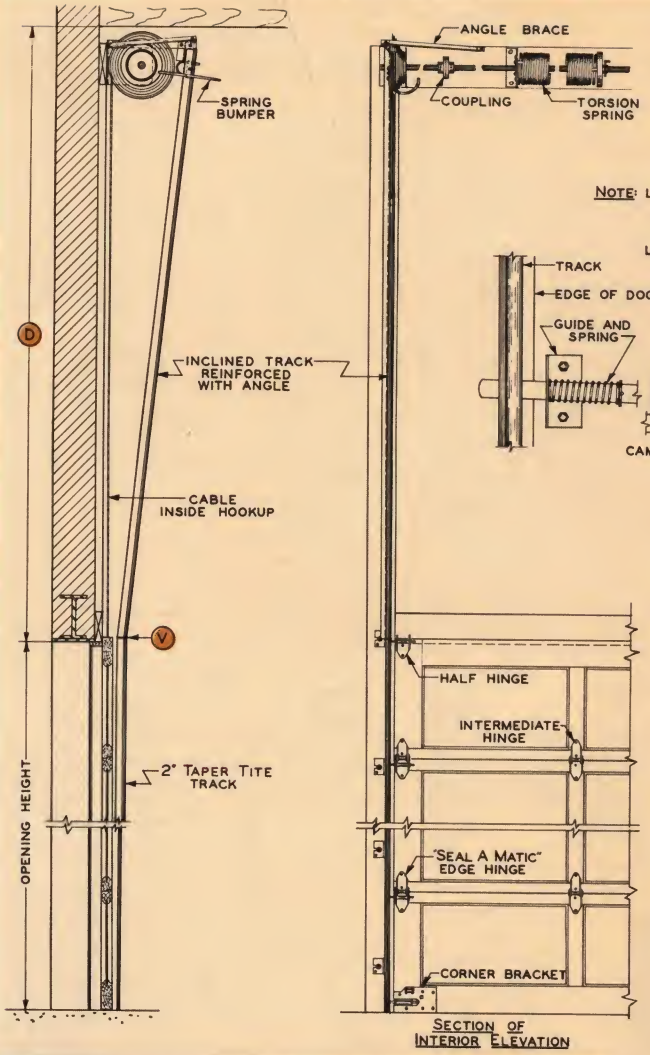
CHAIN HOIST NO. 50 WITHOUT CLUTCH — For Models 811, 851, 891, 911, 951, and 991

Uses: Required on doors over 13' high, over 17' wide or over 179 sq. ft.
Door Size: For areas over 179 sq. ft.
Door Models: Models 811, 851, 891 with 2" tracking; Models 911, 951 and 991 with 3" tracking.
Headroom Required: See model used with.
Sideroom Required: Models 811, 851 and 891 — 7½"; Models 911, 951 and 991 — 8½"
Gear Ratio: 7.68 to 1 reduction.
Drive Chain: Roller Chain No. 41 — ½" pitch.
Hand Chain: No. 2/0 straight link-welded.
Hand Chain Wheel: 10¼" pitch diameter — bronze bearing. Located on either side.

MODEL 891



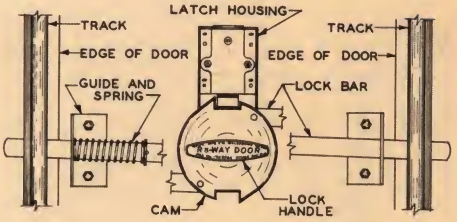
TYPICAL SECTION THRU DOOR AND OPENING



SECTION OF INTERIOR ELEVATION

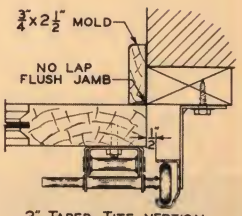
DETAIL OF LOCKING EQUIPMENT

NOTE: LOCK RODS ENGAGE BOTH TRACKS



LOCK ON OUTSIDE OF DOOR

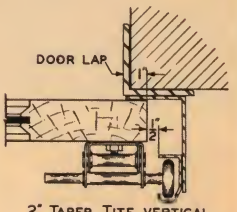
FLUSH JAMB



2" TAPER TITE VERTICAL TRACK MOUNTED ON BRACKETS

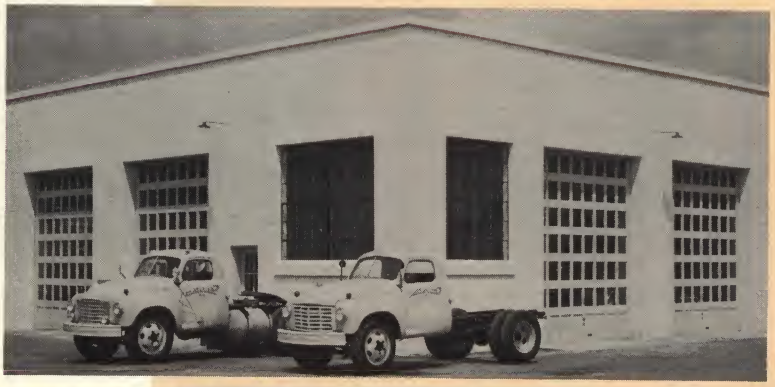
SIDEROOM TYPE C1

LAPPED JAMB



2" TAPER TITE VERTICAL TRACK MOUNTED ON 4"x2 1/2"x1/8" CONTINUOUS ANGLE

SIDEROOM TYPE C2



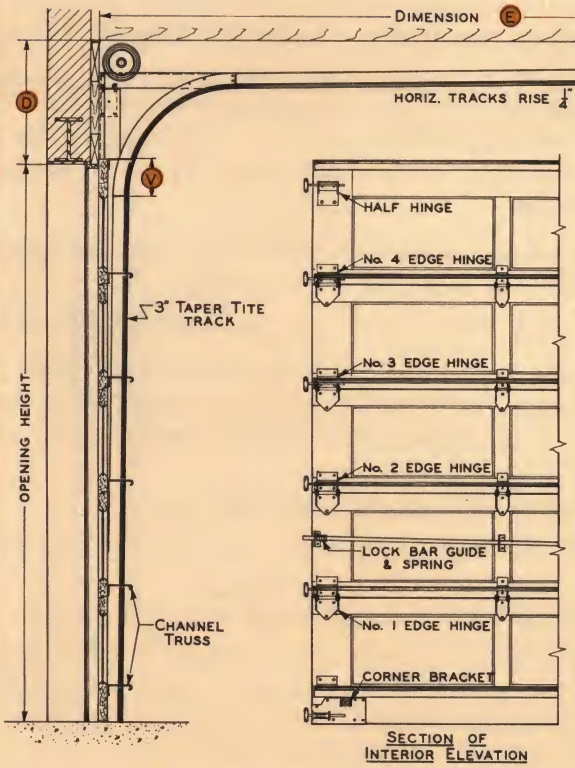
MODEL SELECTOR

MODEL NO.	AREA MAX.	MILLWORK PANELS SECTIONS THICKNESS	SIDEROOM C1	SIDEROOM C2	HEADROOM D	TRACK JOINT V
891	224 Sq. Ft.	See Page 21	4"	5"	Dr. Ht. + 27"	Dr. = Track

MODEL 911

Rō-WAY OVERHEAD DOORS

TYPICAL SECTION THRU DOOR AND OPENING

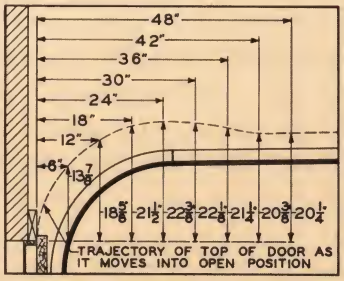


SECTION OF INTERIOR ELEVATION

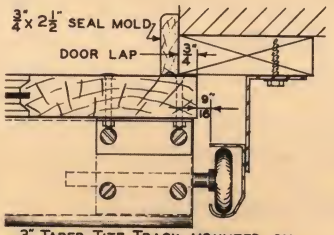
DEPTH DOOR REQUIRES

OPENING HEIGHT	DIMENSION E
	911
6'-0" TO 8'-2 7/8"	10'-2"
8'-3" TO 9'-2 7/8"	11'-2"
9'-3" TO 10'-2 7/8"	12'-2"
10'-3" TO 11'-2 7/8"	13'-2"
11'-3" TO 12'-2 7/8"	14'-2"
12'-3" TO 13'-2 7/8"	15'-3"
13'-3" TO 14'-2 7/8"	16'-3"
14'-3" TO 15'-2 7/8"	17'-3"

TRAJECTORY CHART

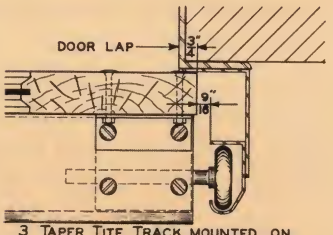


TRACK MOUNTED ON ANGLE OUT



3" TAPER TITE TRACK MOUNTED ON ⅛"x2½"x4" CONTINUOUS ANGLE
SIDEROOM TYPE C3

TRACK MOUNTED ON ANGLE IN



3 TAPER TITE TRACK MOUNTED ON ⅛"x3"x4½" CONTINUOUS ANGLE
SIDEROOM TYPE C4

MODEL SELECTOR

MODEL NO.	AREA MAX.	MILLWORK PANELS SECTIONS THICKNESS	SIDEROOM C3	SIDEROOM C4	HEADROOM D	TRACK JOINT V
911	400 Sq. Ft	See Page 21	6¼"	6¼"	22½"	7"

HEAVY DUTY RO-WAY DOORS FOR COMMERCIAL AND INDUSTRIAL BUILDINGS

Extension Spring Type

MILLWORK: 1¾" thick, stiles and rails Douglas Fir or Sitka Spruce — our option. Joints mortised and tenoned, waterproof glued, steel pinned. Panels ¼" Masonite Dorlux.

GLASS SECTIONS: Any or all sections may be left open for glass or all sections closed if preferred.

SPRINGS: Extension springs — one or more as required above or below each horizontal track. Location of springs depends on model. Safety rods through springs to prevent damage or injury in case of breakage.

CABLES: Models 441, 401: ⅛" diameter 6 × 7 preformed casteel with chain attachment at end for easy adjustment. Cables at outside of vertical tracks.

Models 731-DT, 731, 701, 781, 931, 900: 5/32" 7 × 19 preformed aircraft cable.

TRACKS: With the exception of Models 931 and 900, all above mentioned models have 2" "Taper Tite" construction on vertical tracks and are mounted on brackets or continuous angles. Curved tracks — 15" radius — are made as separate units for extra strength and ease of installation.

Models 441, 401: Horizontal tracks are reinforced with short angle.

Model 731-DT horizontal tracks are mounted one above the other and have full length reinforcing angle.

Models 731, 701, 781. Horizontal tracks have full length reinforcing angle.

Models 931, 900: "Taper-Tite" track construction for weatherproof installation. 3" wide No. 11 gauge, ⅛" thick. Mounted on continuous angle iron. Horizontal tracks have full length reinforcing angle. Curved tracks — 20" radius — made as separate units for extra strength and ease of installation.

TRACK ROLLERS: $1\frac{13}{16}$" diameter for 2" tracking doors.
$2\frac{13}{16}$" diameter for 3" tracking doors.

HINGES: Seal-A-Matic graduated type for weatherproof closing designed to permit full floating roller shafts.

BOLTS AND SCREWS: Cadmium plated.

LOCKING EQUIPMENT: Cylinder lock keyed from outside. Spring latch inside. Full width Cremone bolt locking bars engage both vertical tracks.

RUST PROOF HARDWARE: All hardware, with the exception of springs and bearings, is galvanized.

ARCHITECT'S SPECIFICATIONS:

Overhead type doors shall be Ro-Way (Model_____) Extension Spring Type as manufactured by Rowe Manufacturing Co., Galesburg, Illinois. Door sections shall have 1¾" Douglas Fir stiles and rails. All joints mortised and tenoned, waterproof glued and steel pinned. Panels ¼" Masonite Dorlux.

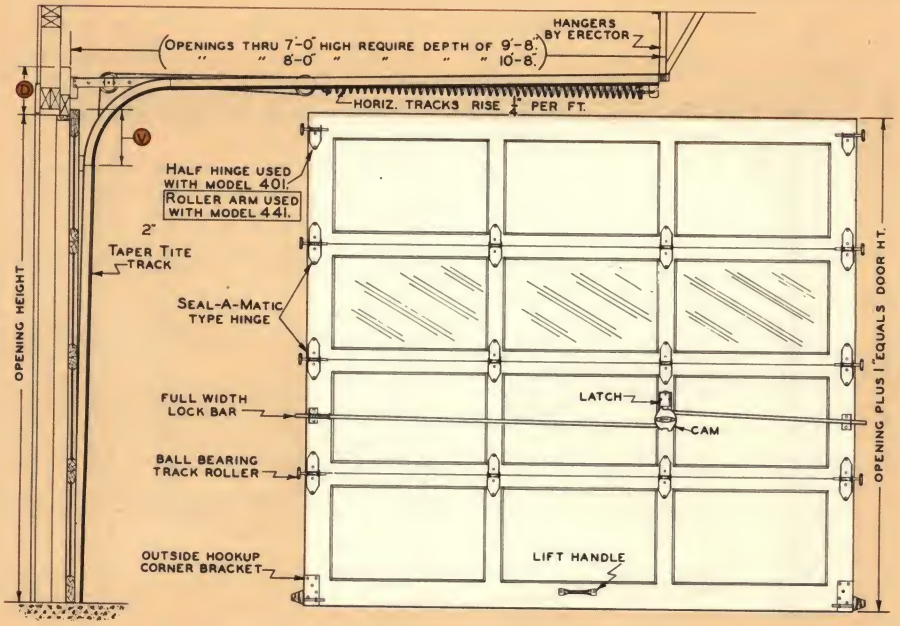
Track rollers and sheaves shall be full ball bearing on hardened shafts. "Taper-Tite" track and Seal-A-Matic hinges shall guide the closing door tightly against the jamb — yet free the opening to provide frictionless, easy operation.

Locking equipment shall be Cremone bolt type engaging tracks at both sides of door. Controlled by thumb latch on inside of door and cylinder lock on outside.

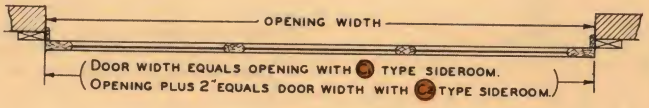
All hardware, including tracking, shall be rustproofed by galvanizing. Bolts and screws cadmium plated.

Rō-WAY OVERHEAD DOORS

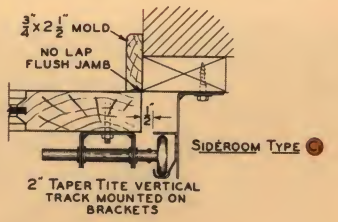
TYPICAL SECTION THRU DOOR AND OPENING



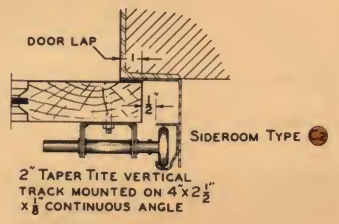
TYPICAL INTERIOR ELEVATION OF DOOR



PLAN VIEW



FLUSH JAMB



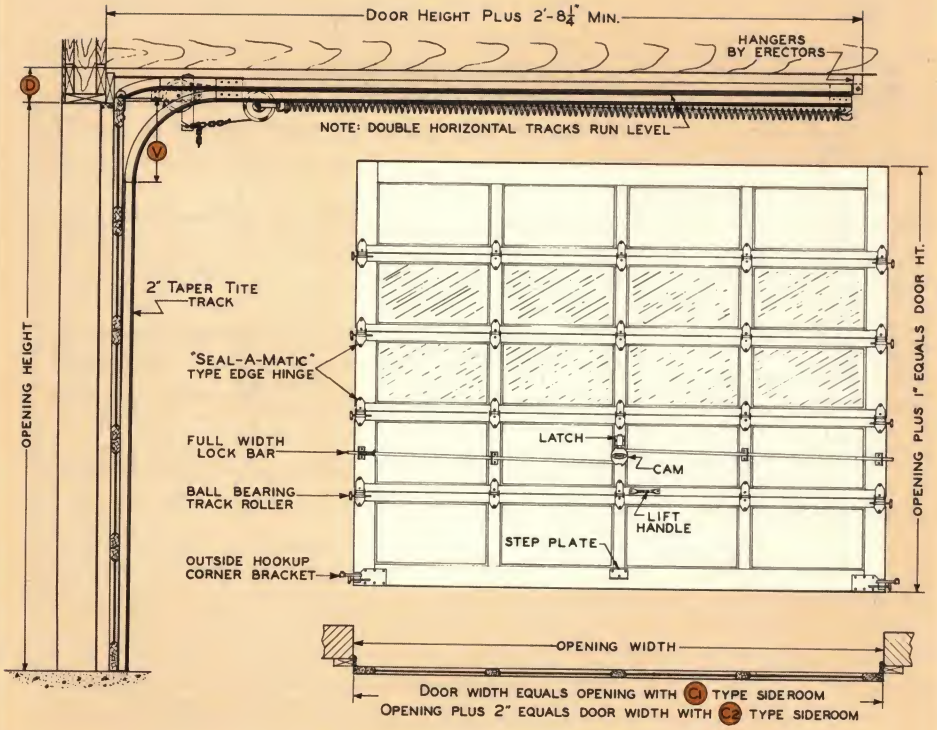
LAPPED JAMB

MODEL SELECTOR

MODEL NO.	AREA MAX.	MILLWORK			SIDEROOM		HEADROOM (D)	TRACK JOINT (V)
		PANELS	SECTIONS	THICKNESS	(C1)	(C2)		
441	80 Sq. Ft.	3	4	1¾"	3⅞"	4⅞"	10½"	10¼"
401	80 Sq. Ft.	3	4	1¾"	3⅞"	4⅞"	15"	9"

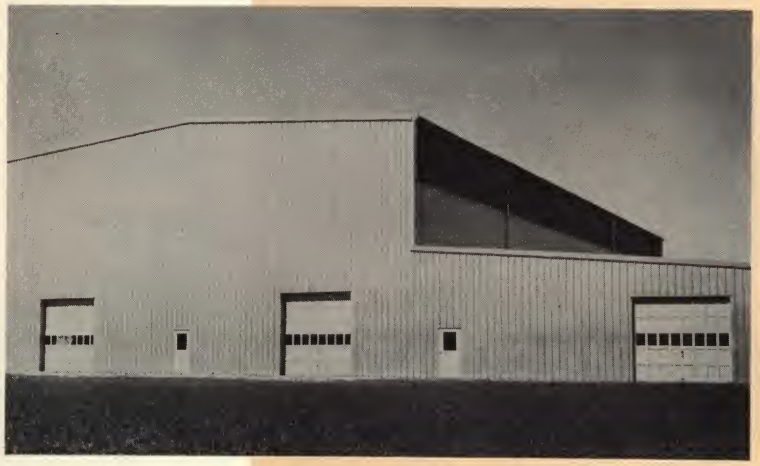
MODEL 731-DT

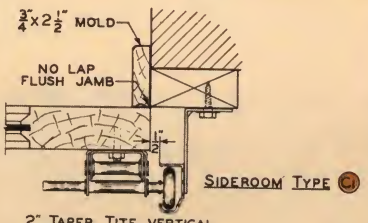
TYPICAL SECTION THRU DOOR AND OPENING



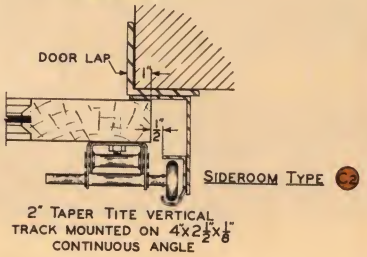
TYPICAL INTERIOR ELEVATION OF DOOR

PLAN VIEW





FLUSH JAMB



LAPPED JAMB

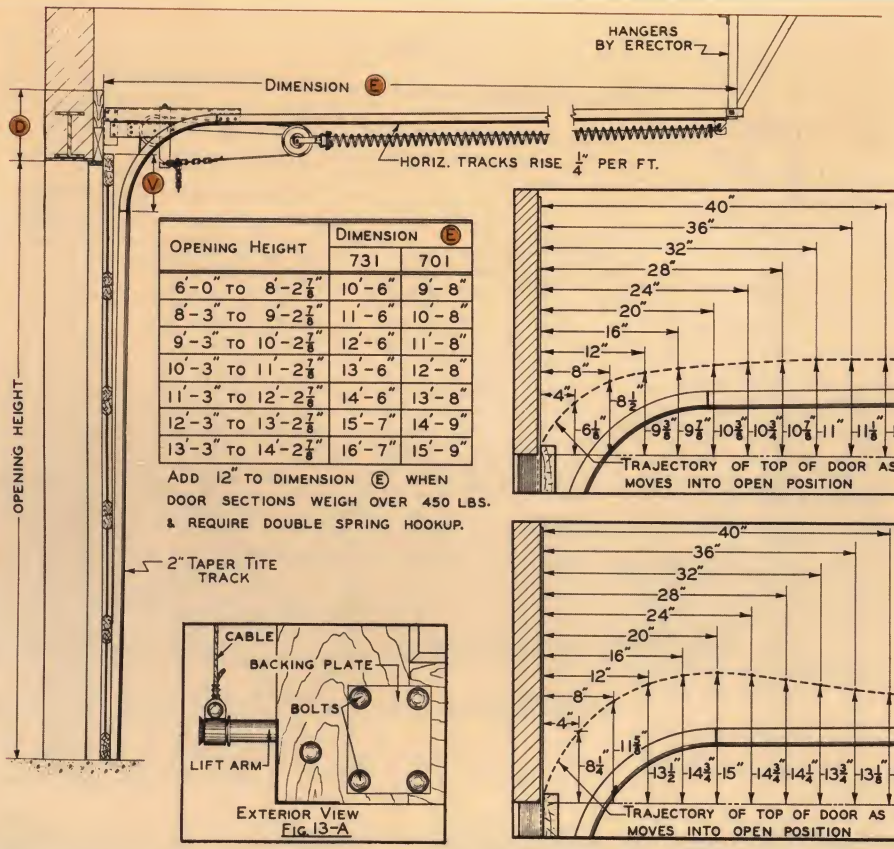
MODEL SELECTOR

MODEL NO.	AREA MAX.	MILLWORK PANELS SECTIONS THICKNESS	SIDEROOM C1	SIDEROOM C2	HEADROOM D	TRACK JOINT V
731-DT	224 Sq. Ft.	See Page 21	4¾"	5⅞"	6½"	15 9/16"

MODEL 731 AND 701

Rō-WAY OVERHEAD DOORS

TYPICAL SECTION THRU DOOR AND OPENING



OPENING HEIGHT	DIMENSION (E) 731	701
6'-0" TO 8'-2 7/8"	10'-6"	9'-8"
8'-3" TO 9'-2 7/8"	11'-6"	10'-8"
9'-3" TO 10'-2 7/8"	12'-6"	11'-8"
10'-3" TO 11'-2 7/8"	13'-6"	12'-8"
11'-3" TO 12'-2 7/8"	14'-6"	13'-8"
12'-3" TO 13'-2 7/8"	15'-7"	14'-9"
13'-3" TO 14'-2 7/8"	16'-7"	15'-9"

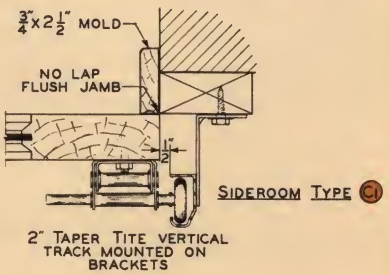
ADD 12" TO DIMENSION (E) WHEN DOOR SECTIONS WEIGH OVER 450 LBS. & REQUIRE DOUBLE SPRING HOOKUP.

EXTERIOR VIEW
FIG. 13-A

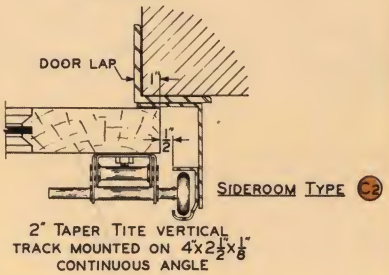
TRAJECTORY CHART MODEL 731

TRAJECTORY CHART MODEL 701

FLUSH JAMB



LAPPED JAMB

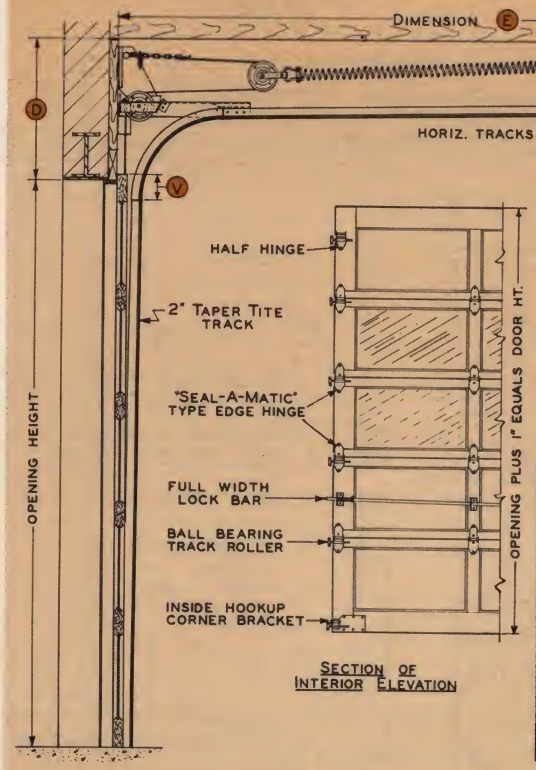


MODEL SELECTOR

MODEL NO.	AREA MAX.	MILLWORK PANELS SECTIONS THICKNESS	SIDEROOM (C1)	SIDEROOM (C2)	HEADROOM (D)	TRACK JOINT (V)
731	224 Sq. Ft.	See Page 21	4 3/4"	5 7/8"	11 1/4"	10 3/4"
701	224 Sq. Ft.	See Page 21	4 3/4"	5 7/8"	15"	9 1/2"

MODEL 781

TYPICAL SECTION THRU DOOR AND OPENING

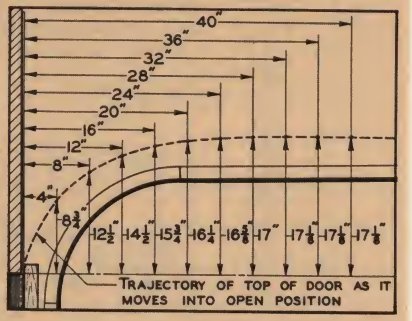


SECTION OF INTERIOR ELEVATION

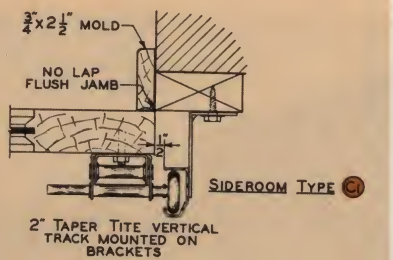
DEPTH DOOR REQUIRES

Opening Height	Dimension E
	781
6'-0" to 8'-2 7/8"	9'-8"
8'-3" to 9'-2 7/8"	10'-8"
9'-3" to 10'-2 7/8"	11'-8"
10'-3" to 11'-2 7/8"	12'-8"
11'-3" to 12'-2 7/8"	13'-8"
12'-3" to 13'-2 7/8"	14'-9"
13'-3" to 14'-2 7/8"	15'-9"
14'-3" to 15'-2 7/8"	16'-9"

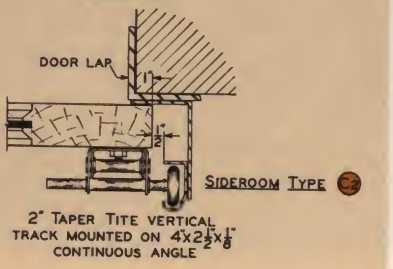
TRAJECTORY CHART



FLUSH JAMB



LAPPED JAMB



MODEL SELECTOR

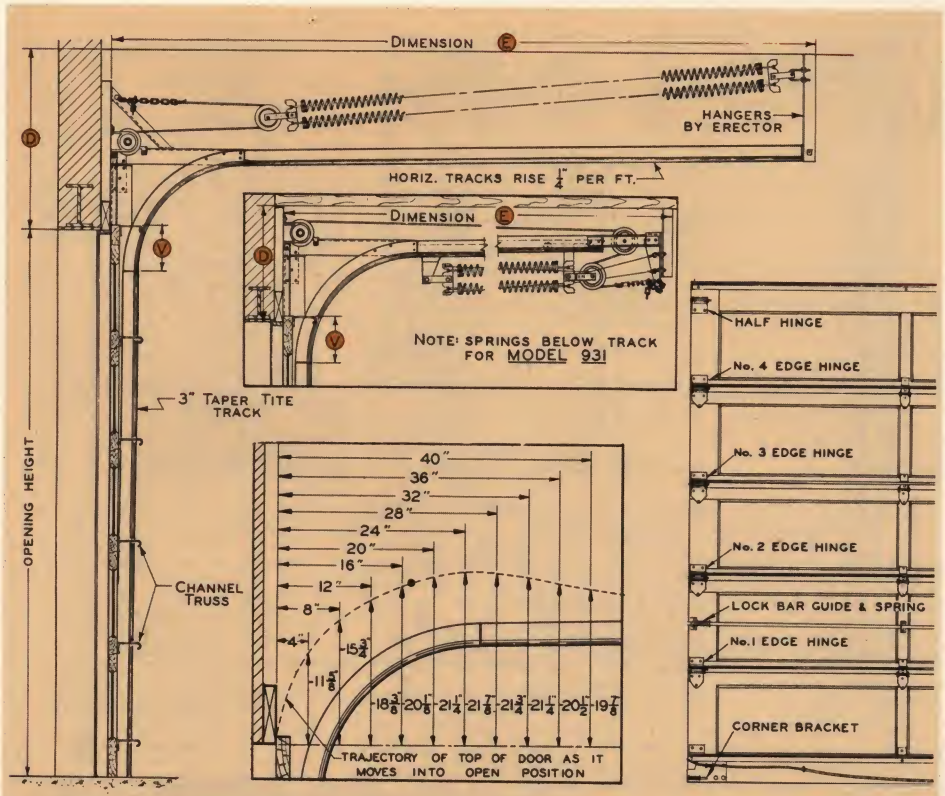
Model No.	Area Max.	Millwork			Siderooom C1	Siderooom C2	Head Room D	Track Joint V
		Panels	Sections	Thickness				
781	224 Sq. Ft.	See Page 21			4 1/8"	5"	26"	4 3/4"

MODEL 931
AND 900

Rō-WAY

OVERHEAD
DOORS

TYPICAL
SECTION THRU
DOOR AND OPENING

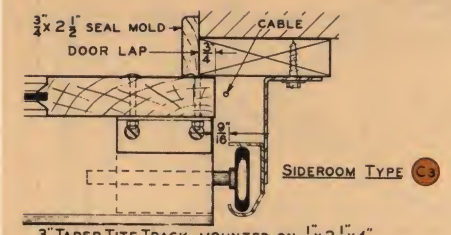


PARTIAL INTERIOR
ELEVATION OF
DOOR

DEPTH DOOR
REQUIRES

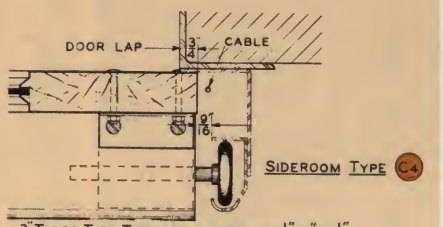
Opening Height	Dimension E	
	931	900
6'-0" to 8'-2 7/8"	12'-4"	10'-2"
8'-3" to 9'-2 7/8"	13'-4"	11'-2"
9'-3" to 10'-2 7/8"	14'-4"	12'-2"
10'-3" to 11'-2 7/8"	15'-4"	13'-2"
11'-3" to 12'-2 7/8"	16'-4"	14'-2"
12'-3" to 13'-2 7/8"	17'-5"	15'-3"
13'-3" to 14'-2 7/8"	18'-5"	16'-3"
14'-3" to 15'-2 7/8"	19'-5"	17'-3"

TRACK MOUNTED
ON ANGLE OUT



3" TAPER TITE TRACK MOUNTED ON 1/8" x 2 1/2" x 4" CONTINUOUS ANGLE.

TRACK MOUNTED
ON ANGLE IN



3" TAPER TITE TRACK MOUNTED ON 1/8" x 3" x 4 1/2" CONTINUOUS ANGLE.

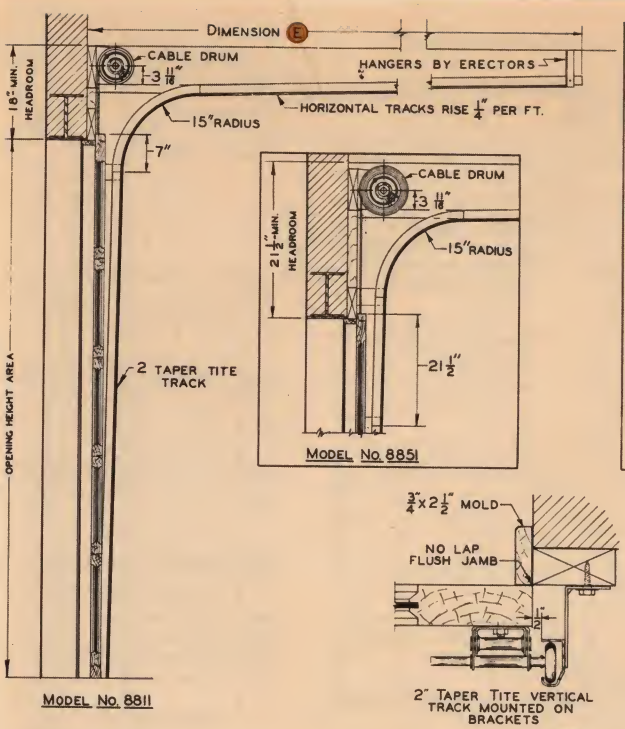
MODEL SELECTOR

Model No.	Area Max.	Millwork Panels Sections Thickness	Sideroom C3	Sideroom C4	Head-room D	Track Joint V
931	400	See Page 21	6¼"	6¼"	22"	8½"
900	400	See Page 21	6¼"	6¼"	36"	8½"

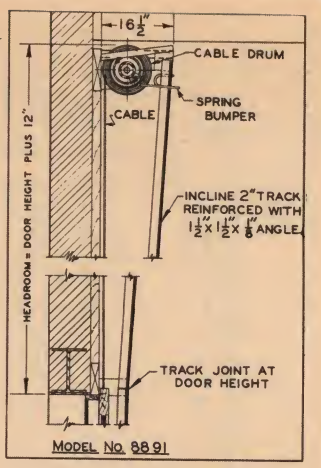
STANDARD CONSTRUCTION RO-WAY DOORS FOR COMMERCIAL AND INDUSTRIAL BUILDINGS

MODELS 8811, 8851 AND 8891

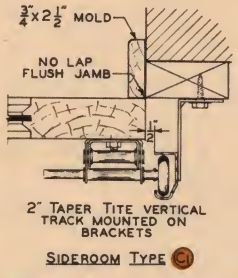
TYPICAL SECTION THRU DOOR AND OPENING

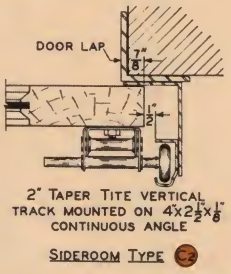


PARTIAL SECTIONAL VIEW MODEL 8891


16 1/2"
CABLE DRUM
SPRING BUMPER
CABLE
INCLINE 2" TRACK REINFORCED WITH 1 1/2" X 1 1/2" X 1/8" ANGLE
HEADROOM = DOOR HEIGHT PLUS 12"
TRACK JOINT AT DOOR HEIGHT
MODEL No. 8891

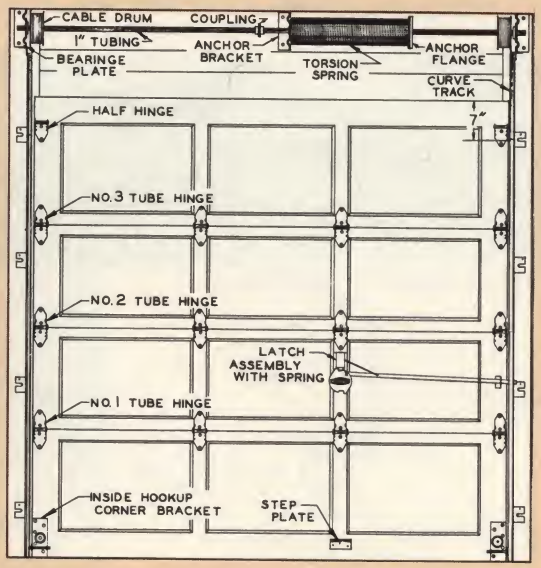
FLUSH AND LAPPED JAMB DETAILS





NOTE:
DIMENSION E THE SAME ON 8811 AS ON 811 PAGE 8.
DIMENSION E THE SAME ON 8851 AS ON 851 PAGE 9.

TYPICAL INTERIOR ELEVATION OF DOOR

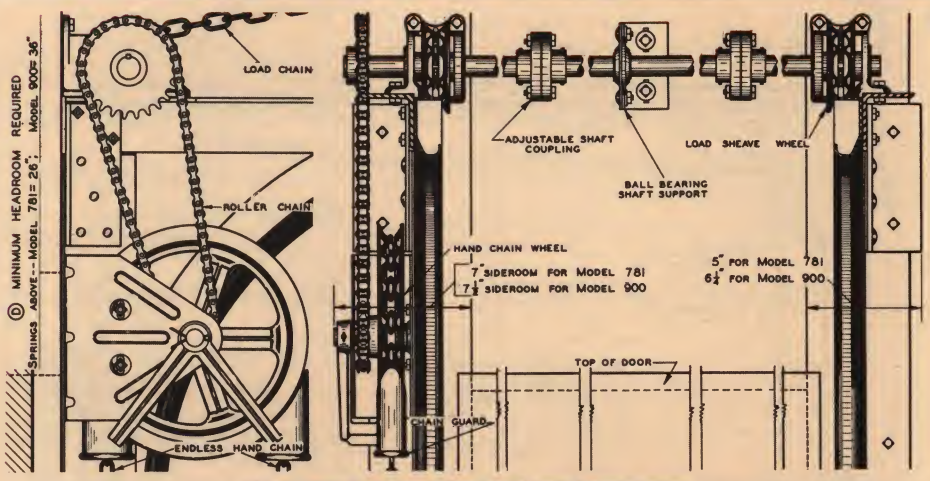


SPECIFICATIONS

All three of the above door models are available in sizes up to and including 12'-0" wide by 14'-0" high.
All models are 1¾" thick Douglas Fir, with ¼" thick Georgia Pacific Hardboard Panels.
Doors 7'-0" wide or less are 2 panels wide, all others 3 panels wide.
All three models have Taper-Tite Track and galvanized hardware.
Sideroom Type C-1 requires 4¼".
Sideroom Type C-2 requires 5".
Headroom for Model 8811—Regular Lift is 18".
Headroom for Model 8851—High Lift is 21½".
Headroom for Model 8891—Vertical Lift is Dr. Ht. + 12".

CHAIN HOIST MODELS 10A AND 15A

SIDE VIEW OF CHAIN HOIST WITHOUT CLUTCH



FRONT VIEW OF CHAIN HOIST WITHOUT CLUTCH

USES AND SPECIFICATIONS FOR 10 AND 15A HOISTS MODELS 781 AND 900

USE WITH MODELS 781 AND 900 — EXTENSION SPRINGS ABOVE HORIZONTAL TRACKS

USES: Required on doors over 12' 0" high or over 17' 0" wide or over 179 square feet in area.

DOOR MODELS: Use with Models 781 and 900.

ADJUSTMENT: Adjustable shaft coupling permits adjustment to eliminate torque or twist in jackshaft — equalizes load chains — holds door sections level when lifting.

SPECIFICATIONS — NO. 10A HOIST

DOOR SIZE: For areas not over 224 sq. ft.

DOOR MODELS: Model 781 with 2" tracking; Model 900 with 3" tracking.

HEADROOM REQUIRED: With Model 781 door — 26"; with Model 900 door — 36".

SIDEROOM REQUIRED: Model 781 — 7"; 900 — 7½".

GEAR RATIO: 7.68 to 1 reduction.

LOAD CHAIN: No. 4/0 matched link welded — 7/32" diameter; total tensile strength 3980 lbs.

DRIVE CHAIN: Roller Chain No. 41 — ½" pitch.

HAND CHAIN: No. 2/0 straight link — welded.

LOAD CHAIN WHEEL: 3-9/32" pitch diameter — supported each side with ball bearing.

HAND CHAIN WHEEL: 10½" pitch diameter — bronze bearing.

JACK SHAFT: For Model 781 — 1" diameter by 9" long on hoist side — 1" diameter by 7¼" long on opposite side for load sheave wheel units; connecting shaft — 1¼" diameter. For Model 900 — 1" diameter by 9¾" long on hoist side — 1" diameter by 7¼" long on opposite side for load sheave wheel units; connecting shaft 1¼" diameter. Shafts for wide doors supplied with one or more center support bearings.

ADJUSTMENT COUPLING: 2 pair supplied; each coupling includes one half-coupling with 1" bore and one half-coupling with 1¼" bore.

SPECIFICATIONS — NO. 15A HOIST

DOOR SIZE: For areas over 224 sq. ft.

DOOR MODEL: Model 900 with 3" tracking.

HEADROOM REQUIRED: 36" with springs above tracks. 22" with springs below tracks.

SIDEROOM REQUIRED: 7½".

GEAR RATIO: 6.1 to 1 reduction.

LOAD CHAIN: No. 6/0 matched link welded — 9/32" diameter; total tensile strength 6840 lbs.

DRIVE CHAIN: Roller chain No. 50 — 5/8" pitch.

HAND CHAIN: No. 2/0 straight link — welded.

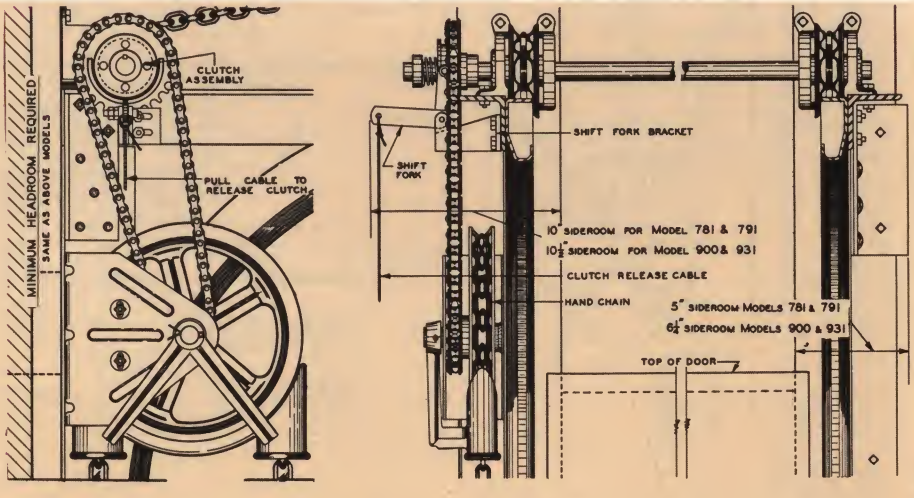
LOAD CHAIN WHEEL: 3-9/32" pitch diameter — supported each side with ball bearing.

HAND CHAIN WHEEL: 10½" pitch diameter — bronze bearing.

JACK SHAFT: 1¼" diameter by 9¾" long on hoist side — 1¼" diameter by 7¾" long on opposite side for load sheave wheel units; connecting shaft 1¼" diameter — length equals door width less 8¾". Shafts for wide doors supplied with one or more center support bearings.

ADJUSTMENT COUPLING: 2 pair supplied — 1¼" bore.

SIDE VIEW OF CHAIN HOIST WITH CLUTCH


CLUTCH ASSEMBLY
PULL CABLE TO RELEASE CLUTCH
MINIMUM HEADROOM REQUIRED
SAME AS ABOVE MODELS
SHIFT FORK BRACKET
SHIFT FORK
10" SIDEROOM FOR MODEL 781 & 791
10½" SIDEROOM FOR MODEL 900 & 931
CLUTCH RELEASE CABLE
HAND CHAIN
5" SIDEROOM MODELS 781 & 791
6½" SIDEROOM MODELS 900 & 931
TOP OF DOOR

FRONT VIEW OF CHAIN HOIST WITH CLUTCH

SPECIFICATIONS FOR 10 AND 15A HOISTS WITH CLUTCH

Use with Models 781, 791, 900 and 931 Doors.

Headroom: Model 781 requires 26"; Model 900 requires 36". For limited headroom use Model 791 which requires 16"; or Model 931 which requires 22". These two models have springs below the tracks.

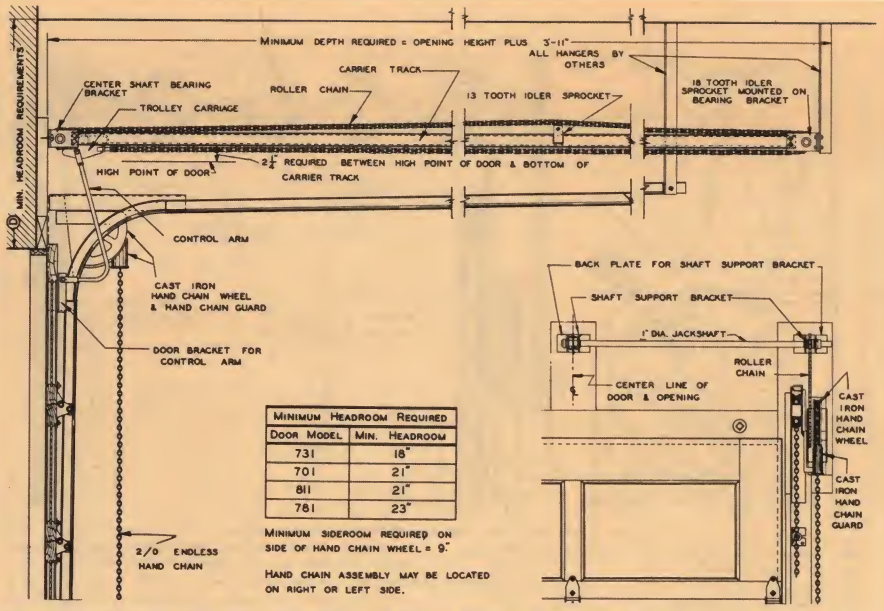
Release Clutch: For changing from hand chain to manual operation, may be had as optional equipment—extra charge.

Remaining Specifications: All other specifications are identical to those shown above.

CHAIN HOIST NO. 20 AND 10A AND 15A

LIMITED HEADROOM

SECTIONAL VIEW OF MODEL 20 HOIST AND DOOR TRACKING


MINIMUM DEPTH REQUIRED = OPENING HEIGHT PLUS 3'-11" ALL HANGERS BY OTHERS
CARRIER TRACK
CENTER SHAFT BEARING BRACKET
ROLLER CHAIN
13 TOOTH IDLER SPROCKET
18 TOOTH IDLER SPROCKET MOUNTED ON BEARING BRACKET
TROLLEY CARRIAGE
MIN. HEADROOM REQUIREMENTS
HIGH POINT OF DOOR
2½" REQUIRED BETWEEN HIGH POINT OF DOOR & BOTTOM OF CARRIER TRACK
CONTROL ARM
CAST IRON HAND CHAIN WHEEL & HAND CHAIN GUARD
DOOR BRACKET FOR CONTROL ARM
2/0 ENDLESS HAND CHAIN
MINIMUM SIDEROOM REQUIRED ON SIDE OF HAND CHAIN WHEEL = 9"
HAND CHAIN ASSEMBLY MAY BE LOCATED ON RIGHT OR LEFT SIDE.
BACK PLATE FOR SHAFT SUPPORT BRACKET
SHAFT SUPPORT BRACKET
1" DIA. JACKSHAFT
ROLLER CHAIN
CENTER LINE OF DOOR & OPENING
CAST IRON HAND CHAIN WHEEL
CAST IRON HAND CHAIN GUARD

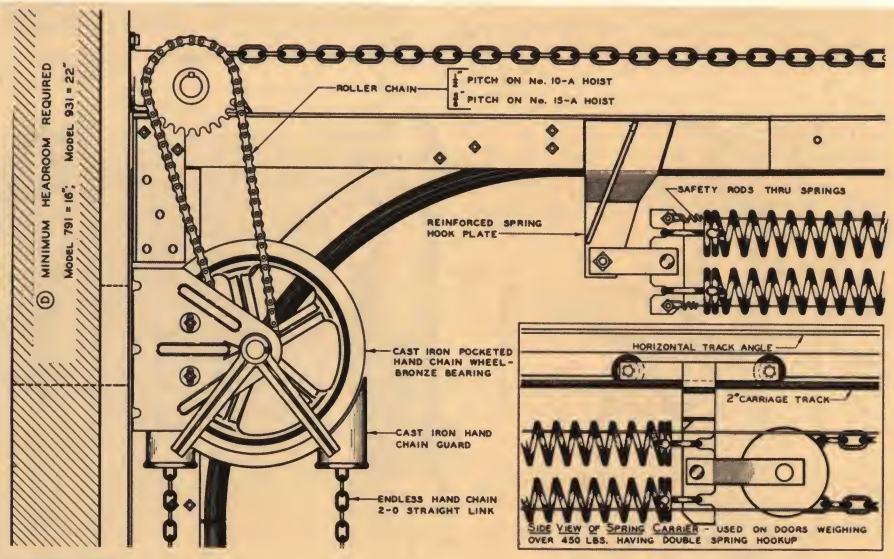
Minimum Headroom Required	
Door Model	Min. Headroom
731	18"
701	21"
811	21"
781	23"

PARTIAL INTERIOR VIEW OF MODEL 20 TROLLEY HOIST

CHAIN HOIST NO. 20 TROLLEY TYPE

Uses: For Models 701, 731, 781, 791 and 811 doors where No. 10-A or 15-A Hoist cannot be used. Usually used on doors already installed.
Location: As shown on drawings. Hand chain may be on either right or left side.
Headroom Required: Model 731—18". Model 701—21" Model 811—21" Model 781—26". Model 791—22"
Sideroom Required: Operating side—9"; opposite side—as required by door.
Drive: No. 41 Roller Chain.
Hand Chain: No. 2/0 Straight Link Chain.
Hand Chain Wheel: 10¼" pitch diameter.
Jackshaft: 1" diameter.
Adjustment: No adjustments required after original installation

10A AND 15A HOISTS SPRINGS BELOW FOR LIMITED HEADROOM


MINIMUM HEADROOM REQUIRED
MODEL 791 = 16"; MODEL 931 = 22"
ROLLER CHAIN
⅝" PITCH ON No. 10-A HOIST
½" PITCH ON No. 15-A HOIST
SAFETY RODS THRU SPRINGS
REINFORCED SPRING HOOK PLATE
CAST IRON POCKETED HAND CHAIN WHEEL-BRONZE BEARING
CAST IRON HAND CHAIN GUARD
ENDLESS HAND CHAIN 2-0 STRAIGHT LINK
HORIZONTAL TRACK ANGLE
2" CARRIAGE TRACK
SIDE VIEW OF SPRING CARRIER - USED ON DOORS WEIGHING OVER 450 LBS. HAVING DOUBLE SPRING HOOKUP

LOW HEADROOM DOORS WITH CHAIN HOISTS

MODEL 791
Hardware and Door Sections: 2" tracking—similar to Model 781 except that springs are below horizontal tracks.
Door Sizes: Up to 224 sq. ft. in area where chain hoist is required but headroom is not sufficient for Model 781.
Headroom Required: Minimum 16".
Chain Hoist: No. 10A, see Page 19

MODEL 931
Hardware and Door Sections: 3" tracking. heavy duty hardware. Similar to Model 900 except that springs are below horizontal tracks.
Door Sizes: Recommended for doors over 224 sq. ft. in area where headroom is not sufficient for Model 900.
Headroom Required: Minimum 22".
Chain Hoist: No. 15A. See Page 19

Rō-WAY

Light Commercial Construction

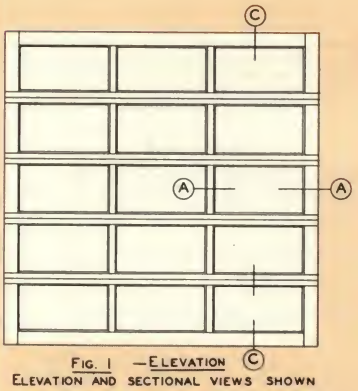


FIG. 1 —ELEVATION

ELEVATION AND SECTIONAL VIEWS SHOWN FOR FIG. 1 ARE TYPICAL FOR DOORS OF LIGHT COMMERCIAL CONSTRUCTION.

Heavy Commercial Construction

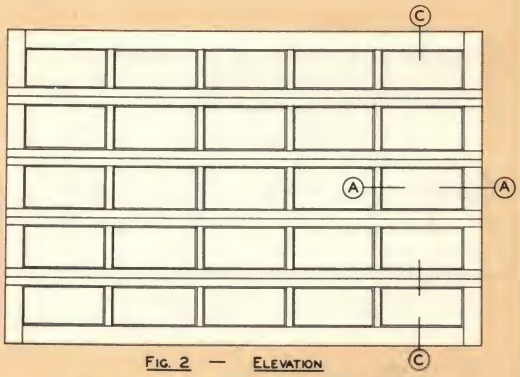
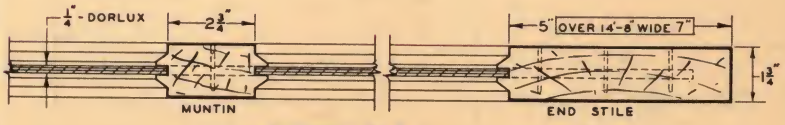


FIG. 2 — ELEVATION

ELEVATION AND SECTIONAL VIEWS SHOWN FOR FIG. 2 ARE TYPICAL FOR DOORS OF HEAVY COMMERCIAL CONSTRUCTION.

MUNTIN AND END STILE LIMITATIONS

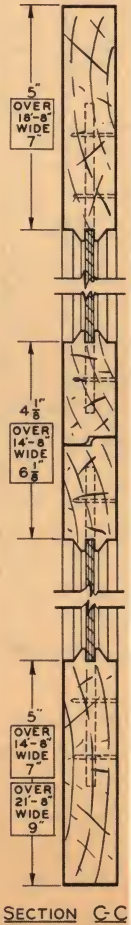


SECTION A-A

PANEL AND SECTION LIMITATIONS

PANEL SCHEDULE		SECTION SCHEDULE	
OPENING WIDTH	No. OF PANELS	OPENING HEIGHT	No. OF SECTIONS
UP TO 7'-0"	2	4'-6 1/8" TO 6'-6"	3
7'-0 1/8" TO 10'-8"	3	6'-6 1/8" TO 8'-6"	4
10'-6 1/8" TO 12'-6"	4	8'-6 1/8" TO 10'-6"	5
12'-8 1/8" TO 14'-6"	5	10'-6 1/8" TO 12'-8"	6
14'-6 1/8" TO 16'-6"	6	12'-6 1/8" TO 14'-6"	7
16'-6 1/8" TO 20'-6"	8	14'-6 1/8" TO 16'-6"	8
20'-6 1/8" TO 24'-6"	10	16'-6 1/8" TO 18'-6"	9
24'-6 1/8" TO 28'-6"	12	18'-6 1/8" TO 20'-6"	10

RAIL LIMITATIONS



SECTION C-C

SPECIFICATIONS

DOORS AS SHOWN IN FIGURES 1 & 2 SHALL HAVE STILES, RAILS AND MUNTINS BUILT OF DOUGLAS FIR, SITKA SPRUCE, PONDEROSA PINE OR UPLAND HEMLOCK (ROWE OPTION).

PANELS SHALL BE 1/4" - DORLUX.

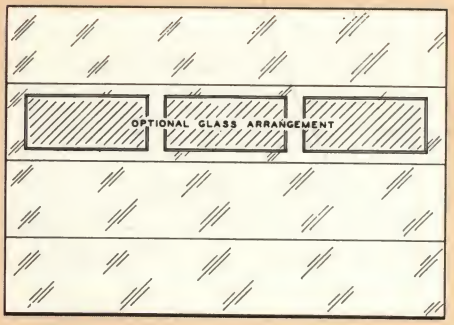
ALL DOOR JOINTS ARE BLIND MORTISE AND TENON, STEEL DOWELED AND WATERPROOF GLUED.

ANY ONE OR ALL SECTIONS MAY BE LEFT OPEN FOR GLASS OR PANELS MAY BE USED THROUGHOUT. GLASS AND GLAZING NOT REGULARLY INCLUDED. KIND OF GLASS MUST BE SPECIFIED.

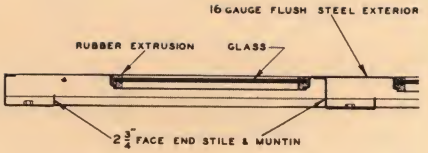
SPECIAL SECTION AND PANEL DESIGN WILL BE FURNISHED UPON REQUEST.

STEEL DOOR CUSTOM DESIGN

EXTERIOR ELEVATION FLUSH STEEL SECTIONS



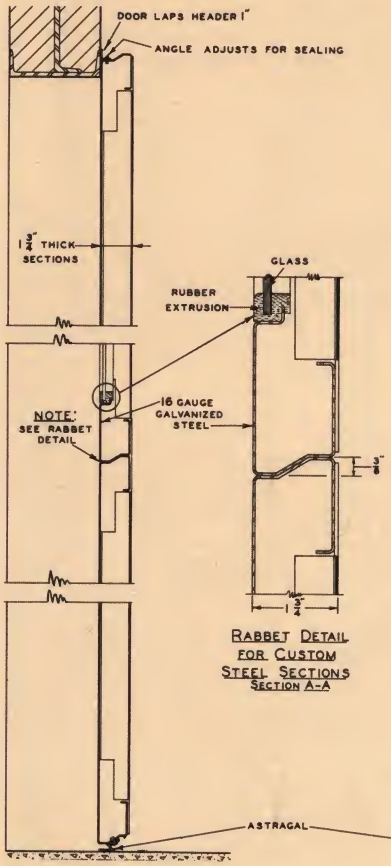
SECTIONAL VIEW THRU END STILE AND MUNTIN



SECTION B-B

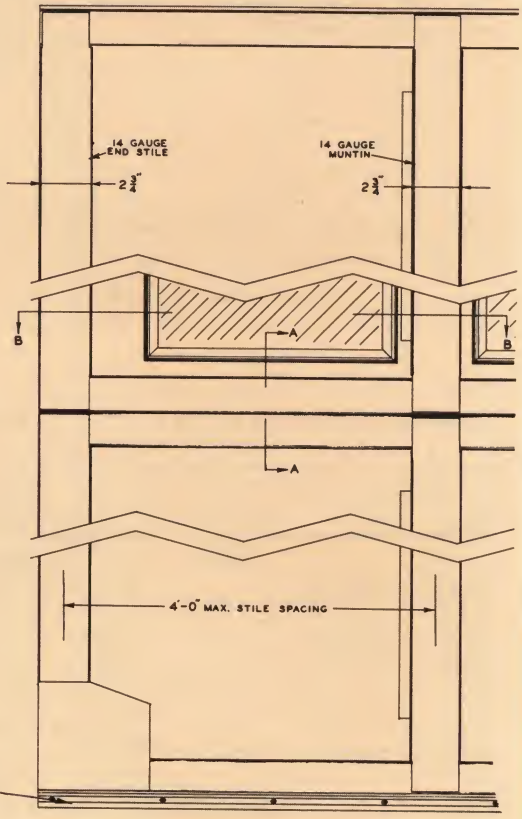
DOOR SECTION SCHEDULE	
DOOR OPENING HEIGHT	No. OF SECTIONS
UP TO 8'-0"	4
8'-1" THRU 10'-0"	5
10'-1" THRU 12'-0"	6
12'-1" THRU 14'-0"	7
14'-1" THRU 16'-0"	8
OVER 16'-0" -- CONSULT ENGINEERING	

SECTIONAL VIEW THRU DOOR AND OPENING



RABBET DETAIL FOR CUSTOM STEEL SECTIONS
SECTION A-A

INTERIOR CUTAWAY ELEVATION OF SECTIONS



SPECIFICATIONS

Material: Muntins 14 gauge; outer skin 16 gauge galvanized paintgrip steel.

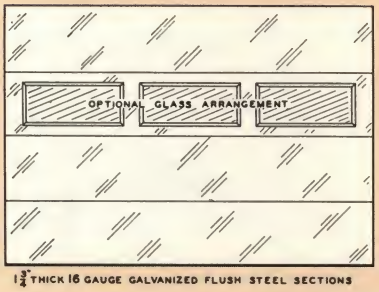
Section Construction: Door sections 1¾" thick shall be flush on exterior side. All sections have a rabbet or shiplap waterseal on top and bottom edges. All welded joints on sections dressed down smooth. Top section has a sealing angle which can be adjusted. Bottom section is provided with a full length astragal for sealing door to floor. Doors over 12' 2" wide have reinforcing member welded to rail, forming integral part of section. All sections are designed to withstand a wind pressure of 20 pounds per square foot. Vertical muntins shall not be spaced more than 4' 0" apart. Exterior face of door has no exposed hinge bolts. Pass doors available 30" wide × 69½" high, located within the 48" stile spacing on right side of door viewed from the interior.

Glazing: Where sections are designated to be open for glass a rubber extrusion shall be supplied to fit in steel frame providing glass with a watertight seal.

STEEL DOOR STANDARD DESIGN

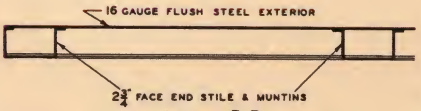
Rō-WAY OVERHEAD DOORS

EXTERIOR ELEVATION FLUSH STEEL SECTIONS



1¾" THICK 16 GAUGE GALVANIZED FLUSH STEEL SECTIONS

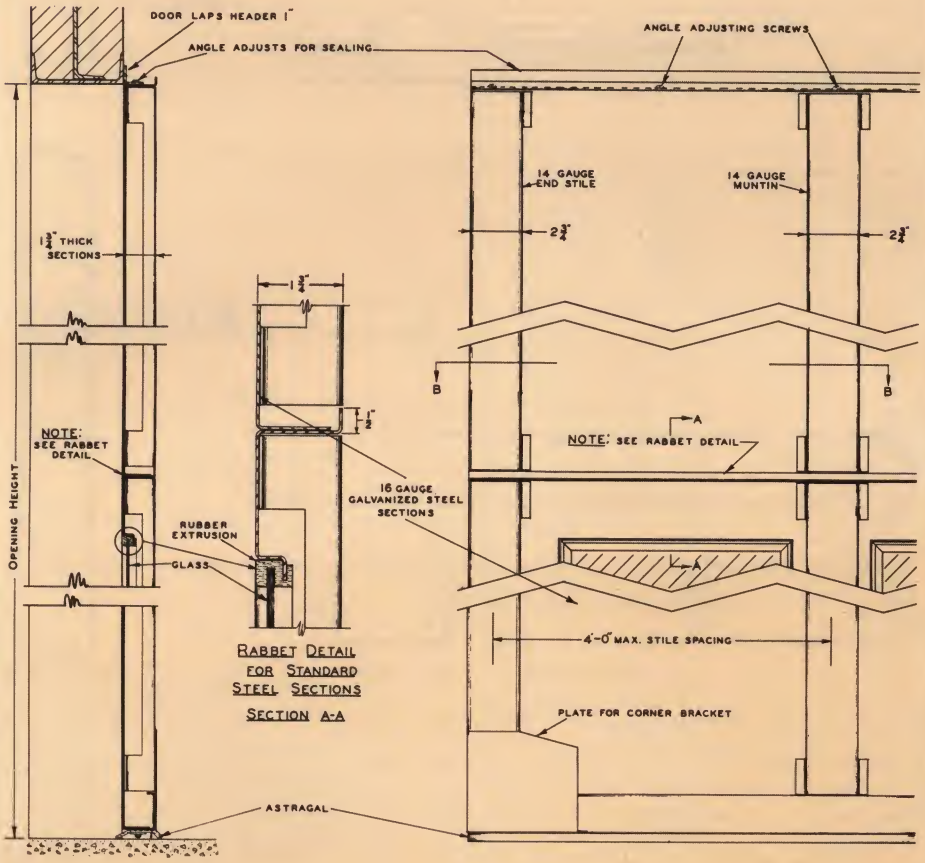
SECTIONAL VIEW THRU END STILE AND MUNTIN



SECTION B-B

DOOR SECTION SCHEDULE	
DOOR OPENING HEIGHT	No. OF SECTIONS
UP TO 8'-6"	4
8'-7" THRU 10'-6"	5
10'-7" THRU 12'-6"	6
12'-7" THRU 14'-6"	7
14'-7" THRU 16'-6"	8
OVER 16'-6" -- CONSULT ENGINEERING	

SECTIONAL VIEW THRU DOOR AND OPENING



INTERIOR CUTAWAY ELEVATION OF SECTIONS

SPECIFICATIONS

Material: Muntins 14 gauge; outer skin 16 gauge galvanized paintgrip steel.

Section Construction: Door sections shall be flush on exterior side with ½" high rabbet at section joints. Vertical muntins not spaced more than 4' 0" apart. Top edge of door is provided with an adjustable sealing angle, while bottom edge is equipped with a rubber astragal. All doors over 10' 6" wide shall have reinforcing member welded to section rail—forming integral part of door section. All welded joints on sections dressed down smooth. Exterior face of door has no exposed hinge bolts. Pass doors are available 30" × 69½" high—located within the 48" stile spacing on right side of door viewed from inside.

Glazing: Where sections are designated to be open for glass a rubber extrusion shall be supplied to fit in steel frame providing glass with water-tight seal.

METAL COVERED DOORS

GALVANIZED SHEET METAL ONE SIDE ONLY

EXTERIOR ELEVATION BOTTOM SECTION

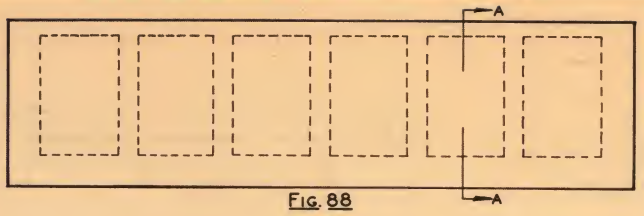
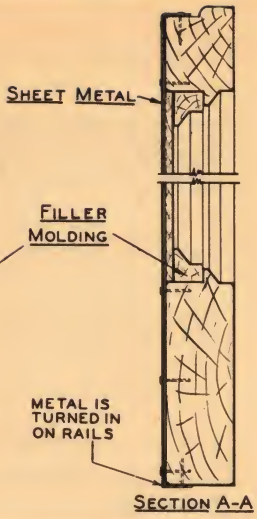


FIG. 88

SECTION THRU END STILE PANEL AND MUNTIN

SECTION THRU GLASS OPENING

SECTION THRU RAILS AND FILLER



GALVANIZED SHEET METAL BOTH SIDES

INTERIOR ELEVATION BOTTOM SECTION

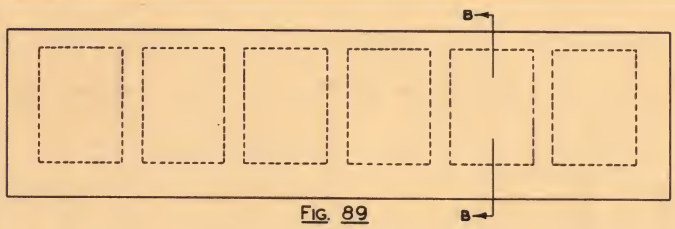
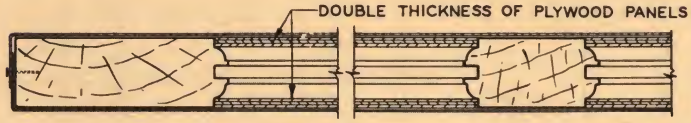
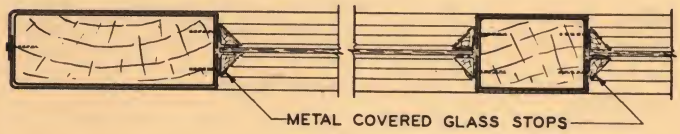


FIG. 89

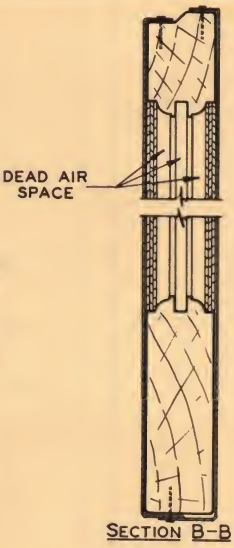
SECTION THRU END STILE PANEL AND MUNTIN



SECTION THRU GLASS OPENING



SECTION THRU RAILS AND PANELS



NO. 44 METAL COVERED DOORS COVERED INSIDE ONLY

Uses: For any 1¾" thick commercial door where protection against fire or burglary is required. (Does not carry Underwriters label.)

Limitations on Door Area. Maximum area for 2" tracking doors is 150 sq. ft. Maximum area for 3" tracking doors is 250 sq. ft.

Metal Covering: 28 gauge galvanized sheet metal applied flat to the inside face of door. Covering on only one side of door is nailed to stiles and rails but is not turned over edges of sections.

Panels: A filler molding is inserted in panel openings to bring ¼" plywood panels out flush with door surface. This permits metal to lay on flat.

Glass Sections: May be had for any sections or panels (extra charge). Always indicate which sections are to be left open for glass.

Wood Glass Stops: Are included as standard equipment for glass sections unless otherwise specified.

Vertical Tracks: Regularly mounted on continuous angles.

NO. 46 METAL COVERED DOORS COVERED OUTSIDE ONLY

Metal Covering: 28 gauge galvanized sheet metal applied flat to the outside face of door. Covering only one side of door is nailed to stiles and rails and is turned over edges of rails but not end stiles.

Other Construction and Limitations: Same as No. 44 described above.

NO. 48 METAL COVERED DOORS COVERED BOTH SIDES AND EDGES

Metal Covering: 28 gauge galvanized sheet metal is applied flat to both sides of the door. Sheet metal covering is also turned over edges of sections and nailed to stiles and rails.

Limitations on Door Area: Maximum area for 2" tracking doors is 130 sq. ft. Maximum area for 3" tracking doors is 200 sq. ft.

Metal Covered Glass Stops: Furnished for each glass opening on all doors metal covered on both sides.

Other Construction: Same as No. 44 described above.

EXTERIOR ELEVATION FLUSH BOTTOM

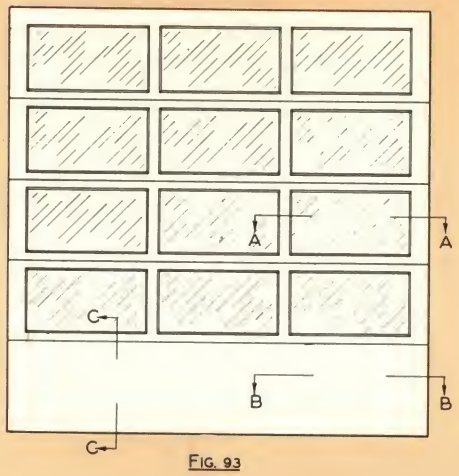


FIG. 93

EXTERIOR ELEVATION PANEL BOTTOM

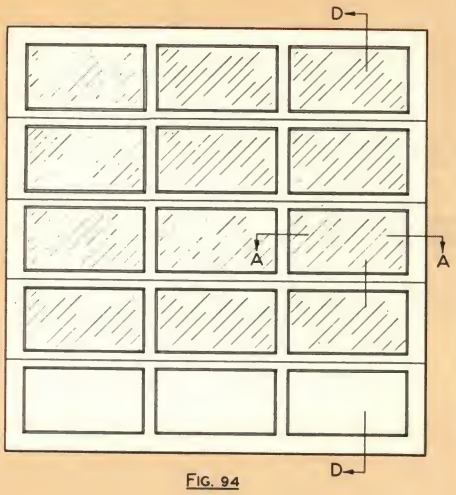
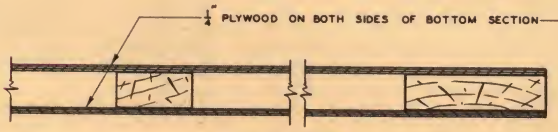


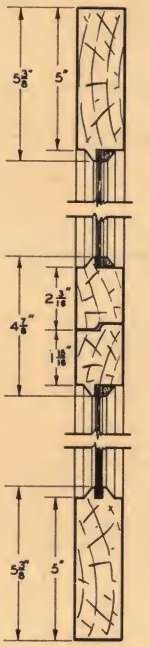
FIG. 94

SECTION A-A



SECTION B-B

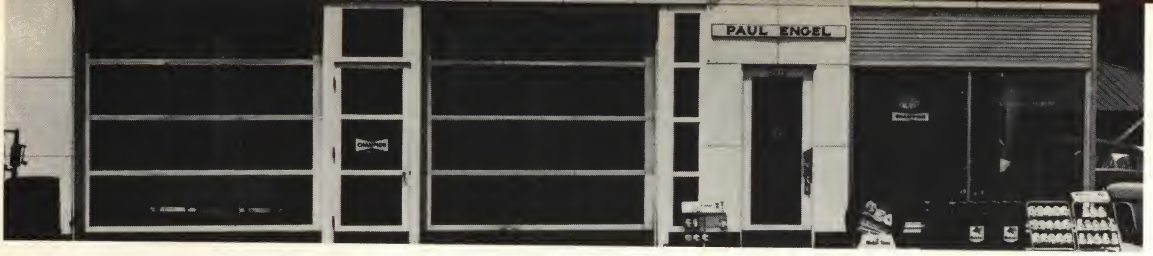
SECTION C-C



SECTION D-D

DOOR SECTIONS ARE BUILT OF DOUGLAS FIR. ALL PLYWOOD IS 3 PLY LAMINATED FIR. SECTIONS MAY BE LEFT OPEN FOR GLASS AS REQUIRED. BOTTOM SECTION MAY BE FLUSH TYPE WITH PLYWOOD FACING AS SHOWN IN FIG.93 AND SECTIONAL VIEWS B-B AND C-C. ALL DOOR JOINTS ARE BLIND MORTISE AND TENON, STEEL DOWELED AND WATERPROOF GLUED. LATCH AND CYLINDER LOCATED ON END STILE OF SECOND SECTION. SECTION D-D SHOWS DORLUX PANELS IN BOTTOM SECTION.

SERVICE STATION DOORS



Wood Muntins

EXTERIOR ELEVATIONS

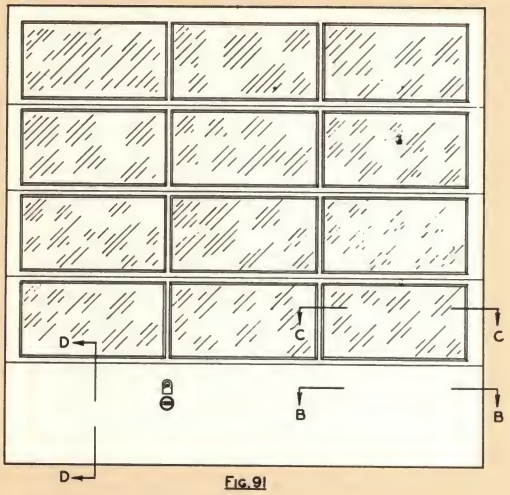


FIG. 91

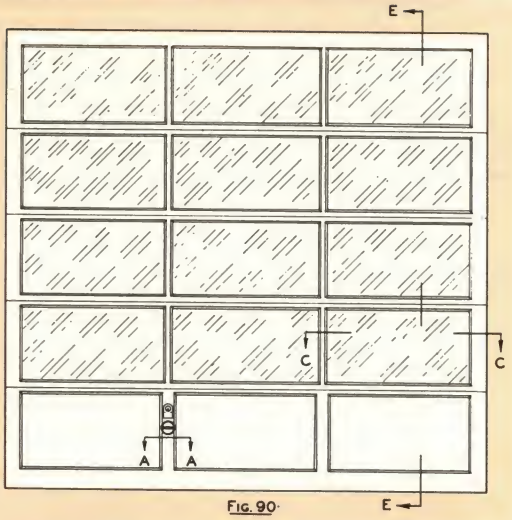
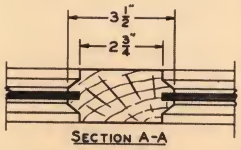
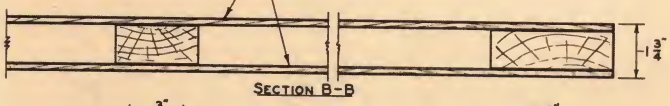


FIG. 90

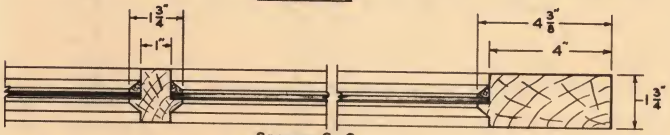
SECTION A-A IS TYPICAL FOR MUNTINS IN BOTTOM SECTION ONLY WHEN PLYWOOD OR DORLUX PANELS PREVAIL. MUNTINS ARE WIDER TO ACCOMMODATE LOCKING EQUIPMENT. WHEN ALL SECTIONS ARE OPEN FOR GLASS, MUNTINS IN BOTTOM SECTION ARE NARROW AS SHOWN IN SECTION C-C AND LOCKING EQUIPMENT IS LOCATED ON END STILE OF SECOND SECTION.



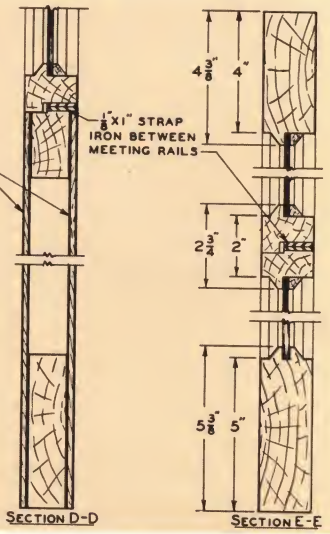
SECTION A-A



SECTION B-B



SECTION C-C



SECTION D-D

SECTION E-E

DOOR SECTIONS ARE BUILT OF DOUGLAS FIR. PLYWOOD IS 3 PLY LAMINATED FIR. SECTIONS MAY BE LEFT OPEN FOR GLASS AS REQUIRED. BOTTOM SECTION MAY BE FLUSH TYPE WITH PLYWOOD FACING AS SHOWN IN SECTIONS B-B & D-D. ALL DOOR JOINTS ARE MORTISE & TENON, STEEL PINNED & WATERPROOF GLUED. THIS DESIGN NOT RECOMMENDED FOR DOORS OVER 10'-6" WIDE.

ALUMINUM MUNTINS

EXTERIOR ELEVATION

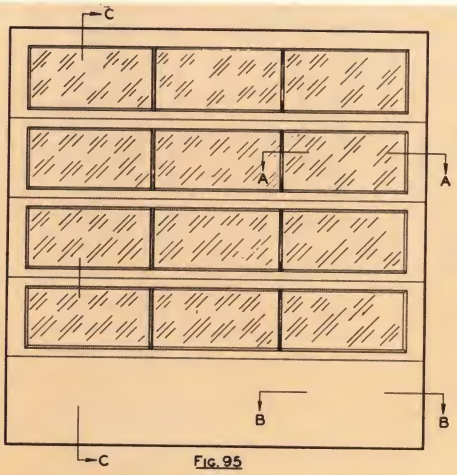
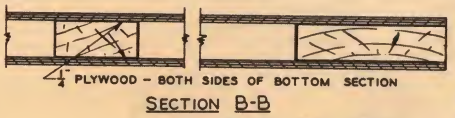


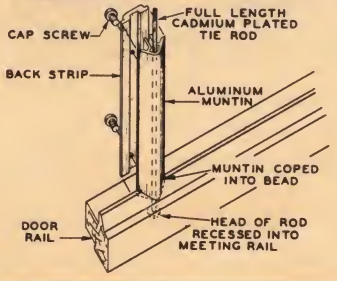
FIG. 95

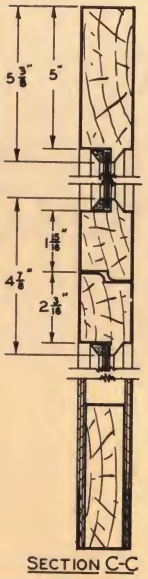
ALUMINUM MUNTIN-TIE BOLTED-BETWEEN MEETING RAILS.

SECTION A-A



SECTION B-B





SECTION C-C

STILES & RAILS ARE BUILT OF DOUGLAS FIR. JOINTS ARE MORTISE & TENON, STEEL DOWELED & WATERPROOF GLUED. ALL PLYWOOD IS 3 PLY LAMINATED FIR. BOTTOM SECTION FLUSH TYPE AS SHOWN. LATCH & CYLINDER LOCK LOCATED ON END STILE OF SECOND SECTION.

INTERIOR ELEVATIONS

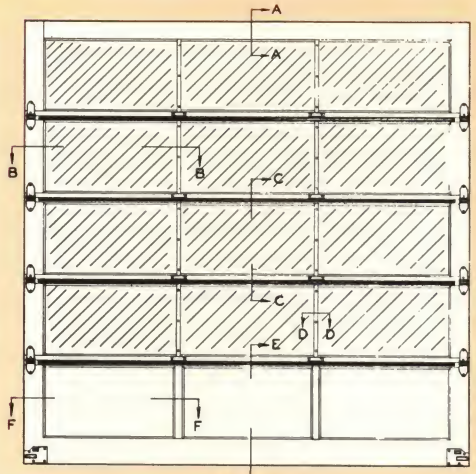


FIG. 96

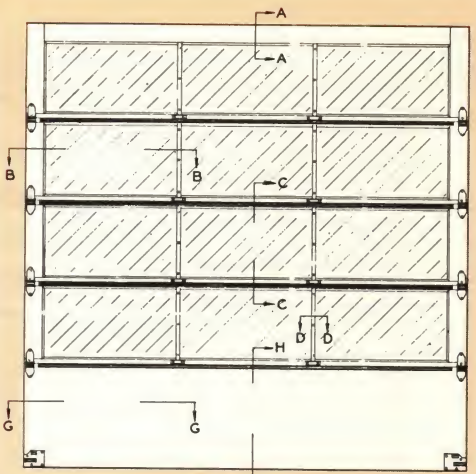
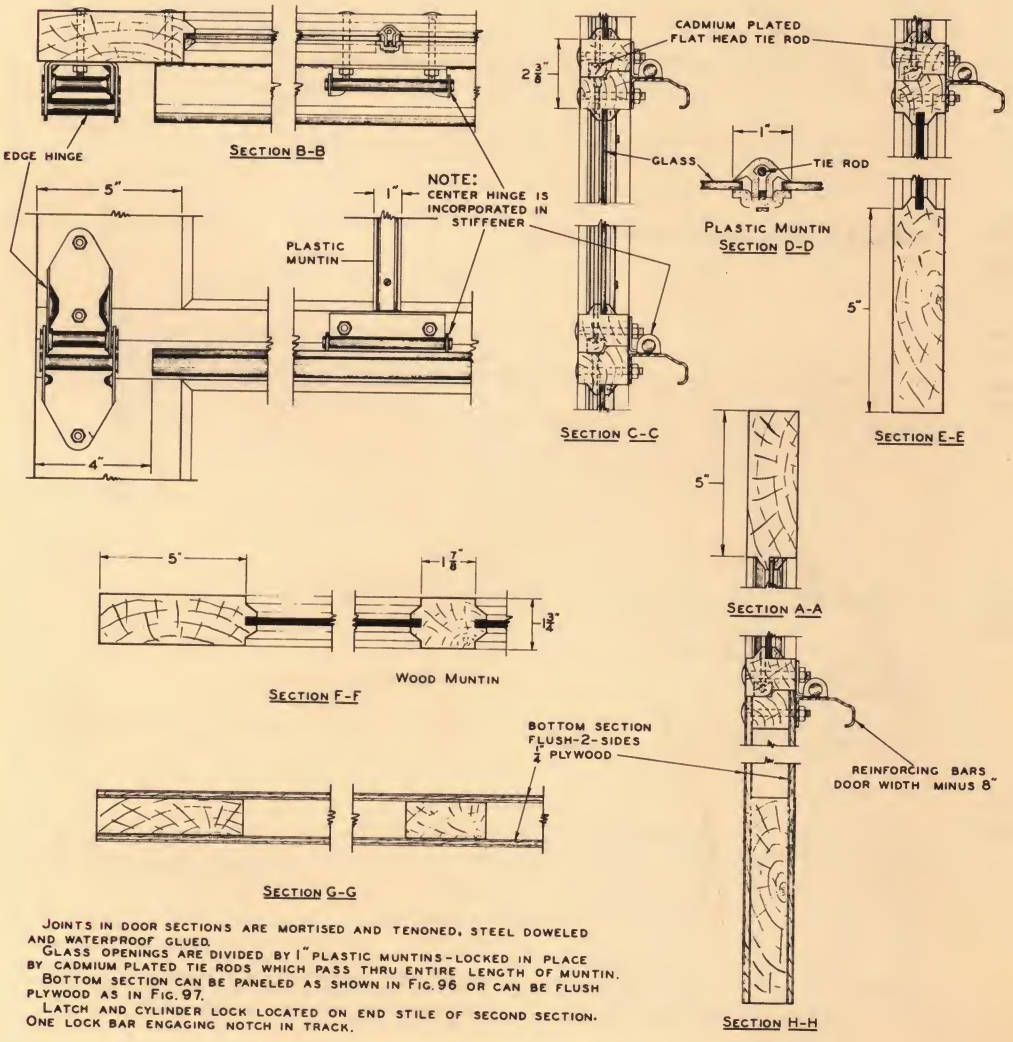


FIG. 97

INTERIOR VIEW OF EDGE AND CENTER HINGES



JOINTS IN DOOR SECTIONS ARE MORTISED AND TENONED, STEEL DOWELED AND WATERPROOF GLUED.

GLASS OPENINGS ARE DIVIDED BY 1" PLASTIC MUNTINS - LOCKED IN PLACE BY CADMIUM PLATED TIE RODS WHICH PASS THRU ENTIRE LENGTH OF MUNTIN.

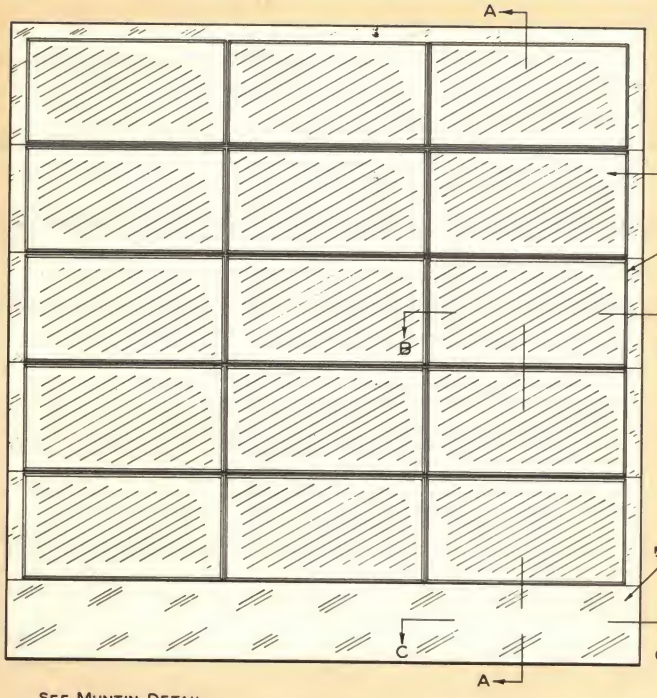
BOTTOM SECTION CAN BE PANELED AS SHOWN IN FIG. 96 OR CAN BE FLUSH PLYWOOD AS IN FIG. 97.

LATCH AND CYLINDER LOCK LOCATED ON END STILE OF SECOND SECTION. ONE LOCK BAR ENGAGING NOTCH IN TRACK.

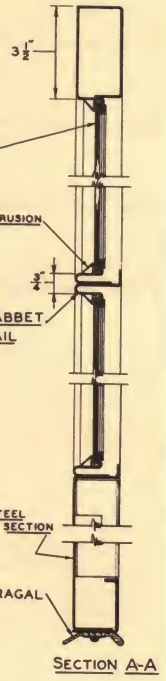
SERVICE STATION DOORS

Steel Narrowline

EXTERIOR ELEVATION

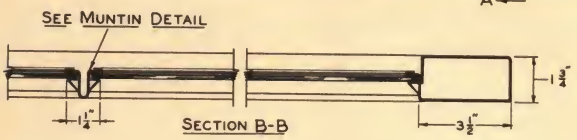


SECTION THRU DOOR RAILS



SECTION A-A

SECTION THRU GLASS MUNTIN AND END STILE

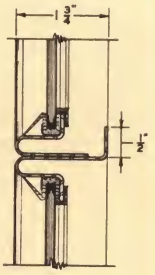


SECTION B-B

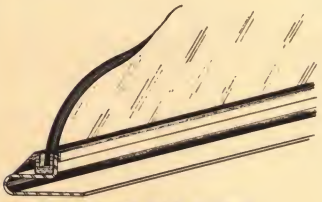
FLUSH EXTERIOR BOTTOM SECTION

SECTION C-C

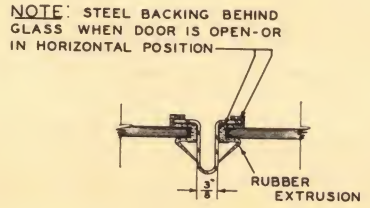
RABBET DETAIL



GLAZING METHOD



METHOD OF HOLDING D.S.B. GLASS IN WITH RUBBER EXTRUSION



SPECIFICATIONS

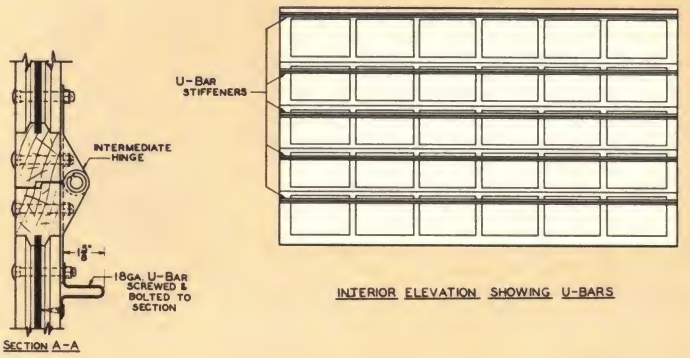
Material: 16 gauge galvanized paintgrip steel.

Section Construction: Door shall have flush bottom section which varies in height with door height. Muntins are not more than 4'-0" on centers. Top and intermediate sections have an aggregate of ¾" face meeting rails. ⅜" face vertical muntins and 3½" face stiles and top rail. All welded joints dressed down smooth. Rabbet heights are approximately ½" high at section joints. Bottom edge of door is equipped with a continuous rubber astragal. Exterior face of door has no exposed hinge bolts.

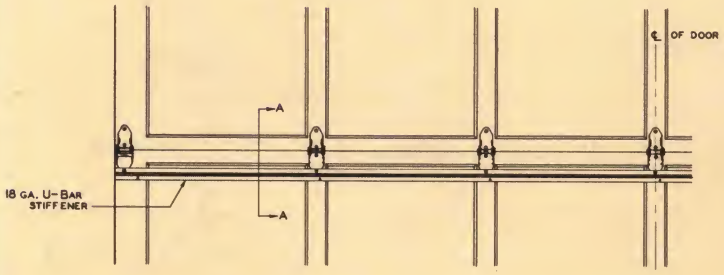
Glazing: Positive steel frame under glass when doors are in horizontal position. Rubber mounting type molding is supplied for glass openings. Rubber mounting requires DS type glass.

REINFORCING FOR DOOR SECTIONS

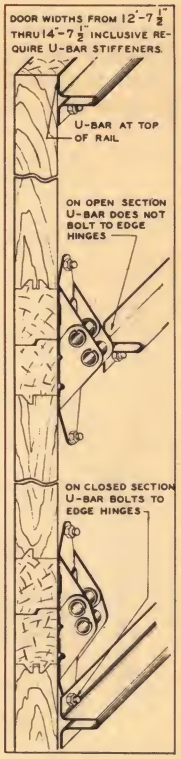
SECTIONAL VIEW SHOWING U-BAR AND HINGE



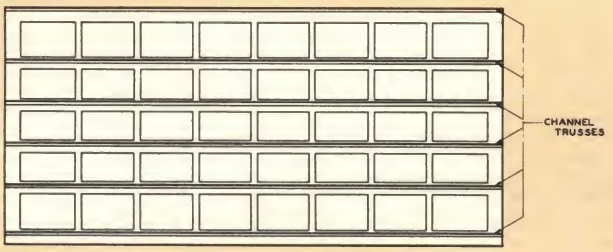
PARTIAL INTERIOR ELEVATION OF U-BAR AND HINGES



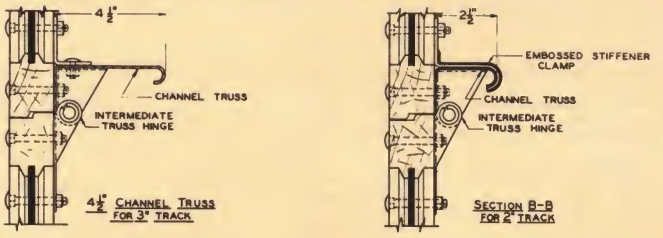
LOCATION AND LIMITATIONS OF U-BAR STIFFENERS


DOOR WIDTHS FROM 12'-7½" THRU 14'-7½" INCLUSIVE REQUIRE U-BAR STIFFENERS.
U-BAR AT TOP OF RAIL
ON OPEN SECTION U-BAR DOES NOT BOLT TO EDGE HINGES
ON CLOSED SECTION U-BAR BOLTS TO EDGE HINGES

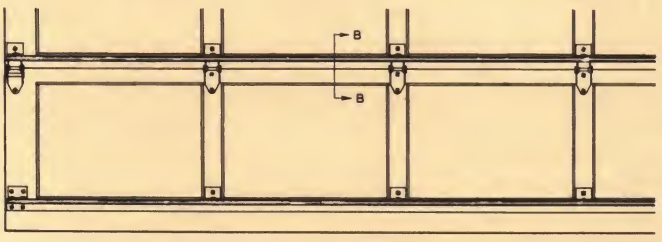
INTERIOR ELEVATION SHOWING CHANNEL STIFFENERS



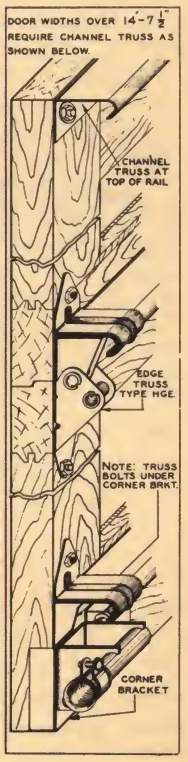
SECTIONAL VIEW SHOWING CHANNEL AND HINGE



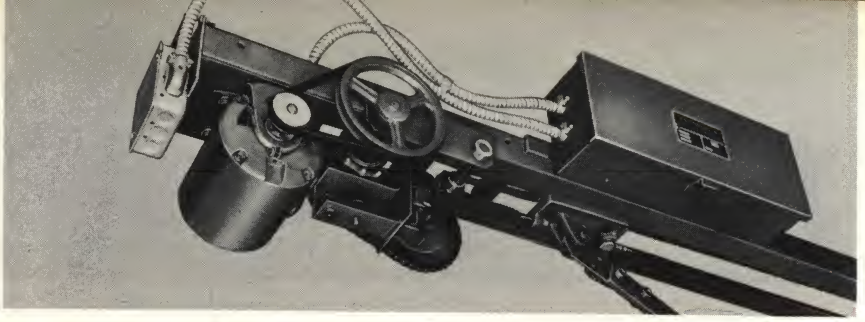
PARTIAL INTERIOR ELEVATION SHOWING CHANNEL TRUSS



LOCATION OF CHANNELS RELATIVE TO HINGES AND CORNER BRACKETS

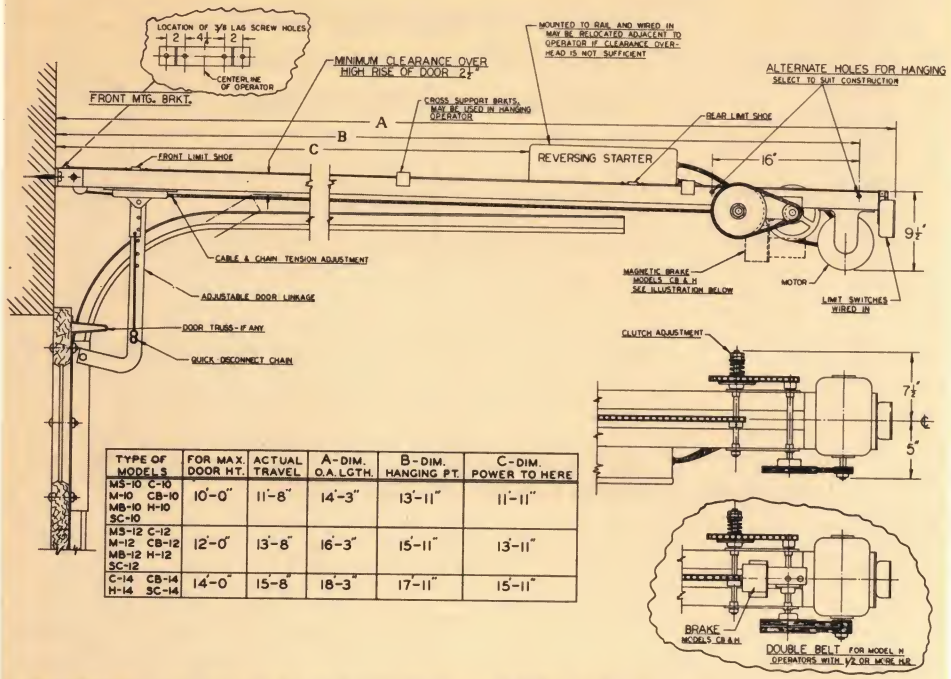

DOOR WIDTHS OVER 14'-7½" REQUIRE CHANNEL TRUSS AS SHOWN BELOW.
CHANNEL TRUSS AT TOP OF RAIL
EDGE TRUSS TYPE HGE.
NOTE: TRUSS BOLTS UNDER CORNER BRKT.
CORNER BRACKET

TROLLEY TYPE ELECTRIC DOOR OPERATORS



Ro-Way offers a complete line of time-tested Electric Door Operators especially designed for commercial and industrial overhead type doors. Following specifications cover the Ro-Way Trolley Type Electric Door Operator for use on continuous shaft or split shaft torsion spring doors and extension spring doors.

AREA REQUIRED FOR OPERATOR


LOCATION OF ⅝ LAG SCREW HOLES
2 4½ 2
CENTERLINE OF OPERATOR
MINIMUM CLEARANCE OVER HIGH RISE OF DOOR 2"
MOUNTED TO RAIL AND WIRED IN MAY BE RELOCATED ADJACENT TO OPERATOR IF CLEARANCE OVERHEAD IS NOT SUFFICIENT
ALTERNATE HOLES FOR HANGING SELECT TO SUIT CONSTRUCTION
FRONT MTG. BRKT.
CROSS SUPPORT BRKTS. MAY BE USED IN HANGING OPERATOR
REAR LIMIT SHOE
A
B
C
FRONT LIMIT SHOE
REVERSING STARTER
16"
9½"
CABLE & CHAIN TENSION ADJUSTMENT
MAGNETIC BRAKE MODELS CB & H SEE ILLUSTRATION BELOW
MOTOR
LIMIT SWITCHES WIRED IN
ADJUSTABLE DOOR LINKAGE
DOOR TRUSS - IF ANY
QUICK DISCONNECT CHAIN
CLUTCH ADJUSTMENT
7½"
5"
BRAKE MODELS CB & H
DOUBLE BELT FOR MODEL H OPERATORS WITH ½ OR MORE H.P.

TYPE OF MODELS	FOR MAX. DOOR HT.	ACTUAL TRAVEL	A-DIM. O.A. LGTH.	B-DIM. HANGING PT.	C-DIM. POWER TO HERE
MS-10 C-10 M-10 CB-10 MB-10 H-10 SC-10	10'-0"	11'-8"	14'-3"	13'-11"	11'-11"
MS-12 C-12 M-12 CB-12 MB-12 H-12 SC-12	12'-0"	13'-8"	16'-3"	15'-11"	13'-11"
C-14 CB-14 H-14 SC-14	14'-0"	15'-8"	18'-3"	17'-11"	15'-11"

TROLLEY AND JACKSHAFT OPERATOR FEATURES

1. **EFFICIENT POWER** — Roller Chain Drive and V-Belt and Pulley Reduction permit use of standard type motor on both trolley and jackshaft type operators. Maximum power is developed to provide years of trouble-free operation. Worm gears and gear-head motors, which waste power, are NOT used.
2. **SAFE OPERATION** — If moving door strikes obstruction, built-in clutch will slip to stop door movement. Clutch is easily adjusted by turning nut to increase or decrease clutch tension. Motor is protected against overload by a Fusetron.
3. **ECONOMY** — Ro-Way Electric Door Operators speed up traffic; save heat; reduce door maintenance. Sound engineering holds maintenance cost to a minimum.
4. **CONVENIENCE** — Doors powered with Ro-Way Electric Operators are opened and closed by pushing a control button. No physical effort need be used. In case of power failure, electric operator can be released for manual or chain hoist operation.

COMMERCIAL TROLLEY TYPE

INDUSTRIAL TROLLEY TYPE

DOOR SIZE HEIGHT	DOOR SIZE AREA	MODEL	MAGNETIC BRAKE	HORSE POWER	POWER SUPPLY (60 Cycle)	CONTROL VOLTAGE	CONTROLS
10 Ft. 12 Ft.	150 Sq. Ft.	MS	No	⅓	115V - 1 phase	12V	SINGLE BUTTON Vemco #320-024
10 Ft. 12 Ft. 14 Ft.	175 Sq. Ft.	SC	No	⅓	230V - 1 phase	12V	No mid-cycle reverse
10 Ft.	150 Sq. Ft.	M	No	⅓	115V - 1 phase	12V	THREE BUTTON Vemco #320-023 "Open - Close - Stop"
12 Ft.	175 Sq. Ft.	MB	Yes	⅓	230V - 1 phase 220V - 3 phase	12V 12V	
10 Ft.	175 Sq. Ft.	C	No	⅓	115V - 1 phase 230V - 1 phase	12V	THREE BUTTON Vemco #320-023
12 Ft.	200 Sq. Ft.	CB	Yes	⅓			
14 Ft.	300 Sq. Ft.	H	Yes	½	220V - 3 phase 440V - 3 phase 550V - 3 phase	110V	G-E #320-039 "Open - Close - Stop"
	400 Sq. Ft.	H	Yes	¾			

Door Heights shown use standard trolley type equipment. For door heights over 14' and up to 18' special operators are available.

Door Widths over 28 feet require dual trolley drive.

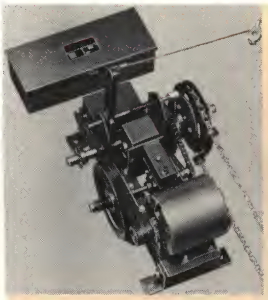
Control Voltages indicated above are standard. Other voltages available on special request.

Control Stations indicated on charts are one 3-button interior type included on all models except Models MS and SC. These two models are equipped with single button control stations. For additional stations see Page 32.

NOTE See Page 32 for Guarantee and Architect's Specifications.

JACKSHAFT TYPE ELECTRIC DOOR OPERATORS

Rō-WAY



Ro-Way offers a complete line of time-tested Electric Door Operators especially designed for commercial and industrial overhead type doors. Following specifications cover the Jackshaft Type Electric Door Operator for use on vertical lift and high lift torsion spring doors and chain hoist equipped extension spring doors.

STANDARD EQUIPMENT

MOTOR — General Electric Form "G" —capacitor or split phase or polyphase induction type. See chart above.

FRICTION CLUTCH — Stops movement if door is obstructed.

MAGNETIC BRAKE — Solenoid operated brake holds door in any position—prevents excessive coast. Supplied on all Ro-Way Jackshaft Type Electric Door Operators. On Trolley models see chart page 30.

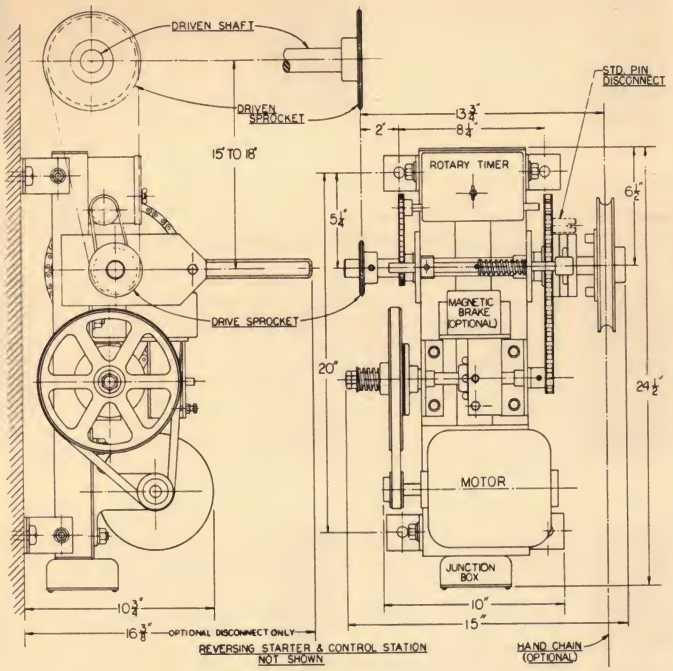
DISCONNECT — Permits quick transfer to manual or chain hoist operation.

LIMIT SWITCHES — Micro type limit switches are used on both Trolley and Jackshaft Operators.

STARTER — Allen - Bradley, Struthers - Dunn, or Potter - Brumfield.

MOTOR PROTECTION — G-E Overloads on 440 volt; Bussman Fusing on others.

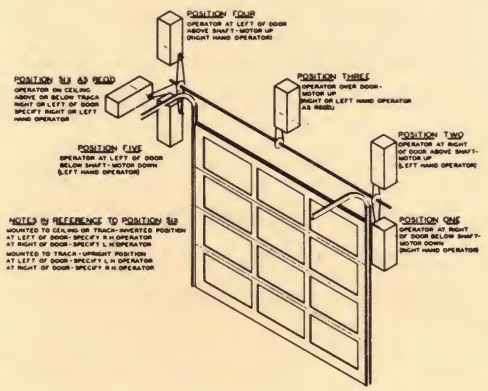
AREA REQUIRED FOR OPERATOR



JACKSHAFT OPERATOR SPECIFICATIONS

Door Size	Model	Horse-Power	Power Supply (1) (60 Cycle)	Control (2) Voltage	Three-Button Station	Magnetic Brake	Chain Hoist
Up to 200 Sq. Ft.	JCB	⅓	115V - 1 phase 230V - 1 phase	12V	Vemco #320-023	Yes	Optional
Up to 300 Sq. Ft.	JH	½	230V - 3 phase 440V - 3 phase	115V	G-E #320-039	Yes	Optional
Over 300 Sq. Ft.	JH	¾	550V - 3 phase	115V	G-E #320-039	Yes	Optional

MOUNTING POSITIONS



WHEN YOU ORDER

Please specify:

1. Model symbol.
2. Current including voltage, phase and cycle.
3. Door width.
4. Door height.
5. Available Headroom.
6. For Trolley Type—Available depth. See drawing.
7. For Jackshaft Type—Diameter of driven shaft and number of turns required to open door.
8. Extra control stations if required.
9. For Jackshaft mounting positions—see drawing.

NOTE See Page 32 for Guarantee and Architect's Specifications.

CONTROL STATIONS ELECTRIC OPERATORS

THREE BUTTON CONTROL STATIONS

Operators using this type of control can be stopped at any travel point and can then be operated in either direction. Three Button Stations are marked "OPEN-CLOSE-STOP." Buttons normally are MOMENTARY CONTACT type but can be made CONSTANT CONTACT for "open" or "close" or both. Three Button Stations CANNOT be used on Single Button Operators.

Standard Station supplied with all three phase operators where control circuit is 115 volts. Wall mounting dimensions: 2¾" × 7½" × 2¾".

Low Voltage Station supplied with all single phase three-button operators where control circuit is 12 volts. For wall or flush mounting. Standard "handy box" enclosure.

Weatherproof, heavy duty station for outside or inside wall mounting. Available on request. Dimensions: 2¾" × 10" × 3½".

SINGLE BUTTON CONTROL STATIONS

Operators using single button stations can be stopped but NOT REVERSED, until door has completed travel to fully open or closed position. Buttons are always MOMENTARY CONTACT. Three Button Stations CANNOT be used.

Low Voltage Station supplied with Electric Operators Models SC and MS. For wall or flush mounting. Standard "handy box" enclosure.

Standard Duty Station available on special request. Dimensions: 2¾" × 4½" × 2½".

Weatherproof, Heavy Duty Station for outdoor use. Wall mounting dimensions: 2¾" × 5" × 3½".

KEY TYPE CONTROL STATIONS

Weatherproof for outdoor wall or post mounting. Key mechanically locks STOP button so that all buttons and stations are electrically inoperative. Dimensions: 2¾" × 10" × 3½".

Weatherproof for outdoor wall or post mounting. Key mechanically locks OPEN button only so that other stations can be used. Dimensions: 2¾" × 10" × 3½".

Weatherproof key switch. Single button momentary contact for outdoor post mounting. Interchangeable with any single button. Dimensions: 1¾" × 4½" × 2½".

Key switch for jamb or flush panel mounting. Single momentary contact. Dimension: ¾" diameter hole.

GUARANTEE

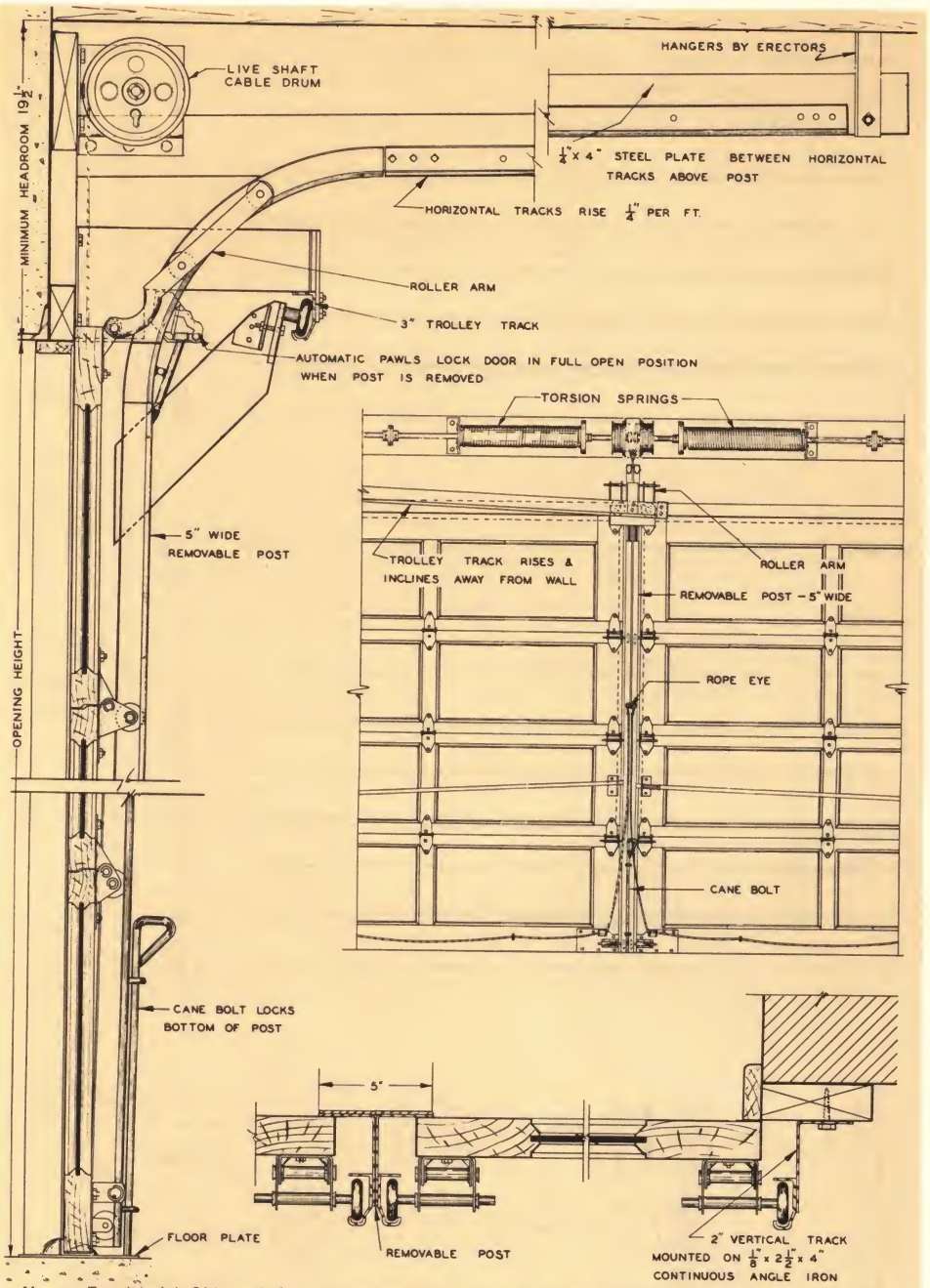
Rowe Manufacturing Co. guarantees each Ro-Way Electric Operator to be free from defects in material and workmanship for a period of one year from date of installation, providing defects are not caused by abuse or neglect. We reserve the right to recall to our factory for inspection, alleged imperfect materials.

ARCHITECTS SPECIFICATIONS

Operators shall be Ro-Way Model_____with Roller Chain Drive and V-Belt, Sprocket and Chain; equipped with Microtype Rotary Limit Switches and Safety Friction Clutch as manufactured by Rowe Manufacturing Co., Galesburg, Illinois.

REMOVABLE POST MODEL NO. 20

TYPICAL SECTION THRU OPENING



TYPICAL INTERIOR ELEVATION AT POST

DETAIL PLAN OF POST AND JAMB

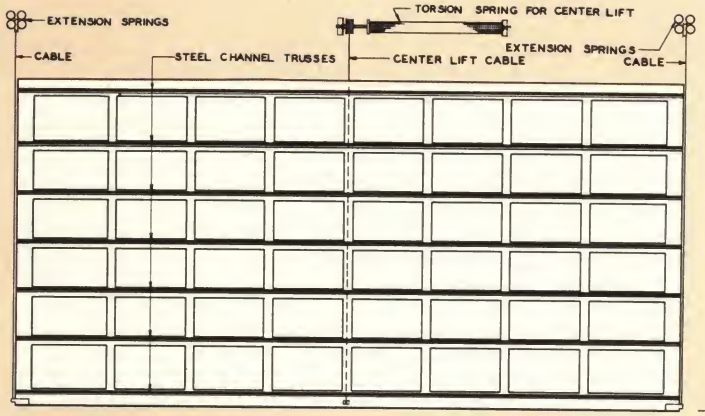
DETAILED DESCRIPTION

Uses: For Model 811 and 851 torsion spring doors that require the removing of the Center Post to provide extra wide openings.
Headroom: 19½" clear space required.
Sideroom: 5" on one side of opening. 12" on opposite side for post to move clear of opening.
Post Width: Total width 5".
Opening Sizes: Not limited since several doors and removable posts can be used in one opening. Removable Posts can be placed in center of opening or off center as required making doors of equal or unequal widths.

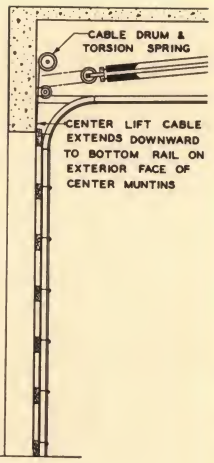
Trolley Track: May be placed so post slides either to right or left side of door opening.
Trolley Carriage: Two ball bearing track rollers support the weight of the Removable Post when being moved.
Locking Pawls: Doors automatically locked in open position when post is removed.
Post in Position: Held in firm alignment at top by two ½" steel pins—at bottom by ⅝" cane bolt.
Pass Door: May be used on any one or all of the doors as required.

CENTER SPRING LIFTS DOORS OVER 22′ 8″ WIDE

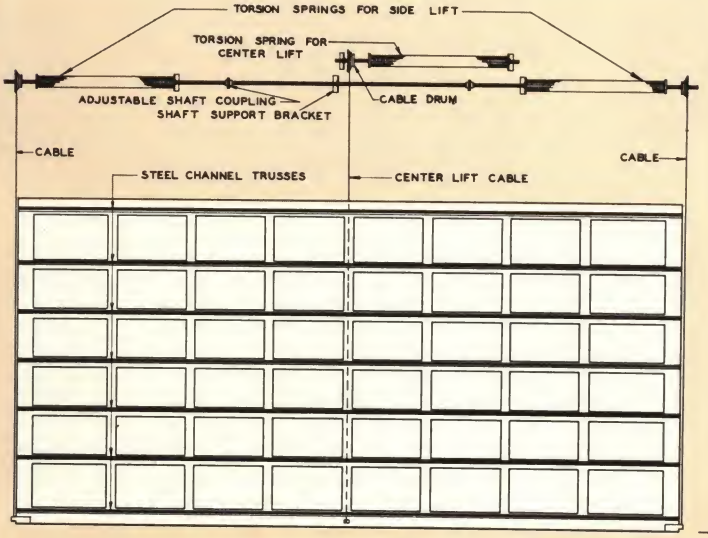
INTERIOR ELEVATION EXTENSION SPRING DOOR



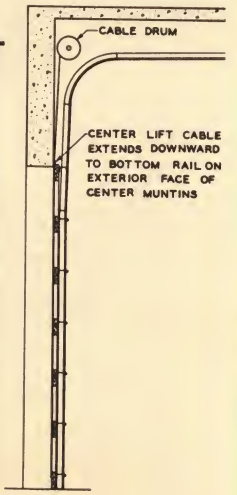
SECTIONAL VIEW — DOOR AND EXTENSION SPRINGS



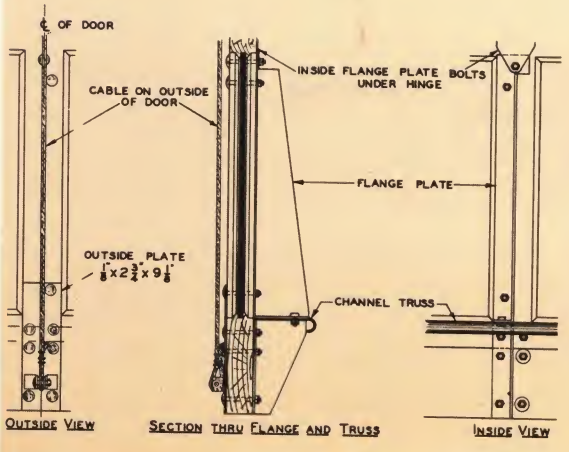
INTERIOR ELEVATION TORSION SPRING DOOR



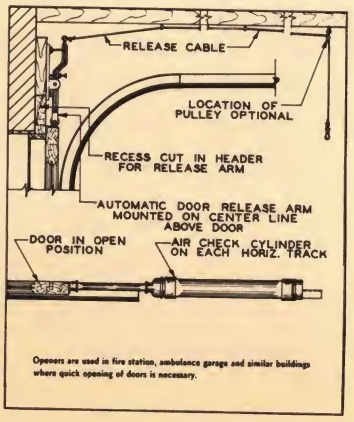
SECTIONAL VIEW — DOOR AND TORSION SPRING



THREE VIEWS OF CABLE ATTACHMENT

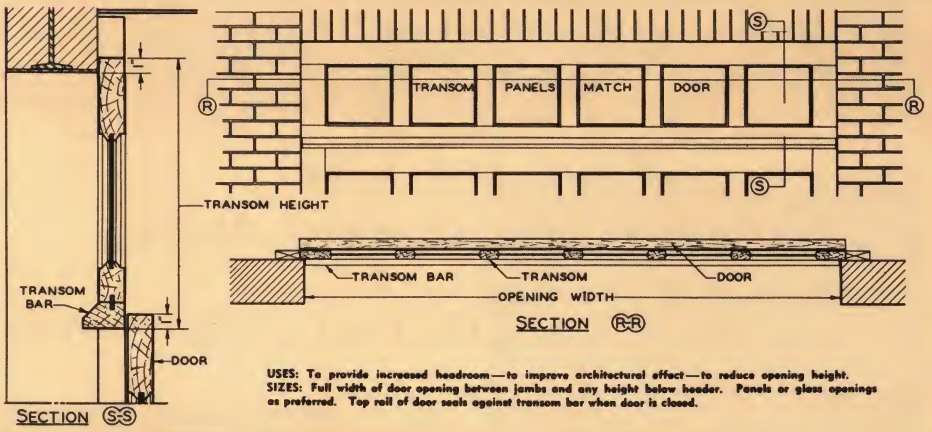


AUTOMATIC DOOR OPENER


RELEASE CABLE
LOCATION OF PULLEY OPTIONAL
RECESS CUT IN HEADER FOR RELEASE ARM
AUTOMATIC DOOR RELEASE ARM MOUNTED ON CENTER LINE ABOVE DOOR
DOOR IN OPEN POSITION
AIR CHECK CYLINDER ON EACH HORIZ. TRACK
Openers are used in fire station, ambulance garage and similar buildings where quick opening of doors is necessary.

TRANSOMS

PASS DOORS

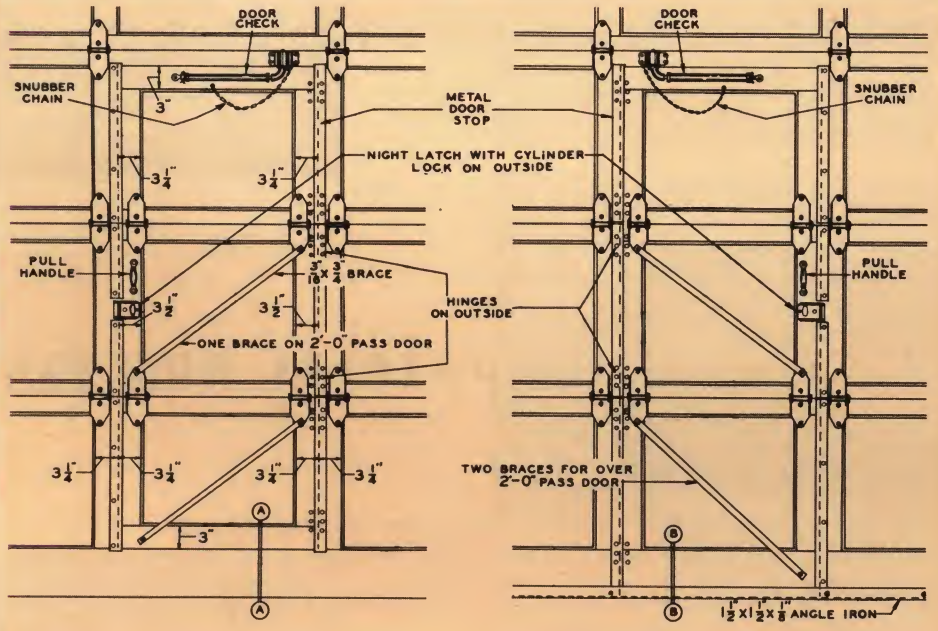


EXTERIOR ELEVATION OF TRANSOM

PLAN VIEW

USES: To provide increased headroom—to improve architectural effect—to reduce opening height.
SIZES: Full width of door opening between jambs and any height below header. Panels or glass openings as preferred. Top rail of door seals against transom bar when door is closed.

INTERIOR ELEVATION NO. 40 PASS DOOR WOOD BOTTOM RAIL



INTERIOR ELEVATION NO. 42 PASS DOOR STEEL BOTTOM RAIL

NO. 40 PASS DOOR WOOD BOTTOM RAIL NOT OVER 18' WIDE

USES: For 1¾" thick commercial type doors. Permits pedestrians to pass through garage door without opening main door. Not recommended for doors over 18' in width.

PASS DOOR SIZES: Limited to two panels in width and three sections in height. Panel openings may be either glass or Masonite Doriux.

WOOD BOTTOM RAIL: Wood rails 5" wide. Door width over 12' 8" requires a 7" wide bottom rail.

HINGES: Six vertical 2½" butt hinges are used on pass door independent of section hinges.

NO. 42 PASS DOOR STEEL BOTTOM RAIL NOT OVER 14' WIDE

BOTTOM RAIL: 1½" x 1½" x 1/8" angle iron used in place of wood bottom rail. When pass door is open this creates only an inch and one-half threshold.

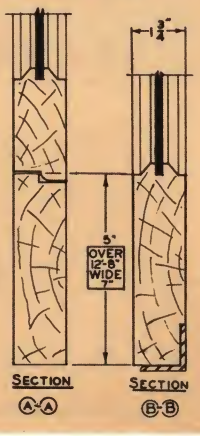
BRACING: One diagonal strap steel brace used on pass doors up to 24" wide. Two braces used on widths 24" and wider.

DOOR CHECK: Made with air cylinder 1¼" diameter x 10" long with adjustable air outlet valve. Check may be regulated so that pass door closes without slamming.

LOCK: Rim type night latch with tapered bolt operated from outside by lock cylinder keyed with door, is regularly furnished — two keys with each lock. Lock rod for main door engages in one vertical track only.

LOCK: Lock rod for main door engages in one vertical track only.

OTHER CONSTRUCTION for No. 42 Pass Door is the same as No. 40 described above.



SECTIONAL VIEWS OF BOTTOM RAILS

RŌ-WAY DOORS

Wood and Steel
Sectional and Upward Acting

MOTOR OPERATORS

COMMERCIAL BUILDINGS

INDUSTRIAL BUILDINGS

SERVICE STATIONS

RESIDENTIAL GARAGES

(See Sweet's Light Construction File)

For Installing Distributors, see Yellow Pages of your Telephone Directory or write to factory.

Rō-Way OVERHEAD DOORS

ROWE MANUFACTURING COMPANY

GALESBURG, ILLINOIS - U.S.A. - SINCE 1908

PRINTED IN U.S.A.

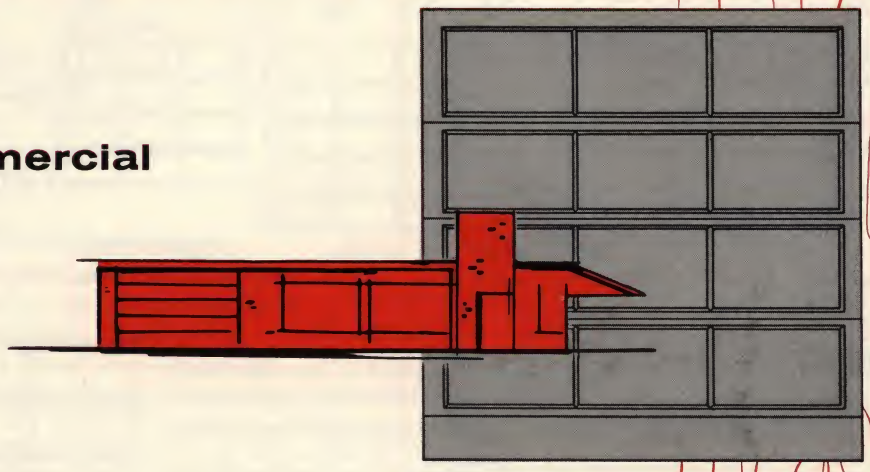
WINFIELD

Door Corporation

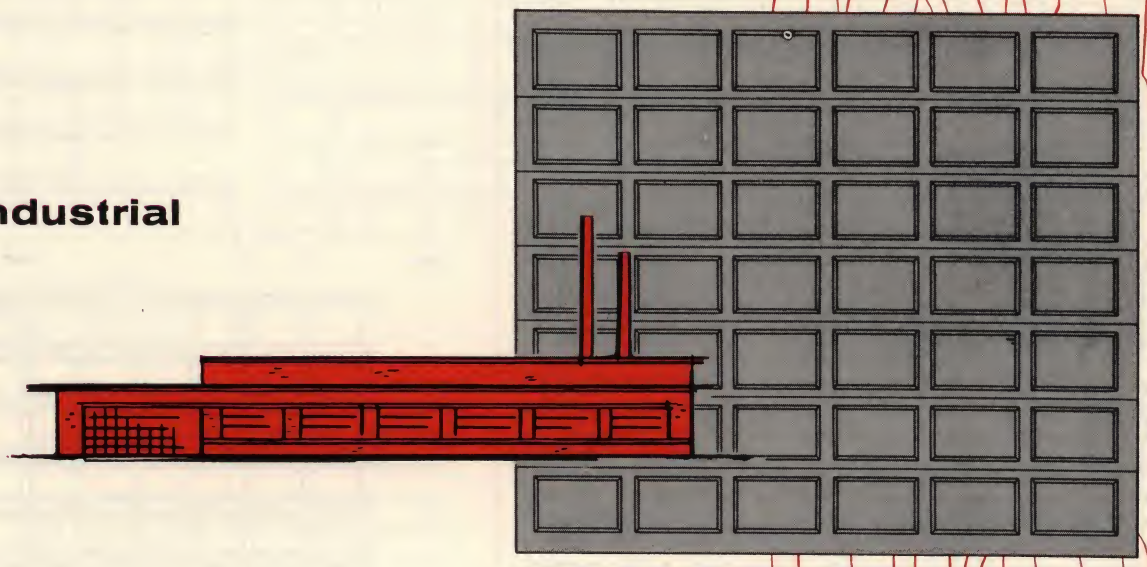
MUNCY AVENUE, WEST BABYLON, N. Y. • P.O. LINDENHURST, N. Y.

SECTIONAL GARAGE DOORS

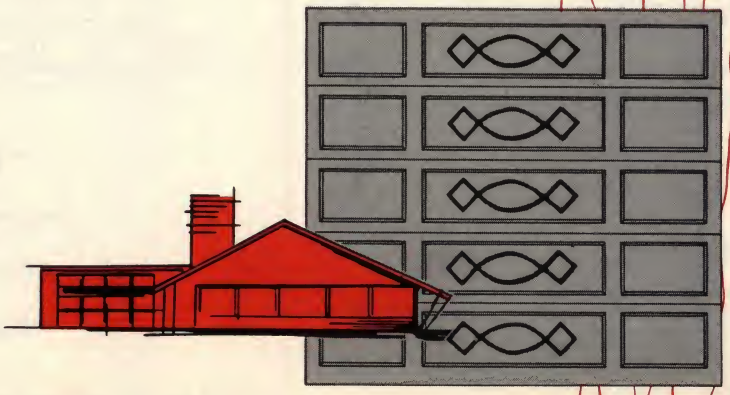
commercial



industrial



residential



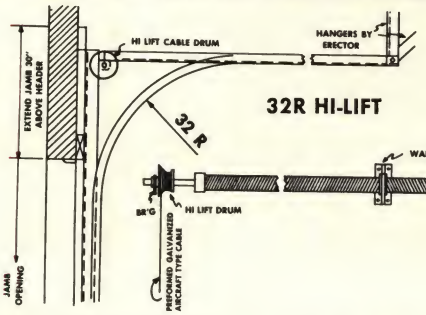
designed and engineered for economy, beauty and service

AIA File No. 16-D

WINFIELD KLEERLITE service station doors

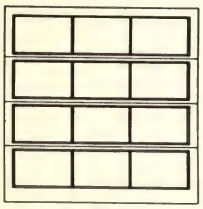
Winfield KLEERLITE Service Station Doors feature aluminum or plastic mutins to assure maximum light and visibility. They are approved by most major oil companies.

Models shown are for door heights up to 10'6" and door widths up to 10'0". For door heights up to 12'6" and door widths up to 12'0", doors are made with 6 sections high and 4 panels or lites across. Similar to models shown. Fixed door and transoms to match are available.

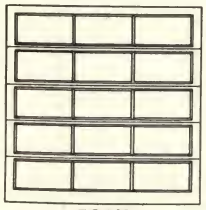


32R HI-LIFT

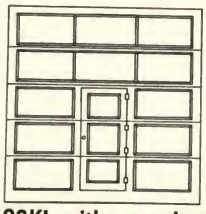
32-R Hi-Lift Track for Service Stations to provide 24" of lift. Available with Torsion or Extension Springs.



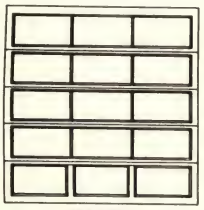
403KL



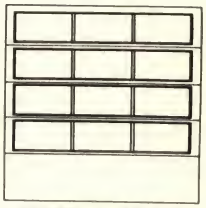
503KL



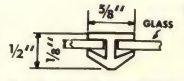
503KL with pass-door



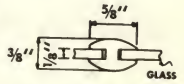
513KL



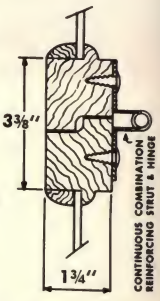
523KL or 533KL



ALUMINUM MUNTIN



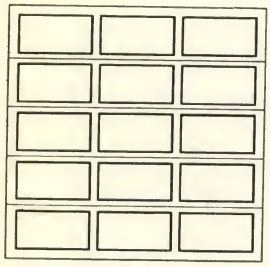
PLASTIC MUNTIN



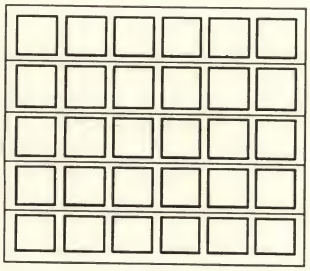
CONTINUOUS HINGE

commercial and industrial doors

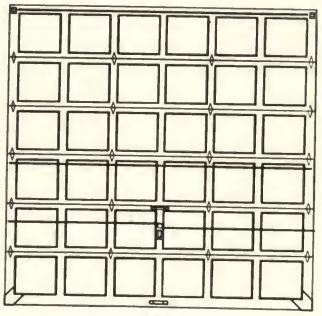
Winfield's typically rugged heavy duty doors are designed for years of constant usage. Sections double-sanded, all joints are doweled or mortised and tennoned, steel-pinned, and reinforced with water-resistant glue for greatest structural strength.



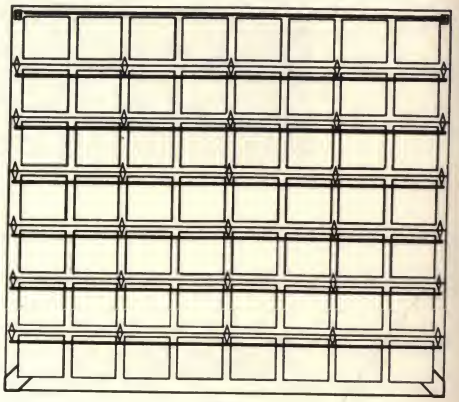
503



506



606



708

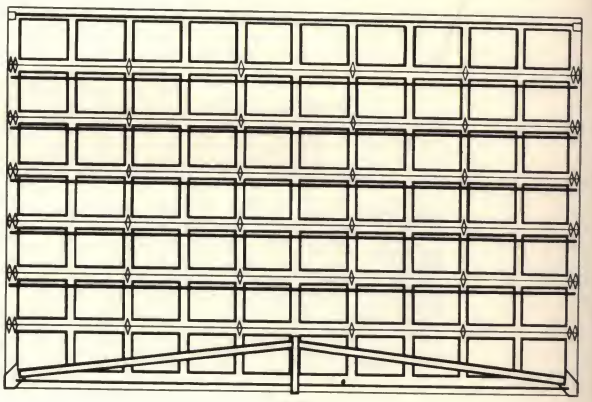
general specifications

doors. Lumber for rails and muntins to be 1¾" thick K.D. Douglas Fir. Joints to be glued with waterproof glue, doweled and steel-pinned. Panels are exterior grade ⅜" Fir Plywood.

hardware. Track—2" wide x .093" or 3" x .125" "Tape-R-Track" continuous angle reinforced. Heavy duty load sheaves and rollers are full ball bearing. Extension or torsion springs are helically wound oil tempered steel. Cable-preformed, galvanized aircraft type. Corner brackets, hinges and roller carriers are heavy gage steel. Cremone, side or top locks are furnished to suit job conditions.

general. Pass doors can be furnished in any model door. Reverse angle track mounting furnished for steel jambs.

automatic operators — All Winfield Doors may be equipped with electric operators.



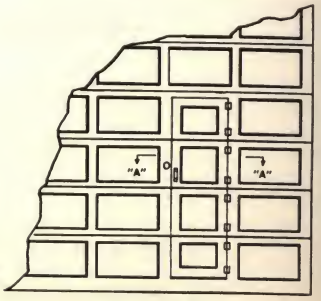
710

architects specifications

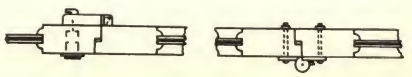
Overhead type doors shall be Winfield model ..... size as per plan as manufactured by the Winfield Door Corp., P.O. Lindenhurst, New York with TAPE-R-TRACK Hardware.

BREAKAWAY

ELEVATION — PASS DOOR

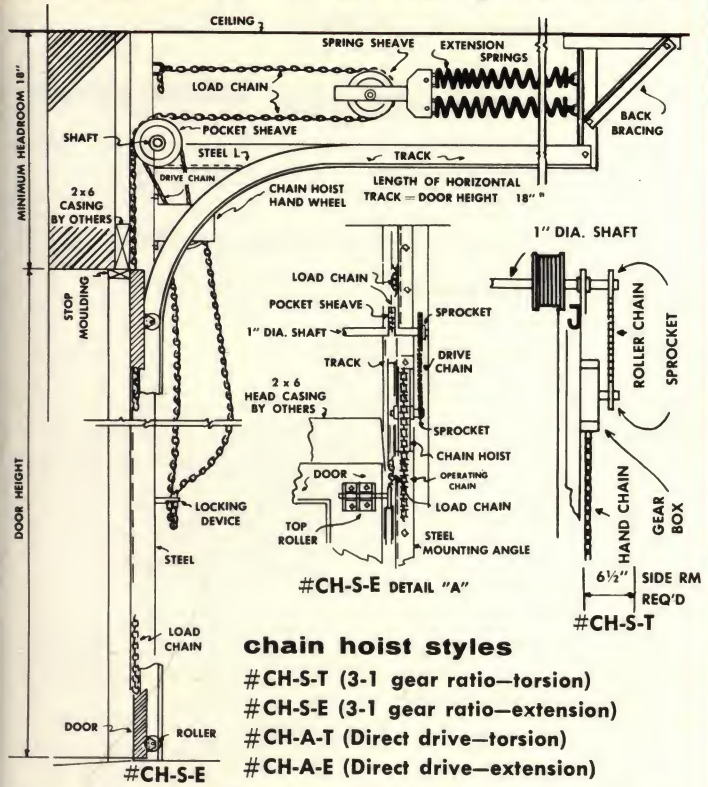


SECTION A-A



specialty hardware details for commercial and industrial doors

Winfield heavy duty ball bearing chain hoists



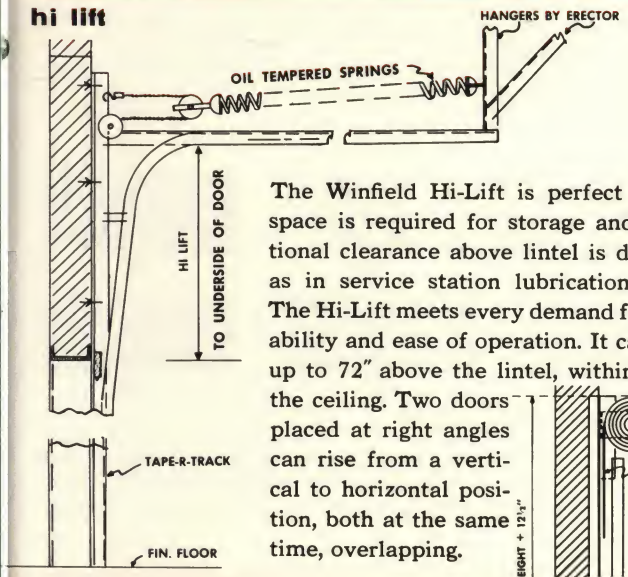
chain hoist styles

#CH-S-T (3-1 gear ratio—torsion)
#CH-S-E (3-1 gear ratio—extension)
#CH-A-T (Direct drive—torsion)
#CH-A-E (Direct drive—extension)

Doors 180 sq. ft. and over and all doors 20'-1" and wider and all doors over 14' high. 2.95 to 1 gear ratio, 1" solid steel shaft. Adjustable shaft coupling, plated hand and load chain. All sheaves, sprockets and couplings keyed to shaft. Can be furnished for use with jack shaft operator with built-in disconnect.

TRACK	RADIUS	HEADROOM	SIDE ROOM	
			OTHER SIDE	HAND CHAIN
2"	15R	18"	4"	8"
3"	15R	19"	4"	8"
2"	20R	20"	4"	8"
3"	20R	21"	4"	8"

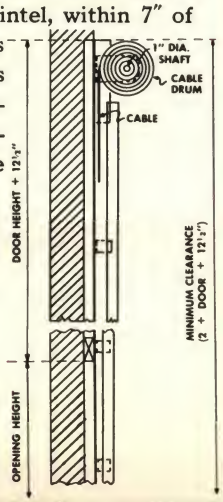
hi lift



The Winfield Hi-Lift is perfect where space is required for storage and additional clearance above lintel is desired, as in service station lubrication bays. The Hi-Lift meets every demand for durability and ease of operation. It can rise up to 72" above the lintel, within 7" of the ceiling. Two doors placed at right angles can rise from a vertical to horizontal position, both at the same time, overlapping.

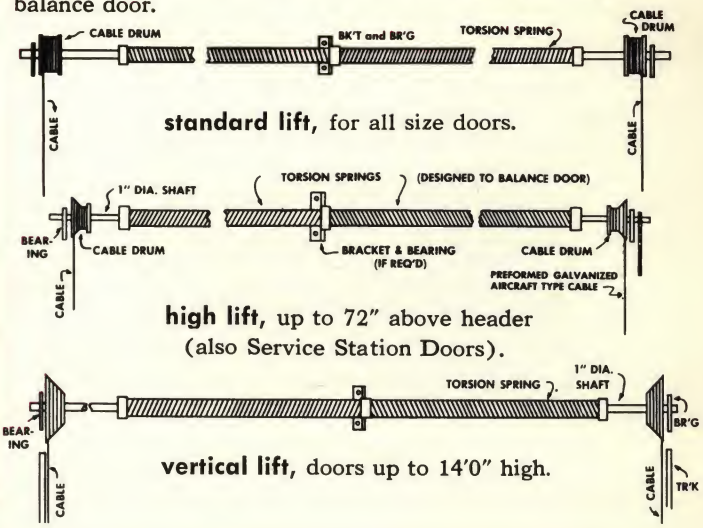
vertical lift (torsion spring)

Door heights up to 14'0". Minimum headroom—2x door height + 6".
Vertical lift hardware also available for counterweight operation (counterweights by others).

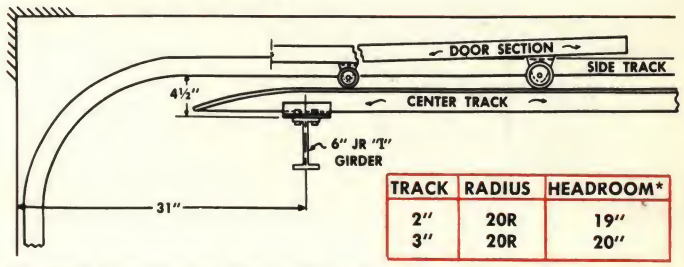


torsion springs

Wire size, diameter and number of springs are designed to balance door.



center track and girder

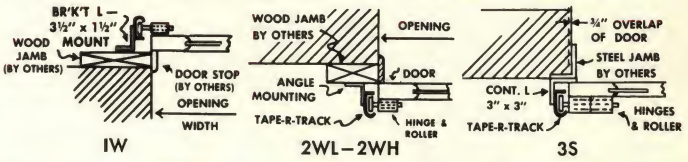


TRACK	RADIUS	HEADROOM*
2"	20R	19"
3"	20R	20"

Winfield center track and girder for all doors 20' and wider (18' with pass-door) center track made with 6" supporting "I" beam and 2½" angle iron track, with rollers attached to each section of door.

**Center track can be installed in minimum of 15" headroom however clearance under "I" beam is reduced.*

track and jamb mounting classifications



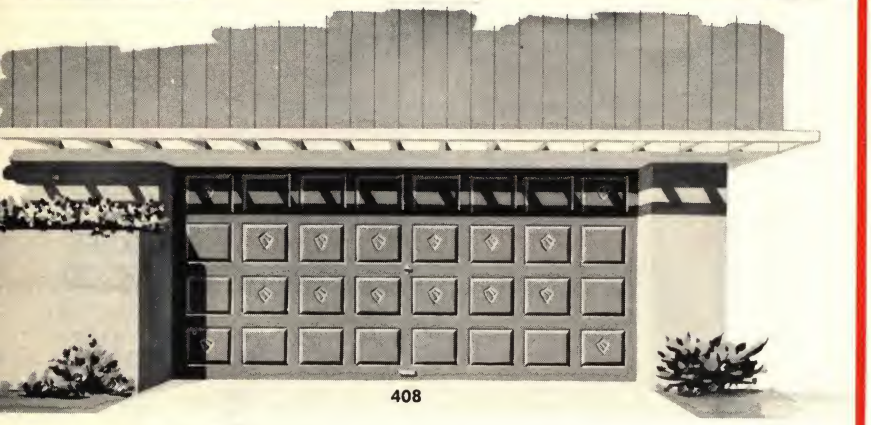
CLASSIFICATION	TRACK SIZE	JAMBS	VERTICAL TRACK MOUNTING	HORIZ. TRACK MOUNTING	DOOR SIZE
IW	2"x.093	WOOD	BR'K'T 3½" x 1½"	FULL ANGLE 2" x ⅛"	UP TO 12' x 12'
2SL	2"x.093	STEEL	FULL ANGLE 2½" x 2½"	FULL ANGLE 2" x ⅛"	UP TO 168 sq. ft. 12' x 14'
2SH	2"x.093	STEEL	FULL ANGLE 2½" x 2½"	FULL ANGLE 2½" x 3/16"	169 sq. ft. and over 14' x 14' and over
2WL	2"x.093	WOOD	FULL ANGLE 3½" x 1½"	FULL ANGLE 2" x ⅛"	UP TO 168 sq. ft. 12' x 14'
2WH	2"x.093	WOOD	FULL ANGLE 3½" x 1½"	FULL ANGLE 2½" x 3/16"	169 sq. ft. and over 14' x 14' and over
3S	3"x.125	STEEL	FULL ANGLE 3" x 3"	FULL ANGLE 2½" x 3/16"	240 sq. ft. and over or as specified
3W	3"x.125	WOOD	FULL ANGLE 3½" x 1½"	FULL ANGLE 2½" x 3/16"	240 sq. ft. and over or as specified

Winfield Door Corporation

WINFIELD residential garage doors

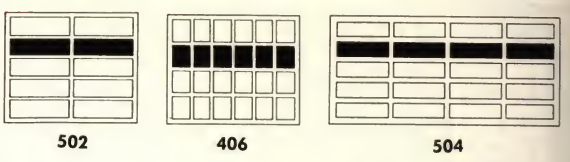
sectional overhead wood doors with exclusive TAPE-R-TRACK

505



408

503 404



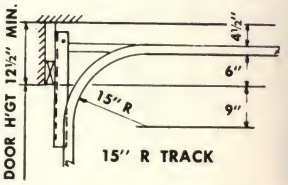
502 406 504

standard one car garage doors

stock sizes

8′ x 6′6″ and 7′
9′ x 6′6″ and 7′
10′ x 6′6″ and 7′
8′ x 8′

note
Intermediate sizes up to 12′ wide made on order.

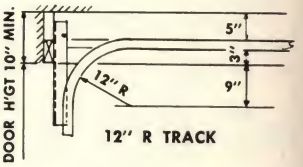


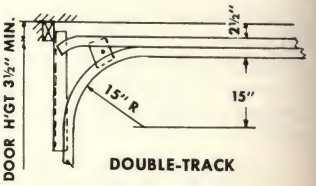
standard two car garage doors

stock sizes

14′ x 6′6″ and 7′
15′ x 6′6″ and 7′
16′ x 6′6″ and 7′

note
Intermediate sizes over 12′ up to 32′ wide made on order.



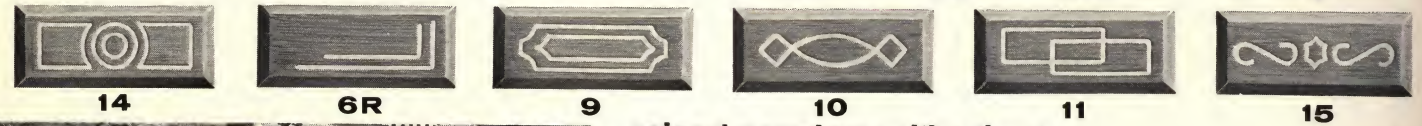


residential specifications

Manufactured of 1⅜" or 1¾" clear kiln-dried Douglas Fir and exterior grade Plywood. Headroom required 12½", 10", 3½". See detail drawings above. Tape-R-Track hardware with oil tempered extension or torsion springs. Steel struts furnished as required.

carved panel designs

1 2 3 4R 7 8 12 15L 5



14 6R 9 10 11 15

The new, modern Winfield Factory is located in West Babylon, Long Island. Their own railroad siding affords Winfield the advantage of efficient delivery of materials and shipment of doors.

raised panel specifications

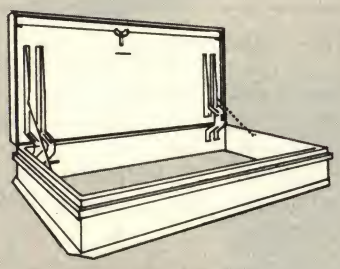
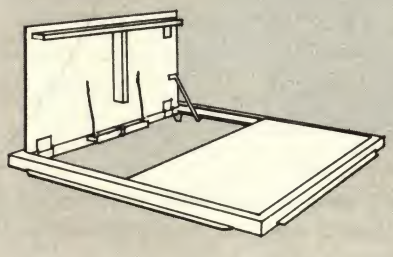
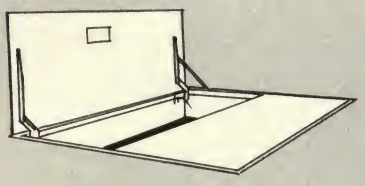
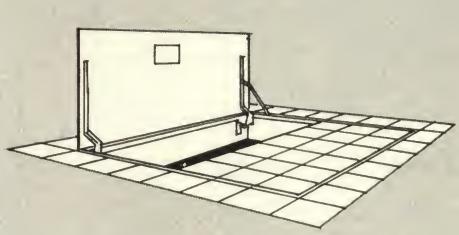
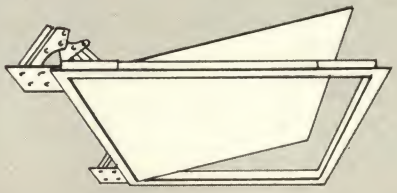
Manufactured of 1⅜" or 1¾" clear kiln-dried California Redwood with ¾" solid raised panels. Pine raised panels available with Fir Doors. California Redwood and Pine Doors available in all standard sizes and models.

DISTRIBUTED BY:

BABCOCK - DAVIS

Established in 1909

MANUFACTURERS OF "EASY ACCESS" HATCHES

PRODUCT	PAGE NUMBER
 ROOF HATCHES	2 - 3 - 4 - 5
 GUTTER-TYPE SIDEWALK HATCHES	6
 FLUSH FLOOR HATCHES	6 - 7
 FLUSH-TILE FLOOR HATCHES	7
 CEILING HATCHES	8

BABCOCK–DAVIS ASSOCIATES INC.
474 DORCHESTER AVENUE · BOSTON 27 · MASSACHUSETTS

BABCOCK–DAVIS ASSOCIATES INC.
474 DORCHESTER AVENUE · BOSTON 27 · MASSACHUSETTS

DESCRIPTION

BABCOCK–DAVIS
ORIGINATORS AND MANUFACTURERS OF B–D EASY–ACCESS HATCHES

The Babcock-Davis roof hatch was developed to fill the need for a scientifically designed, mechanically efficient closure which would provide immediate access to both flat and sloping roofs. Easily and economically installed, B–D easy-access hatches are in use throughout the nation in commercial, institutional, industrial, and governmental buildings.

ADVANTAGES

- LOW IN COST
- EASY TO OPERATE
- WATERTIGHT
- FIREPROOF
- REQUIRES ONLY A ROOF OPENING FOR INSTALLATION
- COUNTER FLASHED FOR EASE OF INSTALLING ROOF FLASHING
- PRE–FABRICATED AS A UNIT
- GALVANIZED HATCHES HOT–DIPPED AFTER FABRICATION
- LATCH RELEASE OPENS ROOF HATCH FROM OUTSIDE
- OPTIONAL CONSTRUCTION PERMITS LOCKING FROM EITHER INSIDE OR OUTSIDE

COMPENSATING HINGE

To ensure ease in opening and closing the hatch cover, the compensating hinges are designed to maintain constant tension. After the initial lift, the heavy spring hinges open the hatch cover. The automatic locking bar secures it in an open or closed position.

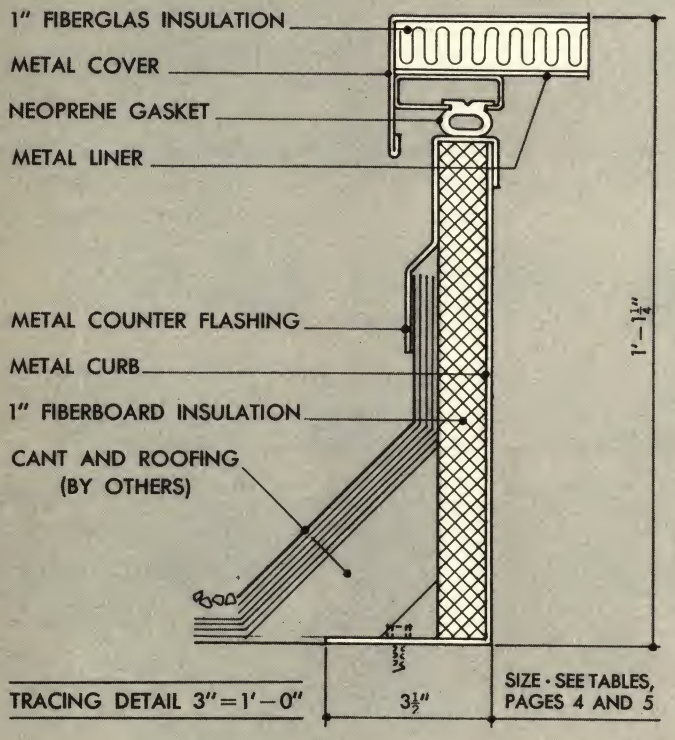
CONSTRUCTION

Every B–D roof hatch is a factory-assembled metal unit of finest workmanship and durability. See pages 4 and 5 for the various materials available.

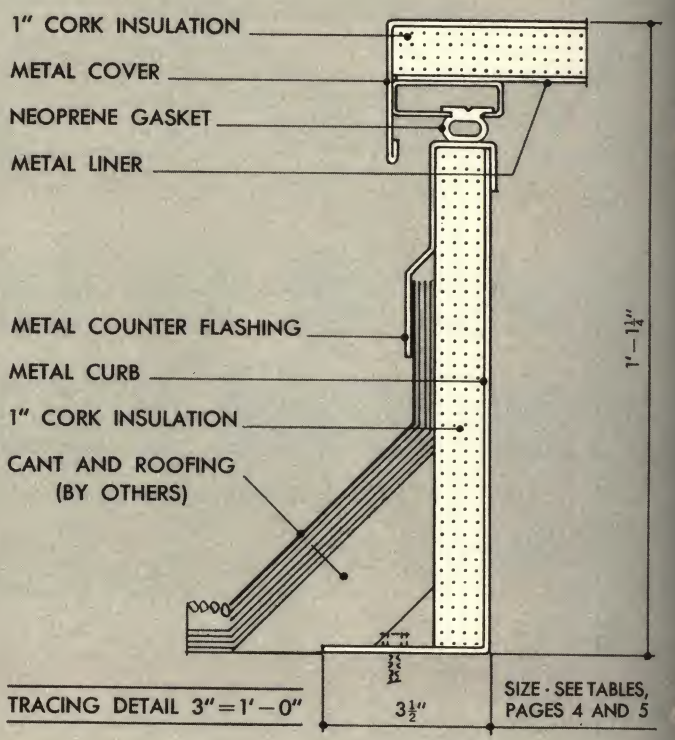
SIZES

Roof hatches are mass produced in six standard sizes, as scheduled on pages 4 and 5. When specified, roof hatches will be made in special sizes, up to a maximum of 10 feet wide by 20 feet long.

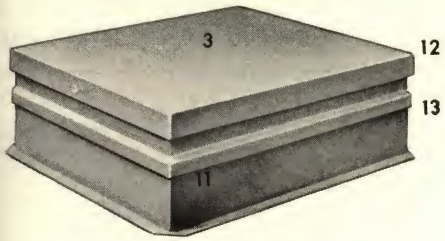
FIBERGLAS INSULATED COVER

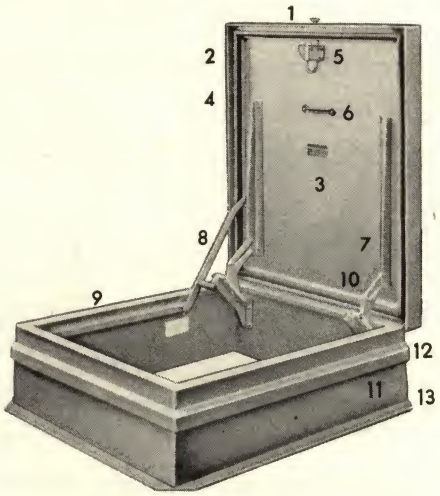


CORK INSULATED COVER AND CURB



EASY ACCESS **roof hatches**



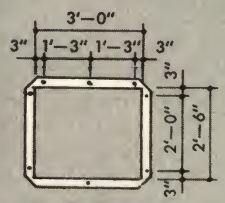


SPECIFICATION ON PAGE 5

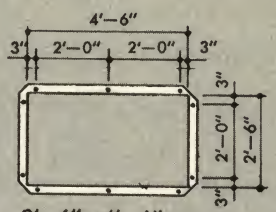
THE DESIGN AND CONSTRUCTION FEATURES

1	OUTSIDE LATCH RELEASE	No one can be locked out by chance.
2	NEOPRENE GASKET	A dustproof, draftproof, weather tight seal.
3	ONE PIECE METAL TOP	Hemmed on the four edges with welded corners to make a neat, durable, and rigid unit. Choice of Fiberglas or cork insulation.
4	REINFORCING CHANNEL	Stiffens cover and holds neoprene gasket.
5	SPRING LATCH AND PADLOCK LUG	Receives padlock, supplied by others, to lock cover in closed position.
6	HANDLE	For opening and closing cover.
7	LONG HINGE LEAF	Stiffens cover and distributes weight equally.
8	AUTOMATIC LOCKING BAR	Locks cover in open position against wind. Releases manually for closing.
9	CAP AND COUNTER FLASHING	With corners welded and ground smooth to form rigid unit. Serves as grab bar. Will not tear clothing.
10	COMPENSATING SPRING HINGE	Heavy, cadmium-plated spring hinges maintain tension for ease in opening and closing.
11	METAL CURB	Insulated with fiberboard or cork.
12	COUNTER FLASHING	Integrated with cap and curb. Roof flashing (by others) slips up under counter flashing to ensure weather tightness.
13	$3\frac{1}{2}$" ROOF FLANGE	Can be nailed or bolted to roof surface.

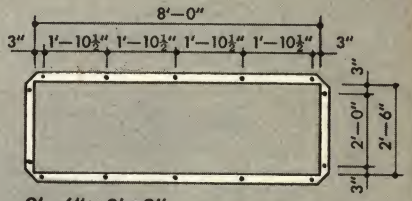
STANDARD ROOF HATCH CURBS SHOWING LOCATION OF BOLT HOLES



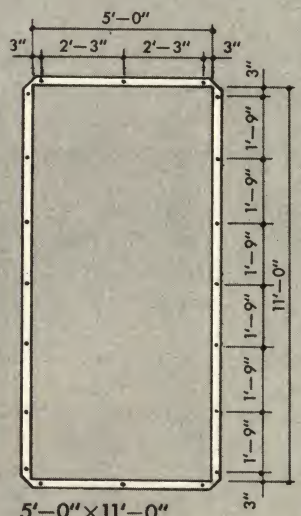
2'–6"×3'–0"



2'–6"×4'–6"

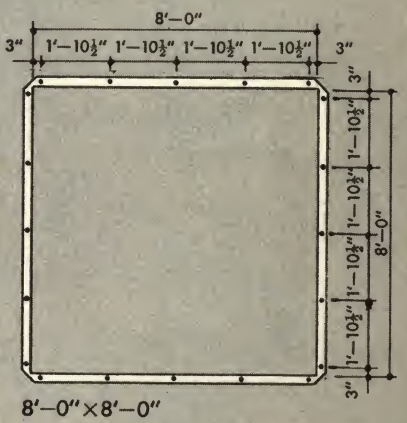


2'–6"×8'–0"



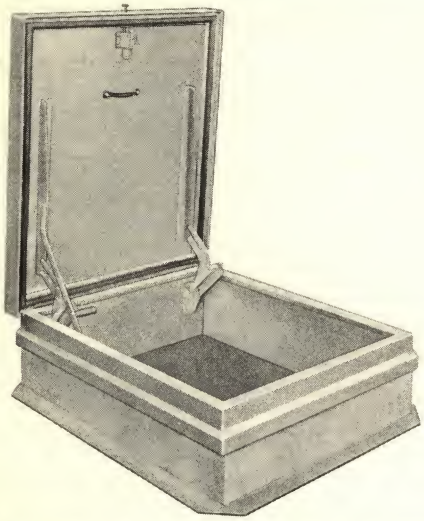
5'–0"×11'–0"

6'–0"×11'–0"



8'–0"×8'–0"

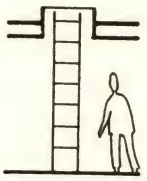
TRACING DETAILS $\frac{3}{16}$"=1'–0"



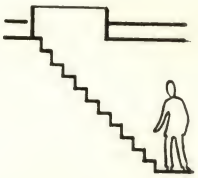
Single-leaf hatches are for use where normal access openings are required. They are manufactured in a combination of standard materials and sizes. Special materials and sizes up to 5′ by 20′ also available. Aluminum covers are recommended for sizes larger than 2′—6″ by 11′.

SINGLE-LEAF TYPE · STANDARD MODELS

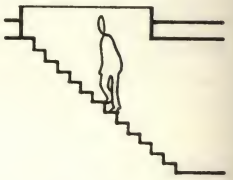
COMPLETE, READY TO INSTALL — SPECIFY BY MODEL NUMBER



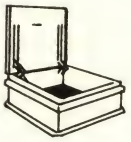
LADDER



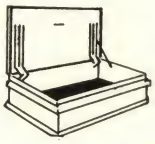
STEEP STAIRS



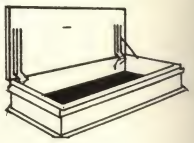
NORMAL STAIRS



2′-6″ by 3′-0″



2′-6″ by 4′-6″



2′-6″ by 8′-0″

MATERIALS AND MODEL NUMBERS

	COVER INSULATION FIBERGLAS	COVER INSULATION CORK	COVER INSULATION FIBERGLAS	COVER INSULATION CORK	COVER INSULATION FIBERGLAS	COVER INSULATION CORK
SHEET STEEL COVER AND CURB, PRIME PAINTED Shipping Weight	**6–101** 178 lb	**4–101** 178 lb	**6–201** 230 lb	**4–201** 230 lb	**6–301** 320 lb	**4–301** 320 lb
***GALVANIZED STEEL COVER AND CURB** Shipping Weight	**6–102** 178 lb	**4–102** 178 lb	**6–202** 230 lb	**4–202** 230 lb	**6–302** 320 lb	**4–302** 320 lb
ALUMINUM COVER AND *GALVANIZED STEEL CURB Shipping Weight	**6–103** 140 lb	**4–103** 140 lb	**6–203** 180 lb	**4–203** 180 lb	**6–303** 260 lb	**4–303** 260 lb
ALUMINUM COVER AND CURB Shipping Weight	**6–104** 102 lb	**4–104** 102 lb	**6–204** 140 lb	**4–204** 140 lb	**6–304** 200 lb	**4–304** 200 lb
COPPER COVER AND CURB Shipping Weight	**6–105** 178 lb	**4–105** 178 lb	**6–205** 230 lb	**4–205** 230 lb	**6–305** 320 lb	**4–305** 320 lb

*Hot Dipped after Fabrication

OPTIONAL FEATURES FOR ALL ROOF HATCHES

SMOKE VENT

Any standard or special roof hatch may be equipped with an Underwriter's approved fusible link which releases at 160°F to provide an escape for smoke and gases. The cover will operate manually from inside or outside without disturbing the fusible link.

ADD LETTER **V** TO MODEL NUMBER TO SPECIFY SMOKE VENT. EXAMPLE: 6-102 **V**

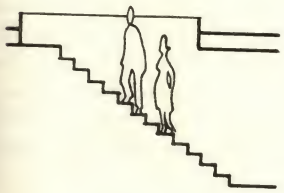
PLEXIGLAS PANEL

Any standard or special roof hatch may be equipped with a 18″ by 24″ panel of clear $\frac{3}{16}$″ Plexiglas. The panel is contoured to shed water and is clamped tightly over the cover aperture to provide complete weather tightness.

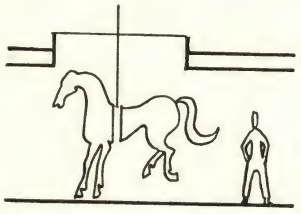
ADD LETTER **P** TO MODEL NUMBER TO SPECIFY PLEXIGLAS. EXAMPLE: 6-102 **P**

DOUBLE–LEAF TYPE · STANDARD MODELS

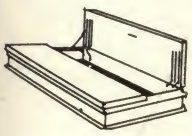
COMPLETE, READY TO INSTALL — SPECIFY BY MODEL NUMBER



WIDE STAIRS

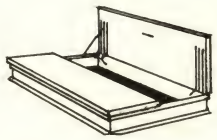


VARIOUS ACCESS USES

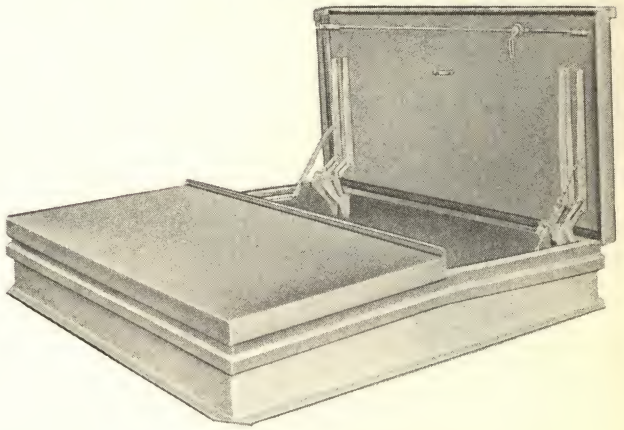


5′-0″ by 11′-0″

6′-0″ by 11′-0″



8′-0″ by 8′-0″



Double-leaf hatches are for use where large openings are required. They are manufactured in a combination of standard materials and sizes. Special materials and sizes up to 10′ by 20′ are available when specified. Aluminum covers are recommended for sizes larger than 5′ by 11′.

COVER INSULATION FIBERGLAS	COVER INSULATION CORK	COVER INSULATION FIBERGLAS	COVER INSULATION CORK	COVER INSULATION FIBERGLAS	COVER INSULATION CORK	MATERIALS AND MODEL NUMBERS
6–401 803 lb	**4–401** 803 lb	———	———	———	———	**SHEET STEEL COVER AND CURB, PRIME PAINTED** Shipping Weight
6–402 803 lb	**4–402** 803 lb	———	———	———	———	***GALVANIZED STEEL COVER AND CURB** Shipping Weight
6–403 750 lb	**4–403** 750 lb	**6–503** 1020 lb	**4–503** 1020 lb	**6–603** 990 lb	**4–603** 990 lb	**ALUMINUM COVER AND *GALVANIZED STEEL CURB** Shipping Weight
6–404 500 lb	**4–404** 500 lb	**6–504** 815 lb	**4–504** 815 lb	**6–604** 790 lb	**4–604** 790 lb	**ALUMINUM COVER AND CURB** Shipping Weight
6–405 803 lb	**4–405** 803 lb	———	———	———	———	**COPPER COVER AND CURB** Shipping Weight

*Hot-dipped after fabrication

SPECIFICATION AND DETAIL FOR ROOF HATCHES

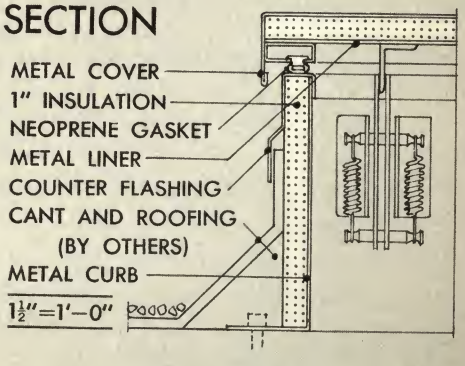
SPECIFICATION

ROOF HATCH(ES). Provide and install B-D easy-access hatch, size __ × __, model number __, manufactured by Babcock-Davis Associates, Inc., 474 Dorchester Avenue, Boston 27, Massachusetts. Roof hatches shall be factory assembled and shipped complete with compensating spring-hinges, ready for installation at the site.

MODEL NUMBERS WITH PREFIX 6 ARE INSULATED WITH 1″ FIBERGLAS IN THE COVER AND 1″ FIBERBOARD ON THE CURB.

MODEL NUMBERS WITH PREFIX 4 ARE INSULATED WITH 1″ CORK IN THE COVER AND 1″ CORK ON THE CURB.

SECTION

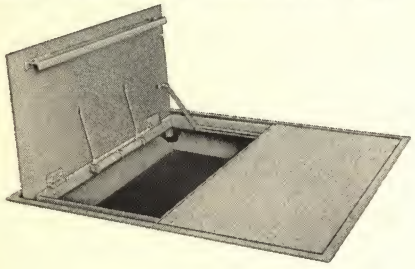


GUTTER–TYPE: SIDEWALK, MANHOLE, PIT HATCHES

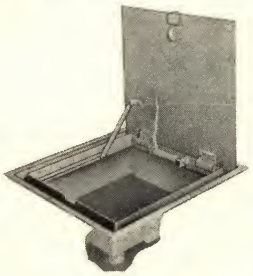
HEAVY DUTY FOR EXTERIOR OR INTERIOR USE AND WHERE DRAINAGE IS A REQUIREMENT

B-D gutter-type hatches are rugged. In standard models they withstand loading of 300 lb./sq. ft. Special sizes and loadings up to 20 tons per unit also available.

- Reinforced ¼" diamond checkered cover
- Heavy brass hinges, stainless steel pins
- B-D spiral spring lift plus hold-open bar
- Outside flush lift handle
- Formed gutters 3" wide by 2½" deep, concrete anchors, 1½" drainage coupling
- Inside lock bolt on double-leaf models; outside flush lock with special removable wrench on single-leaf models



DOUBLE–LEAF TYPE

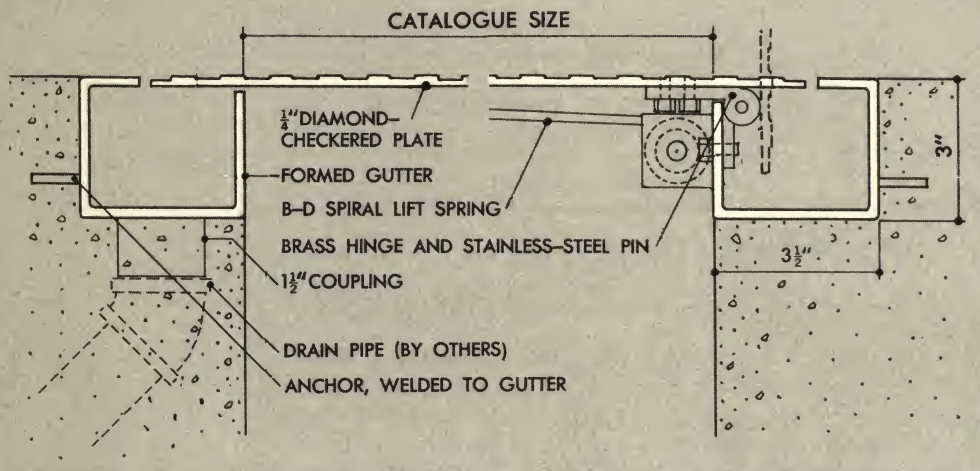


SINGLE–LEAF TYPE

COVER MATERIALS With steel frames	2'–10" by 3'–4"	3'–4" by 3'–10	3'–10" by 3'–10"	2'–0" by 3'–10"	2'–6" by 2'–6"	2'–6" by 3'–0"	3'–0" by 3'–0"	3'–6" by 3'–6"
STEEL (PAINTED)	**GT14**	**GT15**	**GT16**	**AM21**	**AM22**	**AM24**	**AM23**	**AM25**
Shipping weight	252 lb	315 lb	357 lb	120 lb	158 lb	182 lb	216 lb	292 lb
***GALVANIZED**	**GT141**	**GT151**	**GT161**	**AM211**	**AM221**	**AM241**	**AM231**	**AM251**
Shipping weight	265 lb	331 lb	375 lb	126 lb	166 lb	191lb	227 lb	306 lb
ALUMINUM	**GT142**	**GT152**	**GT162**	**AM212**	**AM222**	**AM242**	**AM232**	**AM252**
Shipping weight	126 lb	158 lb	179 lb	60 lb	79 lb	91 lb	108 lb	146 lb

*Hot-dipped after fabrication

SECTION 3"=1'–0"



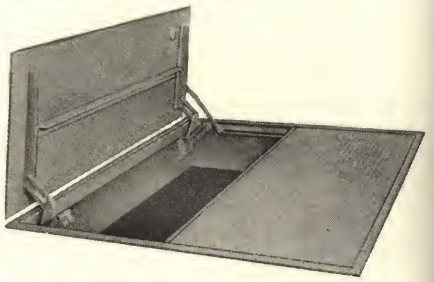
SPECIFICATIONS

GUTTER-TYPE HATCH(ES). Provide and install B-D gutter-type hatch, size ___ × ___, model number ___, manufactured by Babcock-Davis Associates, Inc., 474 Dorchester Avenue, Boston 27, Massachusetts. Hatch(es) shall be factory assembled and shipped complete with spiral spring-hinges, ready for installation at the site.

TO SPECIFY OUTSIDE FLUSH LOCK ON DOUBLE–LEAF TYPE, ADD LETTERS **WL** TO MODEL NUMBER. EXAMPLE: GT14–**WL**

FLUSH FLOOR HATCHES EXPOSED METAL COVER

B-D flush floor hatches are for interior use where easy access is required through a floor that must have no obstructions on the exposed surface. In standard materials and sizes they withstand loading of 150 lb./sq. ft. Special sizes and loadings are available when specified.

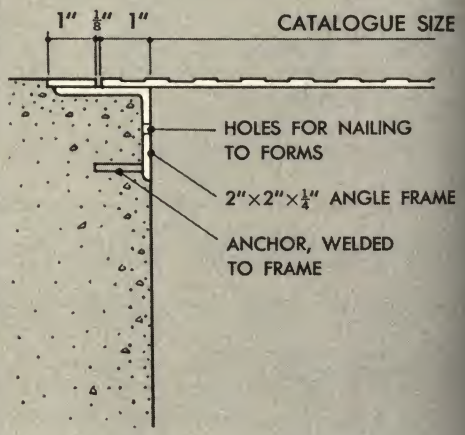


DOUBLE–LEAF TYPE

COVER MATERIALS With steel frames	2'–10" by 3'–4"	3'–4" by 3'–10"	3'–10" by 3'–10"
STEEL (PAINTED)	**F1500**	**F1600**	**F1700**
Shipping weight	242 lb	302 lb	341 lb
***GALVANIZED**	**F1501**	**F1601**	**F1701**
Shipping weight	254 lb	317 lb	358 lb
ALUMINUM	**F1502**	**F1602**	**F1702**
Shipping weight	121 lb	151 lb	171 lb

*Hot-dipped after fabrication

SECTION 3"=1'–0"



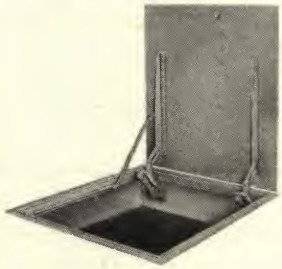
SPECIFICATIONS

FLOOR HATCH(ES). Provide and install B-D flush floor hatch, size ___ × ___, model number ___, manufactured by Babcock-Davis Associates, Inc., 474 Dorchester Avenue, Boston 27, Massachusetts. Hatch(es) shall be factory assembled and shipped complete with

floor access hatches

FOR INTERIOR USE WHERE HARD USAGE IS ENCOUNTERED, FLUSH CONSTRUCTION

- Flush construction, no surface projections
- Reinforced $\frac{3}{16}$" diamond-checkered cover
- Compensating spring hinges
- Hold-open, safety-lock bar
- Outside flush lift handle
- Welded anchors for concrete
- Holes for fastening to concrete forms



SINGLE–LEAF TYPE

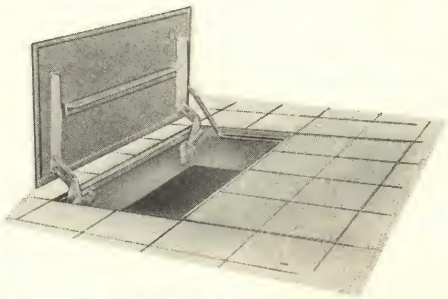
2′–0″ by 2′–0″	2′–6″ by 2′–6″	2′–6″ by 3′–0″	3′–0″ by 3′–0″	3′–6″ by 3′–6″
F1800 140 lb	**F1900** 160 lb	**F2000** 174 lb	**F2100** 200 lb	**F2200** 278 lb
F1801 147 lb	**F1901** 168 lb	**F2001** 183 lb	**F2101** 210 lb	**F2201** 291 lb
F1802 70 lb	**F1902** 80 lb	**F2002** 87 lb	**F2102** 100 lb	**F2202** 139 lb

FLUSH–TILE (RECESSED-COVER) FLOOR HATCHES

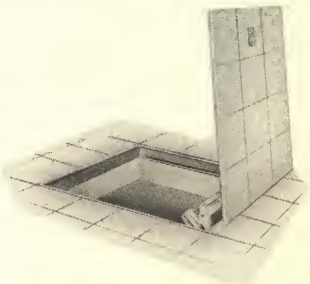
FOR INTERIOR USE WHERE FLUSH CONSTRUCTION AND APPEARANCE ARE REQUIRED

B-D flush-tile floor hatches are for use where application of resilient tile to hatch cover is required. Edge-strips on both the recessed cover and curb serve as tile-stops. In standard materials and sizes they withstand loading of 150 lb./sq. ft. Special sizes and loadings also available.

- $\frac{3}{16}$" smooth steel cover recessed $\frac{3}{16}$"
- Aluminum tile-stops on cover and curb
- Compensating spring hinges
- Hold-open, safety-lock bar
- Outside flush lift handle
- Welded anchors for concrete
- Holes for fastening to concrete forms



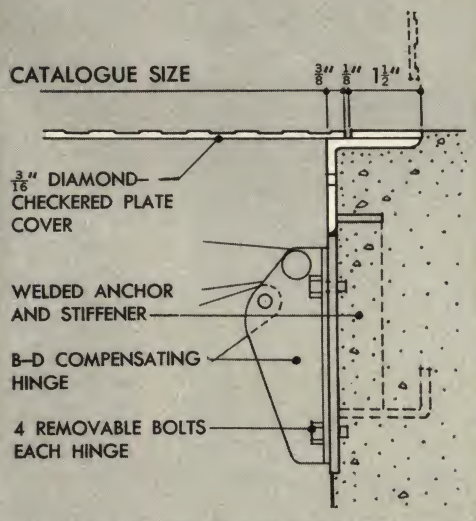
DOUBLE–LEAF TYPE



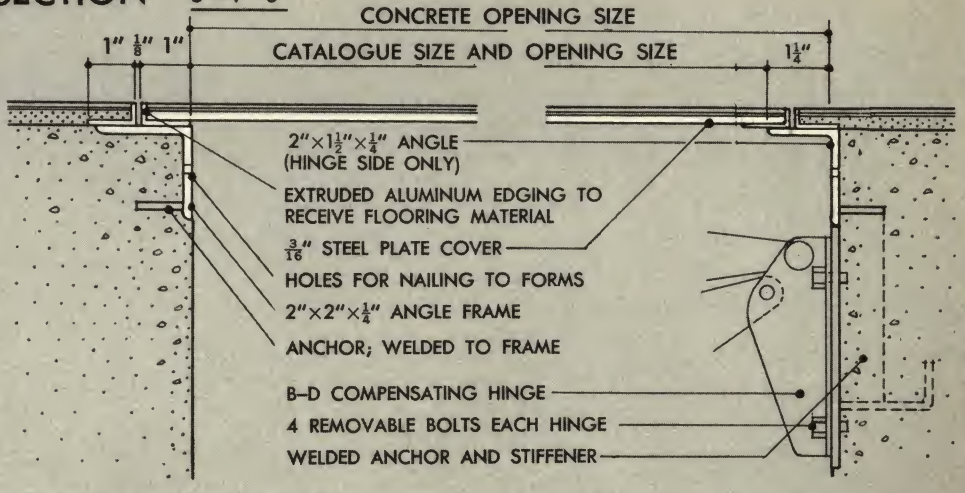
SINGLE–LEAF TYPE

COVER MATERIALS With steel frames	2′–10″ by 3′–4″	3′–4″ by 3′–10″	3′–10″ by 3′–10″	2′–0″ by 2′–0″	2′–6″ by 2′–6″	2′–6″ by 3′–0″	3′–0″ by 3′–0″	3′–6″ by 3′–6″
STEEL Shipping weight	**FT2300** 212 lb	**FT2400** 263 lb	**FT2500** 300 lb	**FT2600** 130 lb	**FT2700** 140 lb	**FT2800** 152 lb	**FT2900** 177 lb	**FT3000** 244 lb

THIS MODEL HAS A PLAIN STEEL COVER, STEEL FRAME, AND ALUMINUM EDGING



SECTION 3″=1′–0″


CONCRETE OPENING SIZE
1" 1/8" 1"
CATALOGUE SIZE AND OPENING SIZE
1 1/4"
2"×1 1/2"×1/4" ANGLE (HINGE SIDE ONLY)
EXTRUDED ALUMINUM EDGING TO RECEIVE FLOORING MATERIAL
3/16" STEEL PLATE COVER
HOLES FOR NAILING TO FORMS
2"×2"×1/4" ANGLE FRAME
ANCHOR; WELDED TO FRAME
B–D COMPENSATING HINGE
4 REMOVABLE BOLTS EACH HINGE
WELDED ANCHOR AND STIFFENER

compensating spring hinges, ready for installation at the site.

THIS HATCH IS NOT DESIGNED FOR EXTERIOR USE. SEE GUTTER–TYPE HATCHES AT THE LEFT FOR USE OUTSIDE.

SPECIFICATIONS

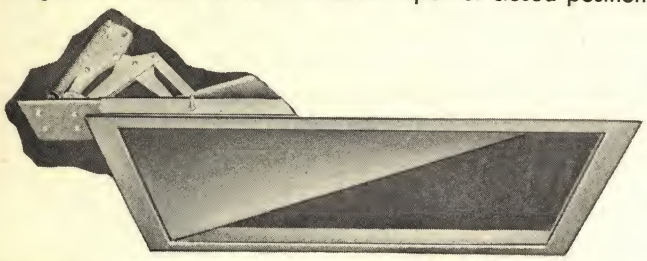
FLOOR HATCH(ES). Provide and install B-D flush-tile floor hatch, size ___ × ___, model number ___, manufactured by Babcock-Davis Associates, Inc., 474 Dorchester Avenue, Boston 27, Massachusetts. Hatch(es) shall be factory assembled and shipped complete with compensating spring hinges, ready for installation at the site.

FOR ALL UNUSUAL HATCH PROBLEMS, CONTACT BABCOCK–DAVIS/—PIONEER, LEADER IN SUPPLYING BETTER HATCHES.

ceiling hatches

SINGLE–LEAF TYPE CEILING HATCHES

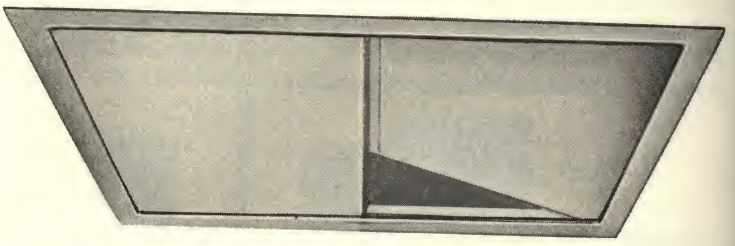
B-D easy-access, single-leaf ceiling hatches are manufactured in the standard models given below and in special sizes and materials when specified. They are equipped with compensating hinges which hold the hatch in either open or closed position.



MADE TO OPEN DOWN WHERE HEADROOM IS LIMITED

DOUBLE–LEAF TYPE CEILING HATCHES

B-D easy-access, double-leaf ceiling hatches are for use where head room is restricted or where openings too large for single-leaf hatches are required. They are equipped with compensating hinges which hold the hatch in either open or closed position.

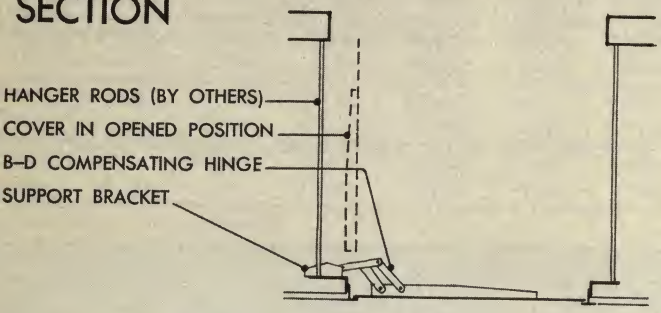


MATERIALS

	2′–6″ by 2′–6″	2′–6″ by 3′–0″
STEEL FRAME AND PLAIN STEEL COVER	**CH3100**	**CH3200**
Shipping Weight	100 lb	134 lb
STEEL FRAME AND ALUMINUM	**CH3101**	**CH3201**
Shipping Weight	96 lb	124 lb

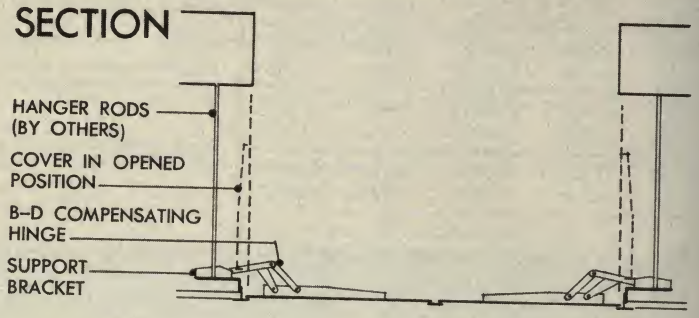
DOUBLE-LEAF CEILING HATCHES ARE MADE TO ANY REASONABLE SIZE FROM STEEL OR ALUMINUM. IN ORDERING, GIVE THE MODEL NUMBER **CH3300 CUSTOM** AND SPECIFY SIZE AND MATERIALS DESIRED.

SECTION



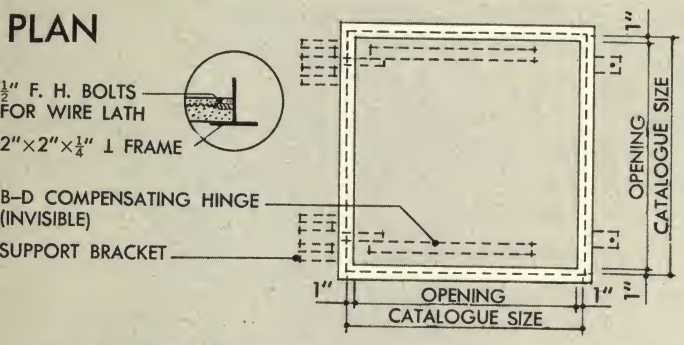
TRACING DETAIL ½″=1′–0″

SECTION

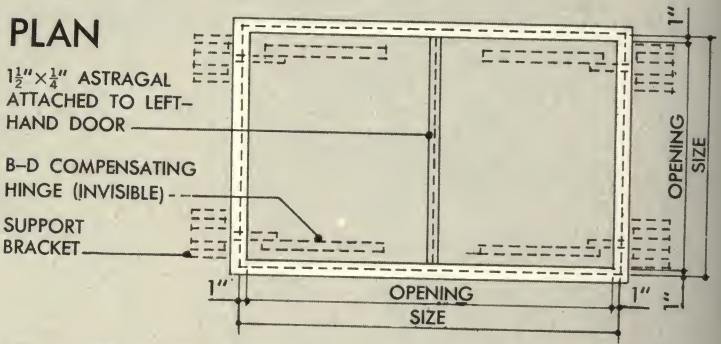


TRACING DETAIL ½″=1′–0″

PLAN



PLAN



SPECIFICATIONS (SINGLE–LEAF OR DOUBLE–LEAF)

CEILING HATCH(ES). Provide and install B-D ceiling hatch(es), size ___ × ___, model number ___, manufactured by Babcock-Davis Associates, Inc., 474 Dorchester Avenue, Boston 27, Massachusetts. Hatch(es) shall be factory assembled and shipped complete with compensating spring hinges, ready for installation at the site.

- ON SINGLE-LEAF CEILING HATCHES, SPECIFY DOWN-OPENING COVER BY ADDING THE LETTER **D** TO MODEL NUMBER. EXAMPLE: CH3100**D**
- FOR DOUBLE-LEAF CEILING HATCHES, USE THE MODEL NUMBER **CH3300 CUSTOM** AND SPECIFY SIZE AND DESIRED FRAME AND COVER MATERIAL.

BABCOCK–DAVIS ASSOCIATES INC.
474 DORCHESTER AVENUE · BOSTON 27 · MASSACHUSETTS

A.I.A. FILE No. 14-N, 14-A-2, 14-B-9

interior/exterior doors

catalog 1960

Bilco®

doors for special services

roof scuttles / ceiling access doors

basement doors

A.I.A. FILE NO. 14-N, 14-A-2, 14-B-9

THE BILCO COMPANY, NEW HAVEN 5, CONNECTICUT

Bilco®

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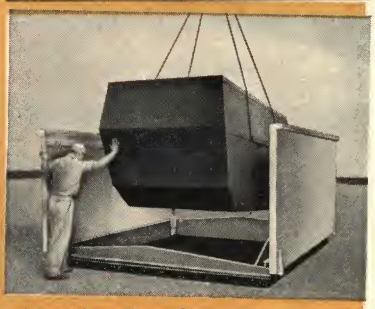
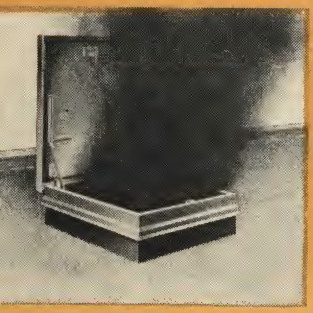
Prices shown in this catalog are F.O.B. New Haven, Conn., U.S.A. and are subject to change without notice.





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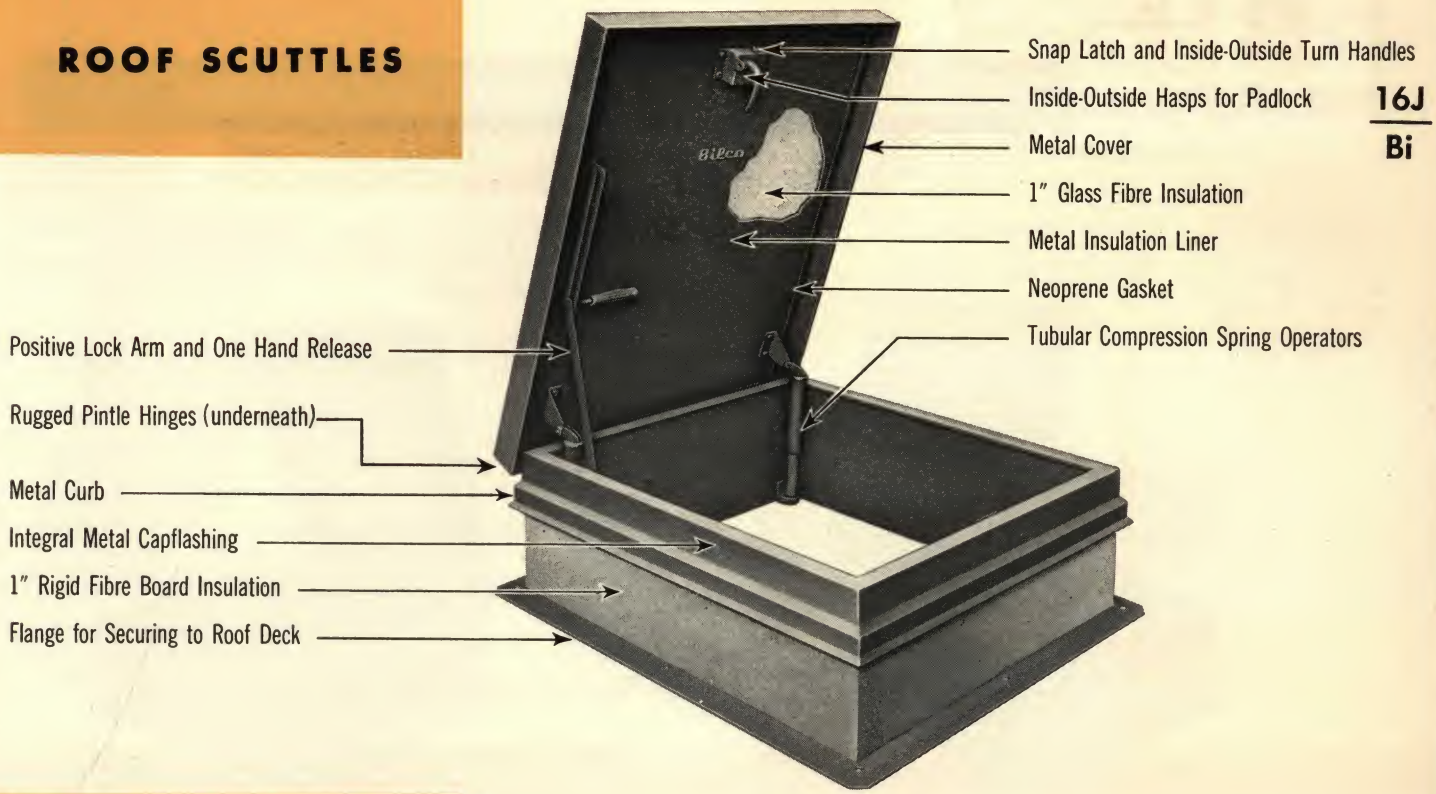
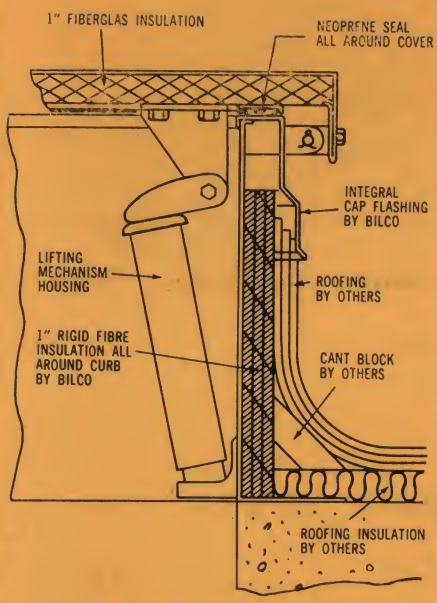
ROOF SCUTTLES


Snap Latch and Inside-Outside Turn Handles
Inside-Outside Hasps for Padlock
Metal Cover
1" Glass Fibre Insulation
Metal Insulation Liner
Neoprene Gasket
Tubular Compression Spring Operators
Positive Lock Arm and One Hand Release
Rugged Pintle Hinges (underneath)
Metal Curb
Integral Metal Capflashing
1" Rigid Fibre Board Insulation
Flange for Securing to Roof Deck


1" FIBERGLAS INSULATION
NEOPRENE SEAL ALL AROUND COVER
INTEGRAL CAP FLASHING BY BILCO
LIFTING MECHANISM HOUSING
ROOFING BY OTHERS
1" RIGID FIBRE INSULATION ALL AROUND CURB BY BILCO
CANT BLOCK BY OTHERS
ROOFING INSULATION BY OTHERS

Section Through Scuttle

Spring Operator and Release Handle

advantages and features

Bilco scuttles are of the very finest workmanship and designed to provide a permanent, economical, and trouble-free means of access to the roof.

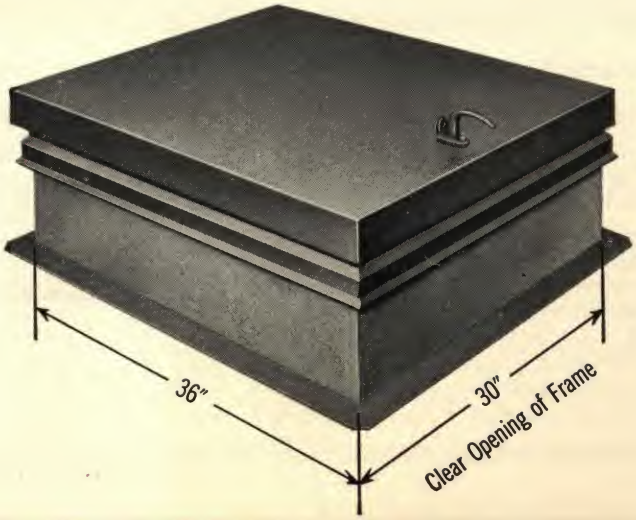
EASY TO INSTALL. Installation is just a matter of placing the scuttle over the roof opening and securing with nails or bolts through holes provided in the flanges. Roofing material is inserted under the integral capflashing.

SMOOTH OPERATION. Bilco compression spring operators "float" the cover for effortless opening and closing. One hand cover release affords both convenience and safety.

WEATHERTIGHT. Integral capflashing, full welded corner joints and neoprene draft seal make the Bilco scuttle absolutely weathertight.

RUGGEDLY BUILT. Bilco scuttles are of extra sturdy construction throughout to withstand rough use. The box type cover design pivoting on rigidly fastened hinges makes the unit extremely rugged.

NOTE: All scuttles may be installed on either flat or sloping roofs. When installed on a sloping roof, the hinge side of the scuttle must run *with* the slope of the roof for best operation.

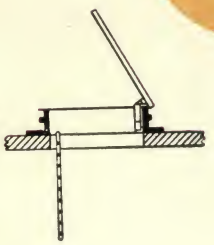


Bilco

ROOF SCUTTLES Standard Types and Sizes

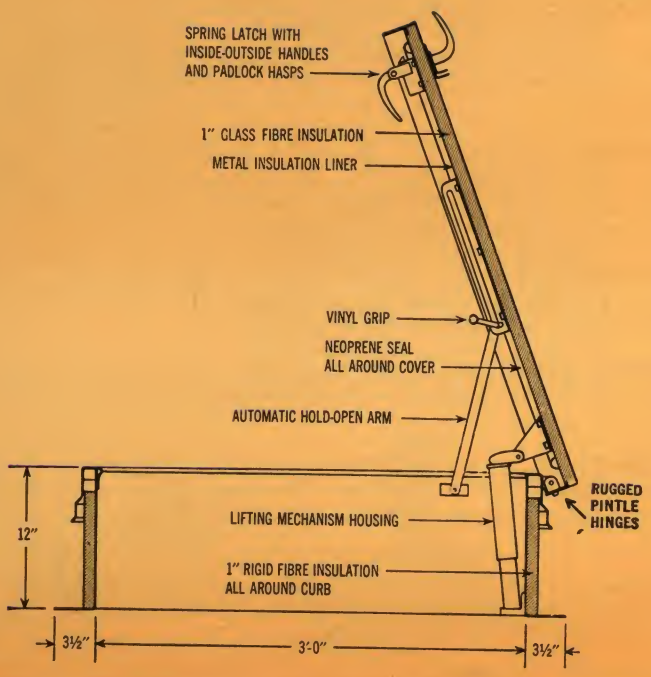
type "S"

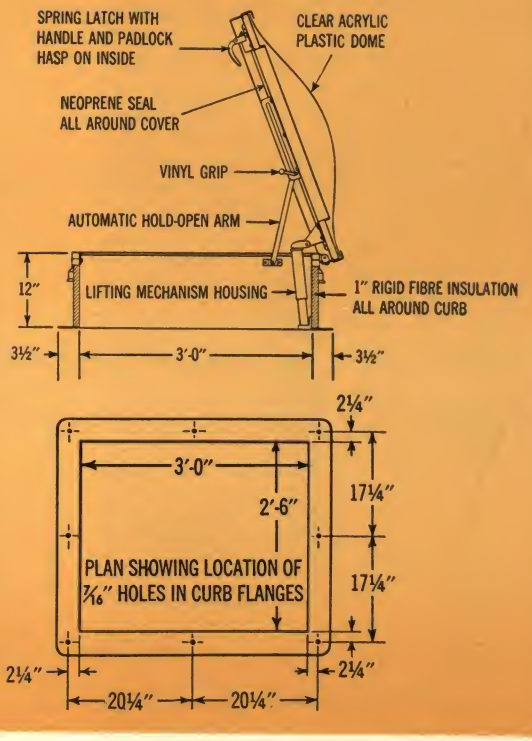
Clear Opening 2'6" x 3'0"
For Ladder Access



type "GS"

Clear Opening 2'6" x 3'0"
For Light and Ladder Access

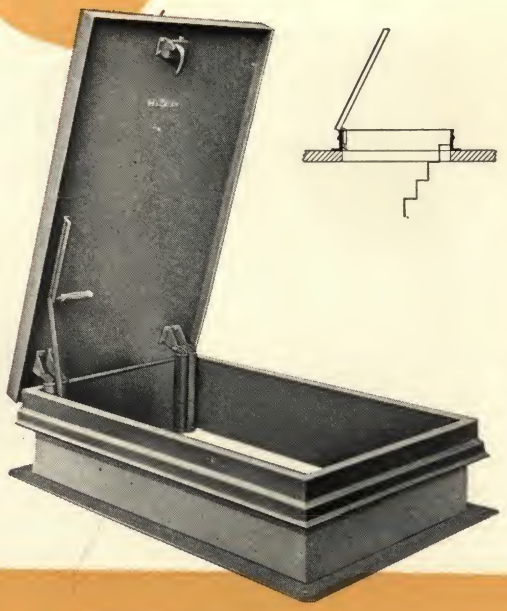




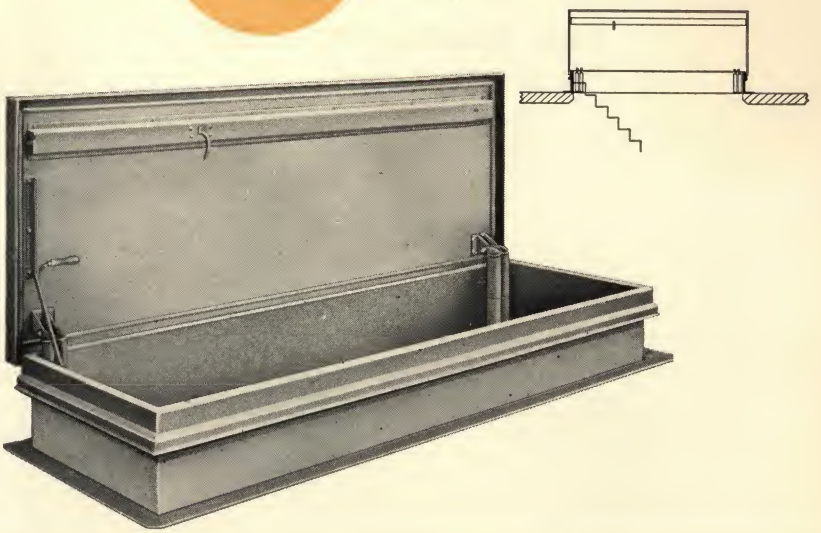
materials, prices and weights (other metals and insulations available)

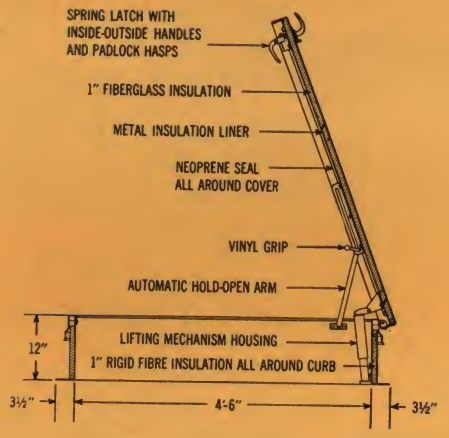
METALS	Gauge of Metal		TYPE S			TYPE GS			TYPE N			TYPE L		
	Cover & Curb	Cover Liner	Type No.	Price	Wt. Lbs.	Type No.	Price	Wt. Lbs.	Type No.	Price	Wt. Lbs.	Type No.	Price	Wt. Lbs.
Steel, Prime Painted	14 Ga.	22 Ga.	S-10	$ 92.	160				N-10	$152.	209	L-10	$224.	350
Galvanized Steel, Prime Painted	14 Ga.	22 Ga.	S-20	99.	165				N-20	163.	217	L-20	240.	362
Aluminum	11 Ga.	18 Ga.	S-50	139.	85	GS-50	$183.	160	N-50	207.	103	L-50	349.	173
Copper	48 oz.	16 oz.	S-70	233.	152	GS-70	289	224	N-70	349.	200	L-70	603.	332

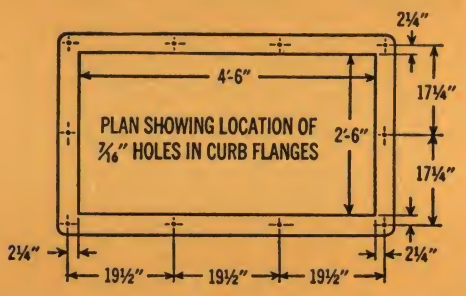
type "N" **Clear Opening 2'6" x 4'6"**
For Steep Stairs

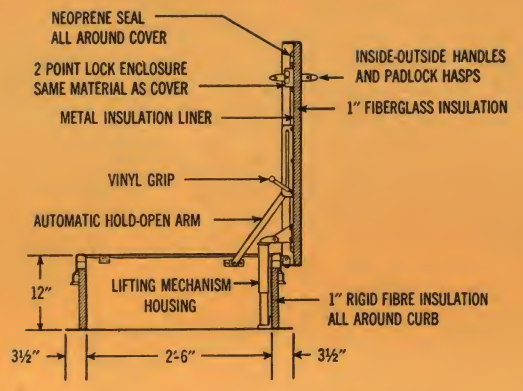


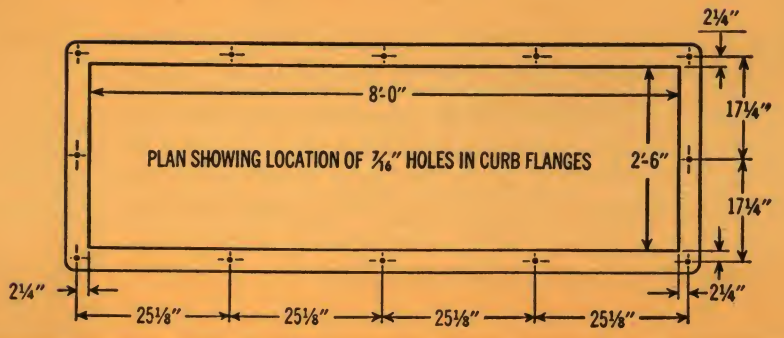
type "L" **Clear Opening 2'6" x 8'0"**
For Normal Stairs











specification

Furnish and install where indicated on plans metal roof scuttle Type —— as manufactured by The Bilco Company, New Haven 5, Connecticut. Cover shall be (state metal and gauge for Type specified) with 3" beaded flange, neatly welded and ground at corners. Insulation shall be glass fibre 1" in thickness, fully covered and protected by a metal liner (state metal and gauge for Type specified).

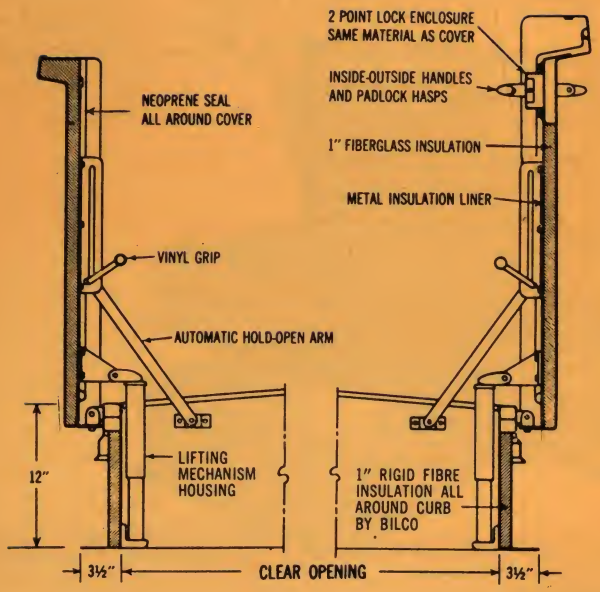
Curb shall be 12" in height and of the same gauge and material as the cover. It shall be formed with a 3½" flange with holes provided for securing to the roof deck. Curb shall be equipped with an integral metal capflashing of the same gauge and material as the curb, full welded and ground at corners for absolute weathertightness. Insulation on the exterior of the curb shall be rigid fibre board 1" in thickness.

Scuttle shall be completely assembled with heavy pintle hinges, compression spring operators enclosed in telescopic tubes, positive snap latch with turn handles on inside and outside, and neoprene draft seal. Provision shall be made for padlocking on both inside and outside. Cover shall be equipped with an automatic hold open arm complete with red vinyl grip handle to permit easy one hand release.

Tracing Templates Available on Request

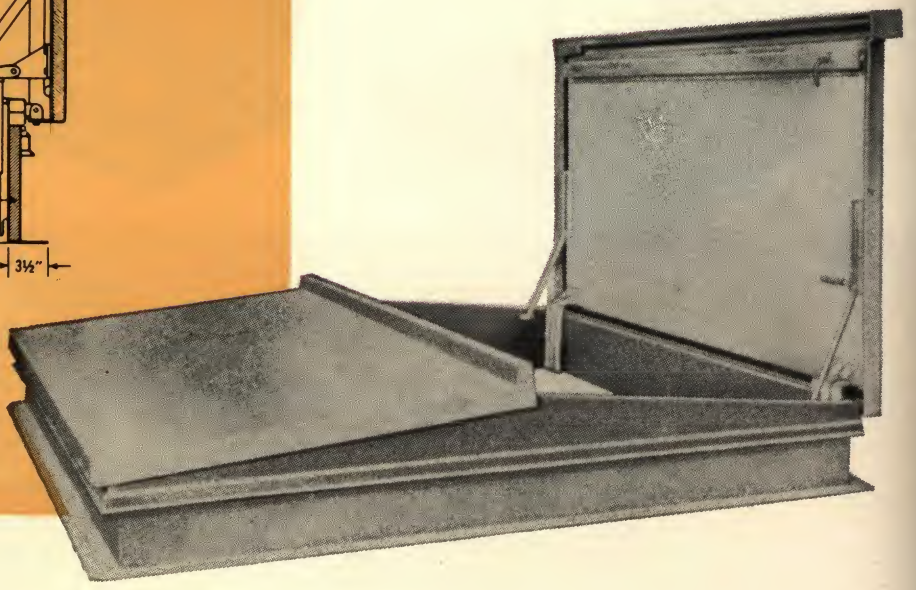
Bilco

ROOF SCUTTLES Special Types and Sizes



type "D"

Double Leaf for Extra Large Roof Openings



The Type D double-leaf scuttle is ideal for the placement or removal of large equipment through the roof, thus eliminating extra wide doors in rooms and corridors below. It is of the same construction as standard scuttles and can be made in clear openings as large as 12′0″ x 12′0″. Compression spring operators afford easy one man operation.

special size single leaf

Special size single leaf scuttles are recommended for openings up to a maximum of 4′6″ wide to 12′0″ long, 5′0″ wide to 6′6″ long, and 5′6″ wide to 6′0″ long. For larger openings reference is made to Type D double leaf scuttle above.

materials, prices, weights

Special types and sizes of Bilco scuttles are available in standard materials shown on page 4. Prices and shipping weights can be quoted promptly upon receipt of requirements.

Architects and engineers are urged to call upon the Bilco Engineering Department for assistance in designing the proper roof scuttle for special or unusual conditions.

specification

Type D double-leaf and Special Size single-leaf. Same specification as standard scuttles (see lower part of page 5). Indicate clear opening and dimension on which covers are to be hinged.

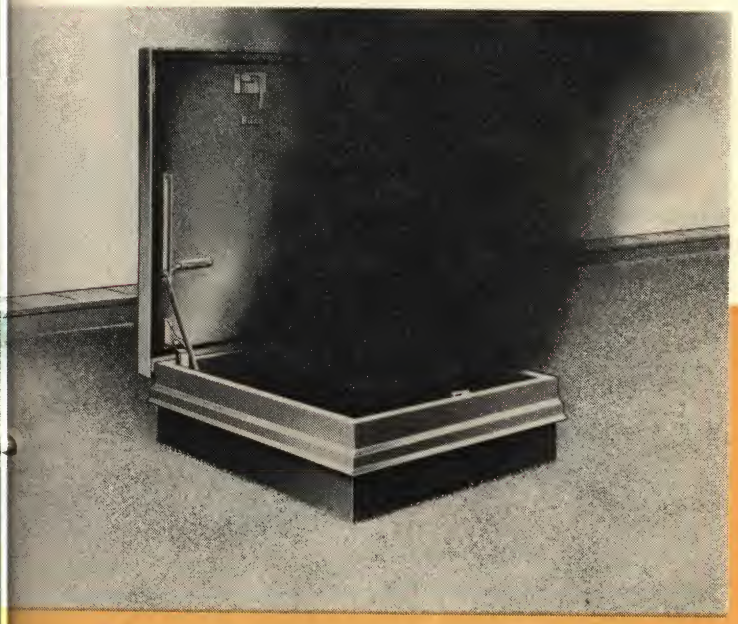
Tracing Templates Available on Request

Bilco

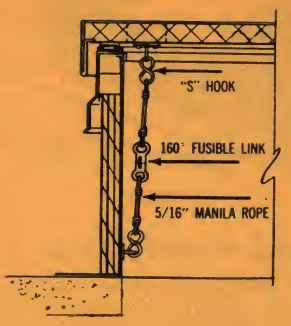
SMOKE HATCHES

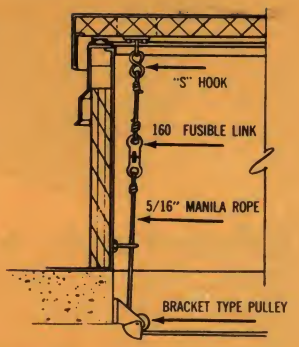
BILCO **smoke** hatches provide the very best in automatic smoke venting and incorporate all the rugged construction features of BILCO roof scuttles. Powerful compression spring operators assure instantaneous cover opening when heat breaks the Underwriters Laboratory approved 160 degree fusible link. Thoroughly tested by an independent organization, they meet the most rigid requirements for this type of emergency equipment.

Single-leaf smoke hatches can be supplied in any standard scuttle size and in the wide range of special sizes shown on Page 6 under "special size single-leaf."

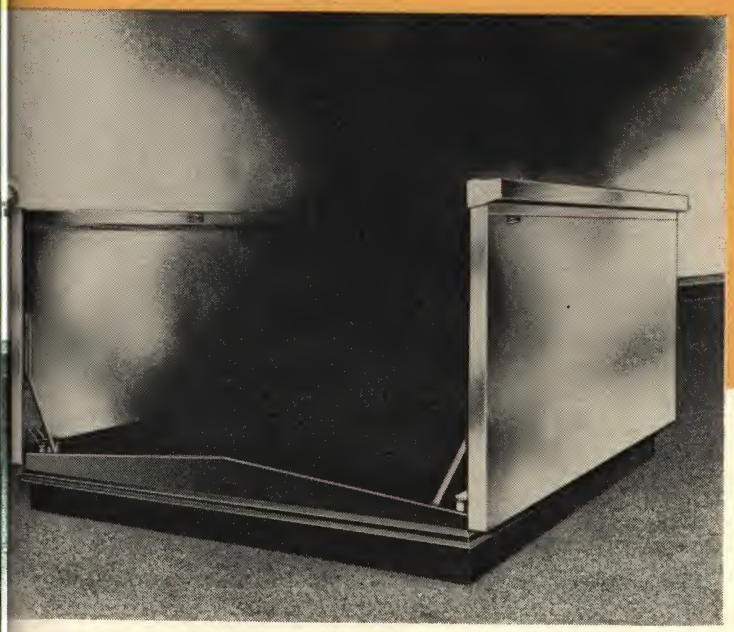


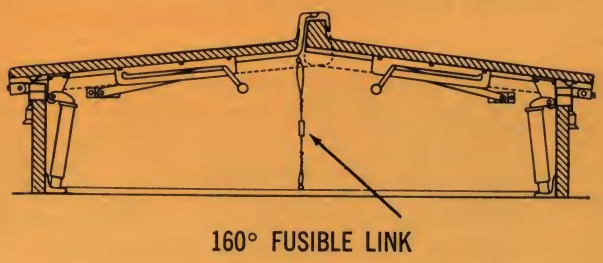
Single Leaf Smoke Hatch





Double Leaf Smoke Hatch





Double-leaf smoke hatches fill the need for extra large openings. Both covers instantly open upon breakage of the fusible link.

specification

In specifying smoke hatches, the standard roof scuttle specification on the lower part of Page 5 applies, with the addition of the words "smoke hatch."

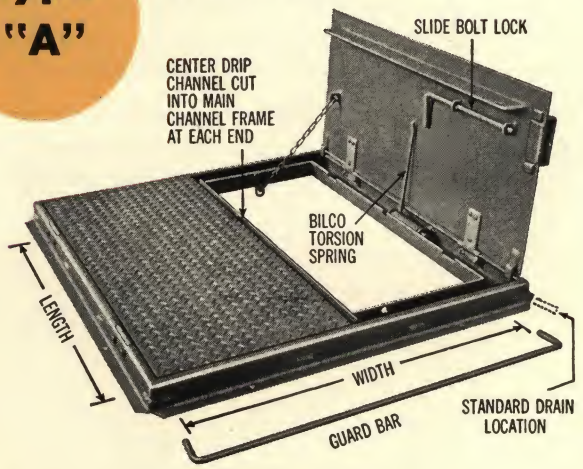
special rigging

When floor operation is desired, a schematic drawing is provided for the guidance of the contractor in locating the pulleys and winch. Such rigging can also be supplied by BILCO when specified, at a slight additional charge.

Tracing Templates Available on Request

type "A"

Double-leaf Sidewalk or Floor Door



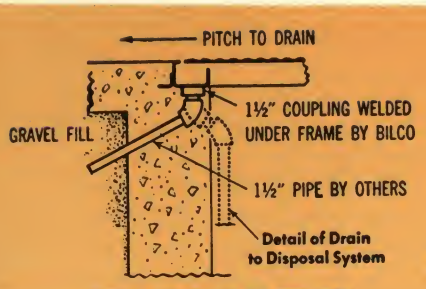
type "VA"

Single-leaf Pit or Floor Door

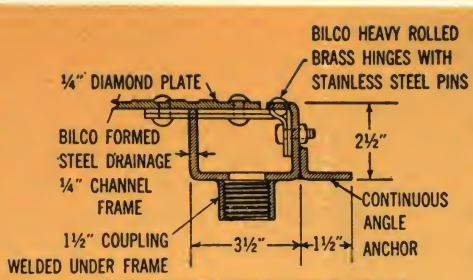
advantages and features

Bilco access doors combine rugged heavy duty construction with built-in lift springs for easy operation. All units are completely watertight when installed outside and the channel frame prevents dirt from falling through to the area below when installed inside. Such features as reinforcing for 300 pounds per square foot live load and heavy brass hinges with stainless steel pins, insure long, trouble-free service. Type VA doors are equipped with a recessed lock which is operated by a special wrench provided. When specified same lock can be supplied on Type A double leaf, instead of interior slide bolt, at slight extra charge.

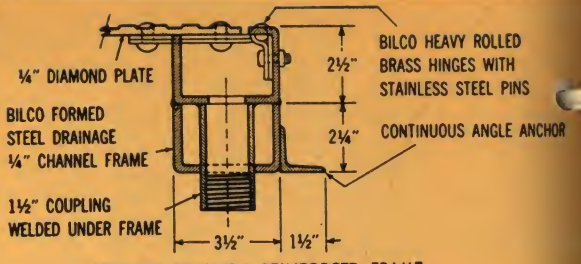
special sizes All BILCO interior/exterior doors are available in special sizes. Orders or specifications should state hinge side. (Prices on request for extra heavy duty doors for H-10, H-15 and H-20 loadings. Torsion lift springs not furnished on H-loaded doors.)



DETAIL OF DRAIN TO DRY WELL



SECTION THROUGH STANDARD FRAME



SECTION THROUGH REINFORCED FRAME FOR LARGE SPECIAL SIZES*

* Furnished when determined necessary by Bilco Engineering Dept.

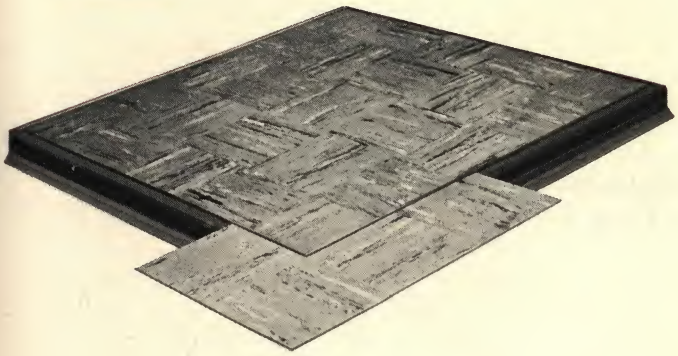
standard sizes, prices and weights

TYPE A (Double Leaf)					Type VA (Single Leaf)					TYPE T (Double Leaf)					TYPE T (Single Leaf)				
Type	Clear Opening		Price	Shipping Wt. Lbs.	Type	Clear Opening		Price	Shipping Wt. Lbs.	Type	Clear Opening		Price	Shipping Wt. Lbs.	Type	Clear Opening		Price	Shipping Wt. Lbs.
	Width	Length				Width	Length				Width	Length				Width	Length		
A-10	2'10"	3'4"	$131.	285	VA-10	2'0"	2'0"	$ 89.	160	A-10T	2'10"	3'4"	$162.	285	VA-10T	2'0"	2'0"	$110.	160
A-20	3'4"	3'10"	143.	355	VA-15	3'0"	2'6"	109.	236	A-20T	3'4"	3'10"	177.	355	VA-15T	3'0"	2'6"	137.	236
A-30	3'10"	3'10"	152.	380	VA-20	3'0"	3'0"	117.	265	A-30T	3'10"	3'10"	190.	380	VA-20T	3'0"	3'0"	145.	265
					VA-30	3'6"	3'6"	133.	350						VA-30T	3'6"	3'6"	162.	350

Tracing Templates Available on Request

type "T"

Single or double-leaf Interior Floor Door



type "AE"

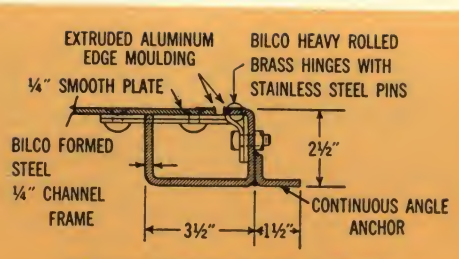
Double-leaf Sidewalk Elevator Door.

advantages and features

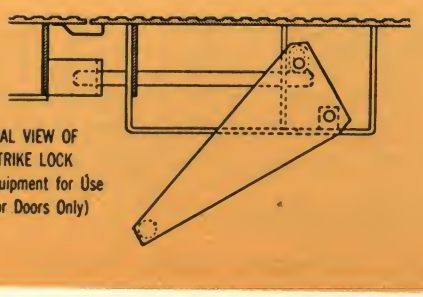
The Type T floor door was designed to fill the need for an access door that can be matched with the surrounding floor covering. It is of the same construction throughout as the Type A and Type VA but is furnished with a smooth plate door and the drain coupling is eliminated unless specified. Extruded aluminum molding strips are fastened to the frame and door leaf to receive composition floor covering of 1/8" or 3/16" thickness.

special sizes All BILCO interior/exterior doors are available in special sizes. Orders or specifications should state hinge side. (Prices on request for extra heavy duty doors for H-10, H-15 and H-20 loadings. Torsion lift springs not furnished on H-loaded doors.)

The Type AE Elevator Door is similar to the Type A door but is equipped with bow strike plates rather than lift springs. Lift springs can be provided if door will also be operated manually. An automatic bow strike locking device is available at an additional charge when specified. These units are not made in standard sizes but are fabricated to order from the elevator manufacturer's details.



SECTION THROUGH TYPE T FRAME



SECTIONAL VIEW OF BOW STRIKE LOCK (Optional Equipment for Use on Elevator Doors Only)

specification

Access door shall be Bilco Type —— as manufactured by The Bilco Company, New Haven 5, Conn.

Type A, Type VA. Door(s) shall be ¼" diamond pattern plate reinforced for a live load of 300 pounds per square foot. Frame shall be ¼" steel formed to a channel 3½" wide. This channel shall have a 1" x 1½" angle anchor welded to the perimeter. Door(s) shall be equipped with a minimum of two heavy brass hinges with stainless steel pins. Springs shall be built into the channel frame to afford easy operation and so as not to reduce the clear opening. A 1½" drainage coupling shall be provided in the lower right corner of the channel frame. Manufacturer's prime coat of red oxide paint shall be applied to door and frame before shipment.

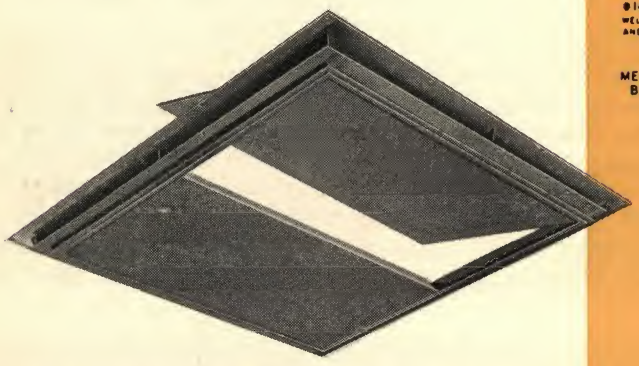
Type T. Same as Type A or Type VA except door(s) shall be ¼" smooth steel plate and door(s) and frame shall be complete with extruded aluminum molding to receive composition floor covering of —— thickness. (Please state whether flooring material is 1/8" or 3/16".)

Type AE. Same as Type A but eliminate reference to lift springs (unless desired for occasional manual operation). Doors shall be equipped with strike plates to engage elevator bow iron. (Please specify if the automatic bow strike locking device is desired.)

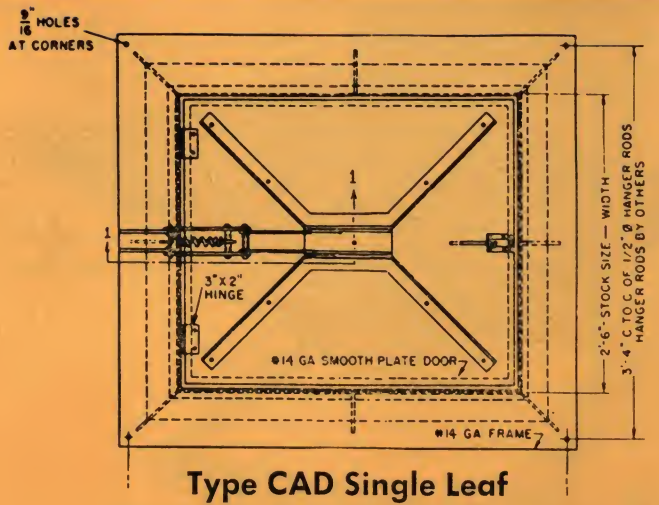
Bilco®

CEILING ACCESS DOORS Types and Sizes

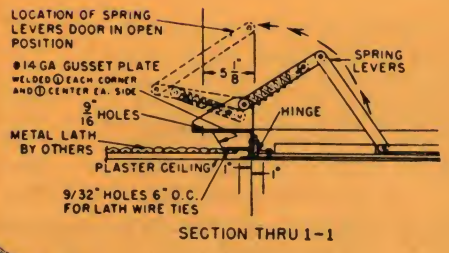
Standard single-leaf Bilco ceiling access doors provide neat looking convenient access — available also in special sizes. For durability, and to offer the finest base for finish painting, the frame and leaf are fabricated of 14 gauge paint bond galvanized steel, prime painted. An 11 gauge aluminum leaf is available as an alternate.



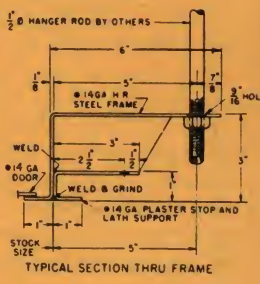
Special double-leaf Bilco ceiling access doors (in the same metals as above) are ideal when a larger size is required or when there is not sufficient clearance above to permit full opening of the single-leaf type.


9/16" HOLES AT CORNERS
3"x2" HINGE
#14 GA SMOOTH PLATE DOOR
#14 GA FRAME
2'-6" STOCK SIZE — WIDTH
3'-4" C TO C OF 1/2" Ø HANGER RODS
HANGER RODS BY OTHERS

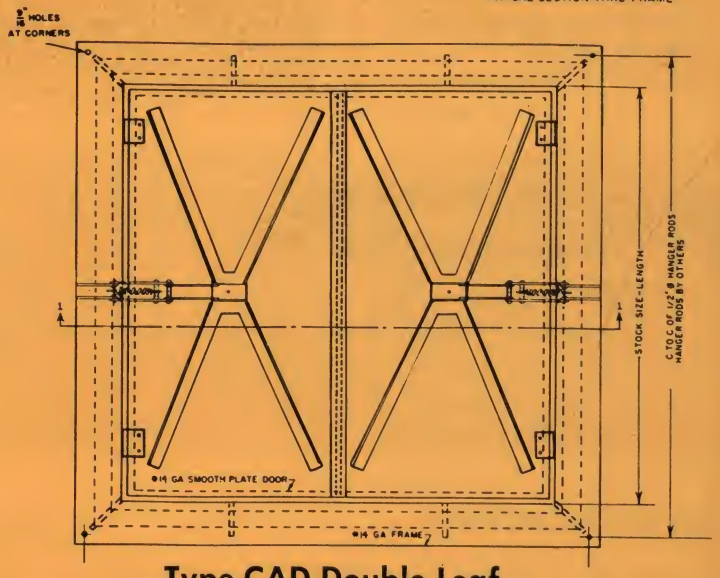
Type CAD Single Leaf


LOCATION OF SPRING LEVERS DOOR IN OPEN POSITION
#14 GA GUSSET PLATE WELDED ① EACH CORNER AND ① CENTER EA. SIDE
SPRING LEVERS
HINGE
9/16" HOLES
METAL LATH BY OTHERS
PLASTER CEILING
9/32" HOLES 6" O.C. FOR LATH WIRE TIES

SECTION THRU 1–1



TYPICAL SECTION THRU FRAME



Type CAD Double Leaf

specification

Furnish and install where indicated on plans ceiling access door Type ____ as manufactured by The Bilco Company, New Haven 5, Connecticut. (If special double-leaf, state size, and dimension on which doors are to be hinged.)

Frame shall be fabricated of 14 gauge paint bond galvanized steel, prime painted. Door(s) shall be (indicate 14 gauge paint bond galvanized steel, prime painted, or 11 gauge aluminum) complete with plaster stop and lath support. Provision shall be made in frame at corners to receive 1/2" round hanger rod.

Door shall be equipped with a spring lever to assist in opening and closing and a positive snap latch.

materials, prices, weights — single leaf

Double leaf and special size single leaf prices on request.

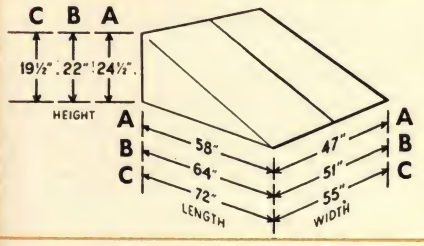
TYPE	STANDARD SIZE	MATERIAL	PRICE	WT. (Lbs.)
CAD No. 1	2'6" x 2'6"	14 ga. steel	$71.	110
CAD No. 2	2'6" x 3'0"	14 ga. steel	79.	125
CAD No. 1A	2'6" x 2'6"	14 ga. steel frame— 11 ga. aluminum door	76.	90
CAD No. 2A	2'6" x 3'0"	14 ga. steel frame— 11 ga. aluminum door	85.	100

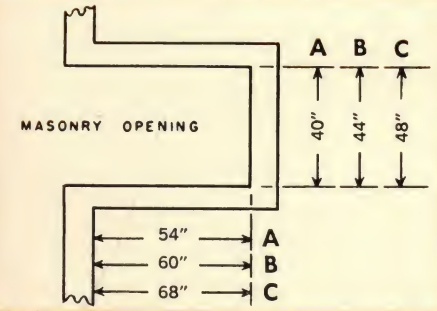
Tracing Templates Available on Request

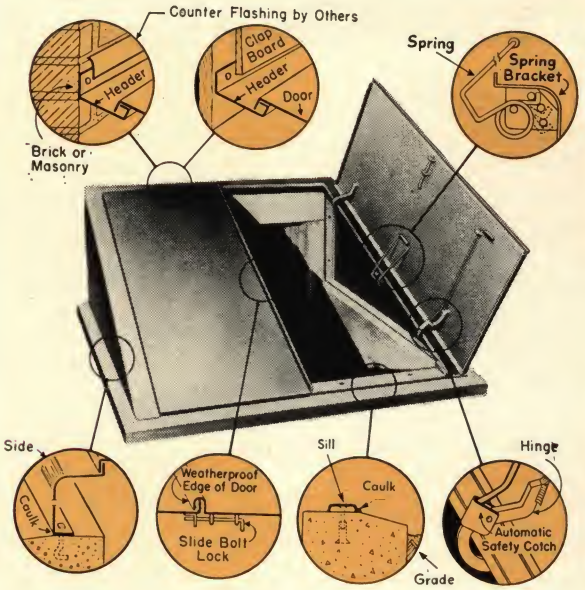
Bilco®

STEEL BASEMENT DOORS

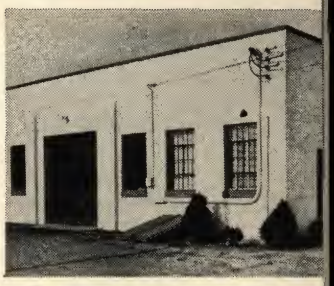
Three Standard Sizes
(Special Sizes are Not Available)







Shipping Weights:
Size A, 165 lbs. Size B, 185 lbs. Size C, 215 lbs.



Best basement entrance for industrial buildings.

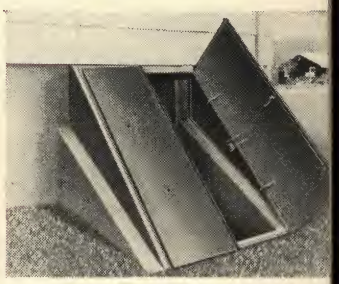
Ideal for homes and apartments.

Bilco Door package.

Bilco Stair Stringer package.

Bilco Doors are quickly assembled and installed by one man.

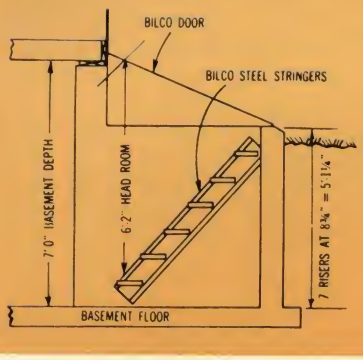
Feather Action operators afford effortless operation.

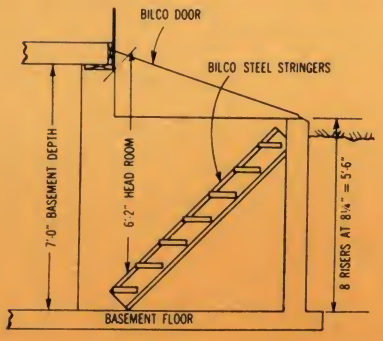


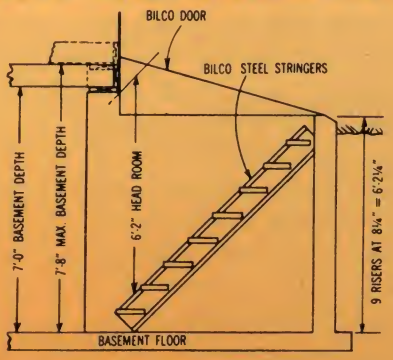
Bilco Door raised to fit low grade.

STAIR STRINGERS

The quick easy way to build steps under a BILCO door. Made of heavy gauge formed steel. Stringers are slotted to receive standard 2" x 10" wood treads by others. Removable treads allow for use of entire pit in bringing bulky equipment in or out.







NOTE: 1. For other basement depths or different grade conditions job built steps of wood or masonry are recommended. For layouts write for Form SL-300.

2. For shallow grade condition, raise BILCO door by cutting backs of side-pieces at proper angle, pour masonry on pitch under door. Cut-off chart for various heights and other information pertaining to special installations is available in BILCO folder Form RF-150.

specification

Bulkhead door to basement shall be Bilco Size_____. Door to be standard packaged assembly available from local lumber and building supply dealers. Unit shall be constructed of #12 gauge steel with prime finish flowcoated and baked on at factory. It shall be furnished complete with all hardware, assembly bolts, caulking compound and hook anchors. Installation to be in accordance with manufacturer's instruction sheet. Painting contractor shall apply finish coat of _____ (color) alkyd resin enamel after installation.

Bilco®

REPRESENTATIVES

ALABAMA
Fred Middleton Company, Inc.
P. O. Box 7405
Birmingham 13 Phone: TRemont 9-2417

ARIZONA
McArthur Specialty Company
4137 North 44th Place
Phoenix Phone: WHitney 5-8218

ARKANSAS
John F. Brett
315 West Markham Street
Little Rock Phone: FR 5-4928

CALIFORNIA
Schultz-Dewey & Company
P. O. Box 987
Oakland 4 Phone: GLencourt 1-7400

Daniel Dunner
6200 Alonzo Avenue
Reseda Phone: Dickens 2-1496

Healey & Popovich
1703 Fulton
Fresno Phone: AMherst 4-4736

COLORADO
The Colorado Builders' Supply Company
1534 Blake Street
Denver 2 Phone: AComa 2-3851

CONNECTICUT
The Bilco Company
P. O. Box 1203
New Haven Phone: WEst 4-2603

DELAWARE
R. C. Kratz Company
1 East Wynnewood Road
Wynnewood, Pa. Phone: Midway 9-9153

FLORIDA
Associated Elevator & Supply Co.
501 N.W. 54th Street
Miami 37 Phone: PLaza 7-4255

Florida Distributors
P. O. Box 801
Tampa Phone: RE 7-4848

Florida Distributors
P. O. Box 5026
Jacksonville Phone: EX 8-1521

GEORGIA
William E. McGill and Company
205 Red Rock Building
Atlanta 3 Phone: JAckson 5-7644

ILLINOIS
Johnson Fire Proof Door Company, Inc.
3925 North Elston Avenue
Chicago 18 Phone: KEystone 9-5140

INDIANA
Schlamp Building Specialties, Inc.
P. O. Box 516
Evansville 3 Phone: HArrison 3-4475

Louis W. Bruck
52 South Audubon Road
Indianapolis 19 Phone: FLeetwood 7-1904

KANSAS
B-D-R Engineering Corp.
1933 North Tenth Street
Kansas City Phone: MAyfair 1-0600

Supply Service, Inc.
P. O. Box 73
Hutchinson Phone: MOhawk 3-9111

Supply Service, Inc.
128 South Fifth
Salina Phone: TAylor 7-6230

Supply Service, Inc.
P. O. Box 1678
Wichita Phone: AMherst 7-5831

KENTUCKY
Paul O. Schubert
P. O. Box 902
Lexington Phone: 4-0950

Schneider Building Products
2345 Frankfort Avenue
Louisville 6 Phone: TWinbrook 6-4459

LOUISIANA
Favort & Pierson
3501 Toulouse Street
New Orleans 19 Phone: AMherst 5733

MARYLAND
The J. D. Slaughter Company
2326 North Charles Street
Baltimore 18 Phone: CHesapeake 3-2277

MASSACHUSETTS
Clark Engineered Products
108 Massachusetts Avenue
Boston 15 Phone: KEnmore 6-5290

MICHIGAN
Wolverine Door Company, Inc.
2966 East Seven Mile Road
Detroit 34 Phone: FOrest 6-8989

L. G. Cook
229 Westmont Drive, N.W.
Grand Rapids 4 Phone: GLendale 8-2267

C. T. DeHaas Company
P. O. Box 89
Marquette Phone: CA 6-6515

MINNESOTA
Bartley Sales Company, Inc.
134 South Tenth Street
Minneapolis 3 Phone: FEderal 8-7838

MISSOURI
B-D-R Engineering Corp.
1933 North Tenth Street
Kansas City, Kansas Phone: MAyfair 1-0600

The Carlin Company
117 Helfenstein
Webster Groves 19 Phone: WOodland 2-8865

MONTANA
Montana Steel & Supply Company
714 Sixth Avenue, North
Billings Phone: 9-3639

Montana Steel & Supply Company
1107 Central Avenue, West
Great Falls Phone: GL 2-2011

NEBRASKA
Builders Products Company
3928 Lake Street
Omaha Phone: PR 2600

NEW MEXICO
Cobusco Steel Products
2001 Gold Avenue, S.E.
Albuquerque Phone: Chapel 3-2291

NEW YORK
Baehre & Shumway
41 Elmwood Avenue
Buffalo 1 Phone: ELmwood 2702

F. E. Davies Company
44 Hartford Terrace
New Hartford Phone: UTica 4-7014

A. Perry Roberts
233 Broadway
New York 7 Phone: BArclay 7-1245

Carberry Building Specialties
135 Spring Street
Rochester 8 Phone: BAker 5-2945

Fireproof Materials Company
P. O. Box 91, Brandywine Station
Schenectady 7 Phone: FR 4-6211

B. R. Johnson and Son, Inc.
5900 South Salina Street
Syracuse 5 Phone: HO 9-3244

B. R. Johnson and Son, Inc.
P. O. Box 312
Watertown Phone: SUnset 2-1320

NORTH CAROLINA
Bayard H. Storm
P. O. Box 6196
Charlotte 7 Phone: EDison 3-9485

OHIO
Calvin C. Huenefeld & Associates
626 Broadway
Cincinnati 2 Phone: GArfield 1-2375

Mechanical Equipment Company, Inc.
3100 Prospect Avenue
Cleveland 15 Phone: ENdicott 1-6212

OKLAHOMA
D. A. Puckett
P. O. Box 3734
Oklahoma City 6 Phone: FOrest 5-6833

OREGON
W. H. Cress Company
201 Concord Building
Portland 4 Phone: CApital 8-1714

PENNSYLVANIA
A. D. Sutherland Company
505 Grant Building
Pittsburgh 19 Phone: COurt 1-2277

R. C. Kratz Company
1 East Wynnewood Road
Wynnewood Phone: Midway 9-9153

RHODE ISLAND
Edcar Sales Company
634 Broad Street
Providence 7 Phone: DExter 1-6123

SOUTH CAROLINA
Bayard H. Storm
P. O. Box 6196
Charlotte 7, N. C. Phone: EDison 3-9485

TENNESSEE
Lancaster Associates
John Sevier Hotel Building
Johnson City Phone: 3200

Lancaster Associates
Andrew Johnson Hotel Building
Knoxville Phone: 4-4623

Maury & Comoany
P. O. Box 3753
Memphis Phone: BR 2-9656

Builders Specialties Co., Inc.
1523 Demonbreun Street
Nashville 4 Phone: ALpine 6-0325

TEXAS
R. M. Sedwick Company
Mercantile Continental Building
Dallas 1 Phone: RI 1-3519

Architectural Products Co., Inc.
P. O. Box 7307
El Paso Phone: KEystone 3-9547

Lehman Steel Products Company
2423 Dunstan
Houston 5 Phone: JA 3-2511

Merbeth & White Company
146-B Olmos Drive West
San Antonio 12 Phone: TAylor 6-8641

UTAH
Joel P. Paulson & Company
P. O. Box 132, Sugar House Station
Salt Lake City 6 Phone: HUnter 5-9251

VIRGINIA
The Staley Company, Inc.
2205 Tazewell Street
Richmond 22 Phone: Milton 4-4539

A. L. Horwitz
P. O. Box 496
Roanoke Phone: Diamond 4-6902

WASHINGTON
F. T. Crowe & Company, Inc.
329 Second Avenue, West
Seattle 99 Phone: ATwater 4-8484

WEST VIRGINIA
Fireproof Products Company
P. O. Box 2311
Charleston 28 Phone: Dickens 2-8111

WISCONSIN
J. M. Mitchell Products Co.
759 N. Milwaukee Street
Milwaukee 2 Phone: BRoadway 6-6152

WYOMING
The Colorado Builders' Supply Co.
2100 East Yellowstone Highway
Casper Phone: 3-3785

CANADA
Alberta
Evans Engineering Sales Ltd.
3628 Burnsland Road
Calgary Phone: CHestnut 3-5506

Evans Engineering Sales Ltd.
11226 - 156th Street
Edmonton Phone: HU 9-5581

British Columbia
Ritchie Equipment Company Ltd.
2685 Maple Street
Vancouver 9 Phone: REgent 1-4191

Manitoba
J. J. Thomas
P. O. Box 125
Brantford, Ontario Phone: St. George 214

Newfoundland
J. C. Pratt & Company, Ltd.
P. O. Box 866
St. John's

Nova Scotia
R. R. Power Limited
100 Brunswick Street
Halifax Phone: 3-7797

Ontario
J. J. Thomas
P. O. Box 125
Brantford Phone: St. George 214

Quebec
Hartco Steel Products, Ltd.
P. O. Box 127
Rosemount, Montreal 36 Phone: RA 8-9289

Saskatchewan
Evans Engineering Sales, Ltd.
#7 Mitchell Building
Regina Phone: LA 3-3443

HAWAII
Lewers & Cooke, Ltd.
P. O. Box 2930
Honolulu 2 Phone: 5-1961

A. I. A. FILE NO. 16-I

A. I. A. FILE NO. 16-I

MILCOR®

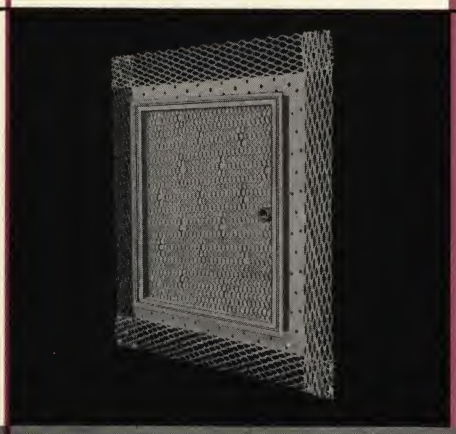
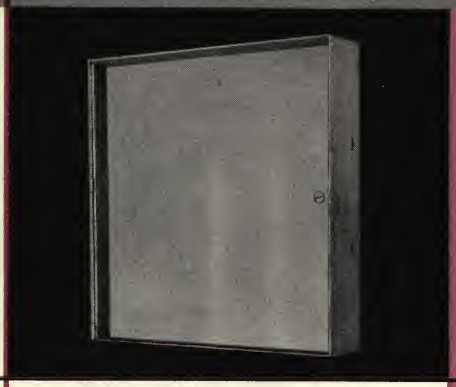
Steel Access Doors

catalog no. 210

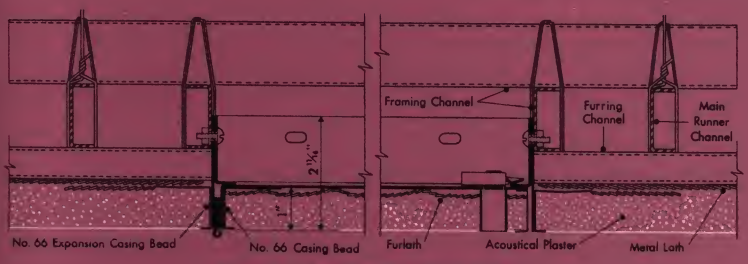
1960 edition

INLAND STEEL PRODUCTS COMPANY
MILWAUKEE 1, WISCONSIN

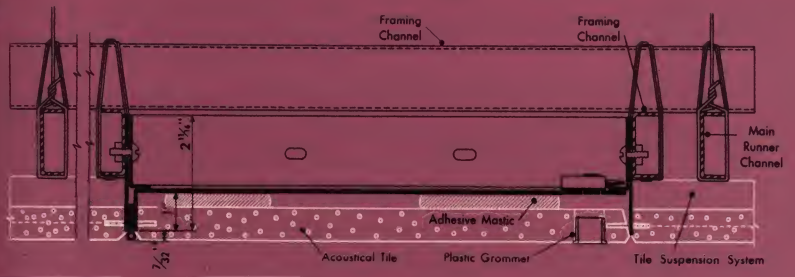
A. I. A. FILE NO. 16-I

Style		Description
B		**NEW — Style B** doors provide a virtually concealed installation in acoustical plaster. The appearance of the surface is greatly improved over any with surface installed doors. The plaster covers the recessed door panel and is bonded to it by self-furring Milcor Furlath welded to the panel. Milcor No. 66 Casing Bead welded at the panel's perimeter protects the plaster edges. Milcor No. 66 Expansion Casing Bead on the outer frame produces a neat, close connection with the surrounding plaster area. Style B furnishes 1" grounds when attached to the furring channels, 1⅛" grounds when attached on outer surface of the lath, or may be shimmed to 1¼" grounds.
A		**Style A** was developed specifically for use in acoustical tile installations. Tile is attached to the recessed door panel with adhesive mastic of sufficient depth to permit the applied tile to finish flush with the plane of the surrounding tile field. The door assembly is thus hidden within the acoustical tile layer and causes no interruption in the appearance or acoustical properties of the surface. Hinge location and recessed panel permit the door with attached tile to open freely. Door has a prime coat of white paint to blend with the tile. Packed one per carton for convenience and protection during storage and handling.
K and L	*Style K illustrated. Style L same except no expansion wings.*	**Style K** is mainly for use in plastered surfaces in new construction. The expanded metal wing that distinguishes this series provides reinforcement and crack resistance in the plaster area around the frame. The nailing flange is recessed ¾" so that the door panel will finish flush with the finished surface that surrounds it. This permits the doors to be painted or wall-papered along with the rest of the wall or ceiling surface so that they are hardly noticeable. Milcor Steel Access Doors make key points in service systems immediately available for maintenance without damage to the wall or ceiling. **Style L** doors can be used in either plastered or non-plastered installations — are employed in both old and new construction. Construction is identical to Style K with expansion wings omitted.
M		**Style M** series can be installed in virtually any type of wall or ceiling construction — masonry, tile, wall board, etc. Its wide adaptability suits it admirably for remodeling work. The finish angle on the frame is flush with the door panel and hides the rough opening made in the wall. The door is fastened in place by nails or bolts, or by means of corrugated masonry anchors as shown in the detail at the right. Masonry anchors are furnished only when specifically requested. Door opens to 175° so that it will provide adequate clearance for the opening yet will not strike and mar the adjacent surface.

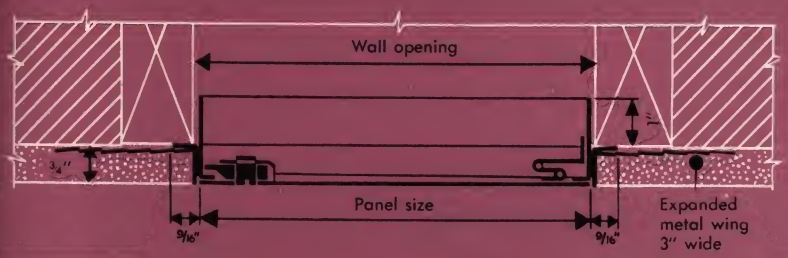
Installation Details



Section — Acoustical Plaster Ceiling.

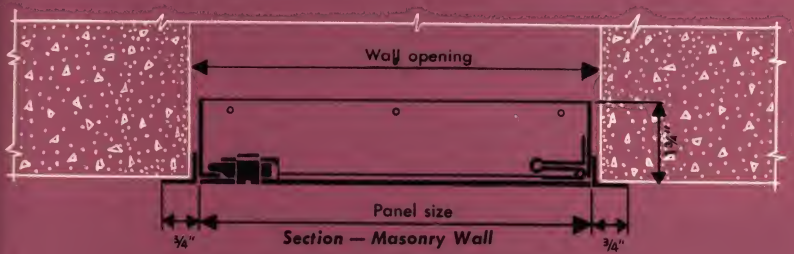


Section — Acoustical Tile Ceiling

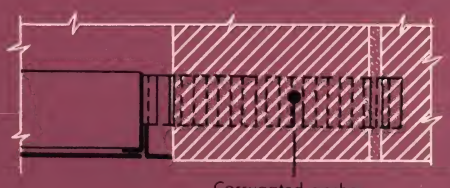


Section — Plastered Wall

(Style L Door identical to Style K except no expansion wings.)



Section — Masonry Wall



Corrugated Anchor in Brick, Block or Structural Facing Tile.

Product Data

SIZES: 12" x 12", 12" x 24", 24" x 24". (Style A door accommodates one, two or four 12" x 12" tiles.)

MATERIAL:

Style B: Frame — 16 gauge Ti-Co Galvanized Steel; Door — 18 gauge Ti-Co Galvanized Steel (24" x 24" Door reinforced); Casing Beads — 24 gauge Ti-Co Galvanized Steel; Furlath — 3.4 lb. Copper Bearing Steel.

Style A: Frame — 16 gauge Steel; Door — 18 gauge Steel (24" x 24" Door reinforced).

PAINT: Factory-primed with coat of white rust-inhibitive paint to blend in with tile.

HINGE: Continuous hinge (on 24" side on 12" x 24" door).

LOCKS: Flush, screwdriver operated, with metal cam. Number varies with size of door. Plastic grommets furnished with Style A to protect hole made in tile for access to cam lock control. Style B has steel grommet welded to door for access to cam lock control after plastering.

PACKING: Packed one per carton.

Dimensions and weights

Door Size	Number of Cam Locks	Shipping Weight (Each)	
		Style A	Style B
12" x 12"	1	6¾ lbs.	9½ lbs.
12" x 24"	2	11½ lbs.	15½ lbs.
24" x 24"	2	18¾ lbs.	24¾ lbs.

ADD LETTER "A" or "B" TO DOOR SIZE TO INDICATE STYLE DESIRED.

STANDARD SIZES: Are listed in the table below.

CUSTOM SIZES: Employing any combination of standard lengths and widths can be assembled on short notice.

SPECIAL SIZES: Will be fabricated on request.

MATERIAL: Door — 14 gauge Steel; Frame — 16 gauge Steel.

PAINT: Factory-applied prime coat of rust-inhibitive paint.

HINGES: Concealed spring hinges allow door to be opened to 175°. Doors removable by taking pin out of hinge leafs attached to doors. Number of hinges varies with size of door.

LOCKS: Flush, screwdriver operated, with metal cam. Number of cams varies with size of door. Cylinder lock with two keys furnished, if required, at slight extra charge.

ANCHORS: Corrugated Masonry Anchors furnished on Style M Doors on request at slight extra charge.

PACKING: Packed one per carton.

Styles, dimensions and weights

Door Size (Inches)	Wall Opening (Inches)	No. of Hinges	No. of Cam Locks	Shipping Weight (Each)	
				Style "K"	Style "L" or "M"
8 x 8	8⅜" x 8⅜"	1	1	4½ lbs.	4 lbs.
8 x 12	8⅜" x 12⅜"	1	1	5¾	5¼
12 x 12	12⅜" x 12⅜"	1	1	7¼	6½
12 x 16	12⅜" x 16⅜"	2	1	9	8½
12 x 18	12⅜" x 18⅜"	2	1	10¼	9½
16 x 16	16⅜" x 16⅜"	2	1	11¼	10¼
16 x 20	16⅜" x 20⅜"	2	1	13	12¼
18 x 18	18⅜" x 18⅜"	2	1	13¼	12½
20 x 24	20⅜" x 24⅜"	2	2	17½	16½
20 x 30	20⅜" x 30⅜"	3	3	21½	20¼
24 x 24	24⅜" x 24⅜"	2	**4	21	20
24 x 30	24⅜" x 30⅜"	3	*5	25½	23½
24 x 36	24⅜" x 36⅜"	3	*5	29	27½

*One Cam Lock (Centered) at top and bottom of door; three Cam Locks on locking side of door.

**Same as above (*) except two Cam Locks on locking side of door.

ADD LETTER "K," "L" OR "M" TO DOOR SIZE TO INDICATE STYLE DESIRED.

Ready to install

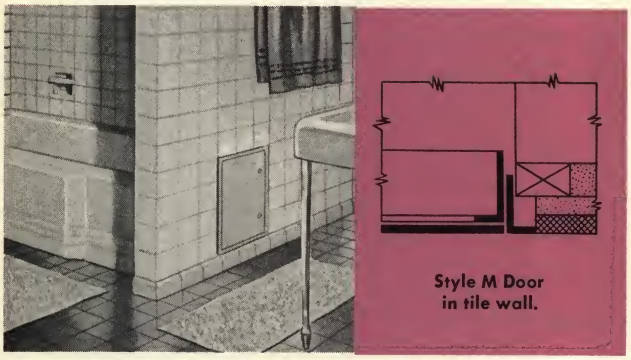
Furnished complete — ready to fasten in place. No cutting, adjusting or altering required. No frame to build. Installation time and labor costs are greatly reduced.

Prime coat painted

Save on painting costs. No sanding needed; no filler coat required. One finish coat ordinarily provides satisfactory coverage. Painted along with surrounding surface.

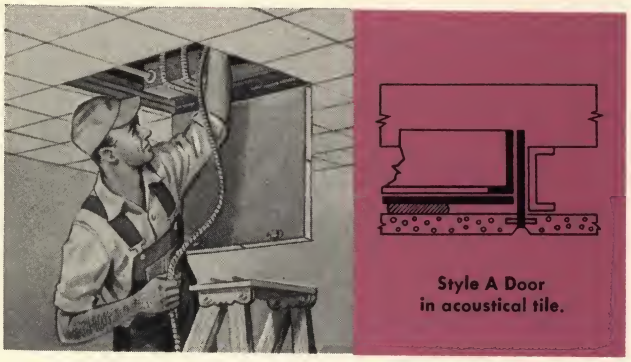
All-steel construction

Door panels fit properly; frames are true; locks and hinges operate smoothly — for the life of the building — because steel will not warp, shrink or swell.



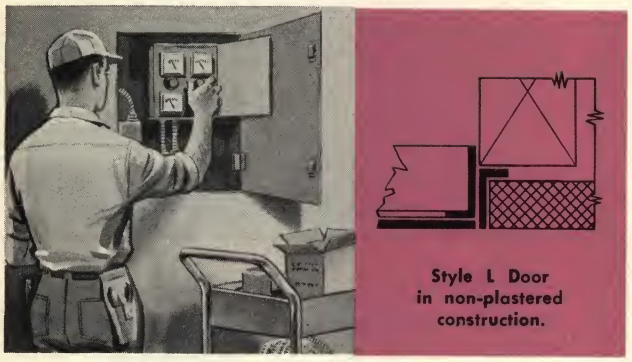
Style M Door in tile wall.

Plumbing maintenance in the bathroom area can create a severe problem. Provide the solution beforehand with a Milcor Steel Access Door. Sketch and detail drawing show Style M door in a tile wall.



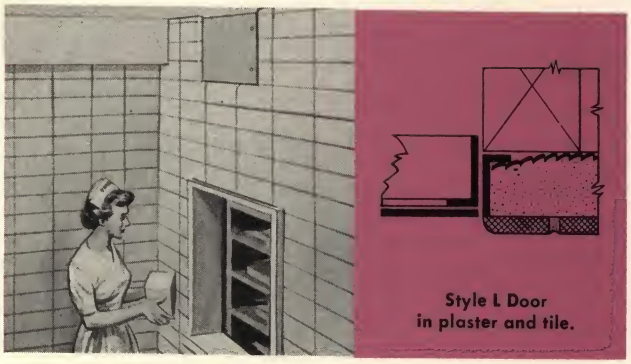
Style A Door in acoustical tile.

The advantages in appearance and acoustical performance of the concealed Milcor Style A or B doors are readily apparent. They are designed with the built-in strength to assure a ceiling installation that won't sag or warp.



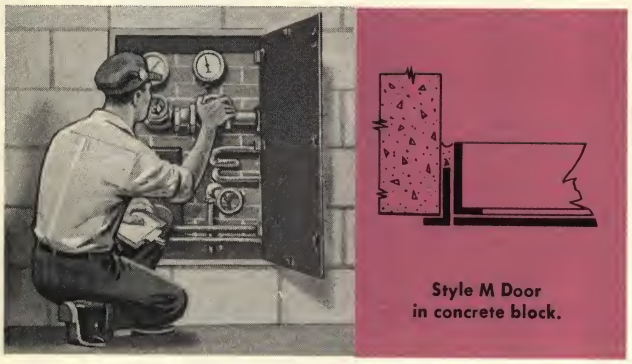
Style L Door in non-plastered construction.

The increasing use and multiplicity of electrical appliances and equipment presents a growing need for access to concealed electrical control points in residential as well as non-residential buildings.



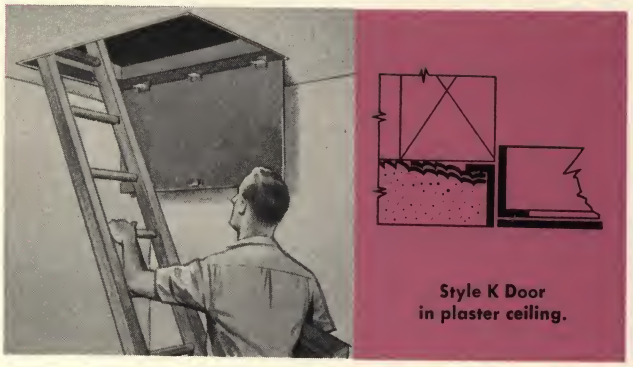
Style L Door in plaster and tile.

Specialized types of equipment must be constantly in operating condition to insure smooth functioning of an institution's routine. Motors and other key points are immediately accessible with Milcor Steel Access Doors.



Style M Door in concrete block.

The use of access doors permits the entire refrigeration system to be concealed in the wall with valves protected from casual tampering. Style M door is mortared in place in concrete block opening.



Style K Door in plaster ceiling.

Style K or L doors are excellent for access to unfinished attics or attic spaces, because they fit flush with the ceiling — make a neat, almost unnoticeable installation. Insulation to be supplied by others.

INLAND STEEL PRODUCTS COMPANY

P. O. Box 393, Milwaukee 1, Wisconsin • Phone: EVergreen 3-4030

Baltimore 5, Maryland
5300 Pulaski Highway
Phone: Broadway 6-5300

Cleveland 14, Ohio
1541 East 38th Street
Phone: UTah 1-2929

Milwaukee 1, Wisconsin
P. O. Box 393
Phone: EVergreen 3-4030

Buffalo 11, New York
64 Rapin Street
Phone: TAylor 4600

Detroit 2, Michigan
690 Amsterdam Avenue
Phone: TRinity 2-2330

New Orlean 19, Louisiana
325 N. Cortez Street
Phone: AMherst 1901

Chicago 9, Illinois
4301 So. Western Ave. Blvd.
Phone: VIrginia 7-0500

Kansas City 41, Missouri
P. O. Box 918
Phone: JOhnson 2-1730

New York 17, New York
230 Park Avenue
Phone: Murray Hill 6-6295

Cincinnati 25, Ohio
3240 Spring Grove Avenue
Phone: KIrby 1-4700

Los Angeles 58, California
4807 E. 49th Street
Phone: Ludlow 7-3215

St. Louis 10, Missouri
4215 Clayton Avenue
Phone: JEfferson 5-9464

member of the INLAND steel family

Form No. 210 3M 10-59

Printed in U.S.A.

MIAMI Carey

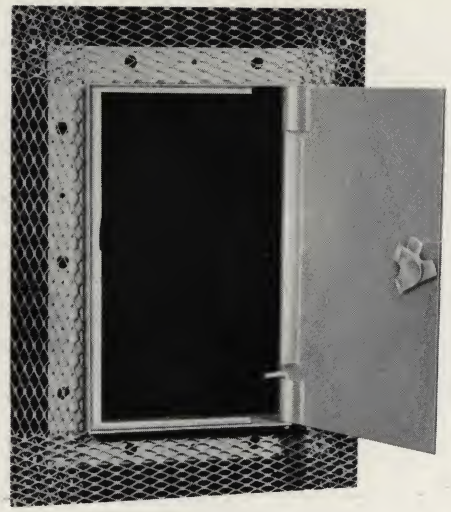
MIAMI-CAREY

STEEL ACCESS DOORS

for use in
... plaster walls
... masonry & dry walls
... acoustical tile
installations

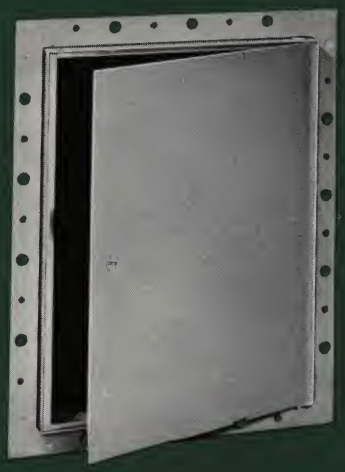
provide easy access
to control
and service points

Style
H.P.E.
with 3″ Wide Expanded Metal Wings—same specifications as for H.P. style, except for increase in overall size.



ACCESS DOORS FOR USE IN EVERY KIND OF CONSTRUCTION

Style
H.P.
for Plaster Walls



Style
H.M.
for Masonry and Dry Walls

All dimensions apply to both H.M. and H.P. models. Cam door locks are screwdriver operated; specially-designed cam unlocks and locks door. Special hinge lift permits easy removal of the door. All doors are 14 gauge. Frames are 16-gauge prime steel.

Style
A.T.
for acoustical tile installation

ACCESS DOORS FOR ACOUSTICAL TILE INSTALLATIONS

Designed especially for use in acoustical tile installations. Tile is attached to recessed door panel with adhesive mastic. Tile to be applied in sufficient thickness to finish flush with the plane of surrounding area.

MIAMI-CAREY Access Doors are designed to permit quick entry to valves, electrical systems and other service points. Yet they are equipped with cam locks which effectively keep out unauthorized personnel and protect installations from meddlers.

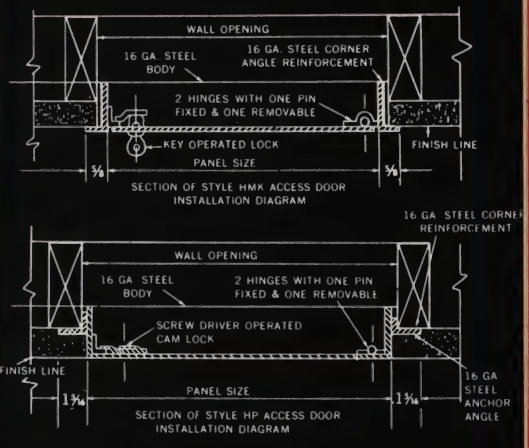
All doors are made according to precision manufacturing standards; to prevent rust, all doors are BONDERIZED after forming.

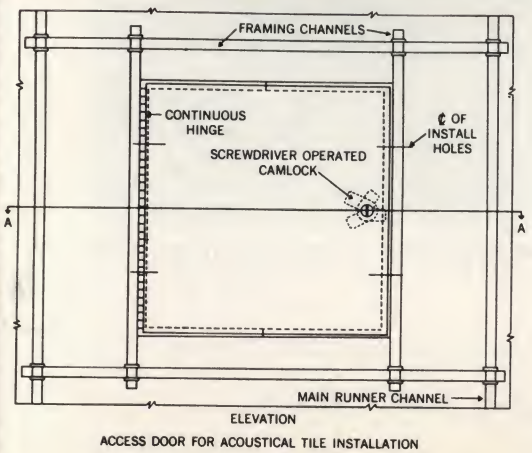
Since these doors are designed for wall or ceiling use, all styles fit flush with the surface when installed. A factory primer coat of rust inhibitive paint protects the metal so that only one finish coat is required. Doors are shipped ready to install; no special framing is required.

D I M E N S I O N S

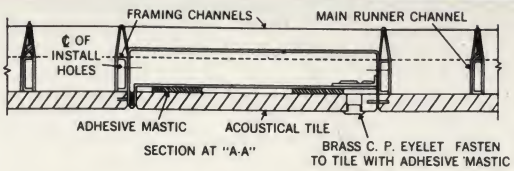
MODEL NO. MASONRY AND DRY WALLS	MODEL NO. PLASTER WALLS	WALL OPENING	CAM LOCKS	HINGES
88 H.M.	88 H.P.	8⅜" x 8⅜"	1	2
812 H.M.	812 H.P.	8⅜" x 12⅜"	1	2
1212 H.M.	1212 H.P.	12⅜" x 12⅜"	1	2
1216 H.M.	1216 H.P.	12⅜" x 16⅜"	1	2
1218 H.M.	1218 H.P.	12⅜" x 18⅜"	1	2
1616 H.M.	1616 H.P.	16⅜" x 16⅜"	1	2
1620 H.M.	1620 H.P.	16⅜" x 20⅜"	1	2
1818 H.M.	1818 H.P.	18⅜" x 18⅜"	1	2
2024 H.M.	2024 H.P.	20⅜" x 24⅜"	2	2
2030 H.M.	2030 H.P.	20⅜" x 30⅜"	3	2
2424 H.M.	2424 H.P.	24⅜" x 24⅜"	2	2

All H.M., H.P. and H.P.E. styles are available with keyed cylindrical locks —
—when ordering, add "K" to desired model number.


WALL OPENING
16 GA. STEEL BODY
16 GA. STEEL CORNER ANGLE REINFORCEMENT
2 HINGES WITH ONE PIN FIXED & ONE REMOVABLE
KEY OPERATED LOCK
FINISH LINE
PANEL SIZE
SECTION OF STYLE HMK ACCESS DOOR INSTALLATION DIAGRAM
16 GA. STEEL CORNER REINFORCEMENT
WALL OPENING
16 GA. STEEL BODY
2 HINGES WITH ONE PIN FIXED & ONE REMOVABLE
SCREW DRIVER OPERATED CAM LOCK
FINISH LINE
PANEL SIZE
16 GA. STEEL ANCHOR ANGLE
SECTION OF STYLE HP ACCESS DOOR INSTALLATION DIAGRAM



ACCESS DOOR FOR ACOUSTICAL TILE INSTALLATION



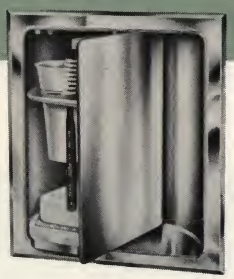
MODEL NO.	OVERALL DIMENSIONS
Models 1212AT	12" x 12" x 2¾"
Models 1224AT	12" x 24" x 2¾"
Models 2424AT	24" x 24" x 2¾"

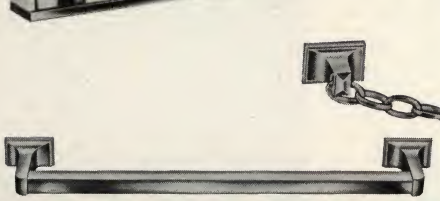
NOTE: Door panel recessed 1⅝". Special piano-type hinge and recessed panel permit door to open freely with tile applied. Prime coated with white rust-inhibitive paint.

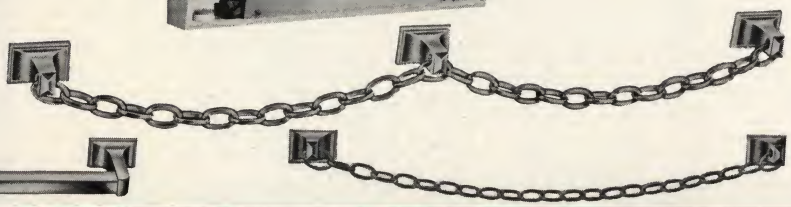
MIAMI-CAREY also manufactures a complete line of Bathroom Cabinets, Mirrors and Accessories, a full line of Kitchen Range Hoods, plus Ventilating Fans for kitchen, den, bathroom and similar purposes. Catalogs of all these products appear in Sweets Architectural File, Index $\frac{16J}{Mi}$. Separate copies will be sent on request.

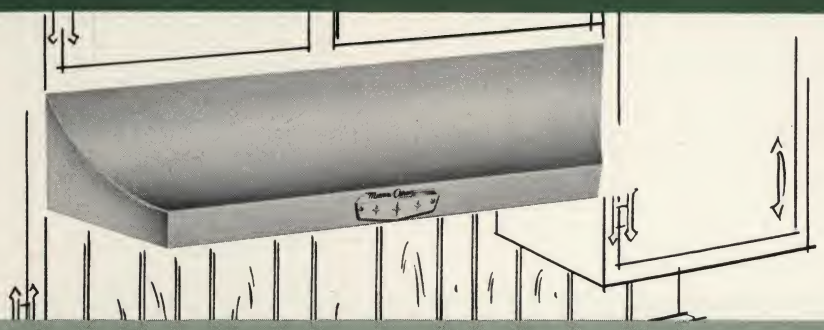
WARRANTY. We warrant our materials to be of good quality and will replace material proved defective. This warranty is in lieu of all others express or implied and may not be extended by representatives, written sales information or drawings. While we recommend uses for our material based on tests believed reliable, we in no way guarantee particular methods of use or application or performance under special conditions.

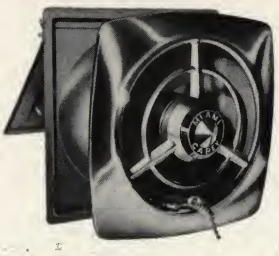
The descriptions and specifications contained in this manual were in effect at the time the book was approved for printing. The Miami Cabinet Division of The Philip Carey Mfg. Company reserves the right to discontinue models at any time or change specifications or design, without notice and without incurring obligation.











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Atlanta, Ga.—251 Armour Drive, N.E.
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Chicago (Bellwood), Ill.—25th & Warren Avenue
Cincinnati, O.—316 S. Wayne Avenue
Cleveland, O.—4515 West 160th Street
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MIAMI Carey®

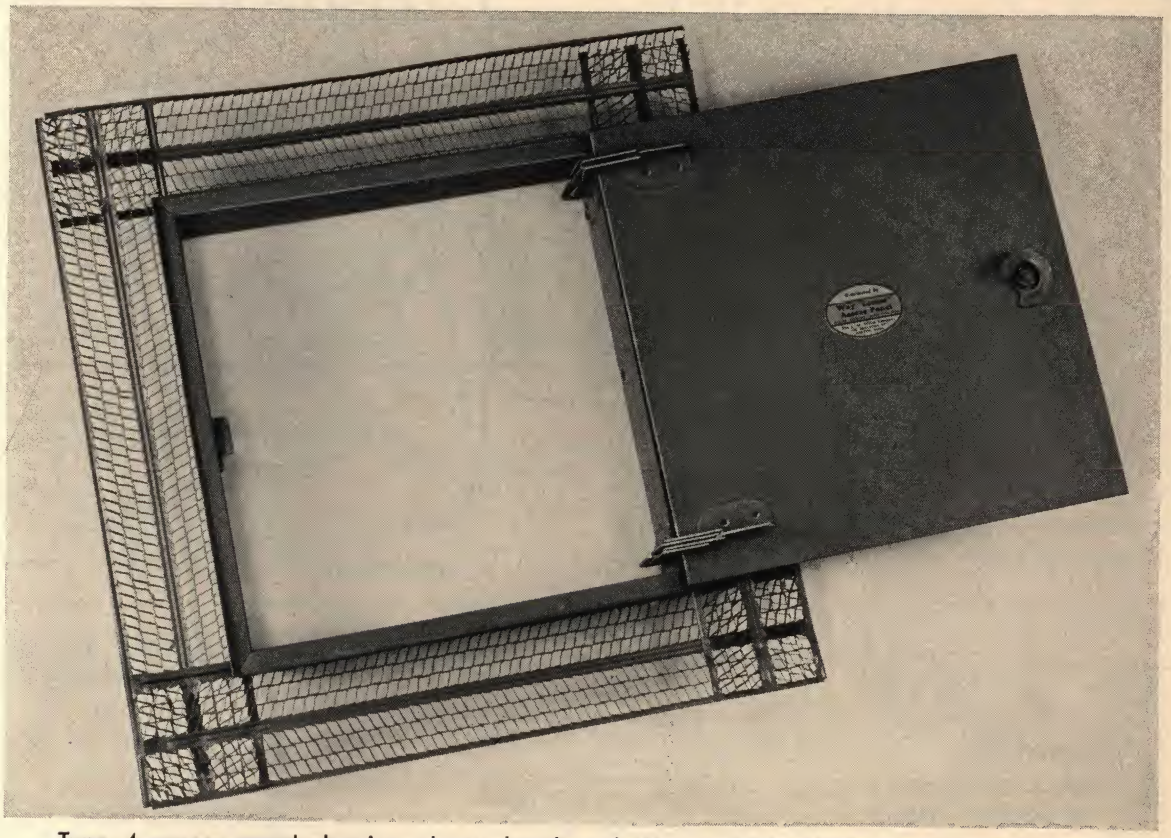
MIAMI CABINET DIVISION • THE PHILIP CAREY MFG. COMPANY • MIDDLETOWN, OHIO

Form 6460—80M—10/59

Litho in U. S. A.

WAY "LOCTOR" ACCESS PANELS

16J
Wa



Type 4 access panel showing plaster bond and Way invisible hinges and "Loctor" cam.

made to sizes required

a completely flush access panel . . .

for concealing entrances to valves, traps, dampers and any ceiling or wall space

Way "Loctor" access panels provide a heavy duty **all steel** dustproof panel that:

- is absolutely flush with wall or ceiling.
- is made up in the size the architect requires.
- has Way invisible hinges that control action of the door and permits opening to 180° without the door coming in contact with wall or ceiling.
- has Way "Loctor" cam fastener screwdriver operated.

index

to other types and specialties available

page 2 ● **flush types**
no. 4 hinged
no. 3 hinged
no. 2 removable door
no. 1 removable door
● **flange types**
no. 4F—3F—2F & 1F

page 3 ● **acoustic bearing type**
no. 20 hinged
● **plaster bearing type**
no. 20PL hinged
● **tile bearing type**
no. 17 hinged and removable door

page 4 ● general specification
● miscellaneous specialties
● stainless steel panels
● representatives

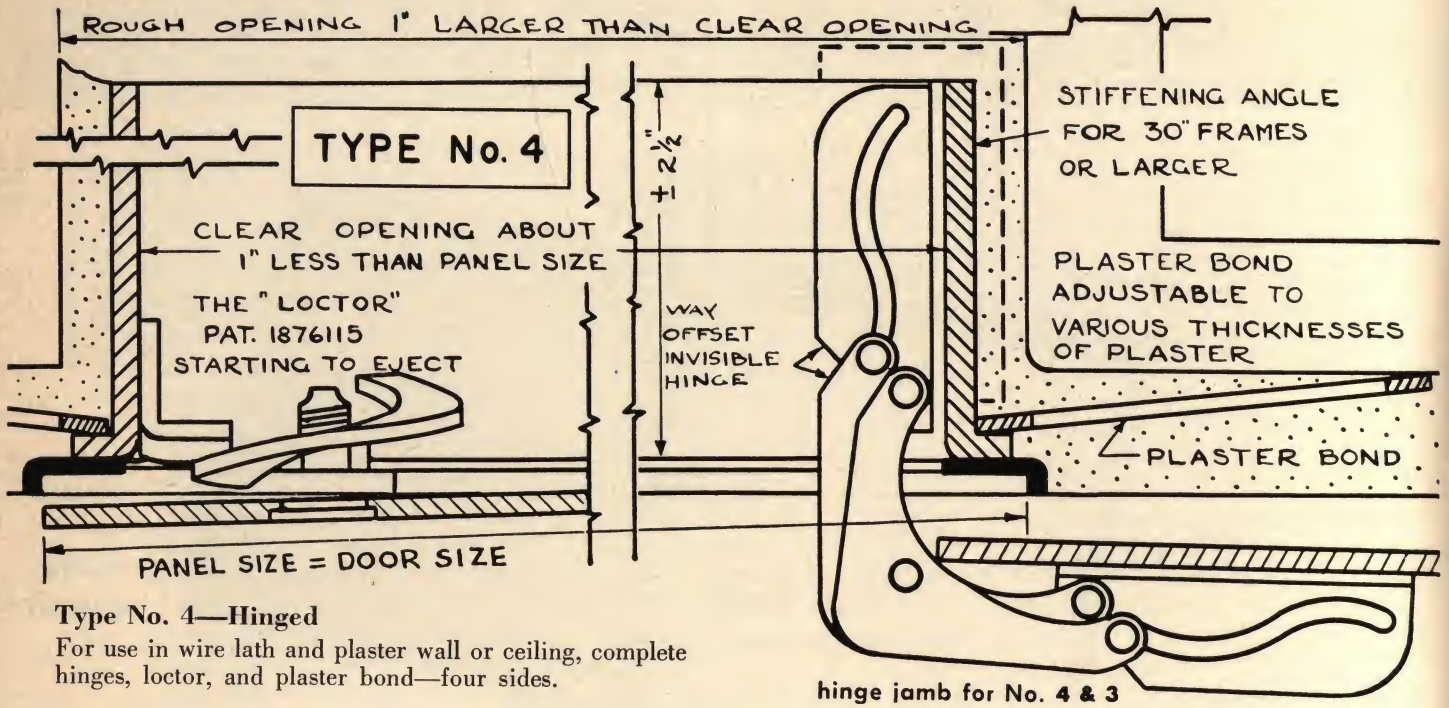
WALSH-HANNON-GLADWIN, INC.

755 Boylston St., Boston 16, Mass. **Phone: Kenmore 6-6776**

Representatives in Principal Cities

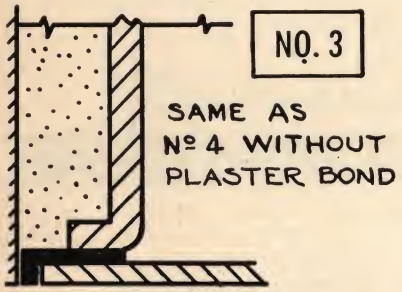
WAY "LOCTOR" steel access panels

flush type *full size detail*


ROUGH OPENING 1" LARGER THAN CLEAR OPENING
TYPE No. 4
CLEAR OPENING ABOUT 1" LESS THAN PANEL SIZE
THE "LOCTOR" PAT. 1876115 STARTING TO EJECT
+1 2½"
WAY OFFSET INVISIBLE HINGE
STIFFENING ANGLE FOR 30" FRAMES OR LARGER
PLASTER BOND ADJUSTABLE TO VARIOUS THICKNESSES OF PLASTER
PLASTER BOND
PANEL SIZE = DOOR SIZE

Type No. 4—Hinged
For use in wire lath and plaster wall or ceiling, complete hinges, loctor, and plaster bond—four sides.

hinge jamb for No. 4 & 3



Type No. 3—Hinged

For use in any wall or ceiling.

Same as the No. 4 but with plaster bond omitted.

Type No. 2
Removable Door*

For use in wire lath and plaster walls.

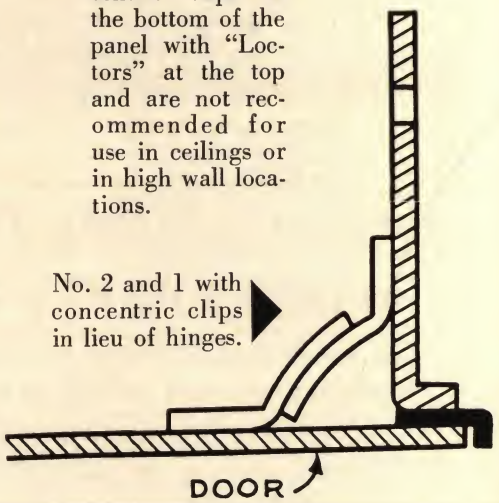
Same as the No. 4 but with concentric clips instead of hinges.

Type No. 1
Removable Door*

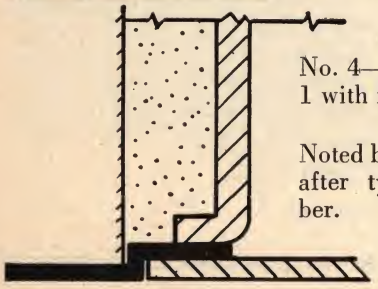
For use in dry wall construction. Same as the No. 3 omitting the plaster bonds and using concentric clips in lieu of hinges.

*Removable Door Panels No. 2 and No. 1 have concentric clips at the bottom of the panel with "Loctors" at the top and are not recommended for use in ceilings or in high wall locations.

No. 2 and 1 with concentric clips in lieu of hinges.



flange type *full size detail*



No. 4—3—2 and 1 with flange.

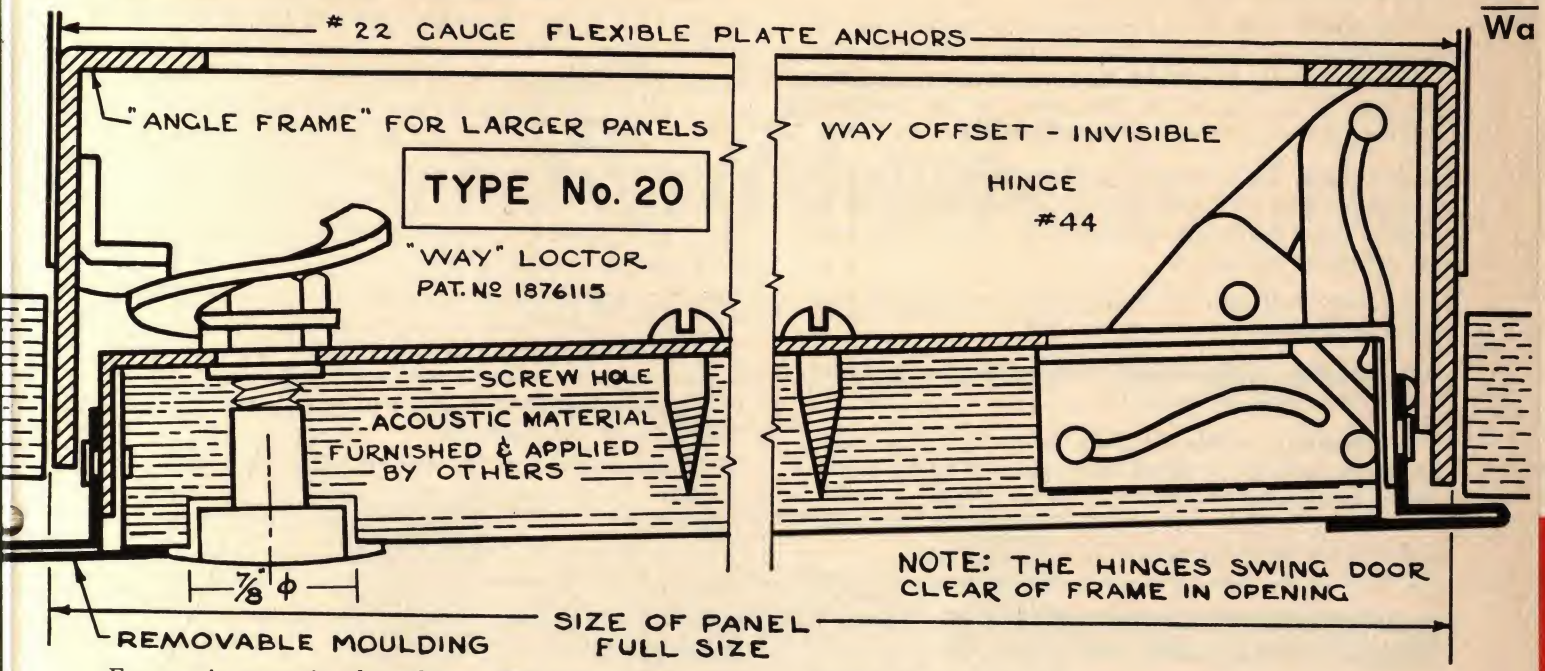
Noted by Suffix F after type number.

Types No. 1—2—3 and 4 above are available with a flange.

Example (when ordering):
If a Type No. 3 is desired with a flange specify Type No. 3F.

acoustic bearing type

Type No. 20—Hinged (full size detail)



For use in acoustic tile ceilings. The acoustic material is applied in the field to the face of the panel. A 1" recessed pan is provided for the tile application and where the tile thickness is less than 1" it may be backed to insure a tight fit.

plaster bearing type

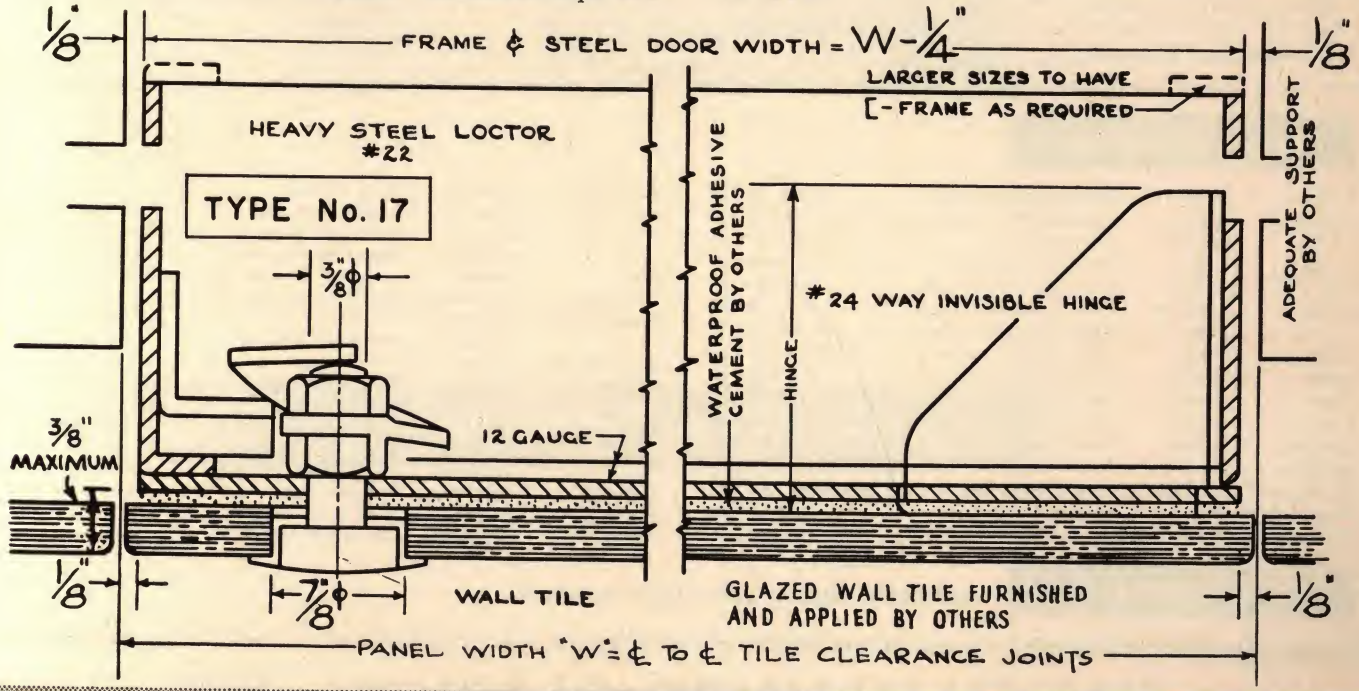
Type No. 20PL—Hinged (not detailed)

Same as the type No. 20 except that this panel would be used in plaster ceilings. The recessed pan is adapted to receive the plaster by boxing in the hinges and spot welding expanded metal lath inside the pan.

tile bearing type

Type No. 17—(full size detail)

For use in tile walls when it is desirable to have the tile applied to the face of the panel. Concentric clips will be furnished in lieu of hinges when panel size exceeds 18" x 18".



specifications

Access panels shall be of sizes as shown on the plans or as specified and shall be Way "Loctor" access panels, manufactured by the Walsh-Hannon-Gladwin, Inc., 755 Boylston Street, Boston 16, Massachusetts, as described and detailed in the Sweet's Architectural File.

Access panels shall consist of a 12-gauge steel frame and a 12-gauge steel door with Way invisible hinges and Way "Loctor" cam fastenings, and they are to be set flush with the adjoining wall finish.

The frame shall be of 12-gauge steel and shall be provided as follows:

for plaster walls—it shall have a 2-inch-wide metal lath plaster bond all around it.

for masonry walls—it shall have a frame to be set flush with masonry or off-set from masonry with a moulding to cover the joint in the masonry (specify which). Frame, also, shall be without plaster bond but with provision in the jamb for anchoring to the masonry.

Panel door shall be (specify which): (solid flush-steel), (louvered flush-steel), (for bearing tile), (for bearing acoustic material or plaster). Flush-steel door shall be made of 12-gauge, cold-rolled steel, reinforced as necessary in larger sizes.

On tile bearing doors, sizes shall be ..... (center to center of tile joints nearest to the desired tile.)

On all type doors, sizes can be as required; however, double doors may be had for large size panels. Contact the Boston office for details before specifying.

Panel doors shall be supported by patented Way invisible hinges or concentric clips.

Note the recommendations in this catalog on concentric clips before specifying. Concentric clips are available for tile bearing panels. Acoustic material or plaster bearing access panels must be supported by hinges. Number of hinges or concentric clips per panel shall be determined by the manufacturer.

All panels shall contain the patented Way "Loctor." The "Loctor" can be supplied with special keyed heads or cylinder locks if required. All panels shall be furnished with a coat of gray metal primer.

miscellaneous specialties

Louvered door panels—If ventilation in the concealed space is desired, Louvered door panels can be furnished in all types with the exception of types no. 17 and no 20. A Border of at least 2¾" is required around perimeter of door to facilitate attachment of invisible hinges and way loctor. Louvers can be made in 4" and 6" width dies. For spacing of louvers and free air space provided kindly consult Boston office.

Grilled door panels—standard design stamped or expaneded metal grills are available for application to the face of all panel types, with the exception of types no. 17 and no. 20. Used in areas where concealed equipment requires additional free air space for ventilation.

Locks—standard manufacturers utility type locks are available for use in lieu of or along with the Way "Loctors" on all flush or flange type panels.

Standard manufacturers wardrobe pin tumbler locks are available for use on type no. 17 and no. 20 panels.

stainless steel access panels *now available*

Complete stainless steel access panels, with removable doors, are now available in both flush and flange types. Slight modifications have been made to adapt the Way "Loctor" panel to stainless steel. Refer to Boston office for additional information.

Stainless steel doors and trim are also available with standard invisible hinges and 12 gauge mild steel frame. For use in areas that require a stainless steel face only.

representatives

Arizona	Phoenix	Building Specialties Supply	3026 N. 16th St.
California	Glendale	Engineered Metals of Southern Calif.	437 Fernando Court
	Oakland	Schultz-Dewey & Co.	321 East 12th St.
Colorado	Denver	Builders Service Bureau, Inc.	1221 Bannock St.
Connecticut	Hartford	Hartford Wire Works Company	90-92 Allyn St.
Florida	Jacksonville	Aichel Steel & Supply Company	P. O. Box 2677
	Miami	Associated Elevator & Supply Co.	501 N.W. 54th St.
Georgia	Atlanta	Lawco Building Materials Co.	145 Linden Ave. N. E.
Illinois	Chicago	Butters Building Specialties Co.	20 N. Wacker Dr.
Kansas	Kansas City	Barry Brokaw Company	1915 W 43rd
Kentucky	Louisville	J. W. Shaughnessey Company	P. O. Box 144 (Valley Station)
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Minnesota	Minneapolis	James C. Nystrom Company	1087 Northwestern Bank Bldg.
Mississippi	Jackson	J. S. Lawson Company	P. O. Box 4825
Missouri	Webster Groves	The Carlin Co.	117 Helfenstein
New Mexico	Albuquerque	Don J. Cummings	P. O. Box 3103
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	New York	Weatherguard Service, Inc.	2339 Chatterton Ave.
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Texas	Dallas	Metal Products Company	2326 Topeka St.
	Houston	Johnson Specialties Supply Corp.	P. O. Box 993
	San Antonio	Kirby Building Specialties	3504 Bandera Rd.
Virginia	Richmond	The Staley Company, Inc.	2205 Tazewell St.
Washington	Seattle	Barclay Dean Company	518 First Ave., North
Wisconsin	Milwaukee	J. M. Mitchell Products Co.	759 No. Milwaukee St.

installations *complete listing sent upon request*

WALSH-HANNON-GLADWIN, INC.

755 Boylston St., Boston 16, Mass. **Phone: Kenmore 6-6776**

Representatives in Principal Cities

16k
St

Rubbair® doors

flexible • shock resistant • silent
light weight • damage proof • safe

for
warehouses
supermarkets
hospitals
schools
restaurants
foundries
loading platforms
refrigerated areas
packing rooms
etc.

Stic-Klip manufacturing company, inc.

A.I.A. File No. 16-P

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the flexible door with solid advantages

The Rubbair door, with its rubber construction and remarkable flexibility is lightweight, quiet, and safe. Its cored construction offers better insulation and absorbs shock which would splinter or mangle conventional doors.

The constant replacement of torn hinges, sheared screws, and shattered door frames is eliminated with the Rubbair door, and its self-returning cam hinge is free from trouble under all conditions of operation.

Single or double Rubbair door installations effect economies and reduce delays on busy loading docks and wherever mechanized material handling is important. Their safe, noiseless and smooth operation is an equally essential factor for use in office areas, restaurants or cafeterias, hospitals, etc.

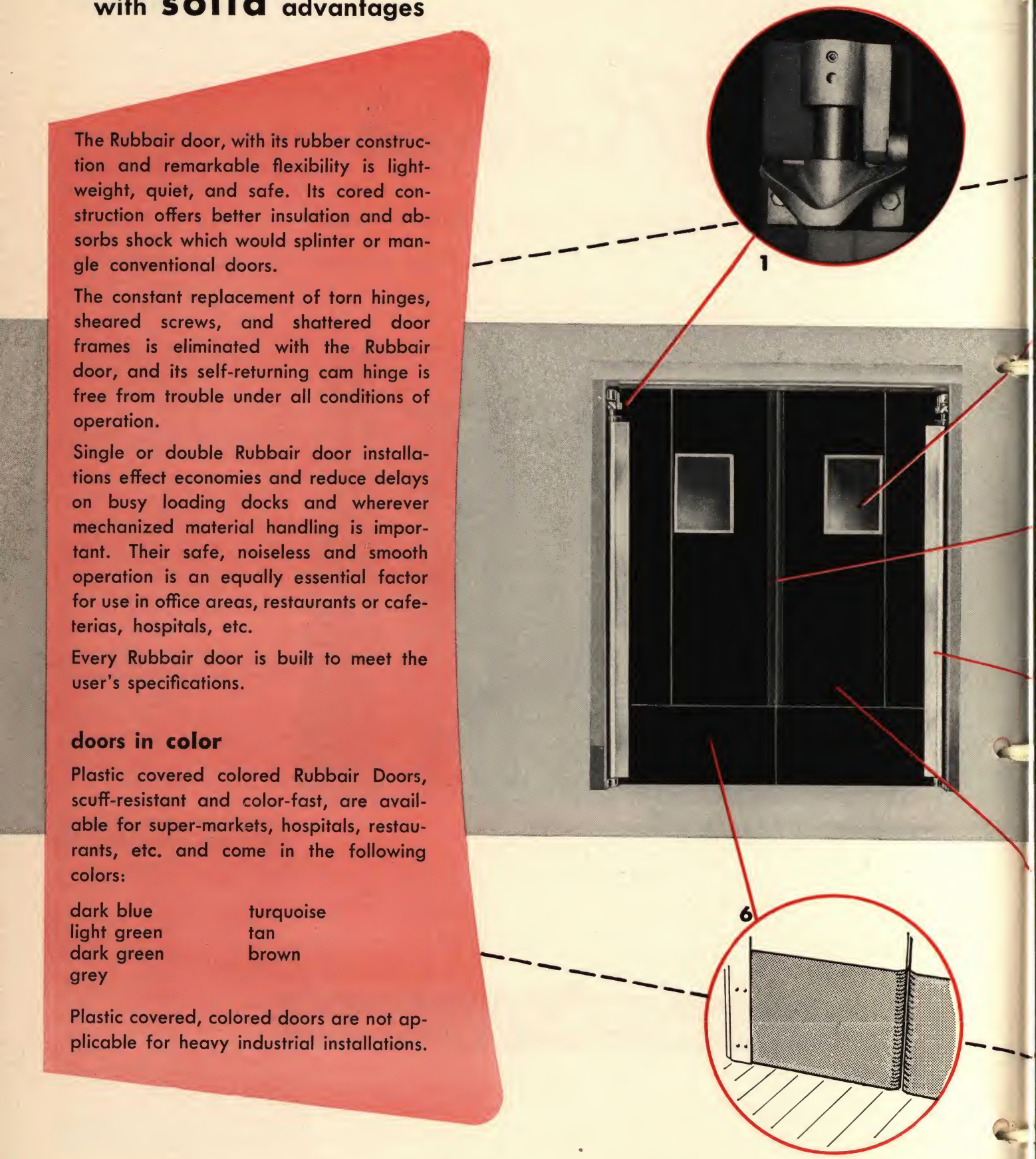
Every Rubbair door is built to meet the user's specifications.

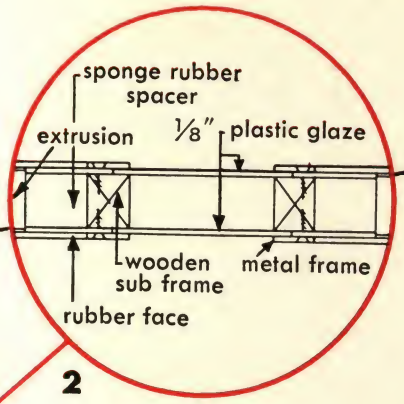
doors in color

Plastic covered colored Rubbair Doors, scuff-resistant and color-fast, are available for super-markets, hospitals, restaurants, etc. and come in the following colors:

dark blue	turquoise
light green	tan
dark green	brown
grey	

Plastic covered, colored doors are not applicable for heavy industrial installations.





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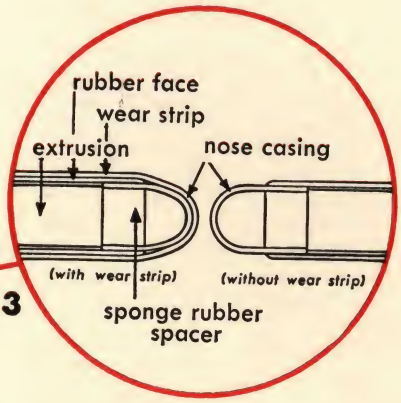

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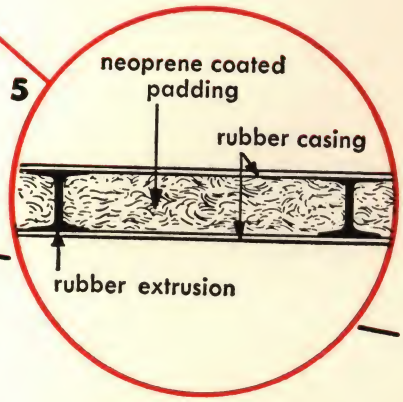


5

1 cam and bearing

The Rubbair door utilizes the simplicity and ruggedness of a V-cam mounting for its top bearing. As the door is opened, a cam roller rides up the V, the pitch of which is gradually lessened to reduce the resistance of the door on the vehicle or object passing through. Gravity returns the door to the closed position. Cams may be specified for door swings beyond 90° and up to 135°.

2 shatter-proof windows

Each door is provided with a shatter-proof window of 11½" x 15½" or 7½" x 10½" placed where desired. The window is glazed both sides with ⅛" thick transparent plastic held in an unrestrained position. Window sizes to 16" x 18" available to order.

3 safety-cushion nose

The nose is half-round and formed of 9/64" neoprene, reinforced with 2-ply, 15.4 ounce duck. It is set between casings at the outer end of extrusions. The hollow section is completely flexible and returns to its natural shape even after severe deflection. Affords safety to personnel against jamming of hands or fingers.

4 positive air seals

Where clearance space at sides and top of doors must be closed, 1/16" thick flexible rubber air seals with continuous metal, anchor strips may be provided. Cams may also be enclosed with 1/16" aluminum shields.

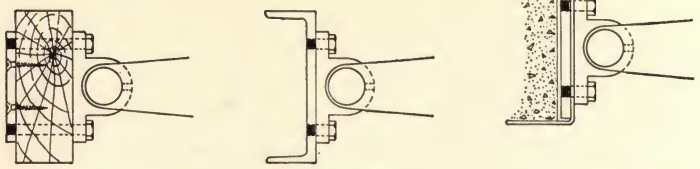
5 flexible construction

Exterior casings are 9/64" black natural rubber (grease-resistant neoprene also available) reinforced with 2-ply, 15.4 oz. duck. The separators between the casings are solid rubber "H" extrusions 1½" x 1½" x ⅛". The compartments between the extrusions are filled with pads of coarse, neoprene-coated matting which forms a firm yet resilient structure, the volume of which is 90% air. It will not disintegrate or collapse as a result of oxidation, nor will it slump or shift.

6 scuff-resistant panels

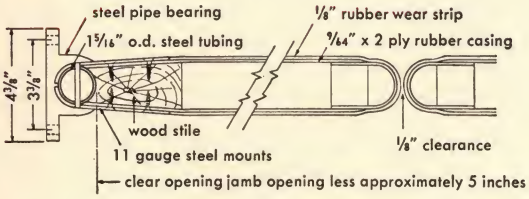
Areas of door subjected to excessive wear should be protected with tough abrasion-resisting rubber. Wear panels of this black material are ⅛" thick, reinforced with one-ply of fabric. These panels are not applicable to colored doors.

jamb details

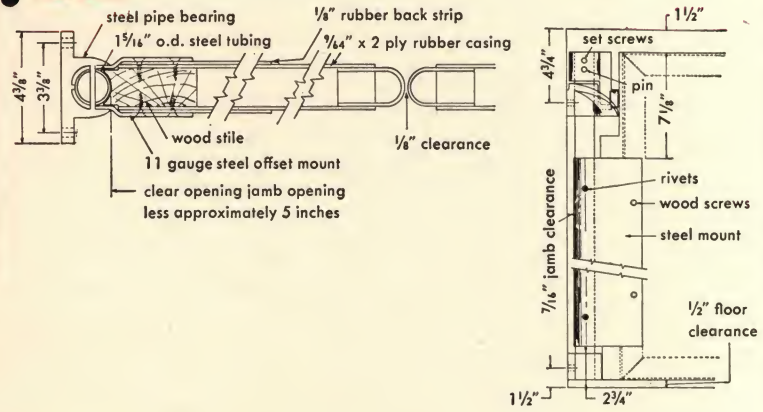


● wood jamb ● steel jamb ● masonry jamb

● door detail for openings under 6 ft.



● door detail



mounting details

The RUBBAIR DOOR is mounted by two supporting castings which are fastened to the jambs by 3/8"-16NC hexhead machine bolts. For wooden jambs, a cold-rolled steel backplate 5 1/2" x 5 1/2" x 3/8" are available for recessed surface mounting. For steel jambs, if less than 1/4" stock is used as a supporting channel, 3/8" x 1 1/2" steel backing plates should be welded to the channel web and provision made to drill and tap holes to receive 3/8"-16NC machine screws.

Generally, openings for double-acting doors should be twice the width of normal motorized loads passing through the doorway. Manually-operated equipment will permit door openings to be slightly narrower.

The clearance above the door when closed must be at least 1 1/2" to allow for the full rise of the door on the V-cam. Flexible closure strips can be provided to seal this clearance opening.

ordering information

RUBBAIR DOORS are built to standard construction specifications, but can be modified to meet customer requirements.

The following information should accompany your order or inquiry:

1. Size and depth of door opening.
2. Jamb construction (wood, steel, concrete, etc.).
3. Size and position of shatter-proof windows.
4. Location and height of wear panels.
5. Are air seals required?
6. Is a grease-resistant finish required?
7. Are locks required?
8. Order forms available on request.

distributors

LOCATION	COMPANY	ADDRESS	PHONE
EAST			
Boston (Cambridge), Mass.	The Eckel Corp.	155 Fawcett St.	KIrkland 7-4744
Springfield, Mass.	The Johnson Asbestos Co.	P. O. Box 301	Republic 3-7861
Cos. Cob., Conn.	McFarland & Conchar	179 Valley Rd.	TOwnsend 9-0572
New York City, N. Y.	McFarland & Conchar		ORegon 9-0572
Philadelphia (Haverstown) Pa.	Emil H. Lutz	9 Jacalyn Drive	Hilltop 6-5438
Bethel Park, Pa.	Pittsburgh Lift Trucks, Inc.	4909 Library Rd.	TEnnyson 3-0225
Utica, N. Y.	Utica Materials Handling Co.	P.O. Box 366	UTica 2-3915
MIDWEST			
Toledo, Ohio	Schenk Equipment Co.	1313 Jefferson Ave.	CHerry 3-7954
Cleveland, Ohio	Industrial Rubber & Plastics Co.	550 East 99th St.	Potomac 1-5788
Norwood, Ohio	Norwood Hardware & Supply Co.	2114 Bennett Ave.	REdwood 1-1832
Melrose Park, Ill.	Industrial Cork Co., Inc.	1545 No. 25th Ave.	Austin 7-0144
Indianapolis, Ind.	Asbestos Insulating & Roofing Co.	1250 Beecher St.	STate 6-1464
St. Louis, Mo.	Patton Equipment Co.	2333 So. Hanley Rd.	MIssion 7-0080
Minneapolis, Minn.	Bartley Sales Co., Inc.	134 South 10th St.	FEderal 8-7838
Milwaukee, Wis.	Building Service Industrial Sales Company	620 N. 108th Place	GLenview 3-6786
Detroit, Mich.	Equipco, Inc.	25550 Grand River Ave.	KEnwood 3-8500
Detroit, Mich.	Par-Foam, Inc.	740 Dix Ave., So.	VInewood 3-5102
SOUTH & SOUTHWEST			
Jacksonville, Fla.	James H. Grady Co.	1062 W. Adams St.	ELgin 4-6766
Johnson City, Tenn.	Lancaster Associates	John Sevier Hotel Bldg.	Phone 3200
Dallas, Texas	Metal Products Co.	2326 Topeka St.	RIverside 8-3775
WEST AND PACIFIC COAST			
San Francisco, Calif.	Victor L. Burner	440 Brannan St.	DOuglas 2-4029
Pasadena, Calif.	Wand Corp.	380 W. Howard St.	RYan 1-9351
Denver, Colo.	Construction Specialties Co.	2625 Walnut St.	KEystone 4-3271
CANADA			
Montreal, Quebec	McGuire Engineering Co., Ltd.	20 Bates Rd.	CRescent 9-1749
Toronto, Ontario	McGuire Engineering Co., Ltd.	77 York St.	EMpire 4-1546

EXHIBIT AT ARCHITECTS SAMPLE CORP., 101 PARK AVE., NEW YORK 17, N. Y.

Stic-Klip **Manufacturing Company Inc.**

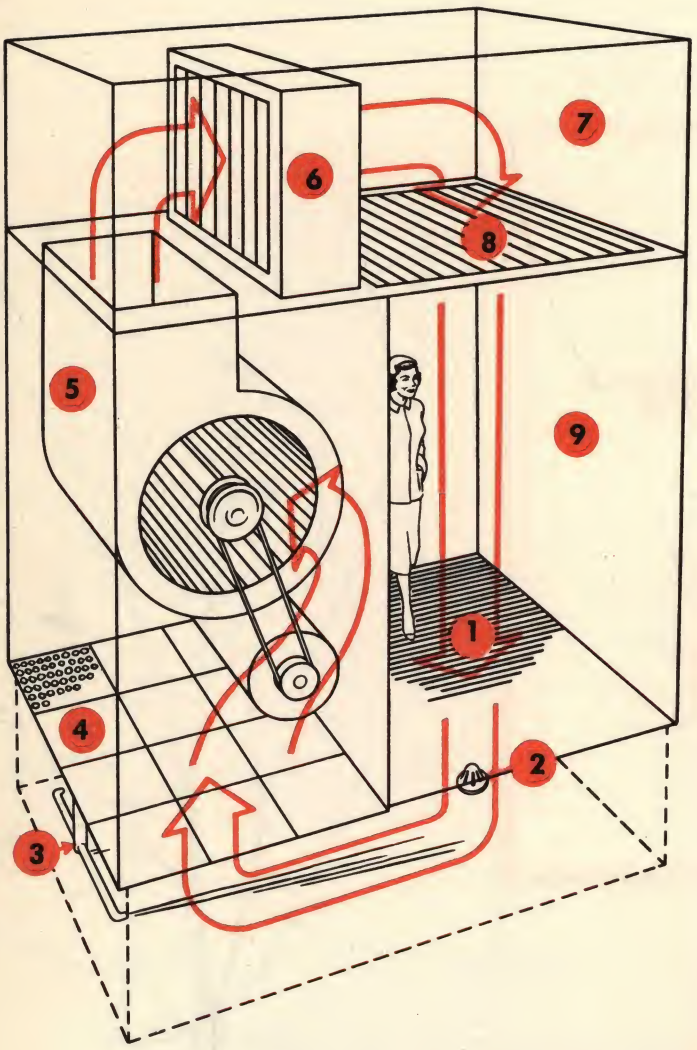
550 Regent Street Cambridge 40, Mass. UNiversity 4-6260

modernfold's

"AIR DOOR"

Open to traffic... closed to weather

AIR DOOR, INC. modernfold® Division of New Castle Products, Inc. New Castle, Indiana



Modernfold's "Air Door" completely eliminates the need for conventional doors during business hours. The result is a truly open door—one that literally invites people to enter.

Wind and weather are kept out by a gentle insulating barrier of air circulating within the "Air Door," while traffic passes freely through in either direction. The barrier is automatically adjusted to the proper angle for the existing weather conditions, and the velocity can be adjusted by a simple dial.

How the "Air Door" Works

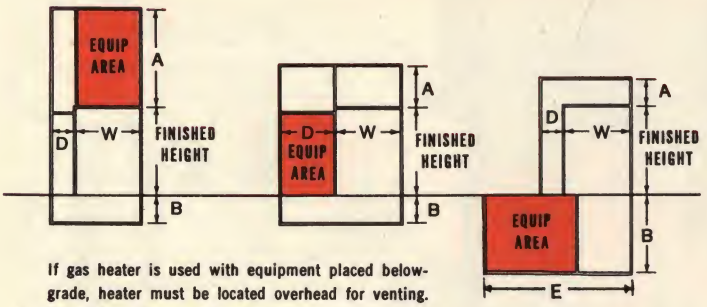
1. Air is drawn by the blower (5) through the floor grating (1) into the pit below.
2. When the air passes through the pit, heavier particles of dust and dirt fall to the bottom, where they are periodically flushed down the floor drain (2) by a solenoid operated water spray system (3).
3. From the pit, the air moves through a filter bank (4) which further cleans the air before it passes through the blower.
4. On leaving the blower, the air is directed through a heat exchanger (6). Cooling is **not** required in an "Air Door" installation under normal circumstances.
5. After passing through the heat exchanger, the air is forced into the ceiling plenum chamber (7) where it is distributed through the ceiling grille (8) into the opening (9)
6. Suction created at the floor grating by the blower draws the air from the opening through the pit to repeat the cycle and form a continuous, invisible barrier of air in the opening.

"Air Door" Sizes and Space Requirements

MODERNFOLD'S "Air Door" is a custom engineered package, available in six different opening widths. Each size is available with equipment placed in any of three locations to suit job site requirements, for a total of 18 basic units.

The charts at right list the various space requirements for each unit. Because of the custom engineering that goes into each "Air Door," minor variations are possible in many of these dimensions; however, the factory must be consulted before any changes may be made.

Doors having space requirements other than shown in chart at right can also be supplied. Many other problems can be solved on an individual basis—Consult the factory for help with any unusual situation you may have.



If gas heater is used with equipment placed below-grade, heater must be located overhead for venting. Write factory for space requirements.

	W	5′	6′	7′	8′	9′	10′
Equipment overhead	A	9′ 0″	9′ 0″	9′ 0″	9′ 0″	9′ 0″	9′ 0″
	B	24″	30″	36″	42″	48″	54″
	C*	70″	76″	82″	82″	88″	88″
	D	21″	23″	25″	28″	29″	33″
Equipment on-grade	A	42″	46″	48″	52″	52″	54″
	B	24″	30″	36″	42″	48″	54″
	C*	70″	76″	82″	82″	88″	88″
	D	56″	61″	65″	65″	69″	69″
Equipment below-grade	A	24″	30″	36″	42″	48″	54″
	B	96″	96″	96″	96″	96″	96″
	C*	70″	76″	82″	82″	88″	88″
	D	21″	23″	25″	28″	28″	33″
	E	135″	135″	140″	140″	144″	144″

*Dimension "C" is the depth from front to rear.

Installation Requirements

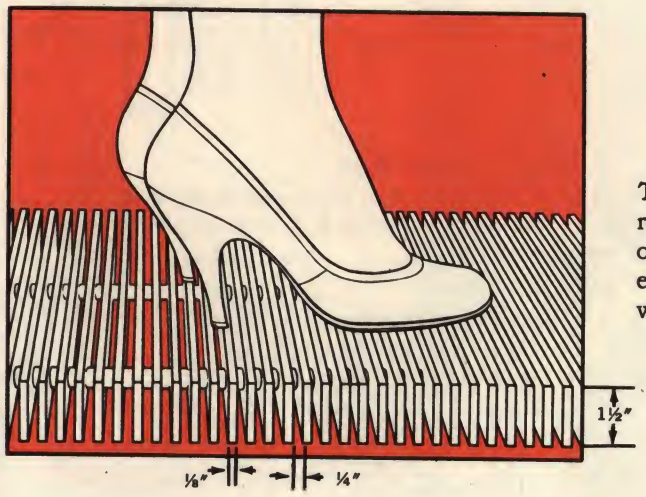
As part of the preparation of opening by owner, each MODERNFOLD "Air Door" requires a ½" iron pipe size cold water line into the pit area, 3-phase electric power service to the equipment area, and 110 volt 60 cycle single phase electric power service to the equipment area (this power supply will also accommodate an electric heating plant, if required).

When a gas fired heater is used, a gas line and vent grille into the equipment area, and a vent stack to the outside are also required. For steam or hot water heaters, supply and return lines are required in the equipment area.

Installation of the "Air Door" into the opening at the site, and connection to the services required, constitutes a completely operative unit with no other equipment requirements. Finish trim between the "Air Door" components and the building walls and floor, and security doors for night time and stand-by use (for example, local power failures or unusually severe storms) are not included.

Total installation time of a typical, 6'0" wide "Air Door" is approximately 80 man hours. This relatively short time is made possible by the extra services supplied by Air Door, Inc. Components of each unit are assembled, wired, and operated at the factory, then dismantled into three sub-assemblies that are crated and shipped to the site. They arrive in one shipment, ready for immediate and complete installation with minimum on-the-job servicing.

To aid in the planning of an "Air Door" installation, detailed data sheets have been prepared—write to the factory for a copy.

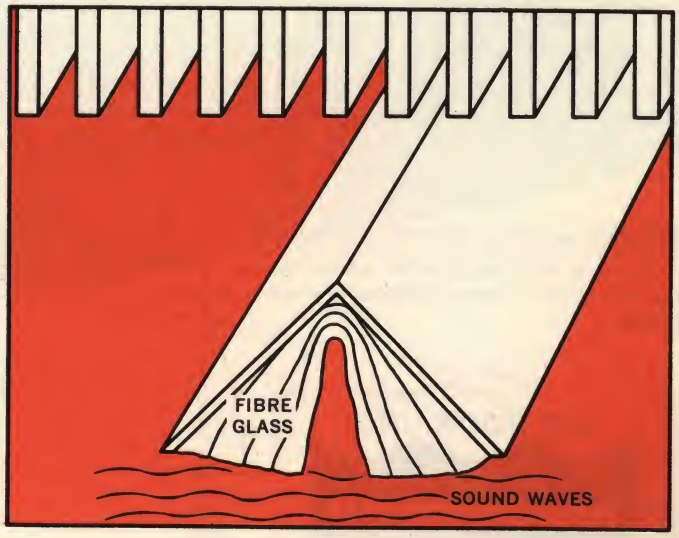


Efficient Grating Design

The "Air Door" grating is made of rugged, corrosion resistant aluminum bar stock, spaced with maximum openings of only ¼" to provide positive support for even the smallest high-heeled shoes—an original design with MODERNFOLD'S "Air Door."

Exclusive, Shallow Pits

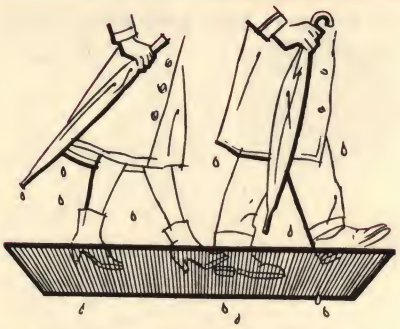
Pit depths of as little as 2' are possible with MODERNFOLD'S "Air Door" because of an exclusive, air trap feature (pats. applied for). Baffles under the floor grating prevent the circulating air from bouncing off the pit floor and back into the opening. As a consequence of "Air Door's" shallow pit depth requirements, preparation costs at the site are minimized, especially in remodeling work. In addition, acoustic lining in the baffles reduces the amount of sound emanating from the pit.



You get these BONUS BENEFITS with the "AIR DOOR"

KEEPS DUST, DIRT, INSECTS OUT

Merchandise stays clean because it's protected by the "Air Door" from dirt, dust and insects that pass through ordinary doors when they are opened.

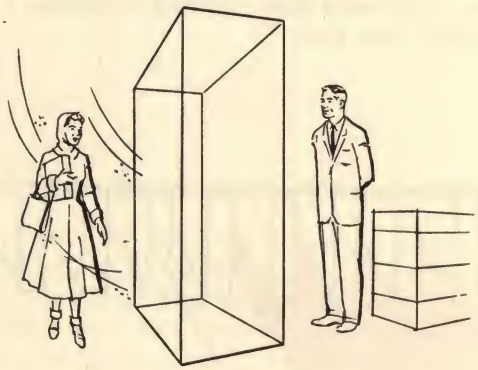


KEEPS ENTRANCES ATTRACTIVE

The heated air and warm grating melt ice and snow—help keep slush and dirt out for a cleaner, drier, safer entrance.

ELIMINATES TRAFFIC JAMS

The "Air Door" permits a safe, uninterrupted flow of traffic at all times—no waiting in line to get in or out, even during rush hours.



REDUCES HEATING OR COOLING COSTS

A continuous stream of air in the doorway provides an effective insulation barrier to prevent heat loss in winter or cooling loss in summer.

ELIMINATES DOOR ACCIDENTS

The "Air Door" eliminates the hazards of swinging and revolving doors . . . and safeguards your customers against the possibility of injury.

Form 1258

Printed in U.S.A.

AIR DOOR, INC.®

modernfold

Division of
New Castle Products, Inc.
New Castle, Indiana

Manufacturers of "Air Doors," "Modernfold" Folding Doors, "Modern-cote" Wall Coverings and "Peabody" School Furniture.

the "open" entrance

which ushers in
the door-less age of merchandising!

AMERICAN AIR CURTAIN*

AMERICAN AIR CURTAIN CORPORATION

10408 MANCHESTER • ST. LOUIS 22, MISSOURI

*Trade Mark—U.S.A. Patent 2,863,373
Other Patents Applied For

The Original! The First! The American Air Curtain

is an "open" entrance—during business hours, there is no obstruction of any kind.

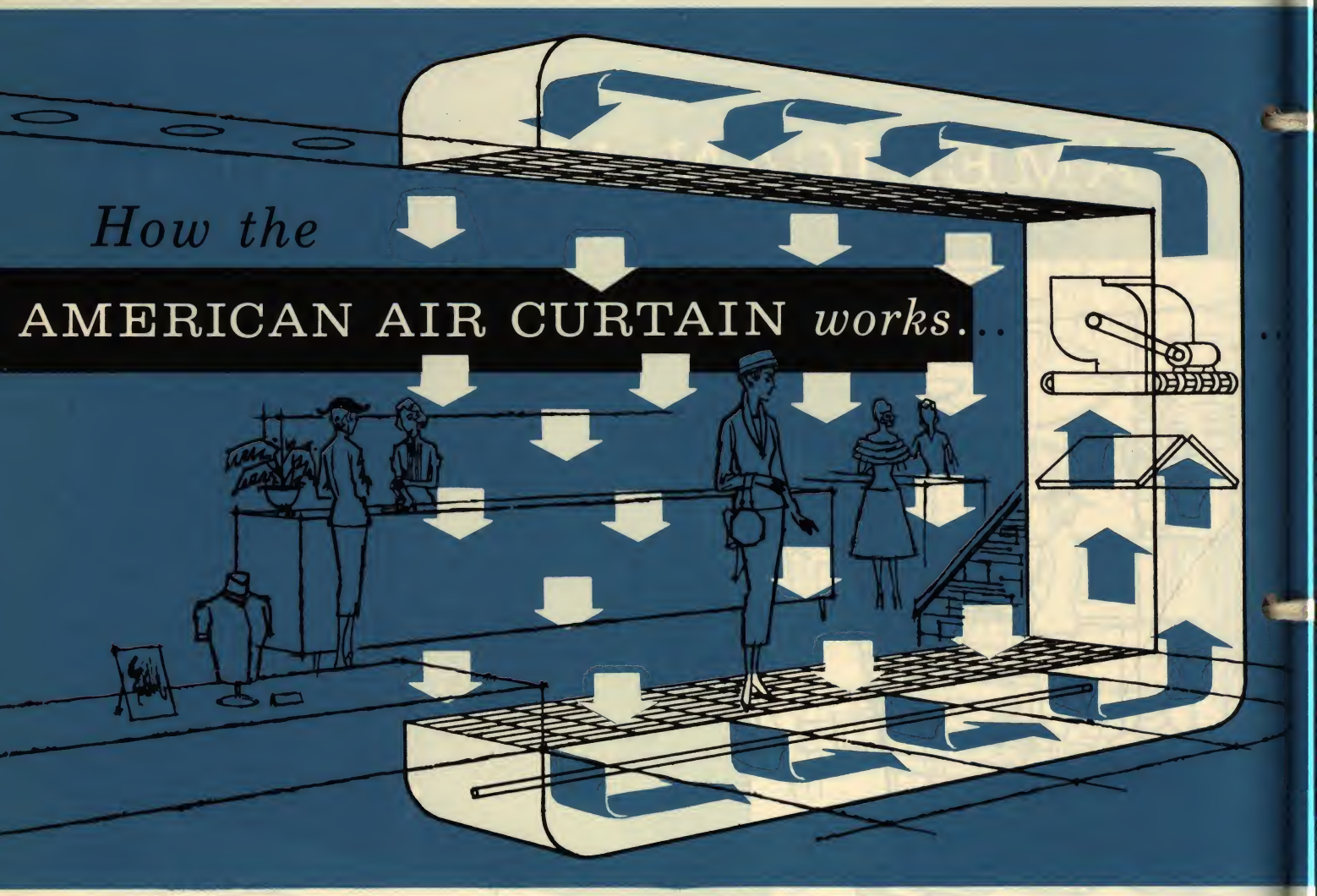
ADVANTAGES

ELIMINATES ENTRANCE TRAFFIC JAMS AND ACCIDENTS

There are no swing or revolving barriers to cause annoyance or injury, no delay in emergency exits. Traffic moves freely and quickly even in rush hours. More traffic can move through an Air Curtain than an opening of equal size with conventional doors.

SEALS IN PLEASURE — SEALS OUT NUISANCES

The gently moving air is thermostatically controlled for the most pleasant possible effect. The air curtain forms a barrier to wind, dust, dirt, rain, sleet, snow, fumes, insects, animals and temperature differences.



FEATURES

AIR DIRECTIONAL DISCHARGE (Patented)

Original nozzle air directional discharge, providing maximum wind and pressure resistance. Positive air direction obtained by tiltable nozzles with life-time lubricated ball bearing pivot points which require no servicing.

DIMENSIONAL FLEXIBILITY

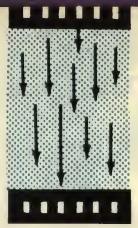
Package unit available with fixed space requirements. Equipment location in custom designing can meet practically all building conditions at little additional cost. Special effects to provide the "open look" have been developed.

AUTOMATIC CONTROL (Patented)

Completely automatic control of air directional and air discharge volume provided as standard equipment on all units. Sensitive multi-position differential pressure control provides proper air direction and air speed for varying winds and building pressures.

KEEPS BUILDING AND MERCHANDISE CLEAN

Dust and dirt stopped at the entrance, providing a cleaner building interior and avoiding merchandise spoilage.



AIR CURTAIN

ATTRACTS ATTENTION — INVITES CUSTOMERS
Each installation, through its unique features, readily attracts community attention resulting in publicity and a feature for advertising the building. The "open" entry invites passers-by to come in and shop.

SAVES VALUABLE FLOOR SPACE
American Air Curtains are compact in design. Therefore, installations take up much less space than do conventional vestibules. This added space can be converted into valuable extra first-floor selling area.

OPERATING PRINCIPLE
Directional air nozzles send air downward from the ceiling of the entrance. The air passes across the entrance and is drawn through a floor grille into a pit. From the pit, the air then passes through filters, a heating element and, by means of a fan, is directed upward to the air nozzle to repeat and continue the cycle.

Horizontal air flow units can be provided for special applications.

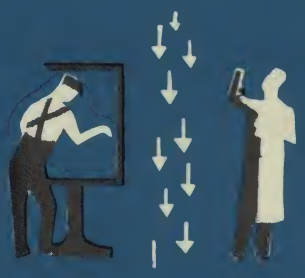
TYPES
Package—Economy model prefabricated units requiring minimum installation work. Readily adapted to new and existing buildings, with overhead or side mounted air handling units.

Custom—Custom designed to satisfy individual building and functional requirements. Especially suited to new and existing buildings, particularly finer construction.

DESIGN CONSIDERATIONS
Consult manufacturer for recommendations and costs for your specific entrance applications.

WHERE USED
Commercial Store exterior entrances, enclosed mall entrances, loading and receiving docks, conveyor openings, separation of areas of different temperatures.

INDUSTRIAL AND INTERIOR
Industrial applications are unlimited. Exterior entrances for trucks and rail, including loading docks, can be sealed. Interior applications include the separation of areas of different temperatures, pressures, humidities or uses. Dust and fumes can be confined to their respective areas.



Such applications result in possible savings over the use of mechanically or manually operated doors.

GRATING
Galvanized steel, aluminum, stainless steel or abrasive topped grating available with openings of ¼". Gratings designed for industrial and special loadings available.

FILTRATION
Special high velocity non-corrosive washable filters are standard equipment.

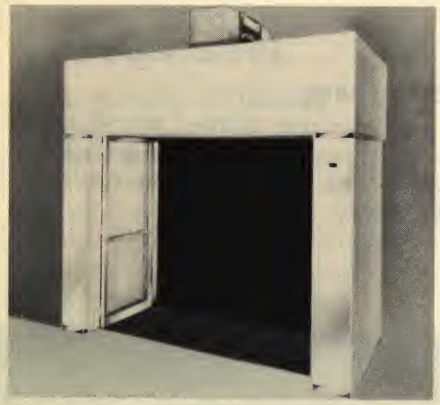
CUTS HEATING AND COOLING COSTS
The American Air Curtain minimizes the heat loss in winter and gain in summer which normally send heating and cooling costs skyrocketing.

EASY TO OPERATE AND MAINTAIN
Simple switch starts the fan and entire system into operation. Air direction, speed and temperature controlled automatically. Maintenance is confined to removal of dirt, which did not enter the building, by periodic pit and filter cleaning, and inspecting and lubricating of mechanical equipment as part of the general maintenance program.

CREATES FRESH DESIGN POSSIBILITIES
Unobstructed entrances of unlimited widths are now practical. Sliding, rolling or folding doors or movable display cases can be used to close entrances after business hours.

AMERICAN AIR CURTAIN

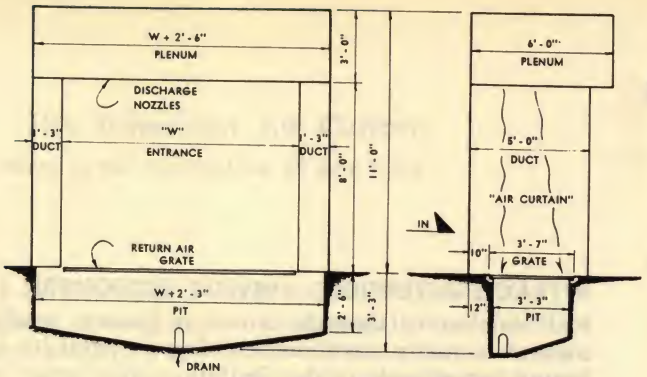
PACKAGE* ENTRANCE



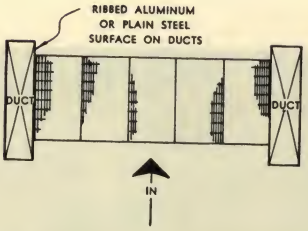
Entrance 10'0" wide 8'0" high shown with top mounted air handling unit. Other widths available.

Purchase your entrance by the "package". Each package is self-contained and several packages can be joined together producing larger entrances. A factory fabricated unit with minimum installation, it provides the lowest cost for the enjoyment of the "open" entry. Many modifications possible at no additional cost, including single-return air duct models.

* TRADE MARK - Pat. Applied for



Standard widths—
W = 6'0", 8'0", 10'0" or 12'0"



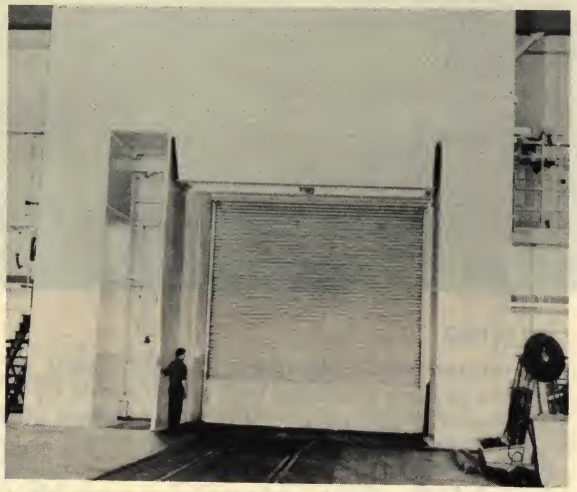
Services required—
Electric — 220V, 60 cy, 3 ph, 15 amp, or equal.
Water — ½" cold water
Drain — 4" drain for pit
Heating (specify type) gas, steam, hot water or electric.

ACCEPTANCE

Department Store Entrance—33'0" wide, 9'0" high. Utilizes five side sliding panels for night closure.

Supermarket Entrance—10'0" wide. 'Package' side sliding auxiliary night closure.

Gambling Casino—41'0" wide, practically entire building front has no auxiliary closure, continuously open.



Industrial Entrance—18'0" high, 20'0" wide. Allows passage of railroad car and large trucks.

AMERICAN AIR CURTAIN CORP.
10408 MANCHESTER • ST. LOUIS 22, MISSOURI

PRINTED IN U.S.A.

No. AC-59-1000

dor less dor

SULZER

An invitation to step in

dor less dor

DOR-less-DOR means
Service to your customer
. . . and to yourself

Unobstructed entrance and exit.
No pushing and shoving of doors.

No barrier that separates your product from your customer.

No traffic pile-ups.
Free flow of traffic even at rush hours.

Full use of sales area (no drafts near the entrance) and more impulse buying (the merchandise put near the entrance catches the eye of the passer-by.)

No more door accidents,
insurance premiums reduced.

Lower maintenance cost.
Cleaner store.
Heat or cooling loss reduced.

DOR-less-DOR, the invisible door,
always open for the customer,
yet always closed to dust and dirt,
to winds, rain and snow,
to heat and cold,
to insects, etc.

DOR-less-DOR is a powerful come-on

A door that's made of air
How it works

In Sulzer DOR-less-DOR entrances, a flow of air moving downward from ceiling to floor seals the entrance. It acts as an insulating wall, protecting the interior against all outside weather conditions. It replaces revolving, swinging and other types of doors.

The air curtain stabilizes a difference between pressure inside and outside the building. This differential is created by the so-called "chimney effect" and the wind pressure. As a result, the continuous flow of air blown out through a ceiling grille toward a floor grating becomes a curved screen. Once the air has been sucked through the floor grating, it is cleaned in filters, reheated or cooled (depending upon season) and brought back by fans to the ceiling grille.

The downdraft is gentle enough not to disturb a customer's hair or hat. Yet the air screen effectively holds back all dirt and dust, insects, cigarette butts, etc.

Sulzer Bros. Ltd., New York
50 Church Street, New York 7, N.Y.

Digby 9-1527

Equipment used

In all Sulzer DOR-less-DOR installations, the following components are used:

Fans—multi-speed motors—heating coils (and cooling coils, if desired)—air filters—outlet grille with automatically or semi-automatically adjustable guide vanes—floor gratings—electronic control systems—sheet metal ductwork.

Sulzer Bros. employ exclusively equipment and controls made by well-known American firms; **this eliminates servicing problems.**

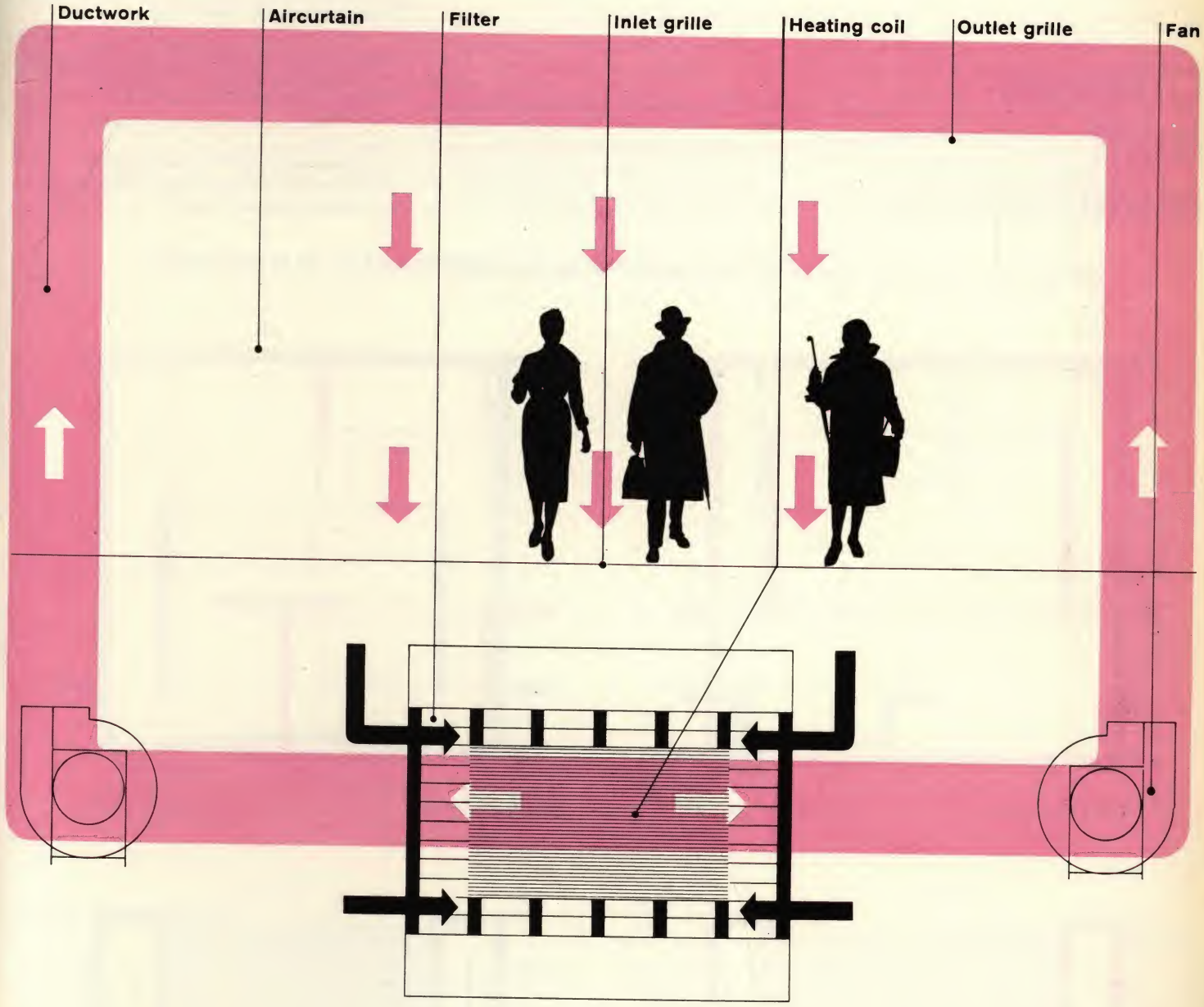
Controls

Normally, Sulzer Bros.' DOR-less-DOR installations are semi-automatically controlled. Also, Sulzer Bros.' engineering skill has led to the recent development of a fully automatic control system. This system controls the air-screen temperature in summer and winter and adjusts the speed of the fans as well as the direction of the airflow in such a manner as to make the DOR-less-DOR operate effectively in all weather conditions.

Sulzer Bros.' engineering services available at any time. Specifications will be prepared upon request.

Sulzer engineering

has developed a special control device which insures trouble-free, continuous operation of the air screen; this device permits the speed of the air flow and its direction to be adjusted automatically to counteract varying weather conditions.



SULZER

DOR-less-DOR:
Red Owl
Supermarket
Madison, Wisconsin

Custom-built installations

Where to use them

The custom-built DOR-less-DOR is recommended as the modern entrance to department stores, supermarkets, banks, office buildings, air terminals, railroad stations, hospitals, schools, theaters, movie houses, factories, warehouses, etc. The DOR-less-DOR offers architects unlimited scope, as installations can be used in conjunction with every type of construction and finishing.

The DOR-less-DOR is also effective in freezer rooms, industrial workshops and wherever adjoining areas differ in temperature, and where smoke or dust has to be confined in adjoining areas without sacrificing accessibility.

Cost calculation

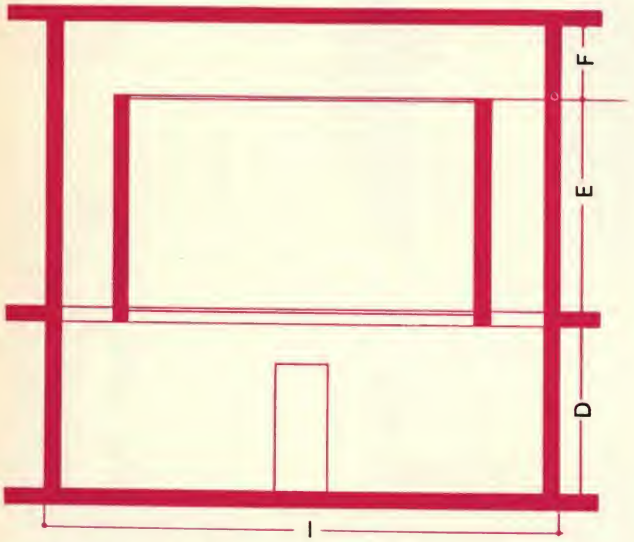
The price of custom-built DOR-less-DOR units depends upon a number of factors.

Custom-built DOR-less-DOR installations are specifically engineered to conform to varying climatic conditions, building structures, existing heating/cooling systems and many other factors which influence costs. (To enable us to make an accurate cost calculation for your particular requirements, please answer the questions on page 7.)

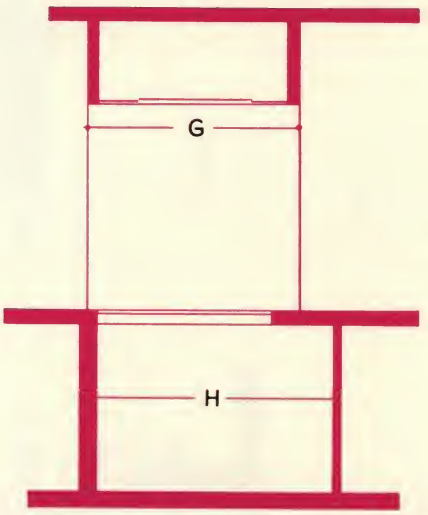
Quoted prices include delivery of all mechanical equipment, its installation and full use of Sulzer Bros.' engineering services.

Sulzer Bros.' engineering services available at any time. Specifications will be prepared upon request.

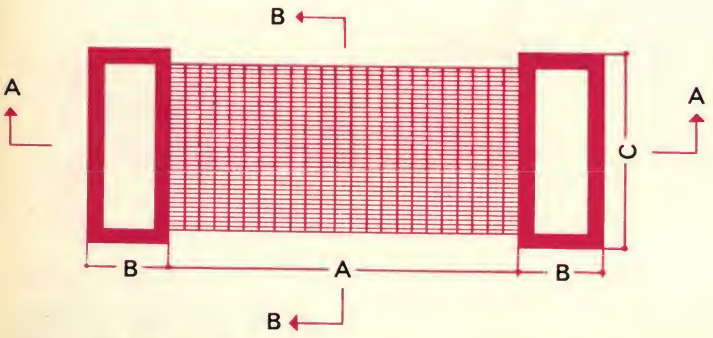
DOR-less-DOR equipment located in basement



SECTION A–A



SECTION B–B



PLAN VIEW

DIMENSIONS IN INCHES

DOOR	A	B	C	D	E	F	G	H	I
6′–0″	72	20	68	84	90	30	60	84	112
10′–0″	120	29	68	84	90	36	60	96	168
15′–0″	180	38	68	84	90	48	60	120	252
20′–0″	240	48	68	96	90	48	72	120	336
30′–0″	360	68	68	96	90	48	72	132	496

DOR-less-DOR:
Knickerbocker
Federal Savings
& Loan Assn.
New York City

SULZER

Operating and maintenance costs

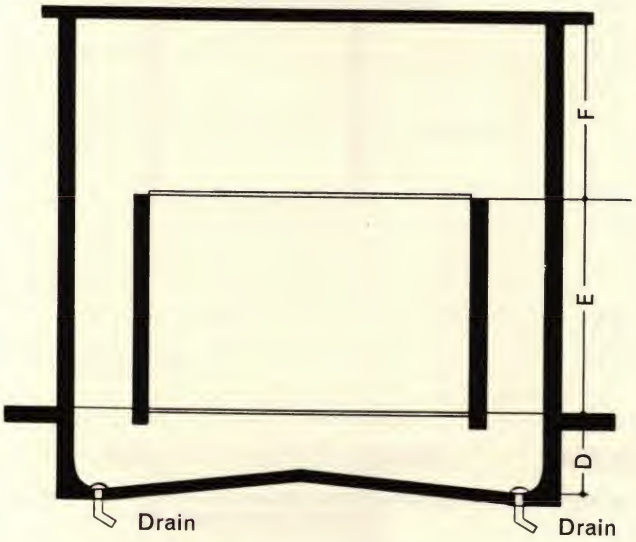
Cost of operating a custom-built DOR-less-DOR starts as low as 10 ¢. per hour. It is influenced, of course, by climatic conditions and the size of the entrance. Sulzer custom-built DOR-less-DOR installations of 10′ width average 50 ¢. per hour. The installation's maintenance is comparable to that of air conditioning systems handling the same air volume.

Space requirements

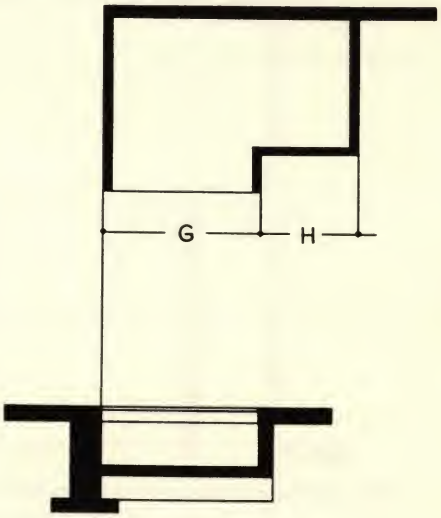
The drawings on page 4 illustrate the space requirements for a typical DOR-less-DOR installation of which the principal equipment is located in the basement.
The plans below show an installation with its equipment above the entrance. The figures in the tables are to be used only as a guide for average space requirements.

In these plans the vertical ducts are placed on both sides of the entrance. If preferred, these ducts may be located wherever sufficient space is available. The equipment can be located to suit all space conditions. Several existing installations carry all equipment above the entrance, on the sides, or recessed at some distance.

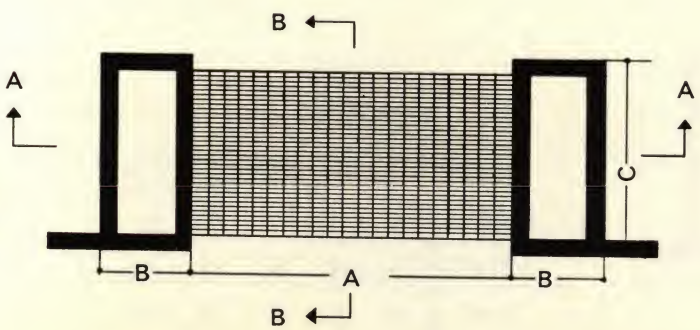
DOR-less-DOR equipment located above entrance



SECTION A–A



SECTION B–B



PLAN VIEW

DIMENSIONS IN INCHES

DOOR	A	B	C	D	E	F	G	H	I
6′–0″	72	20	68	20	90	72	60	48	112
10′–0″	120	29	68	29	90	72	60	60	168
15′–0″	180	38	68	38	90	84	60	60	252
20′–0″	240	48	68	48	90	84	60	72	336
30′–0″	360	68	68	68	90	84	60	72	496

dor less dor

Package Unit– 30% saving

The Package Unit represents a 30% saving over the custom-built door.
The unit has been especially designed for 6, 8 and 10 ft. entrances of single-story buildings.
The main advantage of the Package Unit over the custom-built DOR-less-DOR is a fast, on-site installation by any heating and air conditioning contractor.
A Package Unit can be delivered in 2 to 3 weeks.

Principle

The principle underlying the DOR-less-DOR Package Unit is exactly the same as that of the custom-built installation. Its price advantage is due to the pre-assembly production method.

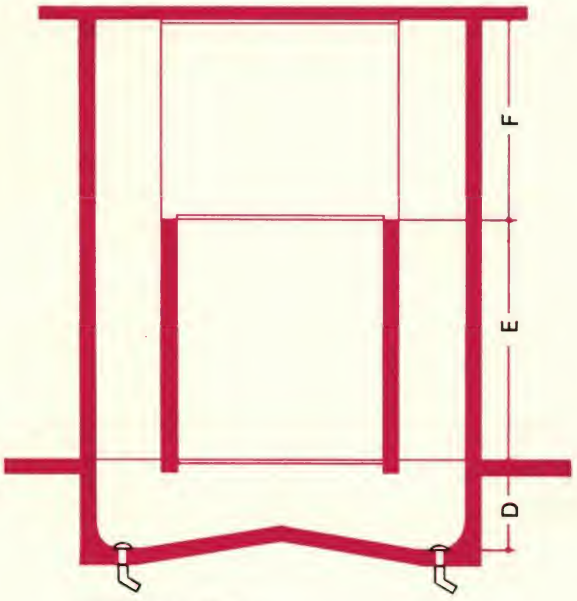
To contractors, Sulzer's Package Unit offers the added "plus" of important construction economies. Sound planning and good teamwork allow heating and air conditioning men to install the DOR-less-DOR and all steam piping, masonry work and exterior finishing in only a few days.

Space requirements

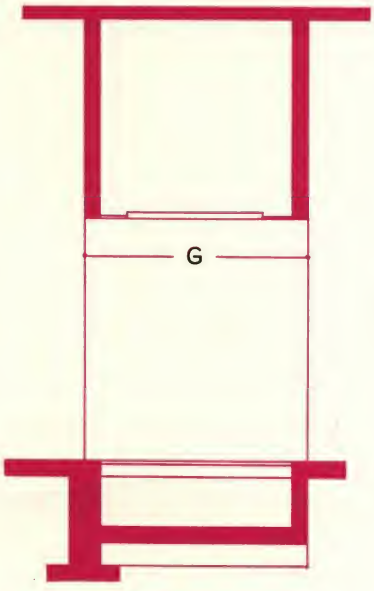
The DOR-less-DOR Package Unit does not require a basement as all the equipment is located in the prefabricated box above the entrance. The sump underneath the floor grating is only two to three feet deep. (For exact dimensions see table at bottom of page.)

Operation and maintenance costs of the DOR-less-DOR Package Unit generally conform to those of the custom-built models.

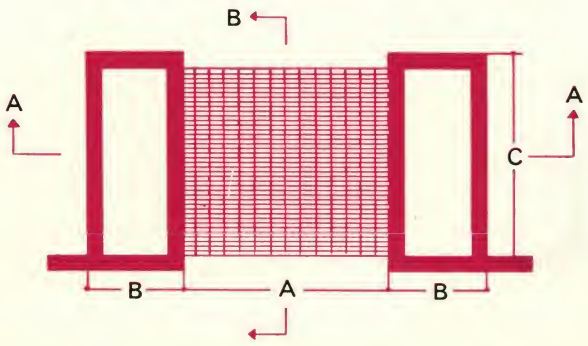
Servicing by local air conditioning contractors



SECTION A–A



SECTION B–B



PLAN VIEW

DIMENSIONS IN INCHES

DOOR	A	B	C	D	E	F	G
6′–0″	72	32	68	30	90	54	60
8′–0″	96	32	68	36	90	54	60
10′–0″	120	38	72	42	90	60	66

Free estimate

Sulzer Bros. will gladly furnish you with a FREE ESTIMATE of costs for a CUSTOM-BUILT DOR-less-DOR or a DOR-less-DOR PACKAGE UNIT. Please answer all the questions listed below and send us the plans referred to in questions # 10 and # 11.

Sulzer Bros.' engineering services available at any time. Specifications will be prepared upon request.

Name and address of the person or firm to which the quotation should be sent.

Name _____ Title _____

Company _____

Address _____

Operation of the DOR-less-DOR

Type and utilization of the space which should be sealed off by the DOR-less-DOR.

_____

_____

Temperatures at which the installation must operate.

Inside, summer_____ winter_____

Outside, summer_____ winter_____

Wind velocity and direction against which the DOR-less-DOR has to seal.

Velocity_____ direction_____

Is there an air-conditioning or ventilating installation? Give short description of the system.

_____

_____

_____

Construction of the building

Year of construction_____

Number of floors_____

Number of floors which are in direct open connection with each other.

Floors_____ stairways_____

Floors_____ escalators_____

Floors_____ elevators_____

Character of the building.

New_____ old_____ remodeled_____

Occupied_____ unused_____

Is the building attached to some other construction? Please submit plan view of building, adjacent structures, state their approximate height.

_____

Please send plans showing HEIGHT and WIDTH of the entrance sections of the building.

_____

Where can the equipment of the DOR-less-DOR be located?

Above entrance_____ beside entrance_____

Basement _____

Heating and cooling system

Kind of heating system.

Steam_____ pressure_____

Hot water_____ temperature_____

Gas _____ other _____

Kind of cooling system.

Temperature_____

Is it possible to use the existing heating and cooling system?

Yes_____ No_____

Electrical installation

Characteristics of power supply.

Volts _____

Phases _____

Cycles _____

_____

Up to what output may squirrel-cage motor be started across the line in HP?

_____

_____

SULZER

Sulzer Bros.
a famous name in engineering, heating and air conditioning since 1841

dor less dor

DOR-less-DOR:
Stern's Department Store, Paramus, N. J.

Sulzer Bros., pioneers of the DOR-less-DOR, owe their world-wide reputation to the quality of their products and their progressive engineering. The activity of the company's heating and air conditioning department reaches back to 1841.
Today, Sulzer installations are found in most countries of Europe, the United States, Canada, Latin America, Australia, Africa and Asia.

Sulzer is a hallmark of dependability.

The DOR-less-DOR represents a revolutionary new departure. Its technique is based on the vast backlog of experience accumulated by the Sulzer organization. Sulzer DOR-less-DORs have been installed in many locations in the Eastern, Western, and Midwestern United States; Montreal (Canada); Zurich, Lausanne, Basle (Switzerland); Augsburg (West Germany), Amsterdam, Hilversum (Holland), Vienna (Austria), Melbourne (Australia), Tokyo (Japan) and other cities.

Part of the Sulzer Works in Winterthur, Switzerland.

Other world-renowned Sulzer-products are:

Marine diesel engines for passenger liners and other vessels, stationary and locomotive diesels, steam power plants, pumps, compressors, steam and gas turbines, refrigeration, heating and air conditioning plants, processing equipment and textile weaving machines.

Sulzer Bros. have affiliated or subsidiary companies with plants in England, France and South Africa; engineering subsidiaries in Argentina, Belgium, Brazil, Egypt, Germany, Japan, Mexico and Spain; agents or sales offices in most countries.

SULZER

50 Church Street, New York 7, N. Y.
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Distributed by:

Printed in Switzerland

SONICBAR

Special Purpose

DOORS

SOUND INSULATING

BLAST RESISTANT

FUME TIGHT

FIRE RESISTANT

NUCLEAR SHIELDING

FIREBAR DOOR DIVISION
RYSDON PRODUCTS COMPANY

SONICBAR DOORS

ENGINEERED ISOLATION

BY RYSDON TECHNICIANS

The Rysdon organization is composed of engineers, designers, and metal craftsmen who have worked together for many years solving a wide range of door operating problems and designing and building special purpose doors, frames, sealing devices and hardware for manual or automatic operation.

Special purpose door problems range from institutional sound insulating to industrial gas-tight requirements, blast resistance, and nuclear shielding—from small access openings to mammoth multi-ton giants.

The wide range of special purpose door requirements which have been met by the Rysdon organization in over 30 years attests to their ability to provide partial or complete designs and completely satisfactory installations for almost any new door function which may be encountered by the designing architect or engineer.

Many special purpose door closures have become standardized so that typical details may be given. Scale tracing sheets of many of these are available upon request.

Due to the frequent need for quick delivery of doors and frames, and in order to offer economies to the industry through use of standardized types and sizes of "packaged" openings, we offer standard units ready for immediate shipment.

Our experimental department includes a new sound transmission testing facility for development of new and improved products. This is at your service for special door problems. These facilities currently are being used especially for higher-than-usual sound transmission loss constructions.

Firebar special purpose doors provide a standard second to none in careful design engineering, conscientious metal craftsmanship and "know-how" derived from solving varied door problems.

SEND FOR OUR CATALOG OF ADHACO SPECIAL PURPOSE HARDWARE AND SEALING DEVICES

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Rysdon Products Co. Panic Opening Sound Insulating Doors reduce noise from engines in tests cell at Chanute Air Force Base, Rantoul, Ill.

PARTIAL LIST OF SONICBAR SPECIAL PURPOSE DOOR INSTALLATIONS

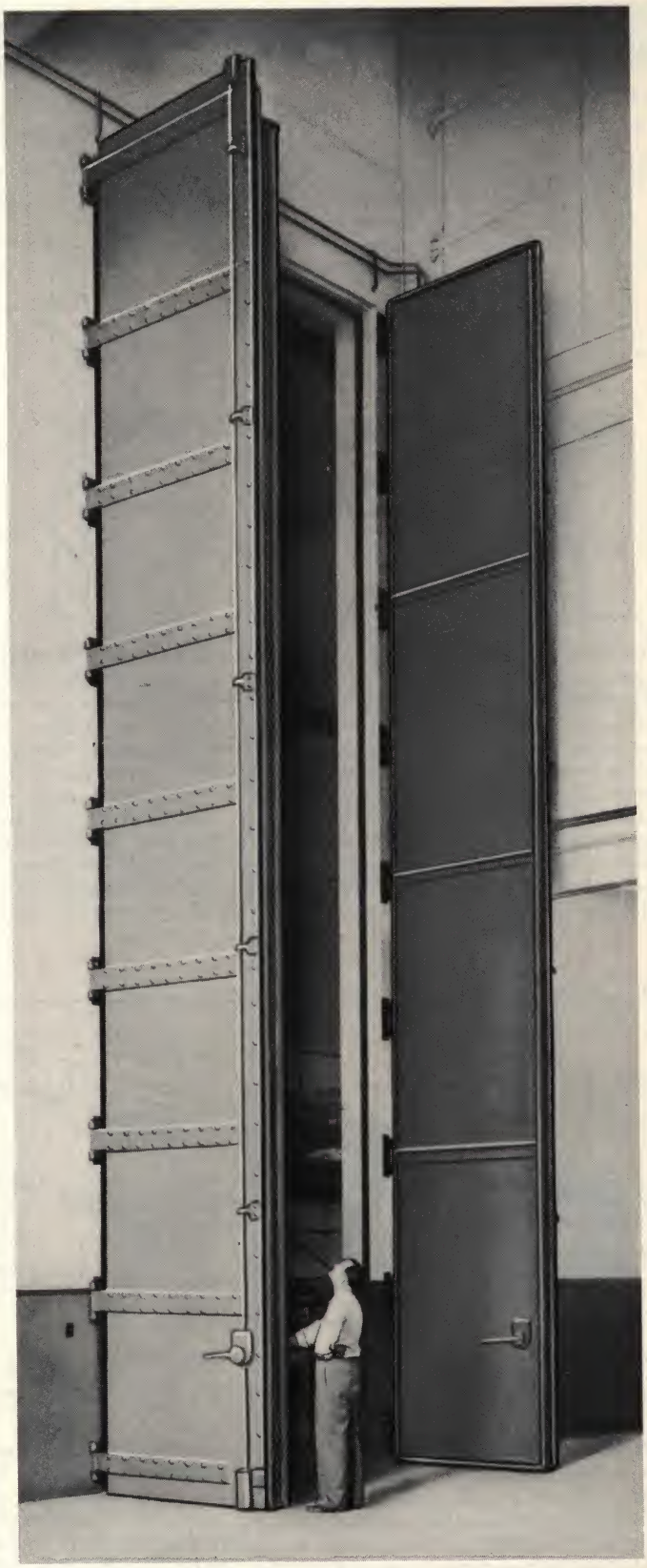
Allis-Chalmers Manufacturing Company
Armour Research Foundation of Illinois Institute of Technology
AVCO-Bridgeport Lycoming Division
A. V. Roe Canada Ltd.
Braniff International Airways Maintenance Base
Bendix Aviation Corp.
Boeing Developmental Center
Canadair Ltd.
Caterpillar Tractor Company
Chrysler Corporation
Convair Div., General Dynamics Corp., San Diego, California
Curtiss-Wright Corporation
E. I. duPont de Nemours & Company
Ford Motor Company
General Electric Company, Missile and Ordnance Dept.
General Motors Corp.—A. C. Spark Plug Division, Technical Center, Chevrolet Motor Division
International Harvester Company
Jones & Laughlin Steel Co.
Massachusetts Institute of Technology
McDonnell Aircraft Corp.
National Broadcasting Company
National Film Board, Montreal, Canada
Nash-Kelvinator Corporation
Oak Ridge National Laboratory
Rolls Royce Canada Ltd.
Standard Oil Company of New Jersey
Trans Canada Airlines
United Aircraft Corporation—Hamilton Std. Propeller Div., Pratt & Whitney Div.
U. S. Air Force—Chanute AFB, Edwards AFB, Hill AFB, Langley AFB, Mather AFB, McClellan AFB, Patrick AFB, Wright-Patterson AFB
U. S. Dept. of the Army
Corps of Engineers, Cape Canaveral, Fla.
Corps of Engineers, Redstone Arsenal, Huntsville, Ala.
Climatic Research, Mt. Washington, N. H.
Army Launching Facility, White Sands Proving Ground, N.M.
U. S. Navy Department—El Toro Marine Base, Engineering Experimental Station, Johns Hopkins Research Laboratory, North Island Naval Air Base, Philadelphia Navy Yard, Puerto Rico Naval Base, Portsmouth Navy Yard
Westinghouse Electric Corporation, Aviation Gas Turbine Div.
Whirlpool Seeger Corp., Evansville, Ind.
WTOP-TV Studio, Washington, D. C.
WBKB-TV Studio, Chicago, Ill.

YOUR DOOR PROBLEM INQUIRIES

We offer the full cooperation of our engineering department to architects, engineers and builders faced with problems of nuisance isolation such as—noise control, blast resistance, radiation shielding, gas tight conditions, etc.

Since many door problems need special analysis, in order to offer recommendations we suggest that your inquiries include the following information:

1. Type of builders hardware desired for institutional doors.
2. Type of physical condition to be controlled.
3. Information about objectionable condition—e.g., 1000 psi blast pressure—140 db sound level and 50 db reduction required—2″ (water manometer) fume-tight condition, etc.
4. Thickness and type of wall construction.
5. Special threshold conditions or requirements.
6. Special material handling problems such as heavy wheeling or monorail through openings.
7. Excessive operational pressures or vacuum, and direction in relation to door swing or slide. Temperature conditions if unusual.
8. Explosion or emergency panic bar release requirements.
9. Power operation requirements—source of power supply.
10. Other special operational requirements.



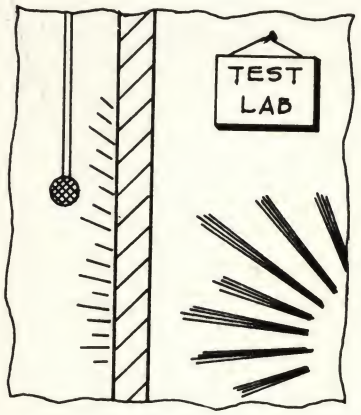
The expert knowledge of Firebar engineers has solved many difficult sound insulating door problems. To meet the needs of one aircraft manufacturer Firebar designed and built these Sonicbar doors for an opening 10 x 33 feet. Doors weigh 10,000 pounds, yet are manually operated with ease.

SPECIAL SERVICES

The following brief description of special services provided by our company reflects the "plus features" which supplement our products, assuring customer service and quality product performance. Your specification incorporating Sonicbar Special Purpose Doors automatically includes these special services.

Portfolio of Specifications and Scale Drawings

This portfolio enables the specification writer to select the type of industrial or institutional door unit specification which fits the sound insulating requirements of the project being designed.
Also included in this portfolio are 3″ scale drawings detailing the various door, frame, hardware and clearance seal constructions. The heavy line drawings are suitable for easy tracing.



Laboratory Testing Facilities

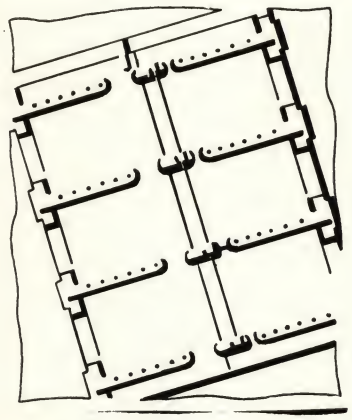
A continuing program of testing various combinations of materials for sound attenuation, clearance crack sealing, etc. results in constantly better and more economical products.
Furthermore, each new product and device is subjected to thorough operating tests before they are installed on a job. This laboratory testing program is your assurance that Sonicbar doors will perform "on the job" as specified.

Sound Reference Handbook

This book contains valuable reference data, graphs, and drawings relating to the fundamentals of sound control in the construction of buildings and the proper design of sound insulating door openings. Much of this material reflects the latest developments in sound control and is not available in other handbooks.
If you have not received your copy, it is available at no cost to architectural and engineering firms requesting it on properly executed Company stationery.

Sound Certification Labels

Every Sonicbar sound insulating door bears a label, serially numbered and showing the decibel rating of the door. This label is your assurance that a prototype door of the same design has been tested at a nationally recognized acoustical laboratory and that the door has a sound transmission loss equal to that imprinted on the label.



Standard Sound Insulating Units

Important economies in cost and delivery are effected by production run, standardized arrangements of doors, frames, hardware and seals in standard sizes. We offer these advantages to the construction industry by inventorying institutional and industrial units.
Standardized printed approval drawings of these standard units are available for clarification of job requirements such as hand of doors, hardware alternates, etc.

Installation Procedures and Instructions

The sound attenuation or other special requirements for which a door opening is designed is dependent on proper installation of all door opening components.
To facilitate and assure proper installation, complete instructions and installation procedures for setting and bracing frames, hanging doors and hardware, installing clearance crack closure seals and final adjustment suggestions are furnished with each order.

DOOR REQUIREMENT SELECTOR

The table below lists building constructions, types and thicknesses of walls, and approximate sound reduction of these walls. From this information the door sound reduction best matched to the installation can be selected. Note that for heavier walls and higher sound reductions, two doors in Sound Lok arrangement are indicated.

	[1]Masonry Walls			[2]Doors		
Type Bldg. Construction	No.	Thickness (each)	Sound Reduction Db	No.	Type	[3]Db
Residential and Institutional	1	4"-6"	40-45	1	SQ2-45	45
					DQ2-45	45
					DM2-48	48
Institutional	1	8"	45-50	1	SM2-48	48
					DQ2-45	45
					DM2-48	48
					DH3-45	45
					DQ3-47	47
					DM3-53	53
	1	12"	50-55	1	DM2-48	48
					DH3-45	45
					DQ3-47	47
					DM3-53	53
					SM6-55	55
Industrial	1	8"	45-50	1	DQ2-45	45
					DM2-48	48
					DH3-45	45
					DQ3-47	47
					DM3-53	53
	1	12"	50-55	1	DH3-45	45
					DQ3-47	47
					DM3-53	53
	1	12"-24"	55-65	1	DM3-53	53
					DA6-60	60
	2	8"	60-70	2	DQ2-45	60
					DM2-48	65
					DH3-45	60
					DQ3-47	65
					DM3-53	70
	2	12"	70-80	2	DM2-48	68
					DH3-45	65
					DQ3-47	70
					DM3-53	75
					DA6-60	80
	2	12"-24"	80-85		DM3-53	82
					DA6-60	85
	2	12"-24"	Over 85	Special construction. Consult our engineering staff.		

1. Wall thickness given only as a guide. Thickness and cavity dimension in double walls must be chosen with care.

2. Sliding door units may be substituted for swing type.

3. Decibel numbers in this column for cavity wall installations are based on a separation between doors for standard installation in walls of thickness indicated.

DOOR TYPE SELECTOR

Rysdon engineers have designed the following types of doors to meet the varied requirements of sound reduction, function, appearance, and cost. See information on auxiliary materials on page 7.

1. Institutional Quiedor 1¾" Flush Door, 45 Db, Type DQ2-45

Hardware: Standard builders' hardware, recessed aluminum "Auto-Seal" threshold crack closer.

Frame: Standard 5½" hollow metal 16 ga. min., other thicknesses available. Welded adjustable Architectural Type H-240 stops or Type H-252 Econostop, depending on requirements and degree of economy.

The Sonicbar Quiedor offers sufficient sound reduction for most locations in institutional buildings. It combines quality and economy with a distinctive appearance which is enhanced by the Neoprene insert perimeter banding on the stop side.

2. Institutional Alstele 1¾" Flush Door, 48 Db, Type DM2-48

Hardware: Standard builders' hardware, heavy duty 4½"x4½" butt hinges, "Auto-Seal" aluminum combination kick plate and threshold crack closer.

Frame: Standard 5½" hollow metal 14 ga. min., other thickness frames available. Welded adjustable Architectural type H-240 stops.

The Sonicbar Alstele unit has the highest sound reduction available in a door of this thickness. It is fabricated with highest quality materials and workmanship which gives it the appearance of the finest custom built hollow metal door and frame.

3. Institutional 1¾" Sliding Flush Unit, 45 Db, Type SQ2-45

Hardware: Standard sliding door lockset.

Frame: Standard 16 ga., also 16 ga. wall pocket members. Standard type rollers and track. Specially designed Acoustilok perimeter sealing system and "Auto-Seal" recessed aluminum threshold crack closer.

This unit provides the quality workmanship and excellent appearance of the Quiedor sound insulating door construction. Sufficient sound reduction for most installations is provided.

4. Institutional 1¾" Sliding Flush Unit, 48 Db, Type SM2-48

Hardware and Frame: See Item 3.

This unit, incorporating our Alstele door construction, provides the highest sound reduction obtainable at present for 1¾" thickness. Highest quality materials and workmanship are used in the manufacture of this unit.

5. Industrial Quiedor 3" Flush Door, 47 Db, Type DQ3-47

Hardware: Adhaco heavy duty, fully adjustable, including multi-point "Slam" type locking devices, "Six-Way" hinges, and "Auto-Seal" threshold crack closer.

Frame: Struct. chan., 6"-12 lb. WF, 8"-11.5 lb., or 12"-20.7 lb. with 6"-8.2 lb. chan. sill. Fully adjustable Type H-210 industrial Neoprene gasketed stops with 12" o.c. position locking devices.

6. Industrial Metal Covered 3" Door, 45 Db, Type DH3-45

Hardware and Frames: Same as in Item 5.
This door is recommended where indicated sound loss is sufficient, and somewhat longer than usual delivery time is acceptable.

7. Industrial Alstele 3" Flush Door, 53 Db, Type DM3-53

Hardware and Frames: Same as in Item 5.
One of our latest and best designs, this door embodies highest quality materials and workmanship, and provides highest sound reduction. It can be fabricated to sizes other than standard and to meet any unusual requirements of function.

8. Institutional Wal-Dor 6" Sliding Unit, 55 Db, Type SM6-55

Our most recent development, the Wal-Dor Unit, should be specified when a sliding door is required with the sound reduction of a concrete wall and the appearance, workmanship, and quality of the finest custom built sliding partition.

9. Industrial Acoustidor 6" Door, 60 Db, Type DA6-60

This newest industrial unit is intended for those installations where highest sound reduction is required with a very rugged door. Unit is complete with heavy duty Adhaco locking devices, "Six-Way" hinges, multiple perimeter sealing devices and dual "Auto-Seal" threshold crack closers.

STANDARD DOOR ARRANGEMENTS AND FRAMES

STANDARD DOOR ARRANGEMENTS

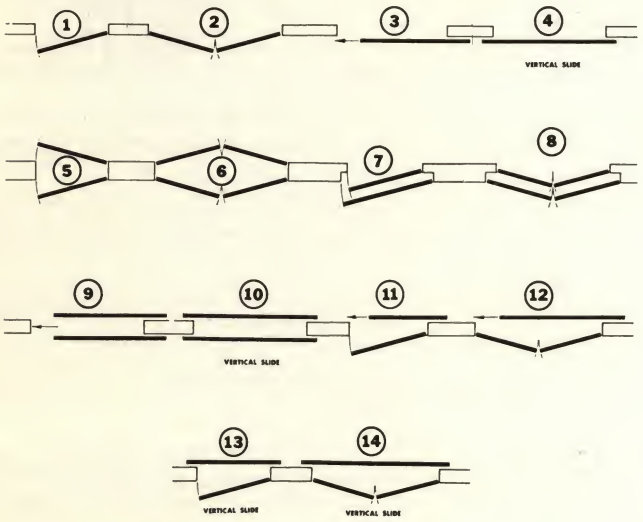
Selection of the proper arrangement of doors in an opening becomes increasingly important as isolation door problems constantly become more varied and complex.

When several swinging or sliding doors are hung in the same opening, the design and function of hardware and sealing devices become of prime importance.

The following diagrams with our standard reference numbers indicate the most frequently used door arrangements in which special purpose doors are used.

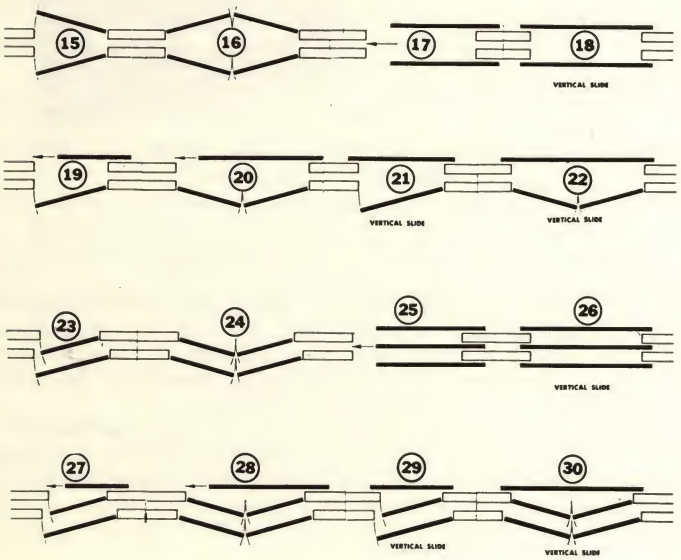
SINGLE WALL INSTALLATIONS

Most facilities require only a single wall of varying thickness and construction. Adequate sound reduction at openings can be obtained with either single door and frame units or double Sound Lok arrangements as shown below:



DOUBLE WALL SOUND LOK INSTALLATIONS

Double walls of the cavity type are required for very high sound reduction. The more commonly used combinations of Sound Lok arrangements are shown below:



STANDARD DOOR FRAMES

The types of frames shown below are those most commonly used with special purpose doors.

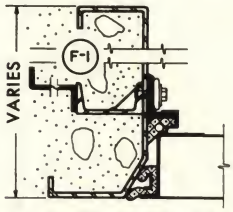
Types F-2, F-3, F-4 and F-5 accommodate most masonry wall conditions and provide heavy duty adjustable sponge Neoprene clearance crack seals equipped with position locking devices.

For large openings or where exceptional crack sealing is desired, we recommend the use of Type F-1 formed frames which provide for the use of two additional seals at head and jambs.

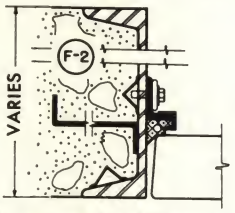
Type F-6 frame incorporates the housing for pneumatic operated "Auto-Air" seals, which have proven highly efficient when used with vertical and horizontal sliding doors. Additional details are shown on page 15.

Further information on types F-7 and F-8 will be found on pages 9, 10 and 11.

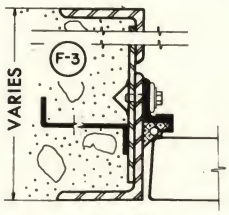
Rysdon engineers are constantly testing new types of frames and clearance crack sealing devices. Your inquiries are invited regarding various adaptations of the standard frames and seals illustrated or regarding your special problems.



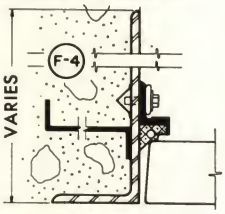
Formed Steel for Triple Seals
Std. 12 ga. Avail. to $\frac{3}{8}$" plate
Min. thick. 6", max. 18"



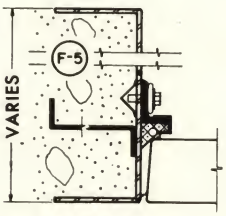
Structural Steel Channel
Std. 6"-12 lb., 8"-11.5 lb., 12"-20.7 lb.
Min. thick. 6", max. 15"



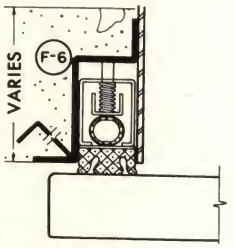
Structural Angles & Plate
Std. $\frac{1}{4}$" Plate & Var. angles
Min. thick. 9", max. 30"



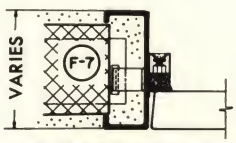
Structural Angle
Std. $3\frac{1}{2}$" x 6" x $\frac{5}{16}$"
Min. thick. 6", max. 8"



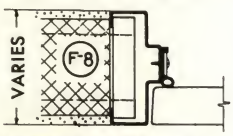
Formed Steel Channel
Std. 12 ga. Avail. to $\frac{1}{2}$" Plate
Min. thick. 8", max. 24"



Formed Steel "Auto-Air" Housing
Std. 12 ga. Avail. to $\frac{3}{8}$" Plate
Min. thick. 8", max. 24"



Formed Steel Architectural Frame and Stop
Std. 14 ga., Avail. in 16 & 12 ga.
Std. $5\frac{1}{2}$" thick
Min. thick. $4\frac{1}{4}$", max. 12"



Formed Steel Frame With Econostop Seal
Frame 16 ga., Std. $5\frac{1}{2}$" thick
Min. thick. $4\frac{1}{4}$", Max. 12"

STANDARD UNITS, SOUND INSULATING DOORS

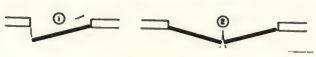
To meet the wide range of variations required of most sound insulating doors, frames and hardware, all of our products until recently were custom designed and built for each opening. There has been, however, an increasing need for door openings which can be obtained quickly in popular sizes with standard hardware functions.

Standard Sizes—We now supply most of our different sound insulating openings in standard sizes with shipment of complete units including frames, doors, hardware and seals approximately ten days after receipt of order, and at considerable economy over other sizes. These standard sizes and types fill the widest range of industrial sound insulating requirements and have proved to be the most popular. We recommend that details and specifications of standard units be specified whenever feasible.

Scale tracing sheets of standard sizes and details are available upon request.

Custom Built Units—We also provide a wide range of sizes other than standard. Although these are not immediately available from stock, standard approval drawings can be supplied immediately, frames are shipped 7-10 days after approval of drawings, and doors soon thereafter.

SINGLE WALL INSTALLATIONS



1. Institutional 1¾″ Quiedor Flush Units, 45 Db, Type DQ2F-45

Standard Sizes:

Singles:	2′6″ x 6′8″	3′0″ x 6′8″	2′6″ x 7′0″	3′0″ x 7′0″
	2′8″ x 6′8″	3′4″ x 6′8″	2′8″ x 7′0″	3′4″ x 7′0″
Pairs:	5′0″ x 6′8″	6′0″ x 6′8″	5′0″ x 7′0″	6′0″ x 7′0″
	5′4″ x 6′8″	6′8″ x 6′8″	5′4″ x 7′0″	6′8″ x 7′0″

Similar doors with half glass, Type DQ2H-45 and 10″ x 10″ vision panels, Type DQ2V-45 also available in standard sizes.

2. Institutional 1¾″ Alstele Flush Units, 48 Db, Type DM2F-48

Standard sizes as in Item 1. Doors with half glass and 10″ x 10″ vision panels also standard.

3. Institutional 1¾″ Sliding Flush Units, 40 Db, Type SQ2-40

Standard Sizes:

Singles:	2′8″ x 6′8″	2′8″ x 7′0″
	3′0″ x 6′8″	3′0″ x 7′0″

4. Industrial 3″ Quiedor Flush Units, 47 Db, Type DQ3-47

Standard Sizes:

Singles:	2′8″ x 6′8″	2′8″ x 7′0″	3′6″ x 7′0″	4′0″ x 8′0″
	3′0″ x 6′8″	3′0″ x 7′0″	4′0″ x 7′0″	5′0″ x 10′0″
Pairs:	5′4″ x 6′8″	5′4″ x 7′0″	7′0″ x 7′0″	8′0″ x 8′0″
	6′0″ x 6′8″	6′0″ x 7′0″	8′0″ x 7′0″	10′0″ x 10′0″

Vision panels 10″ x 10″ standard.

5. Industrial 3″ Alstele Flush Units, 53 Db, Type DM3-53

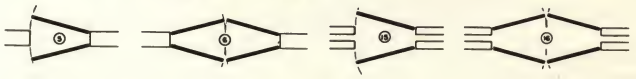
Standard sizes with or without vision panels as in Item 4.

6. Industrial 3″ Metal Covered Units, 45 Db, Type DH3-45

Standard sizes with or without vision panels as in Item 4.

SOUND LOK INSTALLATIONS IN SINGLE AND DOUBLE (CAVITY) WALLS

Opposite Swing Openings



7. Institutional 1¾″ Quiedor Flush Units, Type DQ2F-45, (Installation: 50-70 Db Sound Reduction).

Standard sizes as in Item 1, also half glass, vision panels.

8. Institutional 1¾″ Alstele Flush Units, Type DM2F-45, (Installation: 55-75 Db Sound Reduction).

Standard sizes as in Item 1, also half glass, vision panels.

9. Industrial 3″ Quiedor Flush Units, Type DQ3-47, (Installation: 55-75 Db Sound Reduction).

Standard sizes as in Item 4, also 10″ x 10″ vision panels.

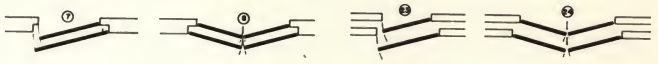
10. Industrial 3″ Alstele Flush Units, Type DM3-53, (Installation: 65-85 Db Sound Reduction).

Standard sizes as in Item 4, also 10″ x 10″ vision panels.

11. Industrial 3″ Metal Covered Units, Type DH3-45, (Installation: 50-70 Db Sound Reduction).

Standard sizes as in Item 4, also 10″ x 10″ vision panels.

Tandem (Panic) Swing Openings



12. Institutional 1¾″ Openings as in Items 7 and 8.

Available in custom built sizes.

13. Industrial 3″ Openings as in Items 9, 10, and 11.

Table below lists frame opening sizes for smaller of two tandem doors.

Standard Sizes:

Singles:	3′0″ x 6′8″	3′6″ x 7′0″
Pairs:	6′0″ x 6′8″	7′0″ x 7′0″

INSTITUTIONAL SOUND INSULATING DOOR UNITS

GENERAL DESCRIPTION

Sonicbar Institutional Door Units are furnished in two standard types to meet the varying conditions of sound attenuation, economy, and project requirements. They consist of 1¾" thick doors constructed with 16 gauge cold rolled stretcher levelled sheet steel flush face panels, 14 or 16 ga. formed metal frames, and adjustable clearance crack seals.

Doors and frames are completely mortised, reinforced and fitted at the factory for accommodating all types of standard builders' hardware. All materials are precision fabricated to the highest standards of metal craftsmanship.

For best results in sound control, we recommend that doors, frames, and sealing devices be supplied as complete units to assure proper operation and prevent divided responsibility for efficiency in the completed job.

Units are supplied in standard sizes and with half glass or vision panels as indicated on page 7. We also supply other sizes, special hardware provisions, and custom designs.

All doors have been tested at Riverbank Acoustical Laboratories, Geneva, Ill., and rating for each is based on these tests.

Standard printed 3" scale drawings for tracing and complete detailed specifications are available.

Quiedor Flush Door, 45 DB, Type DQ2F-45

The Quiedor is the newest addition to the Sonicbar family of sound insulating doors. It is designed to supply the need for an excellent appearing but economical flush panel 1¾" door with a 45 db rating. The Quiedor mortised band of heavy duty moulded Neoprene on stop side gives this door a distinctive appearance and assures complete acoustical sealing when door is closed.

Bottom of door is recessed for aluminum housing "Auto-Seal" threshold crack closer providing sponge Neoprene compression sealing at threshold when door is closed and instantaneous spring-actuated retraction when opened.

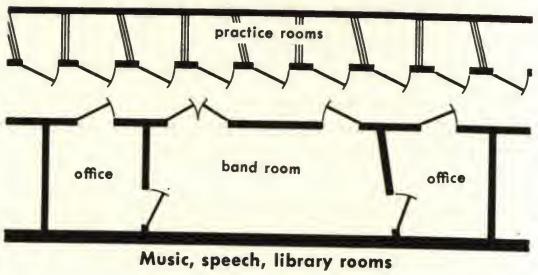
The Quiedor is completely mortised, reinforced and fitted for application of all standard builders' template hardware.

Alstele Flush Door, 48 DB, Type DM2F-48

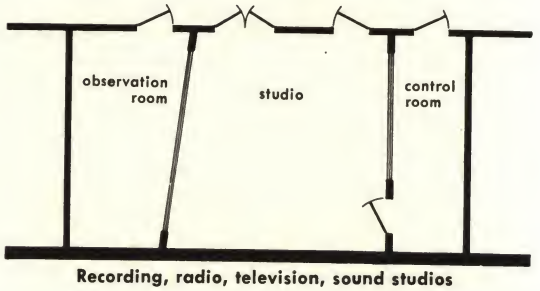
The Alstele door is recommended when highest sound reduction, finest appearance, and highest quality materials and workmanship are required. The door is completely sound deadened and free from metallic sounds. The unit provides a high degree of sound attenuation adequate for practically all institutional requirements and has met with overwhelming approval for installations of the type shown at the right.

Doors are constructed similar to type DQ2F-45 except that additional sound barrier materials are incorporated in the panel construction. Frames are 14 ga. formed steel minimum, and heavy duty 4½" x 4½" butt hinges are used.

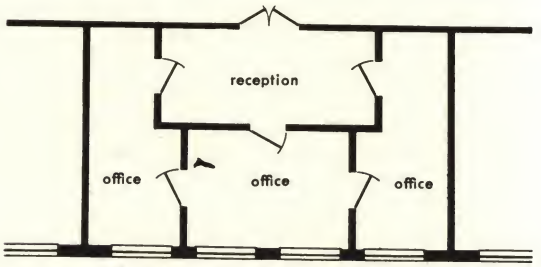
Sonicbar Door reduces objectionable sound.



Music, speech, library rooms



Recording, radio, television, sound studios



Professional and private offices

USES

Modern buildings have many locations where noise of business machines, personnel traffic, elevators, conversations, merchandise handling, record filing, etc., must be isolated so that it does not escape to places where people are working, sleeping, or otherwise need quiet.

Sonicbar institutional sound insulating doors are ideally suited for isolating sound in hospitals, hotels, schools, churches, theatres, office buildings and similar places where a door of relatively high sound attenuation is necessary.

Specific locations where it is desirable to control or isolate sound occur in the following:

- Auditoriums, recital and lecture halls
- Factory areas, furnace and equipment rooms
- Executive and legal offices
- Medical and dental suites
- Radio and television studios
- Business machine rooms
- Recording and music studios
- Sports and entertainment centers
- Clubs and lounges

SPECIAL REQUIREMENTS

Where extremely high sound attenuation is required such as radio and television studios, these institutional doors may be installed in a Sound Lok arrangement, See page 18.

Also a Sonicbar institutional unit including door, frame and seals provides an ideal barrier against dust, vapor, smoke, fumes and weather. Our engineers will be glad to assist with special requirements.

INSTITUTIONAL DOOR FRAMES

GENERAL

This institutional sound insulating door frame fills the need in schools, hospitals, churches, hotels, offices and similar buildings for a tight seal between door and frame.

A built-in sponge Neoprene gasket acts as a cushioned door stop having positive adjustment which seals the clearance crack and prevents impact noise. It eliminates the disadvantages of the immovable non-conforming stop of the standard frame and effectively seals the door clearance crack.

This radically new stop is finding wide use also as a seal against dirt, dust due to air conditioning, weather and odors in various installations where these nuisances are objectionable.

ADJUSTABLE STOP FEATURES

A simple, fool-proof adjustment of the stop compensates for wood door warpage, inaccuracies of installation, or wear on the gasket face of the stop itself. Positive positioning of this stop is achieved by means of a Phillips head screw driver at individual adjusting points which are provided in the edge of stop 12″ O.C. Adjustments of the gasketed stop up to 3/8″ may be made.

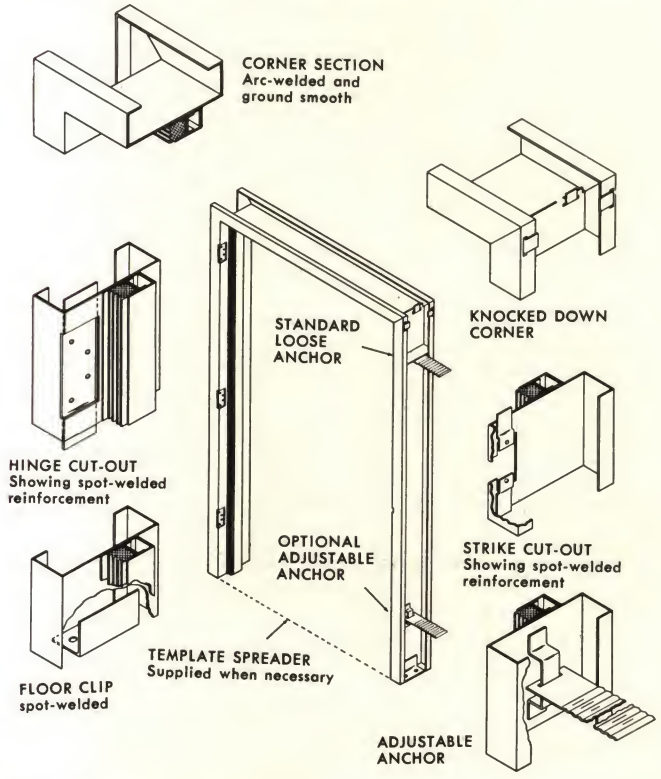
To insure against damage during building construction the entire adjusting unit of the stop may be easily removed, or as easily installed if shipped separately. This eliminates the chance of paint being deposited on the Neoprene gasket face.

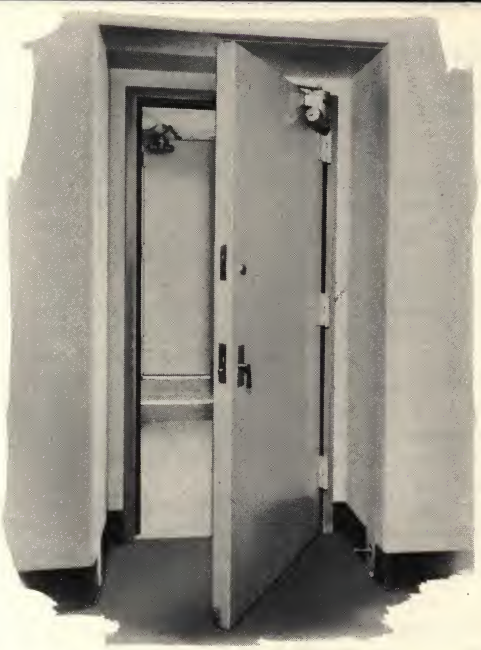
FRAME CONSTRUCTION

Construction features of this frame with integral adjustable stops are shown below. Note that all modern metal door frame features such as factory mortising and reinforcing for hardware, masonry cover plates, and mitered corners are incorporated in frame construction.

Standard frames are supplied in 16 gauge for Quiedor and 14 gauge for Alstele doors, both in the 5½″ thickness. Heavier gauge frames are built to specifications. Normally furnished as completely assembled units, these frames can be supplied knocked down.

Institutional frames are finished with neutral color rust inhibitive primer. If desired, frames may be given baked enamel finish to match color samples.





Door installed in Sonicbar Institutional Frame. Sponge Neoprene stops and threshold crack closer keeps out sound, dust, odors.

ARCHITECTURAL ADJUSTABLE DOOR STOPS

When desired, Sonicbar architectural adjustable door stops may be furnished as separate units for application to wood or metal door jambs. Metal frames must be furnished as cased openings since it is not practical to apply these stops on top of integrally formed stops.

The installation of Sonicbar architectural adjustable stops to door frames together with the application of a satisfactory type of threshold closer on doors will render the door opening sound, dust, odor, moisture and weather proof.

SHORT FORM DOOR STOP SPECIFICATIONS

Where shown on plans, all frames (structural, hollow metal or wood) shall be furnished complete with Sonicbar architectural adjustable door stops as manufactured by Firebar Door Division, Rysdon Products Company, Chicago 20, Ill. Neoprene gasketed stops shall be adjustable with internally located screws having positive self locking, forward and backward minimum 3/8″ adjustment. Stops to be fitted in the field and attached to frames by means of wood screws or self-tapping metal screws.

SHORT FORM DOOR FRAME SPECIFICATIONS

Where shown on plans, all metal door frames shall be institutional type as manufactured by Firebar Door Division, Rysdon Products Company, Chicago 20, Ill. Frames shall be formed (16)(14)ga. steel and shall have integral adjustable stops with sponge Neoprene gaskets. Stops shall be adjustable not less than 3/8″ by internally located adjusting screws which shall be self locking and positive in action, both forward and back. Gaskets and adjusting unit shall be removable.

Frames shall be factory template fitted, drilled and tapped for all mortised hinges and strikes. Corners of frames shall be mitered to hairline joints, welded and ground smooth.

Masonry cover boxes to be welded to back side of frame to protect all tapped holes. Frames to receive one shop coat of rust inhibitive primer. All materials furnished under this specification to be guaranteed against defects in material and workmanship for a period of one year.

INSTITUTIONAL QUIEDOR SOUND INSULATING UNITS

STANDARD UNITS TYPE DQ2-45

Quiedor standard units consist of the following:

A. Door 1¾" thick, Type DQ2-45.

B. Aluminum recessed "Auto-Seal" threshold crack closer.

C. Formed 16 gauge frame 5½" thick.

D. Adjustable Neoprene stops, Architectural Type H-240 or Econostop Type H-252.

E. Doors and frames mortised, reinforced and fitted for the following builders' hardware:
   (a) 1½ pairs 4½" x 4½" template butt hinges.
   (b) Mortise lockset Series 161 with 2¾" backset.
   (c) Overhead check reinforcements in doors and frame.

The above standard units when furnished in the standard sizes shown on opposite page for Alstele units offer production economies and quick deliveries. Quiedor units can also be furnished custom built to almost any required opening size or fitted with special hardware.

Standard printed 3" scale drawings suitable for tracing and complete detailed specifications covering the institutional Quiedor units are available upon request.

SHORT FORM "SPECS" FOR DQ2-45 UNITS

General—*All door openings shown on plans as "Sound-Proof" shall be Sonicbar institutional units, Type DQ2-45 as furnished by Firebar Door Division, Rysdon Products Co., Chicago 20, Ill., or approved equal. Units shall include laboratory certified sound insulating 45 db doors, 16 gauge formed metal frames and adjustable type clearance crack sealing devices.*

Door and Frame Construction—*Doors shall be 1¾" thick, flush design, face panels formed of 16 gauge cold rolled stretcher leveled sheet steel. Stop side of door shall have heavy duty Neoprene banding at head and end stiles. Panels shall be reinforced and acoustically damped to produce required sound transmission loss. Frames shall be formed of 16 gauge steel with hairline mitered head and jamb welded joints and provided with masonry cover boxes at mortises. Doors and frames shall be factory mortised, reinforced and fitted for template builders hardware, (as specified under "Hardware"), adjustable gasketed stops and door "Auto-Seal" threshold crack closers.*

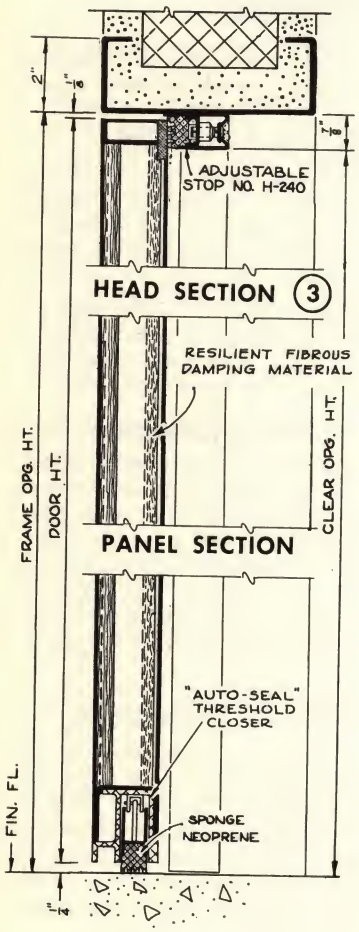
Drawings and Guarantees—*Before any work is started this contractor shall furnish for architect's approval complete shop drawings and the following guarantees:*

(a) *Certification by Riverbank Acoustical Laboratories, Geneva, Illinois or National Bureau of Standards, Washington, D. C. that sound transmission loss of door is not less than 45 db average, based on tests at nine frequencies over a range of 125 to 4000 cycles per second, in accordance with ASTM Sound Transmission Practice E90-55.*

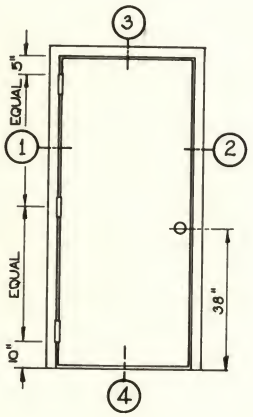
(b) *Written guarantee stating that doors are constructed exactly in accordance with laboratory tested door.*

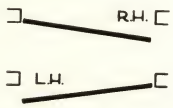
(c) *All equipment furnished under this contract shall be guaranteed free from defects in material and workmanship for a period of one year after installation.*

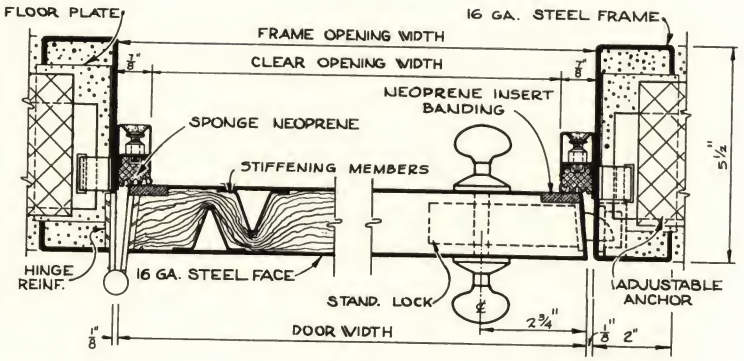
All installation work shall be performed by skilled mechanics in strict accordance with the "Installation Instructions and Procedures" furnished by this door manufacturer.



SILL SECTION (4)







HINGE JAMB SECTION (1)

LOCK JAMB SECTION (2)

SCALE: 3"= 1'-0"

 SCALE TRACING SHEETS OF SONICBAR DETAILS AVAILABLE UPON REQUEST.

INSTITUTIONAL ALSTELE SOUND INSULATING UNITS

STANDARD UNITS TYPE DM2-48

Alstele units consisting of door, frame and adjustable sealing devices are built in the standard sizes shown in right hand column. The standard sizes offer production economies and quick deliveries. Units can also be furnished custom built to almost any opening size or fitted with special hardware.

Standard units are similar to those shown on opposite page for Quiedors except that the heavier duty Alstele units are furnished with 14 gauge frames, *heavy duty* template hinges, "Auto-Seal" combination threshold crack closer and kick plate. Adjustable stops Type H-240 only are furnished.

Standard printed 3" scale drawings suitable for tracing and complete detailed specifications covering the institutional Alstele units are available upon request.

SHORT FORM "SPECS" FOR DM2-48 UNITS

***General**—All door openings shown on plans as "Sound-Proof" shall be Sonicbar institutional units, Type DM2-48 furnished by Firebar Door Division, Rysdon Products Co., Chicago 20, Ill., or approved equal. Units shall include laboratory certified sound insulating 48 db doors, 14 ga. formed frames and adjustable clearance crack sealing devices.*

***Door and Frame Construction**—Doors shall be 1¾" thick, flush design, face panels formed of 16 gauge cold rolled stretcher leveled sheet steel. Panels shall be reinforced and acoustically damped to produce required sound transmission loss. Frames shall be formed of 14 gauge steel with hairline mitered head and jamb welded joints and provided with masonry cover boxes at mortises. Doors and frames shall be factory mortised, reinforced and fitted for template builders hardware, (as specified under "Hardware"), adjustable gasketed stops and door "Auto-Seal" threshold crack closers.*

***Drawings and Guarantees**—Before any work is started this contractor shall furnish for architect's approval complete shop drawings and the following guarantees:*

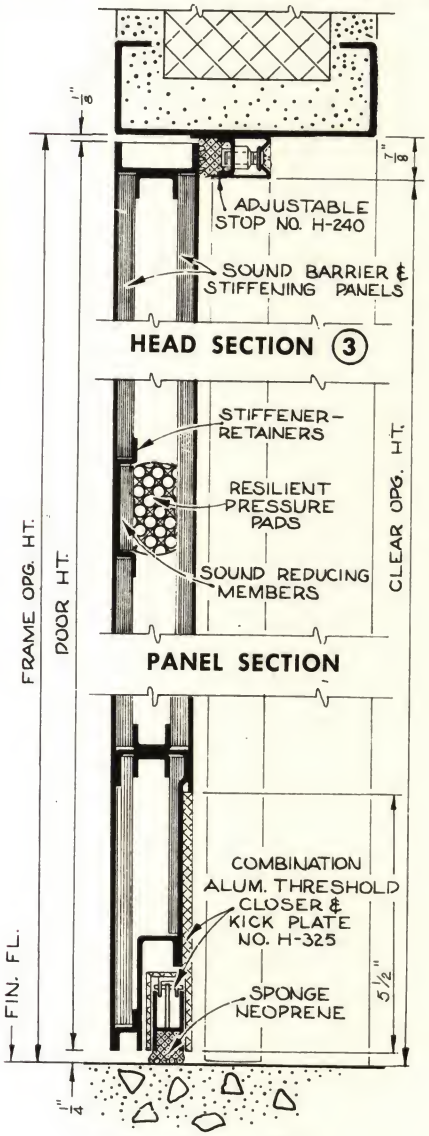
(a) *Certification by Riverbank Acoustical Laboratories, Geneva, Illinois or National Bureau of Standards, Washington, D. C. that sound transmission loss of door is not less than 48 db average, based on tests at nine frequencies over a range of 125 to 4000 cycles per second, in accordance with ASTM Sound Transmission Practice E90-55.*

(b) *Written guarantee stating that doors are constructed exactly in accordance with laboratory tested door.*

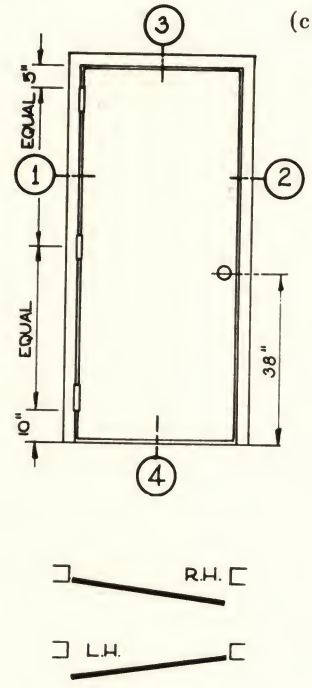
(c) *All equipment furnished under this contract shall be guaranteed free from defects in material and workmanship for a period of one year after installation.*

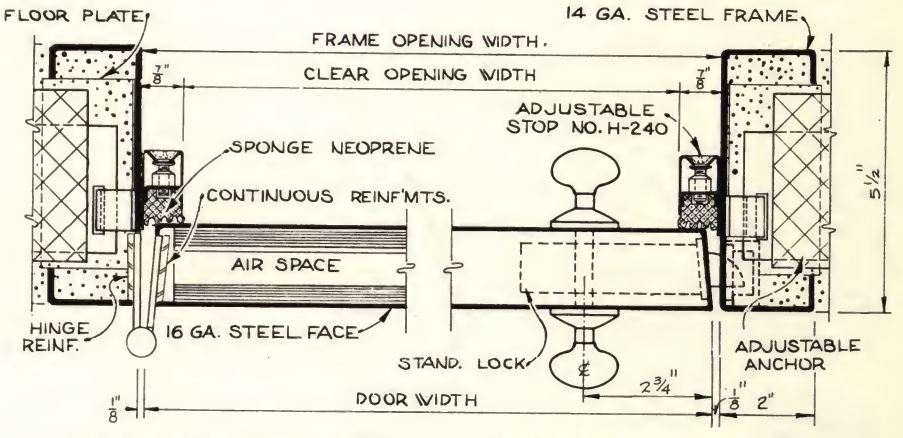
LIST OF STANDARD SIZES AND NOS.

Frame Opg. Size		Stock Nos.
Singles	2'6" x 6'8"	1F7-5DM2-2668
"	2'8" x 6'8"	1F7-5DM2-2868
"	3'0" x 6'8"	1F7-5DM2-3068
"	3'4" x 6' 8"	1F7-5DM2-3468
"	2'6" x 7'0"	1F7-5DM2-2670
"	2'8" x 7'0"	1F7-5DM2-2870
"	3'0" x 7'0"	1F7-5DM2-3070
	3'4" x 7'0"	1F7-5DM2-3470
Pairs	5'0" x 6'8"	2F7-5DM2-5068
"	5'4" x 6'8"	2F7-5DM2-5468
"	6'0" x 6'8"	2F7-5DM2-6068
"	6'8" x 6'8"	2F7-5DM2-6868
"	5'0" x 7'0"	2F7-5DM2-5070
"	5'4" x 7'0"	2F7-5DM2-5470
"	6'0" x 7'0"	2F7-5DM2-6070
"	6'8" x 7'0"	2F7-5DM2-6870



SILL SECTION (4)





HINGE JAMB SECTION (1)

LOCK JAMB SECTION (2)

SCALE: 3"= 1'-0"

SCALE TRACING SHEETS OF SONICBAR DETAILS AVAILABLE UPON REQUEST

INDUSTRIAL QUIEDOR SOUND INSULATING UNITS

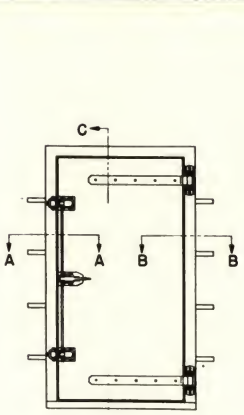
TYPE DQ3-47 UNITS

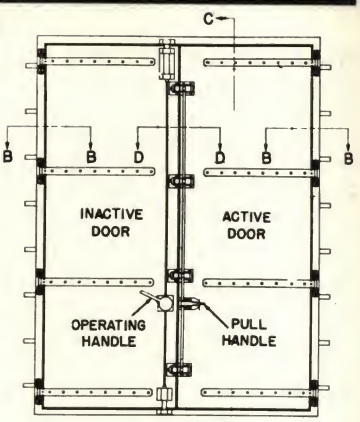
This unit, consisting of our 3" thick Quiedor metal sound insulating door, structural channel frame, Adhaco "Slam" type lock, "Six-Way" hinges, industrial adjustable sealing devices and "Auto-Seal" threshold crack closer, provides excellent operation and high sound reduction at economical cost.

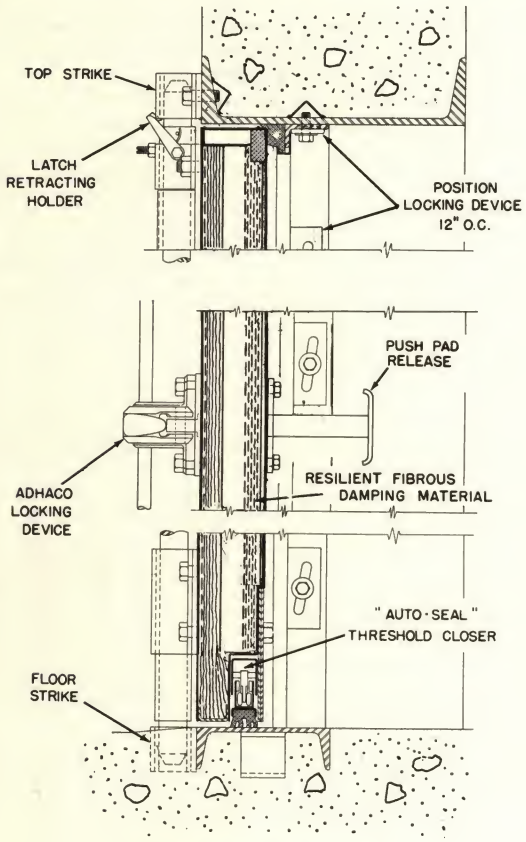
The Rysdon acoustical research laboratory has successfully combined new noise reduction principles with highly efficient fabrication techniques to produce the Quiedor.

Standard Units with heavy duty hardware, frames and seals in standard sizes shown on page 7. Standard drawings DQ3-5904 (singles) and DQ3-5905 (pairs) available for submission of approval drawings or for tracing 3" scale details.

Custom Units can be furnished in a wide range of sizes and operating function to meet a variety of project requirements.







VERTICAL SECTION C-C

SHORT FORM "SPECS" FOR DQ3-47 UNITS

***General**—All door openings shown on plans as "Sound-Proof" shall be Sonicbar industrial units, Type DQ3-47 as furnished by Firebar Door Division, Rysdon Products Co., Chicago 20, Ill., or approved equal. Units shall include laboratory certified sound insulating 47 db doors, structural channel frames, special purpose heavy duty hardware and adjustable type clearance crack sealing devices.*

***Frames**—shall be factory template fitted, drilled and tapped for all hinge pintles, locking hardware and adjustable sealing devices. Masonry cover boxes to be welded to back side of frame to protect all tapped holes.*

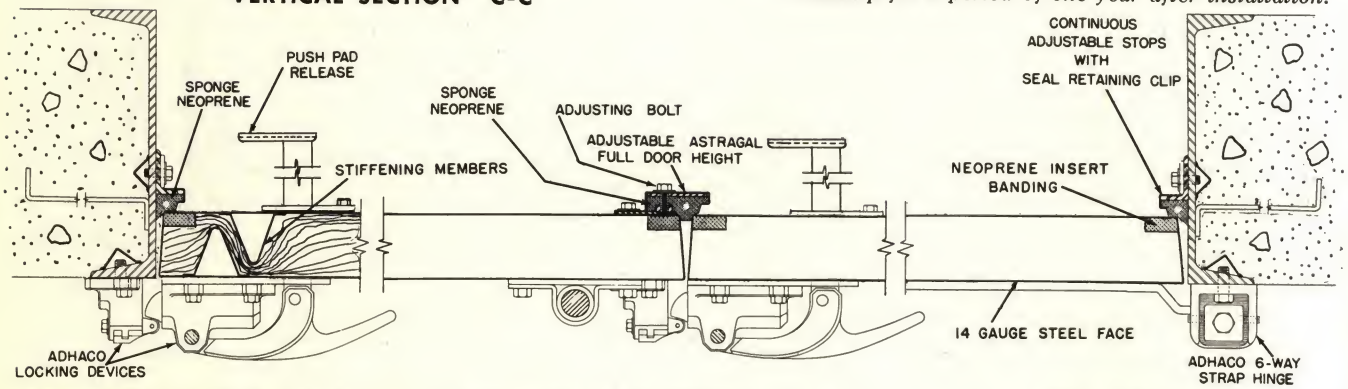
***Doors**—shall be constructed with 16 gauge cold rolled steel flush panels backed up with adequate panel reinforcing members. Stop side of door shall have heavy duty Neoprene banding at head and stiles. Face panels shall be separated by sound insulating air space which is maintained by incorporating non-coupling resilient members. Doors shall be adequately reinforced and factory drilled and fitted for all hardware including "Auto-Seal" threshold crack closers.*

***Drawings and Guarantees**—Before any work is started this contractor shall furnish for architect's approval complete shop drawings and the following guarantees:*

(a) *Certification by Riverbank Acoustical Laboratories, Geneva, Illinois or National Bureau of Standards, Washington, D.C. that sound transmission loss of door is not less than 47 db average, based on tests at nine frequencies over a range of 125 to 4000 cycles per second, in accordance with ASTM Sound Transmission Practice E 90-55.*

(b) *Written guarantee stating that doors are constructed exactly in accordance with laboratory tested door.*

(c) *All equipment furnished under this contract shall be guaranteed free from defects in material and workmanship for a period of one year after installation.*



LOCK JAMB SECTION A-A MEETING STILE SECTION D-D HINGE JAMB SECTION B-B

SCALE 1½" = 1'-0"

SCALE TRACING SHEETS OF SONICBAR DETAILS AVAILABLE UPON REQUEST

INDUSTRIAL ALSTELE SOUND INSULATING UNITS

TYPE DM3-53 DOORS

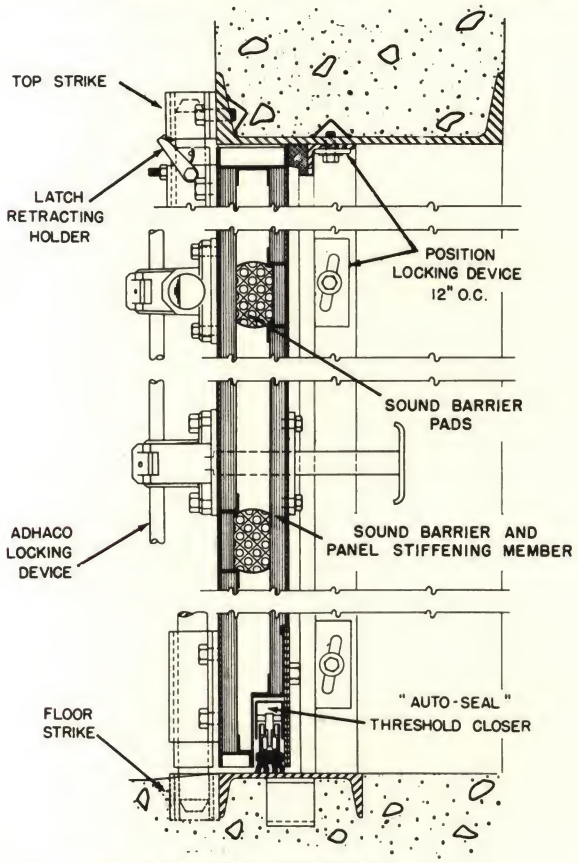
This door was designed to meet the ever increasing need for higher sound attenuation in doors approximately 3" thick. The Alstele with only a small increase in weight attains its higher sound insulating efficiency through the application of new acoustic principles of noise reduction.

The door is constructed with 14 ga. cold rolled steel flush panels backed with reinforcing members and complex acoustical barrier materials. Faces are separated by isolating air space maintained by non-coupling resilient members.

This door has a certification for 53 db by Riverbank Acoustical Laboratories, Geneva, Ill., in accordance with ASTM Recommended Practice E 90-55. This unit, consisting of our 3" thick Alstele metal sound insulating door, structural channel frame, Adhaco "Slam" type lock and "Six Way" hinges together with industrial adjustable seals and "Auto-Seal" threshold crack closer provides finest operation and highest sound attenuation of any 3" door available to industry.

Standard Units are available with hardware, frames and seals in sizes as shown on page 7. Drawings DM3-5806 (singles) and DM3-5807 (pairs) are available for submission of approval drawings or for use in tracing 3" scale details.

Custom Units can be furnished in a wide range of sizes and operating function to meet a variety of project requirements.



VERTICAL SECTION

SHORT FORM "SPECS" FOR DM3-53 UNITS

***General**—All door openings shown on plans as "Sound-Proof" shall be Sonicbar industrial units, Type DM3-53 as furnished by Firebar Door Division, Rysdon Products Co., Chicago 20, Ill., or approved equal. Units shall include laboratory certified sound insulating 53 db doors, structural channel frames, special purpose heavy duty hardware and adjustable type clearance crack sealing devices.*

***Frames**—shall be factory template fitted, drilled and tapped for all hinge pintles, locking hardware and adjustable sealing devices. Masonry cover boxes to be welded to back side of frame to protect all tapped holes.*

***Doors**—shall be constructed with 14 gauge cold rolled steel flush panels backed up with adequate panel reinforcing members. Face panels shall be separated by sound insulating air space which is maintained by incorporating non-coupling resilient members. Doors shall be adequately reinforced and factory drilled and fitted for all hardware including "Auto-Seal" threshold crack closers.*

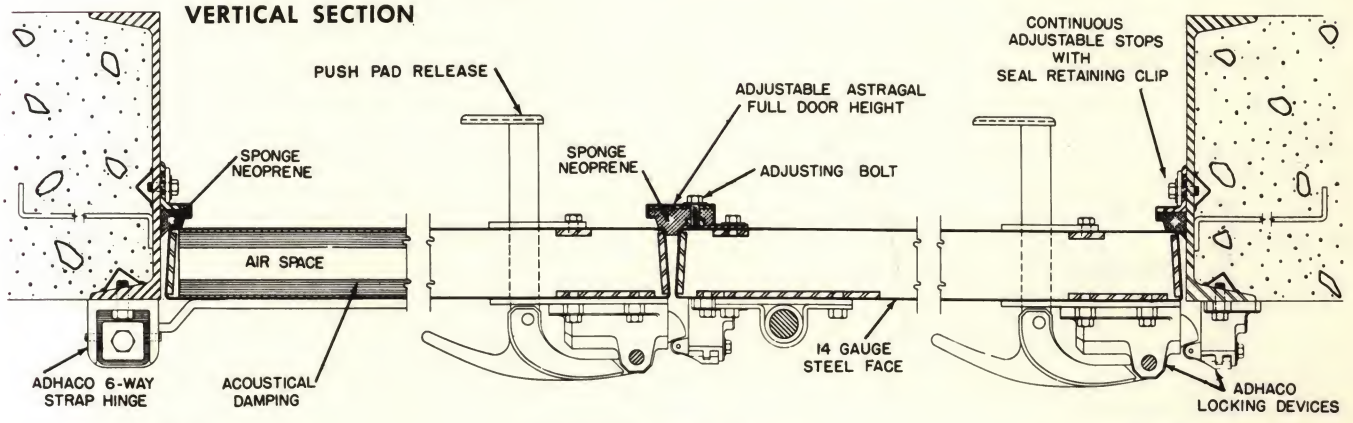
***Drawings and Guarantees**—Before any work is started this contractor shall furnish for architect's approval complete shop drawings and the following guarantees:*

(a) *Certification by Riverbank Acoustical Laboratories, Geneva, Illinois or National Bureau of Standards, Washington, D.C. that sound transmission loss of door is not less than 53 db average, based on tests at nine frequencies over a range of 125 to 4000 cycles per second, in accordance with ASTM Sound Transmission Practice E 90-55.*

(b) *Written guarantee stating that doors are constructed exactly in accordance with laboratory tested door.*

(c) *All equipment furnished under this contract shall be guaranteed free from defects in material and workmanship for a period of one year after installation.*

All installation work shall be performed by skilled mechanics in strict accordance with the "Installation Instructions and Procedures" furnished by the door manufacturer.



HINGE JAMB SECTION

MEETING STILE SECTION

LOCK JAMB SECTION

SCALE 1½" = 1'-0"

SCALE TRACING SHEETS OF SONICBAR DETAILS AVAILABLE ON REQUEST

INSTITUTIONAL SLIDING DOORS

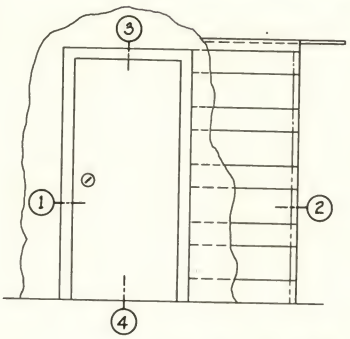
TYPES SQ2-45, SM2-48

A unique system of Acoustilok seals developed by our product research laboratory provides a sliding door unit with the sound insulating qualities of a Sonicbar sound insulating door.

The Acoustilok system consists of an absorbing fibrous glass air seal in the formed trim and expanded metal housings of the frame. Clearance sealing at bottom of door in closed position is accomplished by lever-actuated compressed Neoprene gasket in our "Auto-Seal" threshold crack closer.

Door and frame are standard hollow metal construction of best materials and highest craftsmanship. Frame corners are mitered and ground smooth. Track and rollers provide for easiest, maintenance-free operation.

The Quiedor Type SQ2-45 (45 db) door or the Alstele Type SM2-48 (48 db) door may be specified. For economy in an excellent installation we recommend the Quiedor. For highest sound reduction and best workmanship we recommend the Alstele. See pages 10 and 11 for door construction.

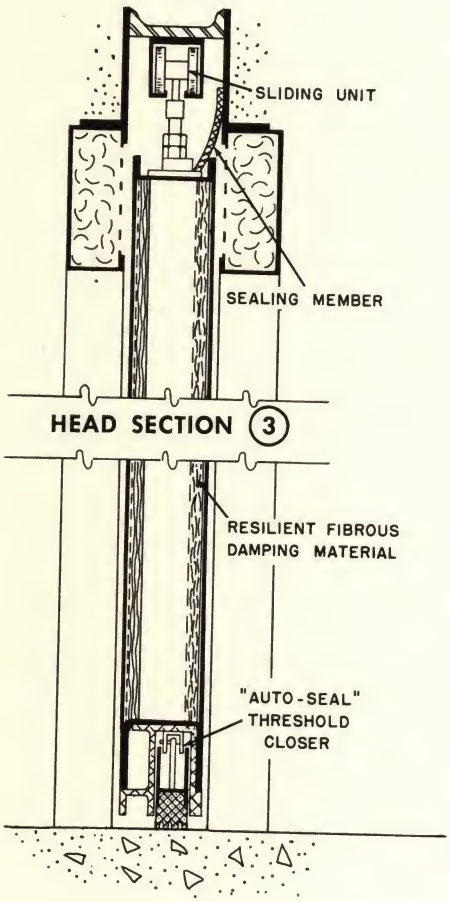


USES:

- Motels, Hotels
- Medical and Dental Suites
- Executive and Legal Offices
- Recording and Music Studios
- Radio and Television Facilities
- Clubs and Lounges

STANDARD SIZES:

2'8" x 6'8"
3'0" x 6'8"
2'8" x 7'0"
3'0" x 7'0"



HEAD SECTION (3)

SILL SECTION (4)

SHORT FORM "SPECS" FOR SLIDING UNITS

General—*All doors shown on plans as "Sound-Proof" shall be Sonicbar units Type (SQ2-45) (SM2-48) furnished by Firebar Door Division, Rysdon Products Co., Chicago 20, Ill. or approved equal. Units shall include laboratory certified (45) (48) db doors, formed metal frames, clearance crack seals and sliding hardware.*

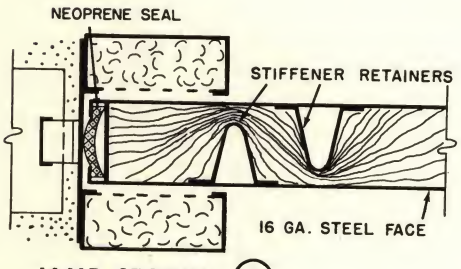
Door and Frame Construction—*Doors shall be constructed with cold rolled steel faces with stiffening members, sound insulating inner construction, and perimeter seals. Doors shall have recessed aluminum "Auto-Seal" threshold crack closers. Frames shall be 16 gauge steel integrally formed trim and jamb members with Acoustilok system of sealing having fibrous glass sound absorption fill or equal. Recess members shall be formed steel to provide a wall pocket and support for sliding hardware.*

Drawings and Guarantees—*Before any work is started this contractor shall furnish for architect's approval complete shop drawings and the following guarantees:*

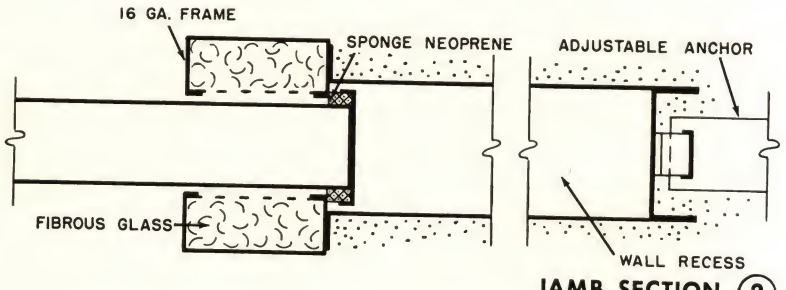
(a) *Certification by Riverbank Acoustical Laboratories, Geneva, Illinois or Bureau of Standards, Washington, D.C. that sound transmission loss of door is not less than (45) (48) db average for nine frequencies over a range of 125 to 4000 cps per ASTM Sound Transmission Practice E90-55.*

(b) *Written guarantee stating that doors are constructed exactly in accordance with laboratory tested door.*

(c) *All equipment furnished under this contract shall be guaranteed free from defects in material and workmanship for a period of one year after installation.*



JAMB SECTION (1)



JAMB SECTION (2)

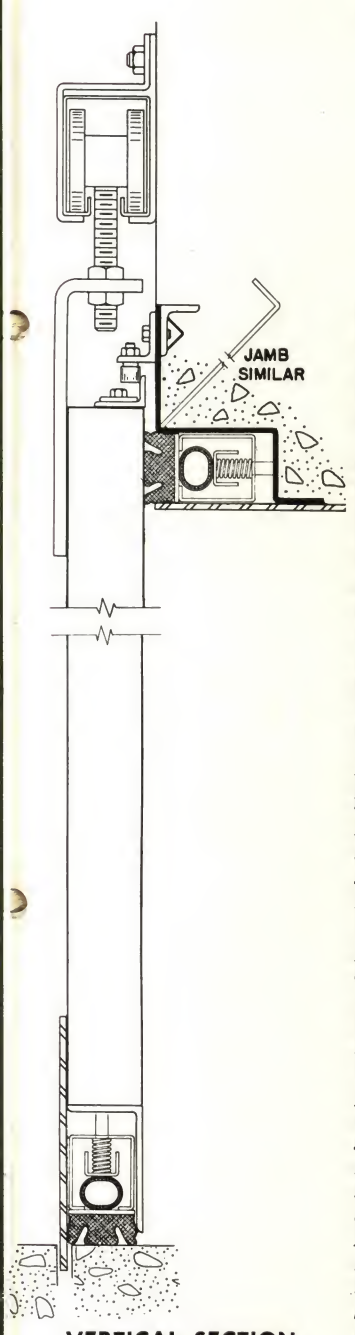
SCALE: 3" = 1'-0"

INDUSTRIAL SLIDING DOORS

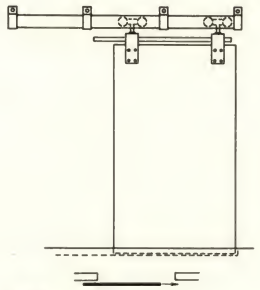
Horizontal sliding doors are advantageous for many door openings where swing doors are impractical due to space factors. The usual difficulty of complete clearance crack sealing on sliding doors has been solved by Rysdon engineers in several combinations of hardware, frame and sealing design.

Both types detailed on this page may be either manual or power operated and each has certain advantages depending on job requirements. Minimum dimension between head and ceiling is approximately 18″ for manual operation and 36″ for power operation.

Vertical sliding doors are similar to these. We will be happy to work out requirements.



VERTICAL SECTION



TYPE 3FG

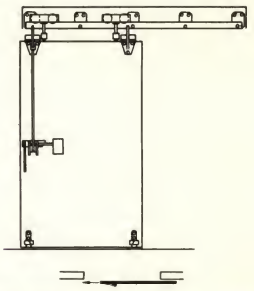
When positive sealing, heavy doors or large openings are required, we recommend this opening. "Auto-Air" Seal installed in integral frame housing (Type F6, Page 6) and on bottom edge of door, provides positive clearance crack sealing for sound, moisture, dust, gases and nominal air pressure differences.

Seals are efficient on most types and sizes of doors for manual (or power) operation. Standard types and sizes of tracks and hangers may be used depending on size and weight of doors and on type of operation and service. Features include complete pneumatic sealing with operating pressures up to 100 psi; positive mechanical seal retraction; minimum maintenance.

SPECIFICATIONS

Doors shown on plans and door schedule as sound-proof horizontal sliding shall be "Sonicbar" units by Firebar Door Div., Rysdon Products Co., Chicago 20, Ill. Units shall be complete, ready to install and include doors; "Auto-Air" seals; frames incorporating seal housings; and door hardware including tracks and hangers. Frames shall be 12 ga. formed steel full wall thickness (as detailed) incorporating seal housings and mechanism within frame at jambs and head. Seal spring retracting stud shall be accurately located to template within the seal housings. (See Pages 12 or 13 for door construction specification).

Neoprene gasket seals shall be pneumatic operated so that inflatable members force gasket against door surface to seal clearance crack. Sliding hardware shall consist of heavy duty industrial track and door hangers of ample capacity for size and weight requirements to enable proper door operation.



TYPE 3H-610

This arrangement of hardware and seals is suitable for doors not exceeding 6,000 lbs. and not exceeding 8′0″ width. Not recommended where seals are expected to maintain different pressures on opposite sides of door. Doors can be manually or power operated from either side.

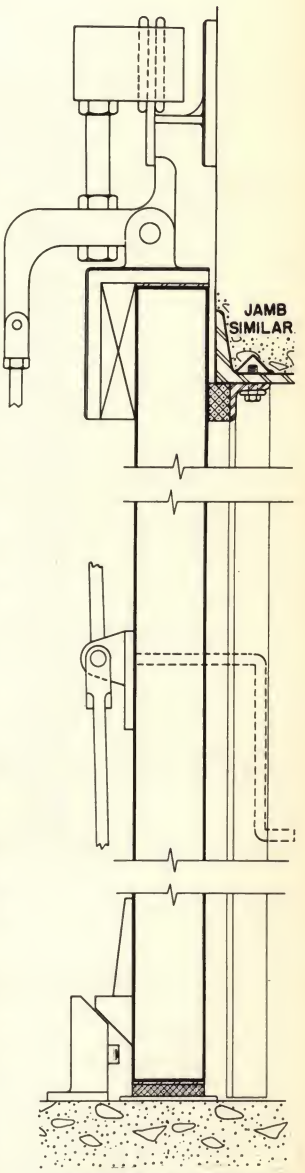
SPECIFICATIONS

Openings shown on plans as sound proof horizontal sliding shall be Sonicbar units furnished by Firebar Door Div., Rysdon Products Co., Chicago 20, Ill. Openings shall include sound insulating doors, sliding hardware, adjustable clearance crack closure seals together with manual (or power) operators.

Frames shall be furnished by others under miscellaneous iron.

(See Page 12 or 13 for door construction specification).

Zerk fittings shall be installed at all friction points of operating hardware which shall include overhead rail assemblies, integral adjustable stops, truck housings, hook and bracket assemblies, crank shafts, handles, brackets and door wedges. Hardware shall provide on and off cam action thru leverage to assure positive sealing and door alignment. Opening and closing of doors and lever operation for sealing shall be manual. (Doors shall be power operated and this contractor shall furnish all power operating equipment including switches, valves, motors—electric, pneumatic, or hydraulic — and other components necessary for door operation. All wiring and piping shall be by others).



VERTICAL SECTION

GUARANTEE

A written guarantee shall be furnished stating that doors are constructed exactly in accordance with laboratory tested units. Copy of test by National Bureau of Standards or Riverbank Acoustical Laboratories shall be furnished showing doors have a loss of .....decibels, based on 125 to 4000 cps. Installation shall be by skilled mechanics in accordance with "Installation Instructions and Procedures" by door manufacturer. Equipment furnished shall be guaranteed free from defects in material and workmanship for one year after installation.

SCALE: 1½″ = 1′-0″

INSTITUTIONAL SLIDING WAL-DOR

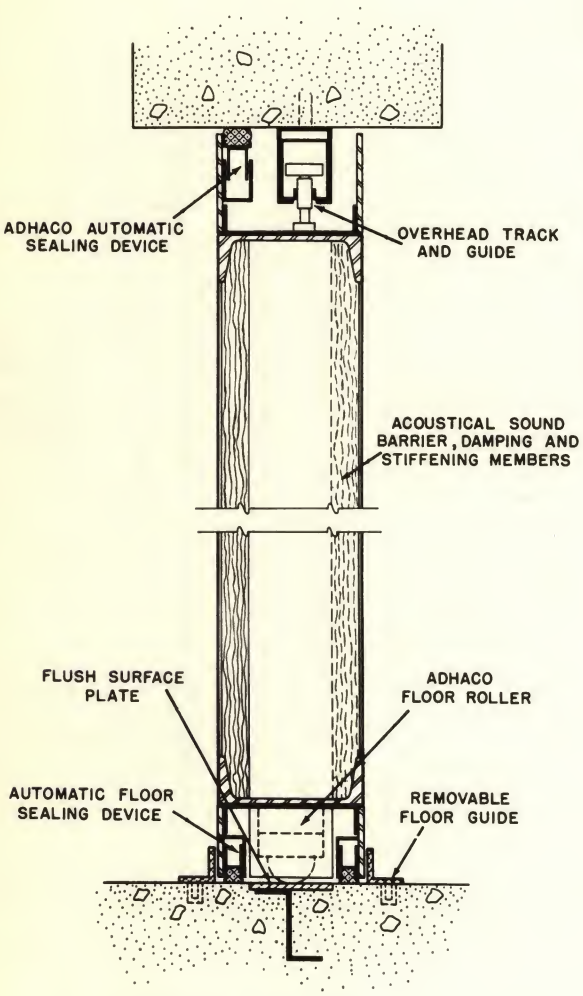
TYPE SM6-55

Wal-Dor units provide a new concept in sliding partitions since they offer approximately the same sound attenuation obtained from a solid 8" poured dense concrete wall. They fill the need in meeting halls for a room dividing partition which can easily be moved into position and which provides high sound isolation for both sides.

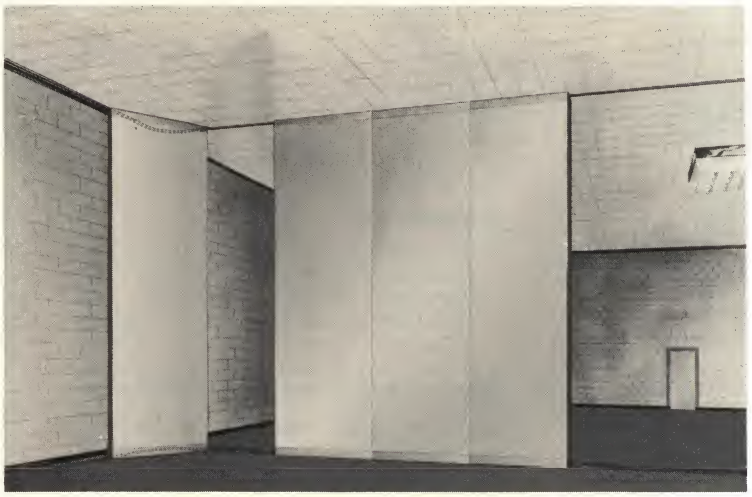
These units are especially desirable in modern buildings where space for multiple usage is at a premium, such as in churches, schools, and similar institutions.

Wal-Dor partitions are furnished in any width and up to 30 feet in height in 3" to 6" thickness, depending on sound insulation required and on ceiling height. Overhead door hangers are provided where ceiling construction will support partition weight; and when this is not feasible, units are mounted on concealed floor rollers with overhead guides.

Preliminary layout incorporating Wal-Dor features, storage spaces, personnel doors, alternate methods of operation, etc., furnished on request.


ADHACO AUTOMATIC SEALING DEVICE
OVERHEAD TRACK AND GUIDE
ACOUSTICAL SOUND BARRIER, DAMPING AND STIFFENING MEMBERS
FLUSH SURFACE PLATE
ADHACO FLOOR ROLLER
AUTOMATIC FLOOR SEALING DEVICE
REMOVABLE FLOOR GUIDE

VERTICAL SECTION



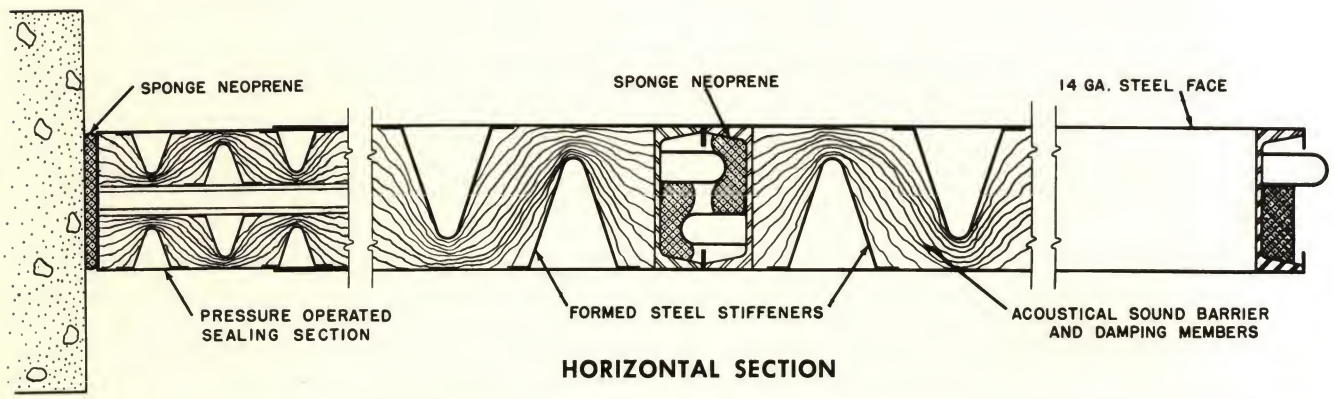
Wal-Dors provide high sound insulation in a movable partition.

SHORT FORM "SPECS" FOR SM6-55 UNITS

Sound insulating partitions shown on plans shall be Type SM6-55 units, furnished by Firebar Door Division, Rysdon Products Co., Chicago 20, Ill., or approved equal.

Openings shall include 6" thick Wal-Dor sound insulating partitons, panel perimeter sealing devices, (overhead tracks and door hangers) or (concealed floor rollers, floor plates and overhead guides) and all operating devices. Doors shall be flush panel design full height and shall be acoustically designed to produce the required sound reduction.

A written guarantee shall be furnished stating that doors are constructed exactly in accordance with laboratory tested units. Copy of test by National Bureau of Standards or Riverbank Acoustical Laboratories shall be furnished certifying doors have a loss of 55 decibels, based on 125 to 4000 cps. Equipment furnished shall be guaranteed free from defects in material and workmanship for one year after installation.



HORIZONTAL SECTION

SCALE: 1½" = 1'-0"

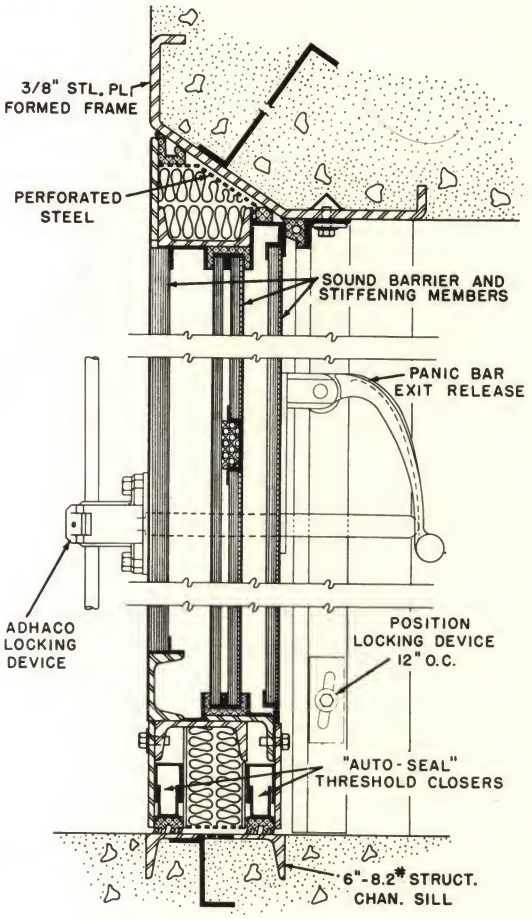
INDUSTRIAL ACOUSTIDOR UNITS

TYPE DA6-60 — FOR HIGHEST NOISE REDUCTION

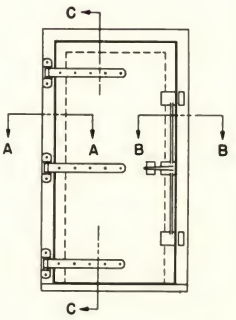
The Acoustidor Unit, consisting of 5¾" thick ruggedly built door, formed steel plate frame, heavy duty hardware and multiple perimeter seals, provides sound reduction equivalent to 12" poured dense concrete walls.

This extremely high sound reduction in a single door is obtained with massive construction, laboratory engineered isolated panels, acoustical damping members and insulating air spaces.

Complementing the door construction is a unique perimeter sealing system with Acoustilok and multiple Neoprene seals.



VERTICAL SECTION C-C



SHORT FORM "SPECS" FOR TYPE DA6-60 UNITS

***General**—All doors shown on plans as "Sound-Proof" shall be Type DA6-60 furnished by Firebar Door Division, Rysdon Products Co., Chicago 20, Ill. or approved equal. Units shall include laboratory certified 60 db doors, formed metal frames, multiple perimeter sealing devices, heavy duty hardware and multiple "Auto-Seal" threshold crack closers.*

Door shall be 5¾" thick and constructed with 14 gauge cold rolled steel panels backed up with adequate panel reinforcing members. Stile and rail members shall be 12 gauge steel plate formed to profiles as shown. Interior of door shall incorporate a 40 db sound insulating septum mounted in sponge Neoprene isolating gaskets which also provides insulating air spaces.

Multiple perimeter sealing devices shall include four Neoprene gasket seals with one set of fully adjustable stops and fibrous glass filled Acoustilok at edges. Meeting stiles of pairs to have four Neoprene gasket seals full height of door including fully adjustable astragal.

Frames shall be formed steel plate and shall be factory template fitted, drilled and tapped for all hinge pintles, locking hardware and sealing devices.

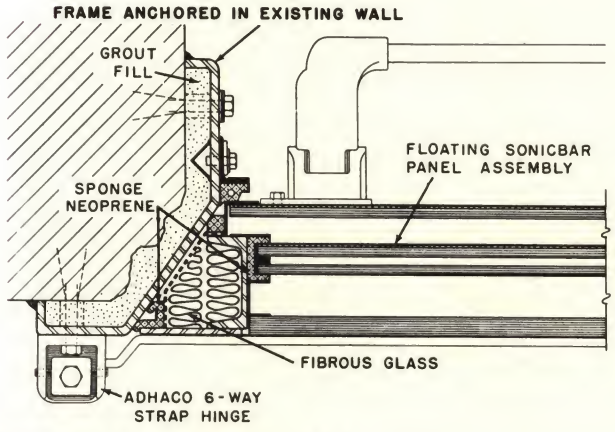
***Drawings and Guarantees**—Before any work is started this contractor shall furnish for architect's approval complete shop drawings and the following guarantees:*

(a) *Certification by Riverbank Acoustical Laboratories, Geneva, Ill. or Bureau of Standards, Washington, D.C., that sound transmission loss of door is not less than 60 db average, based on tests at nine frequencies over a range of 125 to 4000 cps in accordance with ASTM Sound Transmission Practice E 90-55.*

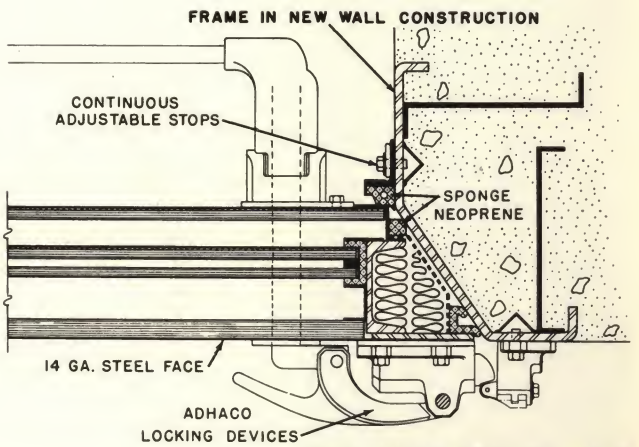
(b) *Written guarantee stating that doors are constructed exactly in accordance with laboratory tested door.*

(c) *All equipment furnished under this contract shall be guaranteed free from defects in material and workmanship for a period of one year after installation.*

All installation work shall be performed by skilled mechanics in strict accordance with the "Installation Instructions and Procedures" furnished by this door manufacturer.



HINGE JAMB SECTION A-A



LOCK JAMB SECTION B-B

SCALE: 1½" = 1' 0"

SOUND LOK OPENINGS

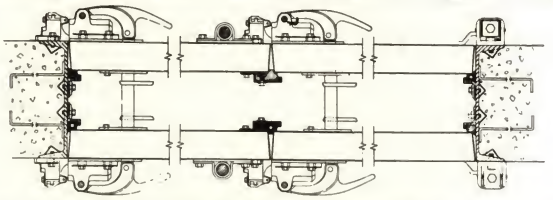
GENERAL INFORMATION

The Sonicbar Sound Lok openings are produced by using double sets of doors (singles, pairs or sliding) thereby utilizing the trapped air space between doors to provide a very high degree of noise reduction. In single walls the Sound Lok arrangement results in approximately 33% more sound attenuation than is obtained by one door in the opening. The amount of increase varies depending on amount of air space between two door faces.

An even higher noise reduction can be obtained with Sound Lok arrangement in double (cavity) walls in which doors are installed in two separate frames. Depending upon the amount of separation between door faces, an increase of approximately 50% sound attenuation is obtained from this design. Thus reductions up to 85 db are possible.

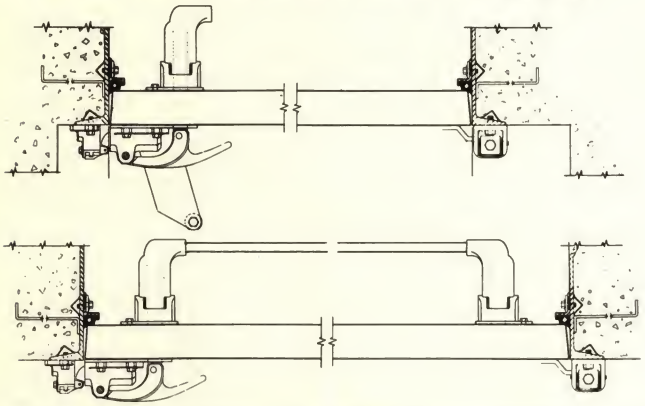
OPPOSITE SWING OPENINGS

Sound Lok Opposite Swing openings may be built from standard sizes and types of doors, frames and hardware. To accommodate project requirements they can also be custom built to any size or hardware function. Standard sizes shown on page 7.



TANDEM (PANIC) SWING OPENINGS

Sound Lok Tandem Swing openings, in which both doors swing in the same direction, have special hardware requirements and a definite relationship in the size of the "small" and "large" sides. For these reasons only a limited number of sizes are available in standard sizes as shown on page 7.

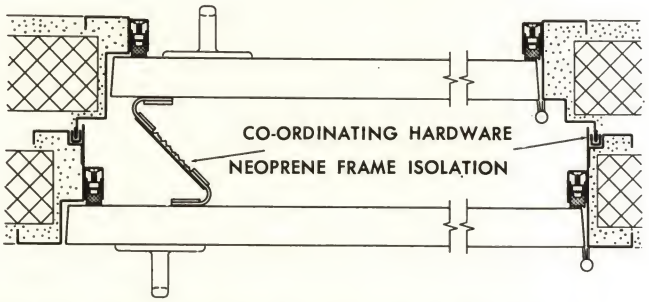


Sound Lok Tandem Swing door installation in aircraft engine test cells at Chanute AFB, Rantoul, Ill. provides entirely adequate noise reduction.

CO-ORDINATED TANDEM UNITS

The Sound Lok co-ordinated door consists of two doors which operate from either side as one. Drawing and photograph show institutional type which gives up to 80 db noise reduction. Note that frames are isolated from each other by Neoprene insert, assuring highest efficiency when installed in double (cavity) walls. Doors also are mechanically isolated from each other as shown.

Sonicbar Co-Ordinated Sound Lok Unit installed in double (cavity) walls at television station WBKB, ABC-TV owned and operated station, Chicago, Ill.



SHORT FORM SOUND LOK SPECIFICATIONS

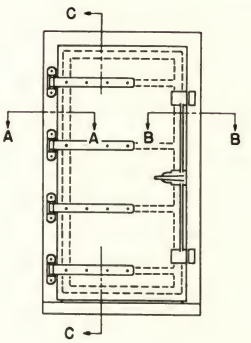
All door openings having double doors in each opening, and shown on plans as "sound-proof" shall be Sonicbar Sound Lok units as furnished by the Firebar Door Division, Rysdon Products Company, Chicago 20, Illinois.

Note: Select the type of door construction desired and add balance of specifications from other pages relating to various door constructions, hardware, guarantee, laboratory certification, etc.

BLAST RESISTANT DOORS

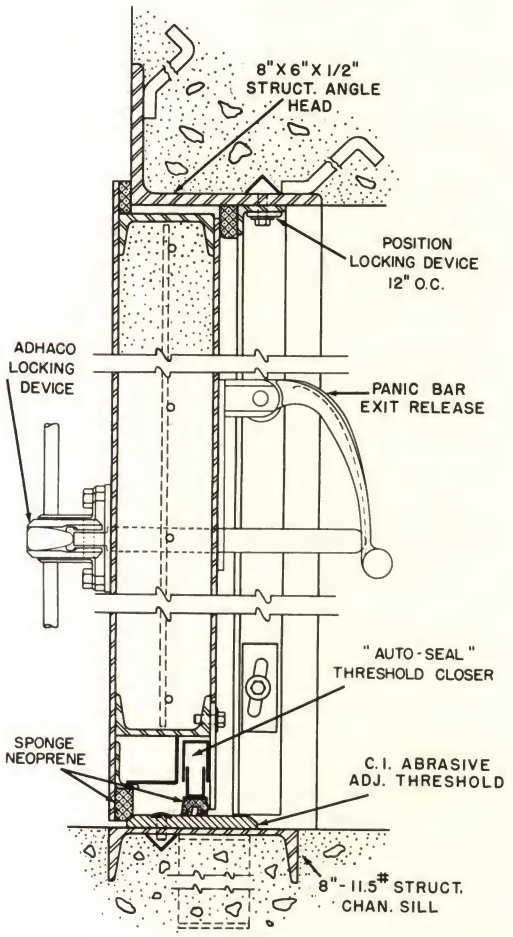
TYPE DC4-41

The Stelecrete Unit is designed to provide a rugged blast resistant and sound retarding door operating with heavy duty hardware and adjustable sealing devices.
The 4½" thick door in sizes up to 3'6" x 7'0" is designed for 1000 p.s.f. and 41 db sound reduction. Thicknesses up to 12" with face plates up to 1" thick are furnished for higher blast resistance. Recommended thicknesses for various sizes and blast pressures furnished on request.



STANDARD SIZES

Frame Opg.	Size
Singles	3'0" x 7'0"
	3'6" x 7'0"
	4'0" x 7'0"
	4'0" x 8'0"
	5'0" x 7'0"
	6'0" x 7'0"
Pairs	5'0" x 7'0"
	6'0" x 7'0"
	6'0" x 8'0"
	7'0" x 7'0"
	8'0" x 7'0"
	8'0" x 8'0"



VERTICAL SECTION C-C

SHORT FORM "SPECS" FOR DC4-41 UNITS

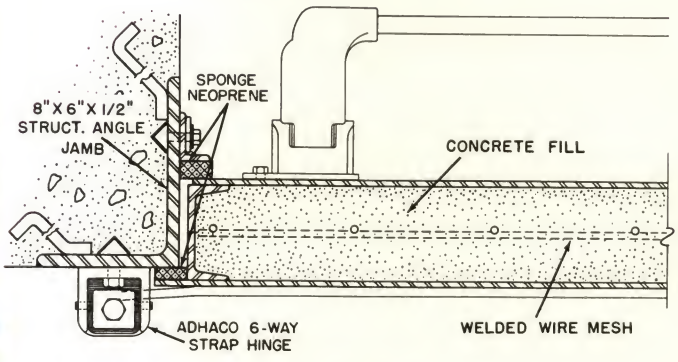
***General**—All door openings shown on plans as "Blast-Proof" shall be Type DC4-41 furnished by Firebar Door Division, Rysdon Products Co., Chicago 20, Ill. or approved equal. Units shall include laboratory certified 41 db steel plate concrete fill doors, structural steel frames, and heavy duty adjustable hardware and dual clearance crack seals.*

***Door, Frame and Seals Construction**—Doors shall be constructed of ¼" steel plates both faces, structural channel perimeter and interior members, welded wire mesh concrete reinforcing, and shall be factory vibrator filled with concrete. Frames shall be welded structural steel shapes as shown, factory template fitted, drilled and tapped for hinge pintles, locking hardware and sealing devices.*
Double perimeter sealing devices shall be provided; one set shall be fully adjustable. "Auto-Seal" threshold crack closers and adjustable thresholds with cast iron abrasive sills shall be provided.

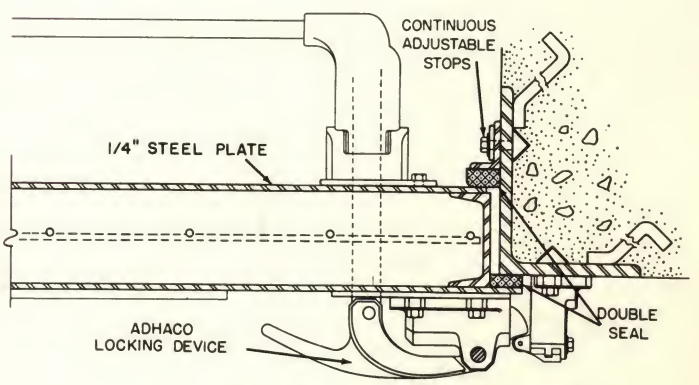
***Guarantees**—A written guarantee shall be furnished stating doors are constructed exactly in accordance with laboratory-tested units. A copy of test by National Bureau of Standards, Washington, D. C., or Riverbank Acoustical Laboratories, Geneva, Ill., shall be furnished, certifying that doors have a transmission loss of 41 decibels (4½" thickness) based on the average of nine tests over a range from 125 to 4000 cps.*

All equipment furnished under this contract shall be guaranteed free from defects in material and workmanship for a period of one year after installation.

Installation shall be performed by skilled mechanics in strict accordance with the "Installation Instructions and Procedures" furnished by door manufacturer.



HINGE JAMB SECTION A-A



LOCK JAMB SECTION B-B

SCALE: 1½" = 1' 0"

BLAST RESISTANT DOORS

Our designation "Blast Resistant Doors" refers to all types of doors, frames, hardware, sealing devices and operators which are designed for the primary purpose of resisting forces from high explosive chemical or nuclear blasts.

In addition to withstanding blast force and rebound, doors in this category are usually required to perform other duties such as radiation shielding, gas tight sealing, thermal insulation, operation from both sides, panic exit, etc.

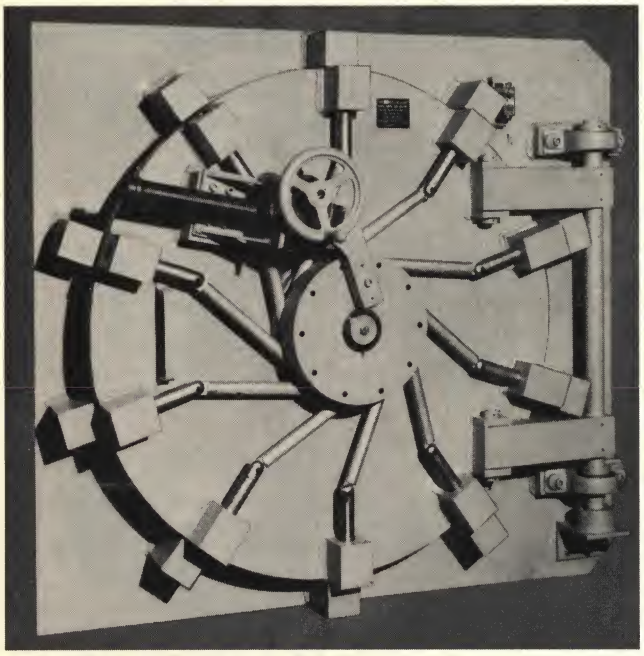
Product development engineers and designers in the Rysdon organization, through many years' experience in designing a wide range of doors, hardware, frames, sealing devices, and manual or power operators, have the "know how" to cope with the constantly changing designs, weights and sizes of blast resistant doors required to meet new developments of modern technology.

Depending upon the size of door opening, anticipated amount and duration of blast force, ease of door operation requirements, etc., we custom design doors in varied constructions ranging from single thickness steel plate to laminated welded plates, cast iron or complex plate and structural steel weldments with special concrete or radiation resistant filling material.

Likewise, the type of door operation which is most desirable varies with almost every project. As a result, we have designed blast resistant doors not only in the conventional hinged swinging type, but also as vertical counterbalanced sliding and horizontal sliding types.

An important phase of our designing services includes furnishing for approval, a complete dynamic analysis verifying blast resistance of door, frame and hardware construction; permanent deformation; concrete frame anchorage; etc.

When required by these newer problems in advanced engineering, our staff is augmented by expert consultants in the fields of blast resistance, nuclear engineering, etc. We offer the services of our engineering staff to assist you in the preparation of designs and specifications for blast resistant door openings.



This Blast Resistant Door is one of a number designed and fabricated by Rysdon engineers and metal craftsmen for the Corps of Engineers, U. S. Army at Cape Canaveral, Florida. This unit is designed to withstand over 500 p.s.i.g. for about 2 milliseconds with a high percent rebound. This door can be operated from both sides and in the closed position is gas tight.

SHORT FORM SPECIFICATIONS

Where shown on plans as Blast Resistant (Nuclear Shielding) doors, frames, hardware and sealing devices shall be furnished by Firebar Door Division, Rysdon Products Company, Chicago 20, Ill. Doors shall be built to resist a blast force of.....p.s.i.g. for duration of.....milliseconds and maximum permanent deformation shall not exceed..... inches. Analysis of frame anchorage and door components shall be based on rebound force of..... % of blast force. With the submission of drawings for approval, door manufacturer shall submit a dynamic analysis, verifying blast resistance, maximum permanent deformation, anchorage and locking members for door, frame and hardware. (When required, doors shall be gas tight before and after blast.)

All materials furnished under this contract shall be guaranteed against defective labor and materials for a period of one year after installation.

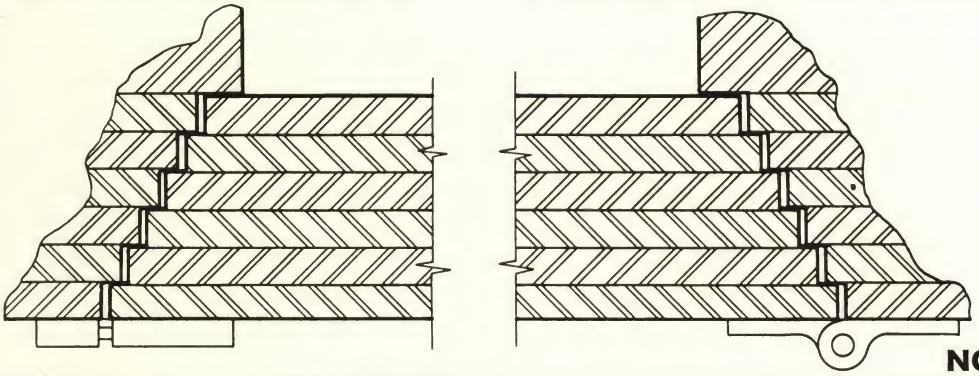
NUCLEAR SHIELDING DOOR

The Nuclear Shielding door is similar to the Blast Resistant door in size, weight and general type of hardware used. It sometimes differs in the kind of materials used and more emphasis may be placed on the close tolerance machined meeting surfaces of door and frame. This provision results in metal-to-metal contact between door and frame, thereby minimizing radiation "streaming."

The constantly increasing industrial applications of Atomic Energy create new radiation door closure problems. The type and design of door will therefore vary considerably for various installations.

The diagram below indicates laminated and welded steel plate door and frame construction. Other effective radiation shielding door constructions include cast iron, solid steel plate and steel plate weldments with cavity between plates filled with magnetite or other shielding material.

Careful attention is given to every detail of construction on each door design. Frames are scientifically built to provide proper radiation shielding at vital locations around the door frames. Our engineering department will be pleased to assist in designing efficient, economical Nuclear Shielding doors.

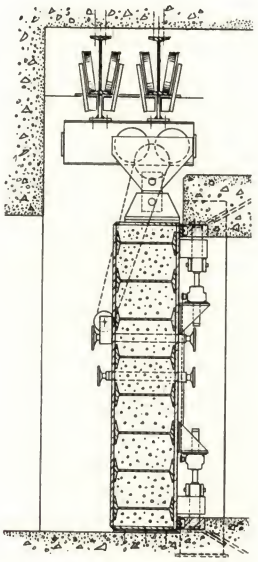


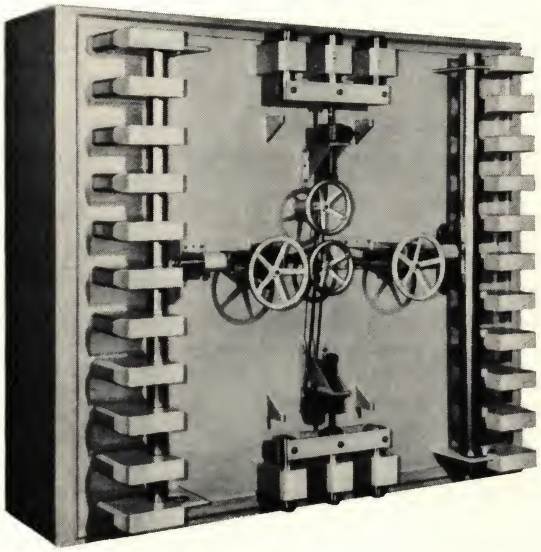
NOT TO SCALE

BLAST RESISTANT DOORS

The two door openings illustrated below indicate alternate methods of operation for a blast resistant project. As designed, the door weight is approximately 20 tons. Design criteria governing both layouts are:

(a) Blast force: 2800 p.s.i.
(b) Theoretical rebound: approximating 100%
(c) Blast duration: 2 milliseconds
(d) Maximum allowable permanent door deformation: ½"
(e) Gas tight before and after blast
(f) Doors operable from both sides
(g) Doors can be manual or power operated

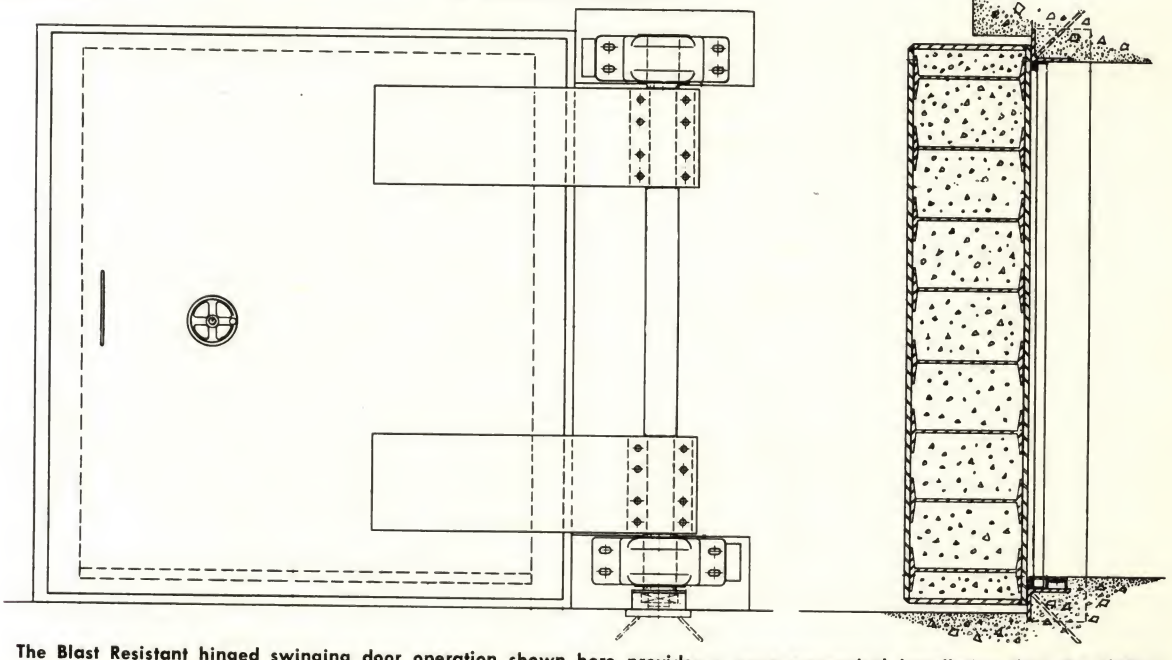




Engineered and fabricated by Rysdon Products Company for the U. S. Army, Corps of Engineers, this Blast Resistant door, one of several of same general type, is installed at Cape Canaveral, Fla. Design criteria: withstands blast force of 2800 psi for 2 milliseconds; rebound, 100%. Door operation shown above is unique since it provides for sliding operation in four directions. The design offers considerable economy in critical floor space.

Blast Resistant and Nuclear Shielding door closures are specified for use in:

1. Nuclear Plants
2. Radiation Facilities
3. Explosives Manufacture
4. Rocket Launching
5. Ordnance Manufacture
6. Test Facilities
7. Protective Construction
8. Personnel Shelters



The Blast Resistant hinged swinging door operation shown here provides a more economical installation than the sliding door above at the expense of over 11'0" radius floor space.

NOT TO SCALE

FUNDAMENTALS OF SOUND CONTROL

THE ARCHITECT AND NOISE CONTROL

1. Erect Suitably Heavy Walls

Dense concrete, masonry, brick, concrete block or plastered walls are necessary. In general 12″ concrete has about 55 db sound reduction, and 6″ about 50 db. Double (cavity) walls may be necessary in extreme cases.

2. Provide a Sound Tight Roof

The roof must generally be comparable in sound isolation to walls, or good walls are not justified. Ventilation openings must be kept to a minimum and may require special acoustic treatment.

3. Design Windows for Minimum Sound Loss

Multiple thick glass plates spaced several inches apart sometimes must be used and glass area should be kept to a minimum.

4. Close Up All Unnecessary Openings

Utilities, conduits, pipes, operating linkages, etc. may require openings in walls. These must all be sealed.

5. Analyse Requirements for Sound Absorption

Intended use of the space will govern amount and type of sound absorption such as acoustical ceiling tile, draperies, etc.

6. Insist On Certified Sound Insulation Tests

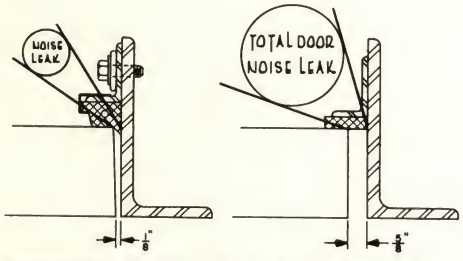
It is not sufficient for the architect, contractor, or engineer to know that a building element is "tested," "laboratory tested" or even "backed by bond." It is important that he simply insist on a test by a "recognized" laboratory such as the National Bureau of Standards or Riverbank Acoustical Laboratories of Armour Research Foundation. These are "recognized" agencies who make the American Society of Testing Materials' test on sound transmission loss through walls, floors, ceilings, windows, doors and similar building elements. The test report supplied by one of these agencies should be insisted upon by the prospective purchaser. Any firm that has its products so tested is able and proud to supply further information.

7. Select and Specify Door Openings that will Effect the Desired Sound Reduction

The design elements which should be carefully checked are:

(a) *Clearance space around doors—Sound leaks caused by clearance space between door and frame, door and sill or threshold are frequently overlooked by specification writers with the result that door openings do not produce "on the job" sound attenuations comparable with the door panel rating.*

The following sketches indicate the range of variation in clearance cracks which are designed into various "sound-proof" door openings:



Sketches show comparative clearance cracks and schematic comparisons of "noise area" leaks.

Illustrating this principle on a typical door opening, we find that the perimeter of a 3′0″ x 6′8″ door is 19′4″. With a 1/8″ clearance at head, sill and both jambs, the clearance crack sound leak area totals 29 sq. in. or 1/5 of a square foot.

With a clearance of 5/8″ all around the door, the clearance crack develops 145 sq. in. or one square foot of noise area leakage.

This is the basic weakness in many so-called "sound-proof" door installations, particularly in industrial areas where a high degree of noise reduction is required.

(b) *Clearance crack seals or gaskets—It should be recognized that clearance crack seals cannot be comparable to the door itself unless (1) they seal the opening completely, and (2) they have the same mass as the door.*

Recognition of the above requirements indicates the need for a seal to have:

(1) *Compliance so as to fit snugly, to close the crack openings and to compress tightly against door and frame members.*

(2) *Mass—must be heavy or dense as possible and still retain sufficient resilience to recover strength and resist fatigue.*

(3) *Size—must be large enough to make the sound path through itself as long as feasible.*

Sponge Neoprene of the proper weight and resilience in moulded or extruded shapes is one of the best materials to fulfill the above requirements. In order to maintain its effectiveness, however, the seal must also be:

(1) *Resistant to wear and other elements contacting it such as: oil, grease, dirt, etc.*

(2) *Fully adjustable so that wear or "compression set" in the seal can be compensated.*

(3) *Reasonably well protected by housing members to lessen likelihood of tearing.*

(4) *Securely fastened without use of adhesives to facilitate easy replacement.*

When crack clearances are kept to a practical minimum and seals meet all of the above design criteria the loss in sound attenuation of a door opening will be reduced by 3 to 7 db. From this example of the effect of ideal sealing, it may be safely concluded that improper sealing of clearance cracks will reduce the efficiency of sound insulating door openings by a very large percentage.

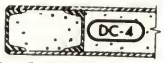
MASS LAW VERSUS ACOUSTICAL DESIGN

When considering the type of door to specify for "sound-proof" openings, it is of utmost importance to consider the mass or weight of the door panel. The difficulty with which a door is operated by personnel and its maintenance costs are usually in direct relation to its weight.

Since many "sound" doors are manufactured on the "Mass Law" principle, and some even add bulky construction to this weight, it therefore may be well to examine the following test data on doors built entirely on the "Mass" principle.

A. Solid Wood Door, 2 1/2″ thick
Wt. 12.5 psf—Rating 30 db

B. Steel Plate & Concrete Door, 4 3/8″ thick
Wt. 39 psf—Rating 41 db



The above illustrates the Mass Law which holds that if the weight is doubled, the sound attenuation is increased by 6 db. On the other hand, observe the test data for the following doors which are dependent for their sound attenuating efficiency not only on their weight or mass, but primarily on their acoustical design:

C. Metal Covered Door, 3″ thick
Wt. 14 psf—Rating 45 db

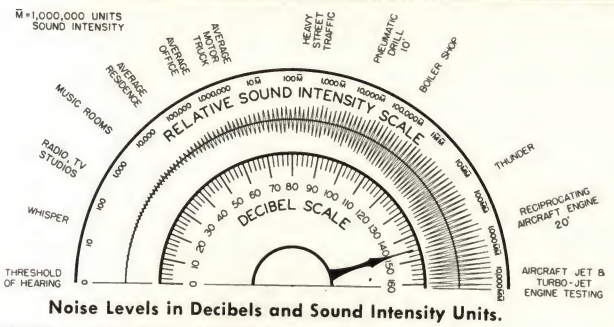
D. Alstele Flush Metal Door, 1 3/4″ thick
Wt. 10 psf—Rating 48 db

E. Alstele Flush Metal Door, 3″ thick
Wt. 18 psf—Rating 53 db

Since the cost of doors, hardware and frames is directly related to the door weight and the operation of doors becomes easier as the weight is decreased, it is of vital importance that acoustical designing be incorporated into the manufacture of "sound proof" doors, rather than the "Mass Law" principle.

Send for Brochure:

FUNDAMENTALS OF SOUND CONTROL



Noise Levels in Decibels and Sound Intensity Units.

COMMON SOUND LEVELS

The chart shows the range of sounds which can be heard by human ears. This range extends from O decibels, which is the point where very acute ears begin to hear, to 160 decibels which is even higher than the region of pain.

NEED FOR SOUND ATTENUATION

One purpose of building walls is to reduce noise at injurious sound levels down to conditions which are not offensive. Heavy masonry such as a 12 inch dense concrete wall will reduce sound about 55 decibels. This means that if a modern jet engine were operating within a test cell with 12 inch concrete walls, the level inside might be about 155 decibels, and that outside would be 100 decibels. In order to preserve the relatively high attenuation of the walls, the architect must design wall elements properly.

SAFE SOUND LEVELS

Walls, windows, and doors must reduce intense noises to sound levels which are not hazardous to hearing. Authorities such as H. C. Hardy (Jour. Acoustical Soc. of America, Nov., 1952) and L. L. Beranek, (Trans. Chem. Eng. Conf., Hyg. Found. of America, Nov., 1950) agree as to limiting or safe levels.

In the table the number below each octave is given by these authorities as the limit above which hazard to hearing might exist for exposure during most of the working day over a period of years. These might be called safe levels, at least until more is learned about hazardous levels.

Octave Bands, cps:	Below 75	75 150	150 300	300 600	600 1200	1200 2400	2400 4800	Above 4800
Decibel Levels:	107	101	97	95	94	91	90	95

Even 12 inch poured concrete walls with a 55 decibel sound reduction fail to provide adequate attenuation when levels of 150 to 160 decibels must be reduced to 90 decibels. Double wall construction must be used when a reduction of 60 decibels is required or when a reduction of 55 decibels is desired with a wall other than 12 inch masonry.

WHAT IS "SOUND TRANSMISSION LOSS?"

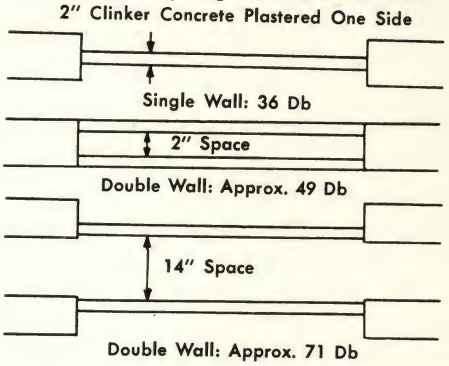
It is necessary for the architect to know that sound transmission loss is the term assigned to the property of a wall or other element to prevent sound from going through. It should be understood that this barrier action against sound is not related to the property of ceiling acoustical tile or similar material to absorb sound by reducing reflection.

Acousticians have an exact relation defining the transmission loss in terms of acoustic power incident on a wall and that transmitted through. The noise reduction provided by a wall is a little simpler. It is the difference in sound pressure levels on either side of a wall. It is not, therefore, the same as transmission loss, but for many cases of interior doors, the two are not far different.

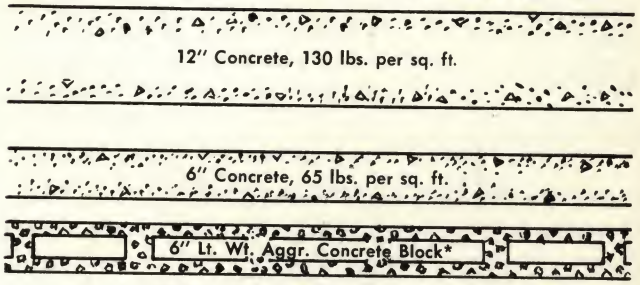
The transmission loss of a wall or element is determined by placing it in an opening between two standard test rooms. Sound is provided on one side, and measured on both. The difference in sound level, with certain corrections, is the transmission loss.

DOUBLE WALL CONSTRUCTION

The two diagrams below show that double (cavity) walls in a test facility have greatly improved noise reduction.



Upper sketch shows 2" concrete wall, plastered one side, has loss of 36 db. The next sketch shows a double wall same construction with loss of 49 db. For separated walls in lower sketch, loss is 71 db.



*Hollow 24 p.s.f. Painted one side.

Upper wall has a loss of 55 db. Lower 6" cavity wall provides 78 db.

HIGH SOUND REDUCTION WITH DOORS

When double (cavity) walls require an opening with two doors, each in its own frame so that frames and doors are not mechanically tied together, the attenuation of the doors can be expected to approximate that of the walls, assuming good seals. This is referred to as a sound lock and we call it our double wall Sound Lok arrangement (page 6).

In many cases high attenuation is not necessary and two doors spaced apart from each other to form a sound lock but hung in the same frame would be satisfactory. The transmission loss in this single wall Sound Lok is somewhat less than with separate frames in double walls.

LABORATORY CERTIFICATION

Performance characteristics of building elements are determined by standard tests. The ability of a wall or door to reduce noise is known by its transmission loss. This is determined by recommended practice ASTM E 90-55 by the American Society for Testing Materials.

This specification is used by testing agencies such as the National Bureau of Standards, Washington, D. C. and Riverbank Acoustical Laboratories, Geneva, Illinois to test doors and similar elements. These agencies will test such elements sealed in place or normally hung. Most tests on doors have been made with the unit sealed rather than normally hung. This, of course, gives a higher test figure than normal installation because of the loss due to cracks. This difference may vary from 2 to 8 db depending on cracks and sealing.

A report of the test lab describing specimen and installation is supplied to the manufacturer. This certification should be required by the architect when specifying elements which require a definite transmission loss. Some manufacturers have certain tests made on elements as part of their developmental program, and such tests may not indicate actual performance. The certification therefore should be examined to be certain that the test indicates actual performance or some other acceptable condition.

SONICBAR SALES-ENGINEERING REPRESENTATIVES

STATE	CITY	WRITE	CALL
ALABAMA	Mobile	Shearer & Rayford, 2504 Old Shell Road	GR 9-4581
CALIFORNIA	Los Angeles (22)	Durand Door Supply, Inc., 6445 Fleet St.	OV 5-8330
	San Francisco (10)	Durand Door Supply, Inc., 850 S. Van Ness St.	AT 8-2989
COLORADO	Denver (5)	W. Ray Crabb, Inc., 3600 East 40th Avenue	DU 8-4123
DISTRICT OF COLUMBIA	Washington (17)	James A. Cassidy Co., Inc., 8th & Lawrence St., N.E.	HU 3-8300
FLORIDA	Jacksonville (4)	George P. Coyle & Sons, 2367 Dennis Street	EL 6-4821
	Miami (37)	Associated Elevator & Supply Co., 501 N.W. 54th St.	PL 7-4255
	St. Petersburg (33)	Building Specialties, Inc., P. O. Box 10969	5-4613
IDAHO	Boise	The Casco Company, P. O. Box 335	3-3758
ILLINOIS	Chicago (20)	Metldor Sales Division, 8800 S. Vincennes Ave.	VI 6-1456
	Decatur	Hugh J. Baker & Co., 560 Citizens Bldg.	2-2810
INDIANA	Indianapolis (6)	Hugh J. Baker & Company, 602 W. McCarty St.	ME 6-2301
	Evansville	Hugh J. Baker & Company, P. O. Box 505	GR 7-1491
	South Bend	Hugh J. Baker & Company, P. O. Box 957	AT 9-9042
	Fort Wayne	Hugh J. Baker & Company, 1028 S. Barr St.	AN 0286
IOWA	Waterloo	Pinkerton Building Supplies, Inc., 302 ½ West Fourth	AD 3-3361
KANSAS	Topeka	Topeka Builders Supply, Inc., P. O. Box 826	CE 2-0551
	Wichita	Chester L. Anderson Co., Inc., P. O. Box 2254	HO 4-9354
LOUISIANA	Alexandria	Flynn Building Specialties, Inc., P. O. Box 668	3-7346
	Lafayette	Flynn Building Specialties, Inc., P. O. Box 275	CE 4-7594
MASSACHUSETTS	Boston (16)	Robert F. Crane, Inc., 31 St. James Ave.	LI 2-3404
MICHIGAN	Marquette	C. T. De Haas Company, P. O. Box 89	CA 6-6515
MINNESOTA	St. Paul (8)	Trussbilt, 2757 Como Avenue, West	MI 6-7181
MISSISSIPPI	Jackson	Thrasher Company, P. O. Box 4477	EM 2-1575
MISSOURI	Kansas City (11)	Edelman-Lyon Co., 4303 Main St.	VA 1-4340
NEBRASKA	Omaha (10)	Porter Trustin Co., 2300 North 18th St.	AT 4586
NEW MEXICO	Albuquerque	Don J. Cummings Co., P. O. Box 3103	AX 9-2411
NEW YORK	Rochester (11)	Vanguard Fabricated Prod. Corp., 1160 Scottsville Rd.	ID 6-3434
NORTH CAROLINA	Charlotte (1)	Delph Hardware & Specialty Co., 2109 Hutchison Ave.	FR 6-3671
	Raleigh	Delph Hardware & Specialty Co., 223 Bickett Blvd.	TE 3-1603
OHIO	Cincinnati (3)	Tom Ragouzis Co., N-207 Cincinnati Union Terminal	MA 1-6150
	Akron (6)	The George P. Little Co. Inc., 683 E. Exchange St.	FR 6-8119
	Cleveland (29)	The George P. Little Co. Inc., 8551 Brookpark Road	SH 9-4555
	Columbus (8)	The George P. Little Co. Inc., 1313 Edgehill Road	AX 1-5323
	Toledo	The George P. Little Co. Inc., 1421 Key Street	TW 3-1131
	Youngstown (3)	George P. Little Co. Inc., 202 Schween-Wagner Bldg.	RI 3-7455
OKLAHOMA	Oklahoma City	Engineering Service Company, 2211 N.W. First St. Ter.	CE 6-8484
PENNSYLVANIA	Philadelphia (3)	Victor C. Smith, Inc., 1717 Sansom Street	LO 7-5377
	Pittsburgh (33)	The George P. Little Co. Inc., 1018 Pennsylvania Ave.	CE 1-8717
SOUTH CAROLINA	Columbia	Delph Hardware & Specialty Co., 502 Belt Line Blvd.	SU 7-5600
	Greenville	Delph Hardware & Specialty Co., 512 Rutherford St.	CE 9-4331
TEXAS	Dallas (35)	R. J. De Wees & Son, Inc., 5911 Maple Ave.	FL 7-9337
	Houston	R. J. De Wees & Son, Inc., P. O. Box 6411	MA 3-6668
	Lubbock	R. J. De Wees & Son, Inc., 220 Ins. Bldg. 2109 Ave. Q	PO 2-5856
	San Antonio (9)	R. J. De Wees & Son, Inc., P. O. Box 6534	CA 5-2251
VIRGINIA	Richmond (28)	Sash Door & Glass Corporation, Sixth & Stockton Sts.	BE 2-2327
WASHINGTON	Seattle (3)	Builders Specialties, Inc., Greenwood at North 36th	ME 3-4000
	Spokane (10)	Brant Bernhard Corp., West 34 Second Ave., Box 1796	RI 7-2081
CANADA	Montreal (6)	Project Sales Ltd., 4206 St. Catherine St. W.	WE 7-3977
	Toronto (9)	Horsfall Engineering Co., 2696 St. Clair	RO 7-1151

FIREBAR DOOR DIVISION

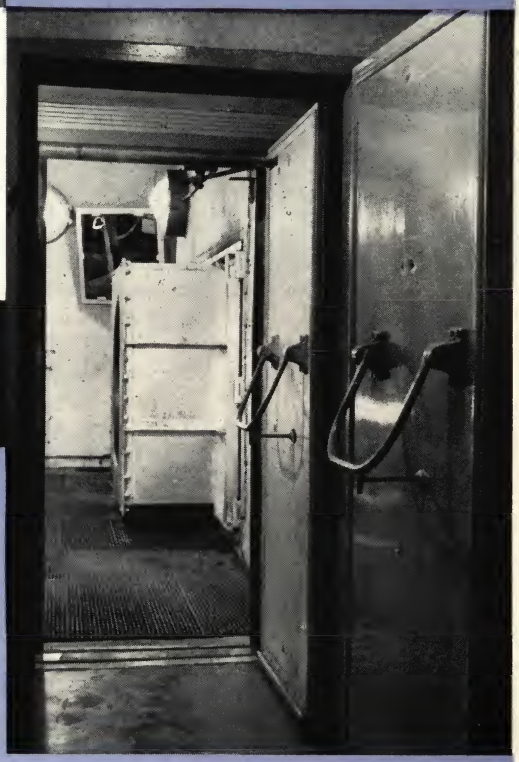
Rysdon Products Company

8800 VINCENNES AVE. • CHICAGO 20, ILLINOIS

PRINTED IN U.S.A.

JAMISON

50 db sound reduction doors



doors engineered to solve noise problems at any sound level

Sound Reduction Door Division Jamison cold storage Door Company
Hagerstown, Md., U.S.A.

16m
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Jamison offers dependable help in controlling unwanted noise

During the past 30 years, Jamison has acquired invaluable experience in designing and constructing doors which have proved highly efficient in reducing noise to a level tolerated by the human ear. Today, the modern doors engineered by the Jamison Sound Reduction Door Division are successfully insulating the noise in research laboratories; test cells for jet, turbo-prop, and reciprocating engines, quiet rooms for industrial testing; TV studios and anechoic chambers.

Jamison engineers have thoroughly investigated the problem of unwanted noise, and are today in a position to offer reliable, helpful recommendations in controlling noise problems at practically any sound level. Jamison Sound Reduction Doors—extensively tested in all types of installations—represent maximum effectiveness in both design and construction based on continuing acoustical research.

Jamison 50 db doors give *maximum* sound reduction in two ways

To isolate noise most effectively, the design of a sound reduction door must take into account the two major ways in which sound can pass from the source to outside areas.

1. The door must minimize the transmission of noise through the door structure itself.
2. Effective seals must be provided at the jambs, sill, and the astragal of double doors to prevent noise transmission through openings.

Maximum sound reduction in the door structure proper depends upon the door's ability to absorb sound energy and prevent the fundamental and harmonic frequencies of sound waves from causing vibration. For this reason, all Jamison Doors embody

- The mass principle of sound reduction
- Great rigidity
- Massive vibration proof hardware

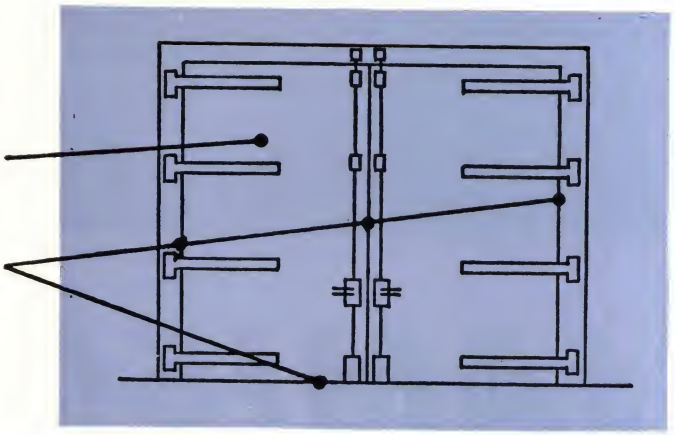
Mass principle assures greatest absorption of sound energy.

Tests conducted by the National Bureau of Standards have shown that weight per unit area is the main factor in minimizing sound transmission through a structure. This principle of mass is effectively applied in Jamison Doors by making them 6″ thick and using a completely solid construction with the inside of the door filled with a 4″ thickness of insulation having a density of 13 to 15 pounds per cubic foot. In this way, a maximum amount of sound energy is absorbed and converted into other forms of energy.

This construction, along with the firm support offered by rugged hardware, further decreases the possibility of sound transmission by providing the rigidity needed to prevent vibration. In addition, the hardware itself is vibration-proof.

Gaskets reduce sound transmission at jambs . . . sills . . . astragals.

To minimize sound transmission along the edges, all Jamison Doors are equipped with highly effective gaskets. These seal off the openings at the jambs and sills. In addition, double doors provide extra gaskets at the astragal.



special doors for unusual needs

Jamison Doors are regularly supplied as single doors for passage of personnel and as double doors to permit movement of equipment and materiel. Because of their efficiency, these doors usually provide the needed sound reduction when installed as individual units. However, if the noise level at the source is extremely high, or if unusual conditions exist affecting pressure, temperature or humidity, Jamison will gladly make specific recommendations and build the required doors. Complete research, engineering, and manufacturing facilities are at your disposal.

selecting sound reduction doors

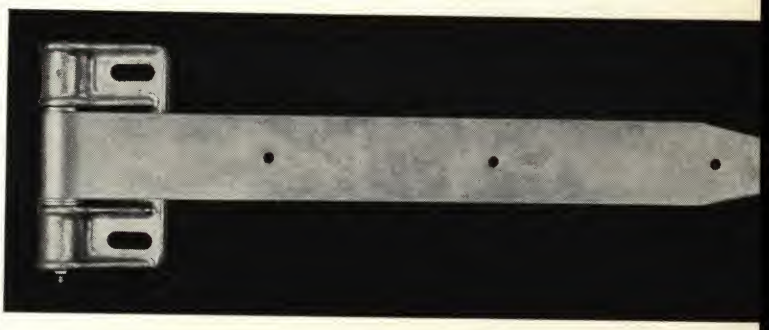
Suggested specifications for sound reduction doors are given in this catalog. To assure best possible results, the following information should also be given.

1. Source of the noise and its intensity and frequency range.
2. Kind and thickness of wall construction.
3. The way materiel is to be moved—by trucks, overhead conveyor rails, etc.
4. Extremely high or low operational temperatures.
5. Extreme operational pressures or vacuum.
6. Explosion or emergency panic bar release.
7. Any special operational conditions or security measures.

features of Jamison 50 db doors

Jamison-built hardware

All of the hardware used on Jamison Sound Reduction Doors is massive and vibration-proof. It contains built-in elements that effectively absorb sound energy. Application of the hardware also assures tight closures and provides firm support for the door. On double doors, each leaf is securely locked to the frame at top and bottom by the Jamison interconnected fasteners. In addition, the active leaf is interlocked to the inactive leaf at two or more points depending on height of the door.



Jamison Hinges—Massive steel strap ½" slotted for adjustment of door during installation.

Jamison-fabricated steel frames

Close dimensional tolerances and correct drilling of the steel frame plays an important part in the operation of Jamison Sound Reduction Doors. Frames fabricated in the Jamison factory assure proper fit of the door because they are built by the same people who make the doors and understand the need for proper fit. Anchors are properly located; drilling done accurately; frames are welded in one piece ready to install in the wall (except in unusual sizes).

Jamison Interconnected Fastener for double doors. All locking points have adjustments to permit positive gasket pressure for a tight seal.

all gaskets adjustable for a sound-tight seal

sweeper gaskets

Hinge adjustment assures proper pressure between the edge of the door and the frame when first installed. On double doors this same hinge adjustment permits locating active and inactive leaves for desired gasket pressure in the center.

center compression gasket

Mounted on the inactive leaf it receives pressure from the active leaf of the double door that can be changed by adjustments of the interconnected fastener.

back compression gaskets

Their mounting on adjustable stop angles inside the frame permits accurate locating against the inside edge of the door to give the desired amount of gasket pressure. On double doors the top and bottom fasteners can be adjusted to provide holding pressure against gaskets.

automatic sill seal

The spring pressure that holds the gasket against the sill when the doors are closed can be accurately adjusted to the desired gasket compression.

sill compression gasket

Exclusive sill compression gasket for single and double doors assures sound-tight seal at most critical point.

Effect of noise on hearing loss and speech communication

noise level criteria

For jet engine noise levels, there are two basic problems associated with the noise: first, the effect of noise on hearing loss; and second, the interference of the noise with speech communication.

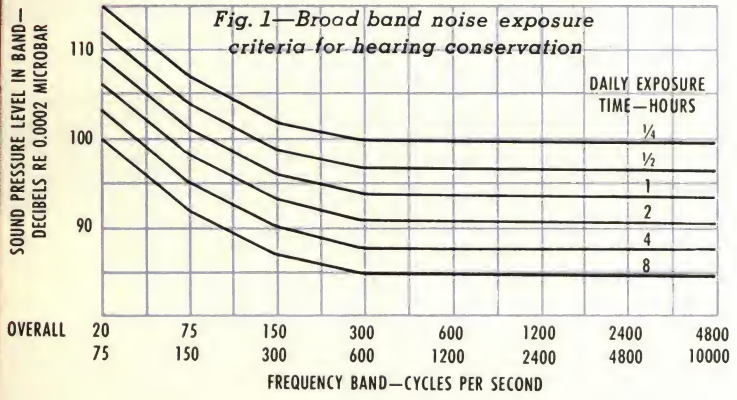


Fig. 1—Broad band noise exposure criteria for hearing conservation

Evidence to date indicates that no significant amount of noise-induced hearing loss will be experienced by the average person for long time exposure to jet engine noise levels no higher than those given by the bottom curve of Fig. 1. A "long-time exposure" means a daily exposure of approximately 8 hours for a normal 5-day work week for a number of years, say 10 to 25. *We will assume that the noise levels to be achieved in working areas outside the test cell should not exceed those of the bottom curve of Fig. 1.*

The noise level values given in Fig. 1 apply to broad band noise only. For noise which contains noticeable discrete frequencies, such as the siren-like whine at the intake of a jet engine compressor, the noise level values of Fig. 1 should be reduced approximately 10 db because the hearing mechanism of the ear is more easily damaged by "pure tone" or discrete frequency signals than by broad band noise having no tonal quality.

noise levels in jet engine test cells

Approximate noise levels within a typical test cell are shown in Fig. 2. The values given represent the average noise levels of several different engines operating at 100% rpm with afterburners in several different test cells. The family of noise level curves are given in terms of the rated engine thrust for free flight operation.

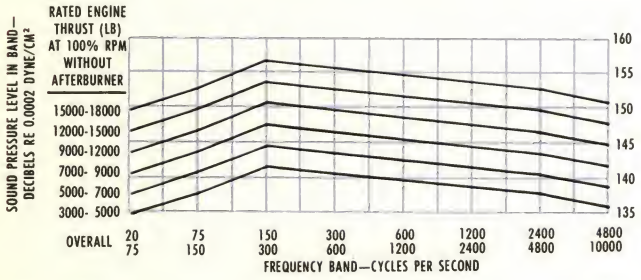


Fig. 2—Approximate noise levels toward rear end of jet engine test cell for engine operating at 100% rpm with afterburner.

speech communication

In many areas near the test cell it is essential for personnel to be able to speak and to be heard in the presence of jet engine noise. The curves of Fig. 3 represent the range of noise levels in which speech communication can be carried on under various conditions. The noise level in the control room beside the test cell *should not exceed* those of the NCA 60 curve of figure 3.

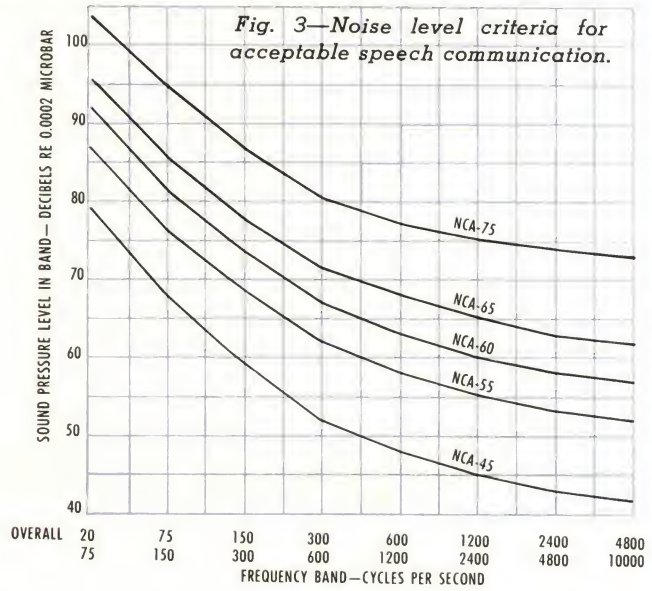


Fig. 3—Noise level criteria for acceptable speech communication.

Average voice levels required in presence of NCA noise levels for reliable speech communication

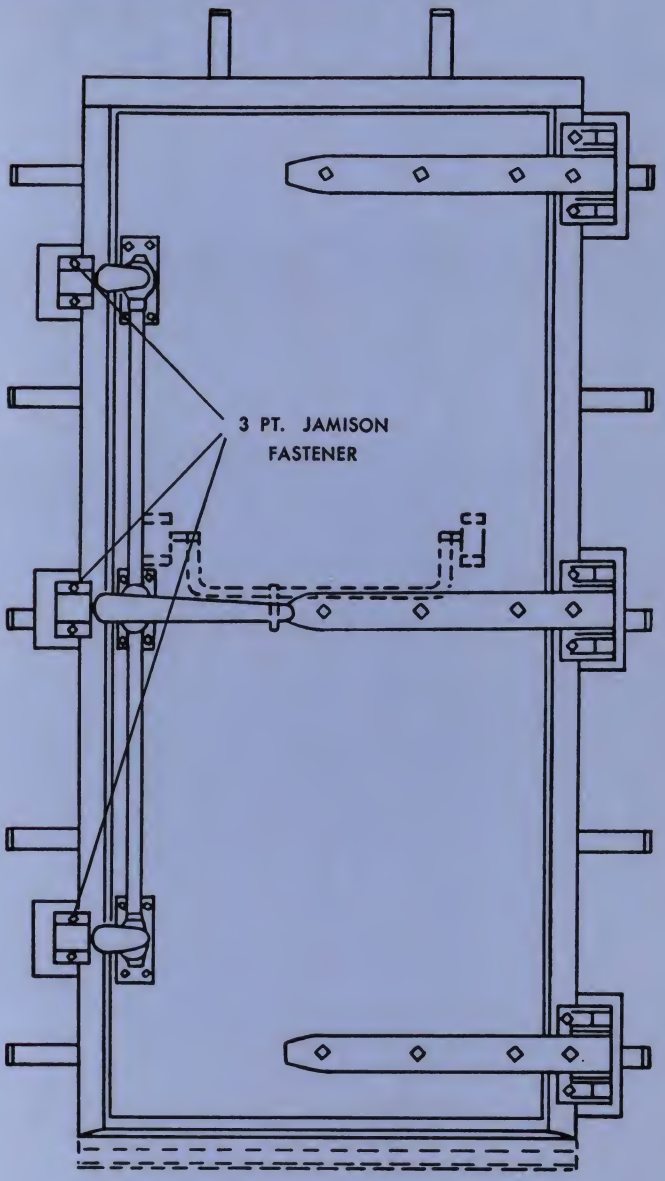
Noise Level Curve of Fig. 3	Approximate Voice Level and Distance
NCA-45	Normal Voice at 2-4 ft., or Raised Voice at 5-10 ft.
NCA-55	Normal Voice at ½-1 ft., or Raised Voice at 2-4 ft., or Very Loud Voice at 5-10 ft.
NCA-60	Raised Voice at 1-2 ft., or Very Loud Voice at 3-6 ft.
NCA-65	Raised Voice at ½-1 ft., or Very Loud Voice at 2-4 ft., or Shouting at 10-20 ft.
NCA-75	Very Loud Voice at 1-2 ft., or Shouting at 3-6 ft.

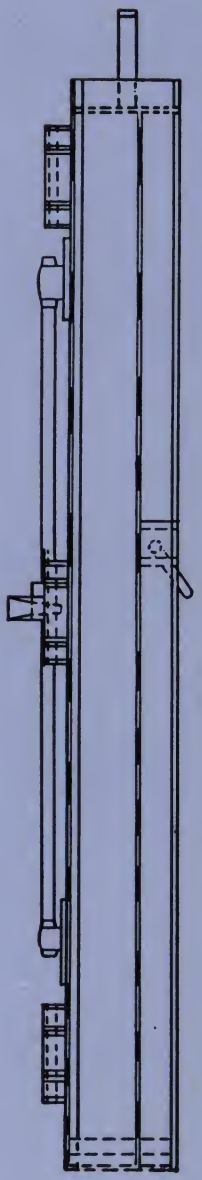
Required Transmission Loss of a Test Cell Door

The amount of noise energy transmitted through a solid wall is determined by the area of the wall and the transmission loss of the wall. If the wall contains a door, then the noise energy transmitted is determined by the area and the TL of the door and by the area and the TL of the wall. In a perfectly balanced design, the TL of the door should be the same as the TL of the wall, but there are situations in which this may not be practical.

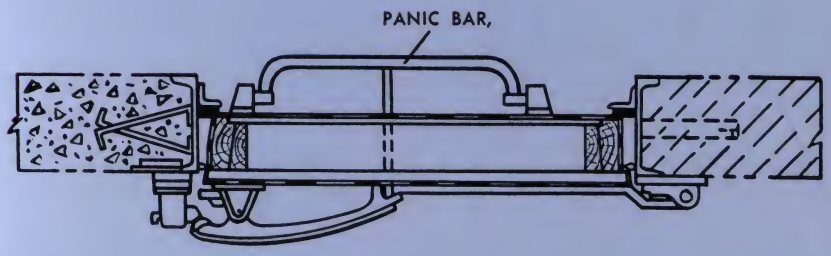
Obviously, it would be of little acoustical value to install a high-TL door of small area in a low-TL wall of large area; for almost all of the noise would be transmitted through the wall and the door would be better than it need be. On the other hand, it is possible to destroy the effectiveness of a high-TL wall by installing a poor door.

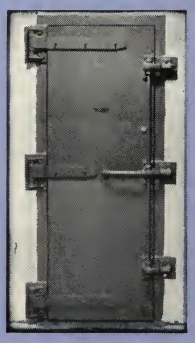
Jamison single doors



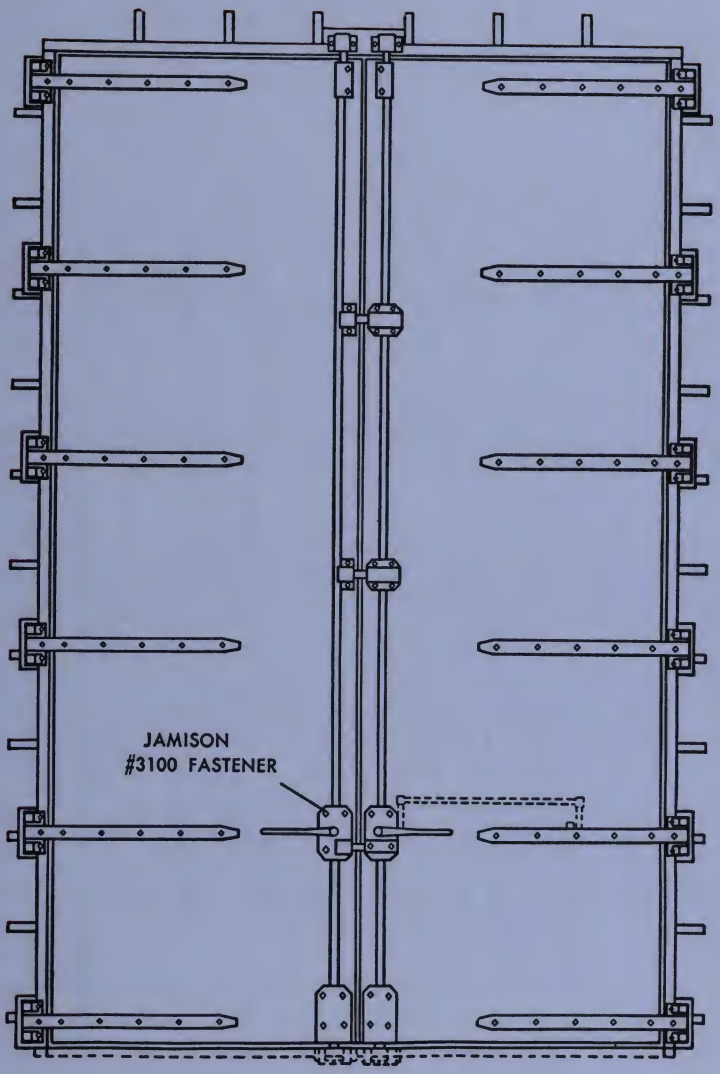


SCALE $\frac{3}{4}$" = 1'





Jamison double doors



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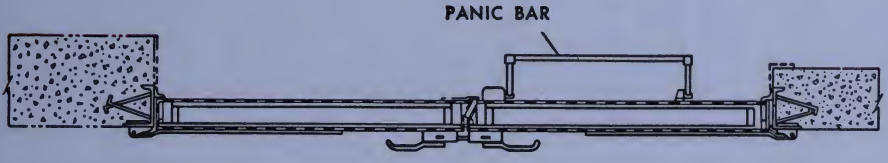
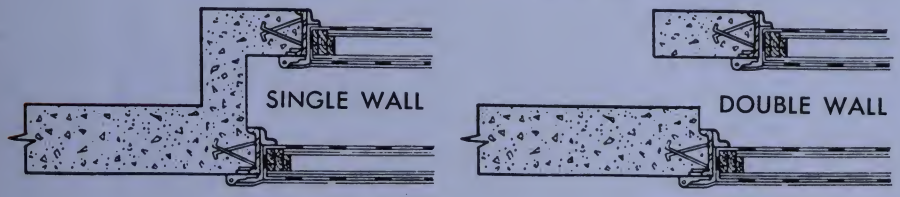
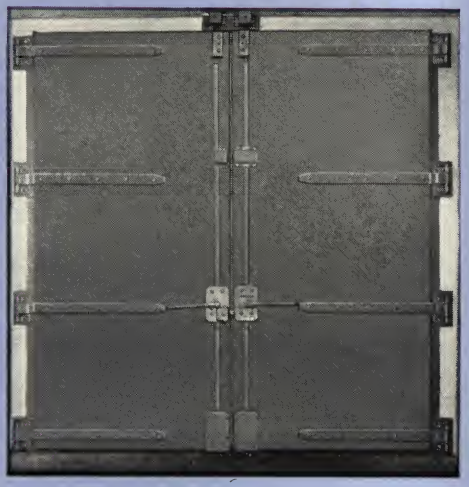
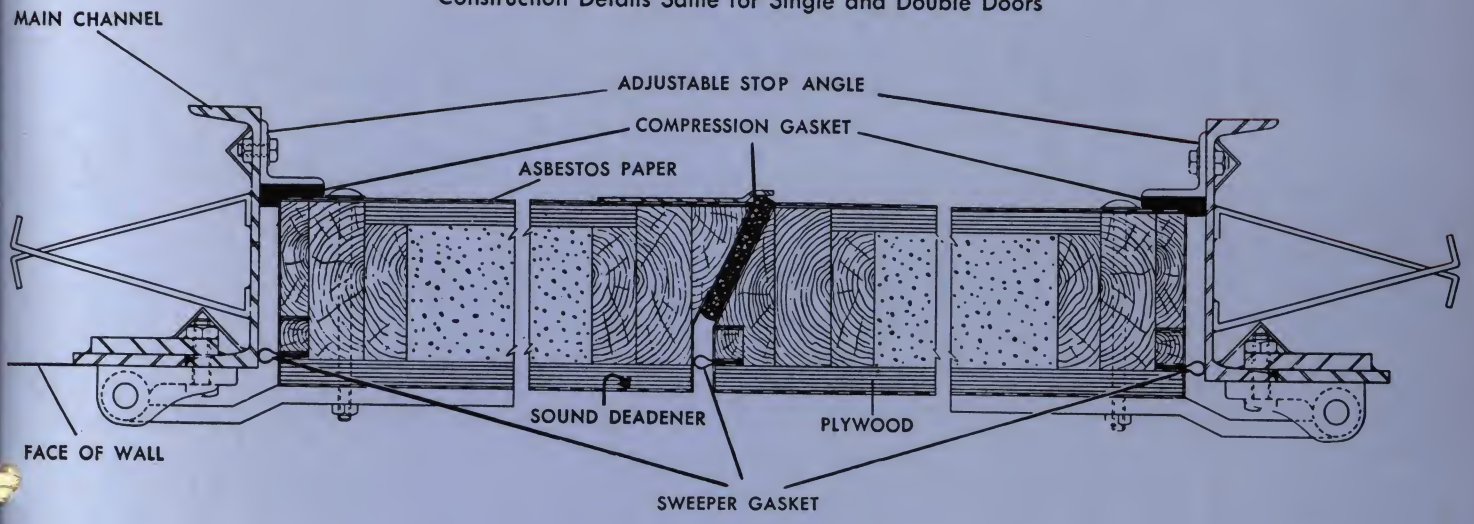


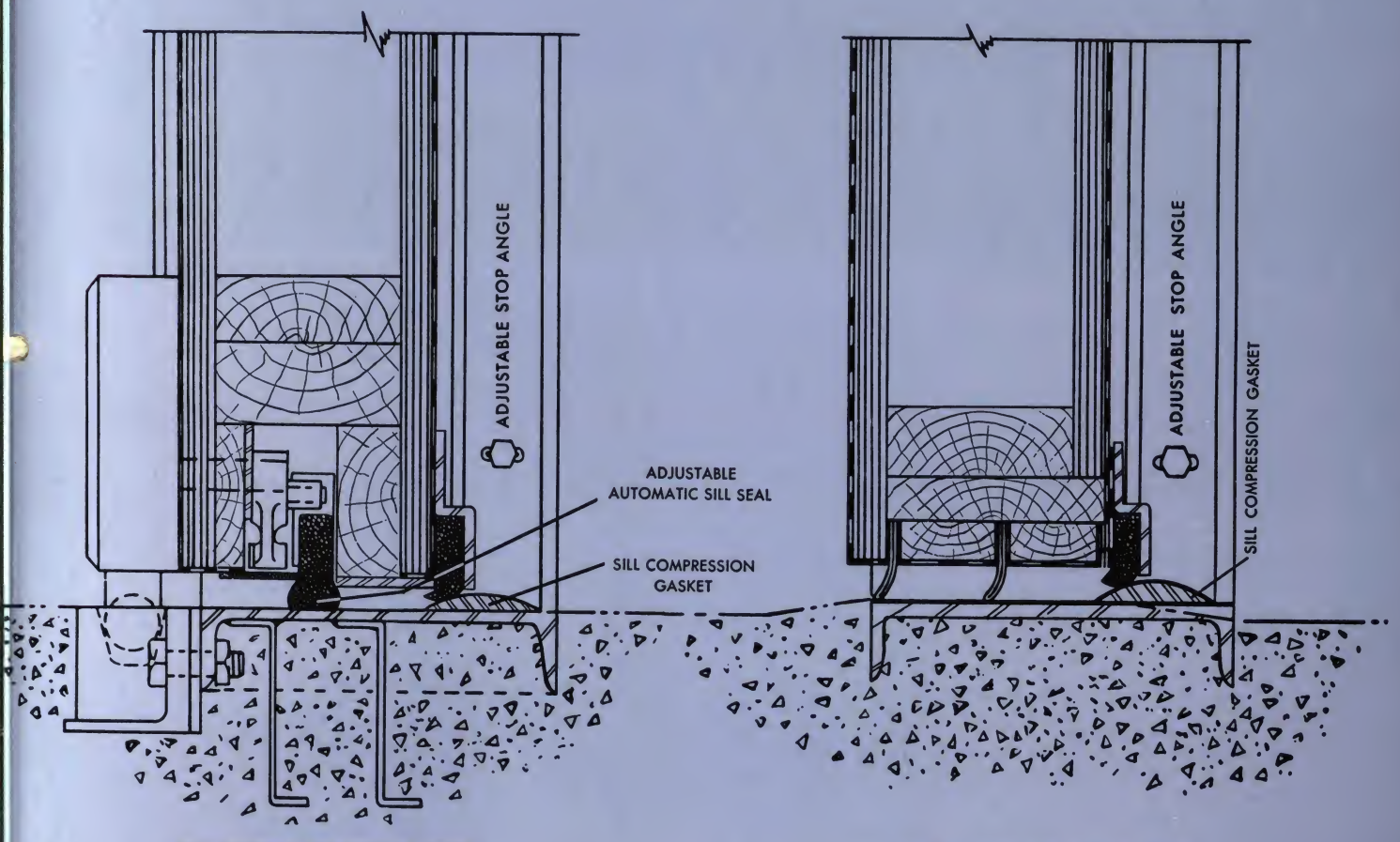
TANDEM DOOR ARRANGEMENTS TO ATTAIN
REQUIRED SOUND TRANSMISSION LOSS





SECTION AT CENTER OF DOUBLE DOOR
Construction Details Same for Single and Double Doors





SILL SECTION FOR DOUBLE DOOR

SILL SECTION FOR SINGLE DOOR

SCALE 3" = 1'

specifications for the 50 db sound reduction door

Install, where indicated on the plans, sound reduction doors as specified herein and as detailed on the drawings. The doors shall be the product of a recognized manufacturer of doors of this type. All single doors and the active leaf only of double doors shall be provided with panic bar releases. The door manufacturer shall provide the channel frame, sill plate where required, adjustable stops, and all hardware.

The contractor shall furnish to the owner evidence that complete units of the same construction, installed in wall and operable, including doors, frames, gaskets, and hardware, shall have been tested by a nationally recognized laboratory in accordance with "Recommended Practice for Laboratory Measurements of Airborne Sound Transmission Loss of Building Floors and Walls" No. E 90-50T of the American Society for Testing Materials, and found to have an average sound reduction of 50 db for single doors and 49 db for double doors, plus or minus 2 db. The average shall be the result of 11 readings taken at the following frequencies: 125, 175, 250, 350, 500, 700, 1000, 1500, 2000, 3000 and 4000 cps. (Give specific sound reduction requirements if available.)

All material shall be guaranteed for one year after shipment against defective workmanship or materials.

Jet test cell applications range from 23,000 pounds thrust for Orenda to 1,000 pound thrust for Fairchild.

typical installations

AIRLINE SERVICE FACILITY
Capital Airlines, Washington, D. C.
TWA Mid-continent Airport, Kansas City, Mo.

ARMED FORCES SERVICE FACILITY
Olmstead A.F.B., Middletown, Pa.
Tinker A.F.B., Oklahoma City, Okla.
Kelly A.F.B., San Antonio, Texas
Norton A.F.B., San Bernardino, Calif.
Banana River Naval Air Station, Melbourne, Florida
Engine Overhaul & Test Bldg., Quonset Point, R. I.
U. S. Naval Air Station, Engine Test Cells, Lakehurst, N. J.
Cunningham Field, Cherry Point, N. C.
Wright Field, Dayton, Ohio
Torque Bldg., Wright Field, Ohio
Propeller Test Torque Stand, Wright Field, Ohio
Rome Air Depot, Engine Test Bldg., Rome, N. Y.
Naval Air Station, Flour Bluff, Corpus Christi, Texas
Georgia Air Depot, Supply Bldg. #41, Wellston, Ga.
U. S. Naval Air Station, North Island, Calif.
Engine Test Bldg., Hill Field, Ogden, Utah
Add'n to Engine Test Bldg., Patterson Field, Fairfield, Air Depot, Osborn, Ohio
Southeast Air Depot, Engine Test Bldg., Mobile, Ala.
Engine Test Facility, Edwards A.F.B., Calif.
Cape Canaveral Auxiliary A.F.B., Florida

MANUFACTURERS TEST FACILITY
Ford Motor Co., Lincoln Plant, Detroit, Mich.
Continental Motors Corp., Muskegon, Michigan
Curtiss-Wright Corp., Propeller Division, Bloomfield, N. J.
Wright Aeronautical, Woodbridge, N. J.
Fairchild Engine Division, Farmingdale, L. I., N. Y.
Packard Motor Co., Detroit, Mich.
General Motors Corp., Aeroproducts Div., Vandalia, Ohio
Orenda Engines, Ltd., Canada
DC-8 Thrust Stand, Douglas Aircraft, Calif.
Wind Tunnel, Convair, Calif.

TEST LABORATORIES
Westinghouse Electric, Kansas City, Mo.
Stromberg Carlson Laboratory, Rochester, N. Y.
Supersonic Wind Tunnel, U. S. Army, Aberdeen, Md.
Detroit Tank Arsenal, Detroit, Michigan
N. A. C. A. Langley Field, Va.
Aircraft Engine & Research Lab., Cleveland, Ohio
Engine Test Torque Stand Bldg., Wright Field, Ohio
Chrysler Tank Arsenal, Detroit, Mich.
Aeronautical Research Laboratory, Wright-Patterson A.F.B.

MUSIC STUDIOS
Capitol Record Co., Los Angeles, Calif.
WBAY-TV, Green Bay, Wis.
TV Studios, Denver, Colorado Public Schools
NBC Color TV Studio, Brooklyn, N. Y.

ANECHOIC LABORATORIES
Douglas Aircraft, California
University of Pittsburgh

STEAM OR ELECTRIC TURBINE INSTALLATIONS
Delaval Steam Turbine Co., Trenton, N. J.
Municipal Light & Power Co., Cushing, Okla.

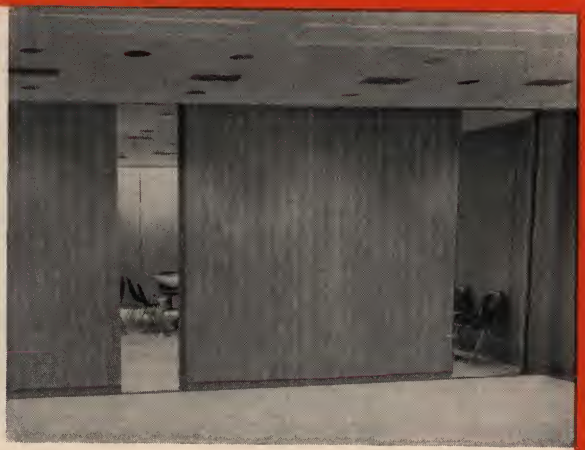
Printed in U.S.A.

Sound Reduction Door Division **Jamison** cold storage **Door Company**
Hagerstown, Md., U.S.A.

Munchhausen® soundproof doors and partitions

CIT Corporation
650 Madison Avenue
New York

WMGM Radio Station
400 Park Avenue
New York



House of Seagram
375 Park Avenue
New York

where silence matters®

MUNCHHAUSEN SOUNDPROOFING COMPANY, INC. • NEW YORK

THE *Munchhausen*®

CONCEPT OF

SOUNDPROOF DESIGN

The degree of soundproofness of doors and partitions bearing the *Munchhausen* trademark—embodying the wedge frame shown in section on front cover—is so high that it has created a new standard of acoustical excellence. Leading architects and acousticians in the United States and abroad have come to regard *Munchhausen* doors and partitions as the practical, reliable solution to the ever more frequent need for good sound insulation.

Perfect edge sealing, intelligent use of practical standard hardware, and simple and reliable installation procedures for the carpenter in the field assure that the qualities inherent in *Munchhausen* doors and partitions are not lost. Such installations have been made since 1951—with uniformly good acoustical results. Yet the doors are as easy to open and close as ordinary doors.

Since 1954, *Munchhausen* doors have undergone repeated tests at the National Bureau of Standards under its strict, exacting methods. The sound transmission loss figures (page 3) are given for the two most popular executions: the 2⅝" and the 4" doors. These are realistic figures, directly comparable to performance figures for walls; and should not be confused with high ratings obtained from commercial laboratories.

The warranty (page 8) is a specific guarantee that the acoustical performance of each such installation is equal to that of the specimen tested at the National Bureau of Standards—rather than a simple statement that the product is made like the laboratory test specimens, or that a similar installation has given the specified results. *Architects are urged to make this warranty a part of the specification.*

The Munchhausen door principle has been awarded United States patent 2,880,471.■

in this catalog:

• ***Munchhausen* doors:** beautiful, unbroken wood faces or steel-clad . . . in two executions: 2⅝" and 4" thickness . . . . . *section* **1**

• ***Munchhausen* doors for extreme requirements:** extra large or extra thick . . . . . *section* **2**

• ***Munchhausen* operating partitions:** as soundproof as a wall . . . the only partition that permits activity on both sides without interference . . . *section* **3**

■ ***This patent and the trademarks used herein are under license from H. V. Munchhausen, New York City.***

1 *Munchhausen*

SOUNDPROOF DOORS

The designer of a soundproof closure has only a few useful means at his disposal: mass, separation, de-tuning, damping, space. Good design will make maximum use of separation, de-tuning and damping, so that costly mass and space can be kept down.

To illustrate: modern acousticians build "quiet rooms" more soundproof than a medieval dungeon but weighing relatively little. They place a "floating room" on springs in a rigid room, avoiding all stiff connections. The "floating" walls, floor and ceiling are smaller than the outer shell and thus have a higher natural frequency (the sound you hear when you tap). Fibrous materials and viscous treatments are used as damping between the two shells. Of course, all openings are sealed with great care.

The same approach governs the design of the *Munchhausen* door. It is the absence of this approach which explains the failure or, at best, indifferent success of the numerous other attempts in this field.

For some years, H. V. Munchhausen, widely known acoustical designer and consultant, had felt that there must be a good, practical way of translating these simple yet advanced concepts into door design. The design we introduced in 1951, and which has since met with such remarkable success, embodies the features described and illustrated below.

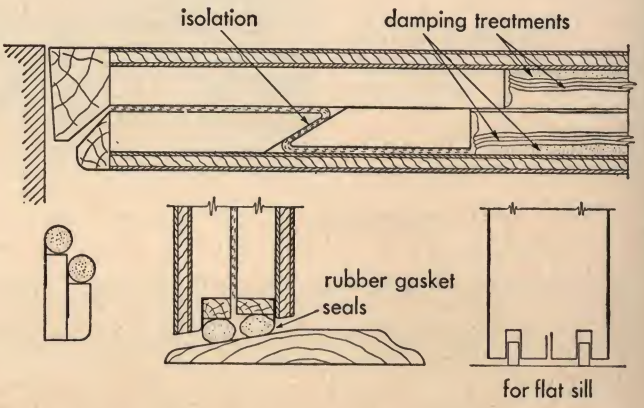
• **complete separation:** Discontinuity between the two faces. Transmission through solids reduced to a minimum. A subframe is built into the main frame over an interlay of special sound vibration isolation materials.

Doors made in accordance with this design of interlocked yet separate frame elements are exceptionally durable and warpproof.

• **de-tuning:** Panels differ as to free span and mass. The "beat" (difference in natural frequency) of the two panels kills resonance, thus improving soundproofness.

• **panel damping:** A viscous treatment having an exceptionally high degree of inertia is applied directly to the inner panel faces, and is covered in turn with high-density membranes which have maximum effect in the low-frequency range.

• **double seals:** Ultra-compliant double gaskets staggered for best performance in pre-fabricated, pre-fitted door stops provide a soundproof seal at the jambs and head. Two similar gaskets with an even more durable cover are installed in the door bottom and close against our slope saddle. For level sills we provide two automatic, plunger-operated drop seals.



sizes and typical applications

standard: 2⅜" thick; maximum size, 4' x 8'6"; unbroken wood faces or steel clad—for music departments, studios (many radio, TV and recording studios use these doors without sound locks), doctors' offices, hospitals, private offices, laboratories, machinery rooms, many other applications.

special: 4" thick; maximum size, 6' x 14'6"; unbroken wood faces or steel clad—for offices requiring extreme privacy; to contain extra loud machinery noise; in sound studios direct to busy hallways; in acoustical laboratories; for many other exceptionally high requirements.

Munchhausen Soundproofing Company is the only organization devoted exclusively to the design and manufacture of high-performance soundproof constructions. This specialization has produced a fund of knowledge and experience in the application of soundproof doors, partitions and other products which is unique. It has been found that this valuable asset can best be made available to the architect through direct communication. Trained representatives and our design service department will be glad to serve you.

suggested door specifications, frame and hardware recommendations

► doors

Soundproof doors shall be the *Munchhausen* door as furnished by Munchhausen Soundproofing Company. Doors shall be (2⅜") (4") thick and shall have flush unbroken surfaces on each side. Doors shall be constructed so that the sound insulation of the opposite faces is carried completely through the door from edge to edge and from top to bottom with no point of rigid or wood or metal contact. Panels on opposite faces shall differ substantially as to natural frequency. Sides and top of door shall have staggered edges shaped for positive contact against two staggered gaskets mounted in prefabricated door stops. A set of prefabricated door stops containing two gaskets of highly compliant and resilient material in a staggered arrangement to meet that of the door edges shall be supplied with each door.

The door bottoms shall be sloped to be parallel with a sloped oak saddle (by door supplier) or a sloped metal saddle or small ramp (by others). Installed in the sloped door bottoms shall be two highly compliant durable gaskets. (Alternative, for flat sills: The door bottoms shall have two grooves for drop seals. The door supplier shall supply two automatic drop seals for each door.)

Doors shall be of a construction that has been tested by the National Bureau of Standards for sound transmission loss of: (40 db as a 2⅜" panel) (48 db as a 4" panel) and in actual operating installation (37 db as a 2⅜" door) (42 db as a 4" door).

Supplier shall guarantee that each door supplied under this specification is substantially equal in construction *and sound transmission loss* to the sample tested at National Bureau of Standards. Supplier shall further guarantee for each door installation, carried out in accordance with supplier's simple instructions, a sound transmission loss within three decibels of specimen installation tested at National Bureau of Standards.

for steel clad doors, *add:* Doors shall be clad by manufacturer with 24-gauge steel in such a manner as to fully preserve the separation and insulation of the opposite panels and their framing.

► hardware *(by others)*

locks

cylindrical (preferred): Federal specification FF-H-106A—either type 161N passage sets or type 161A locksets—with backset link to 5" (Schlage or equal).

mortise: Federal specification FF-H-106A, type 86—with special backset, 4" min.; or standard backset with lever handle and spring rose on door stop side. On HM opening frames with molded stops, use special large backset only.

Specify door thickness, hand and swing. Lock extension for thickness is entirely on door stop side.

hinges

for 2⅜" doors: 4½" x 4½" or 5" x 5"—full or half mortise (not surface or strap).

for 4" doors: 5" x 5" or 6" x 6"; ball-bearing preferred. For doors to 4' x 8', three butts (not surface or strap). For large doors, Rixson intermediate pivots, M3 or M3W (or equal).

► frames *(by others)*

wood (or kalamein) buck and jamb: fill shim spaces with felt.

hollow metal with flat jamb faces, no molded stop (we supply gasketed stops): coat back of frame with ⅛" asbestos fibre roof cement; fill frame with mansonry or grouting (for existing hollow metal frames, with or without stops, ask for special details).

channel or bent plate, kalamein frame: grout well.

► weight

2⅜": 7 lbs/sq ft
4": 12 lbs/sq ft

► vision ports *(when specified)*

usual size: 10" x 10"
max. width: door width less 20"
max. height: 30"

sound transmission loss ratings by National Bureau of Standards, decibels

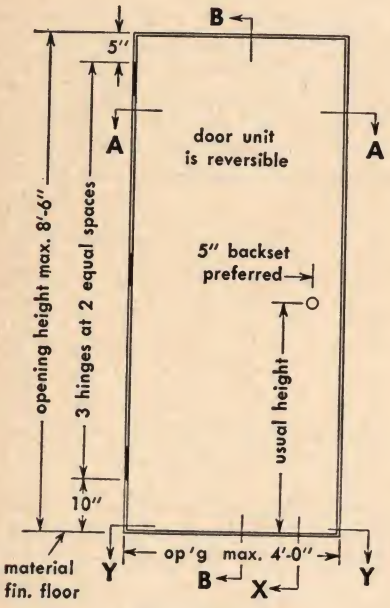
under recommended practice ASTM E90-50T—ASTM E90-55 of American Society for Testing Materials; Z24.19-1957 of American Standards Association: reverberant sound field method

cycles/second	125	175	250	350	500	700	1000	1500	2000	3000	4000	average
2⅜" door												
operating value (actual working installation)												
with slope bottom and saddle (NBS 639, 1957)	31	30	35	29	36	34	36	39	44	47	48	37
with two drop seals (NBS 612, 1954)	29	33	33	32	36	34	34	...	41	...	40	35
panel value (door sealed in) (NBS 613, 1954)	32	38	38	35	39	38	42	...	49	...	53	40□
4" door												
operating value (actual working installation)												
with two drop seals ■ (NBS 641, 1957)	34	32	37	36	39	43	42	45	51	53	53	42
panel value (door sealed in) (NBS 642, 1957)	39	37	41	40	45	47	50	54	56	58	62	48

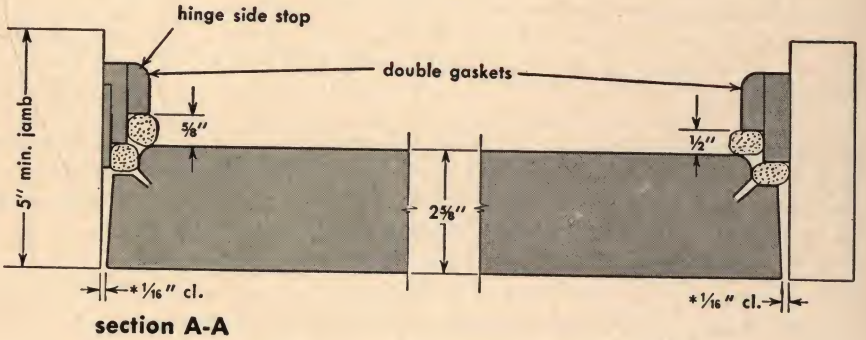
□ When tested as an operating installation, *Munchhausen* doors, because of their excellent edge seals, lose relatively little of their panel value. The new slope seal and saddle is an important improvement, especially at the higher frequencies, and should be used whenever a standard height saddle of oak or metal or a slight incline is practical.

■ The slope bottom execution of the 4" door has not yet been tested at NBS. We prefer this execution as more soundproof. It should be used whenever a saddle or slight incline is practical. Our own tests show that the improvement is about the same as for the 2⅜" door.

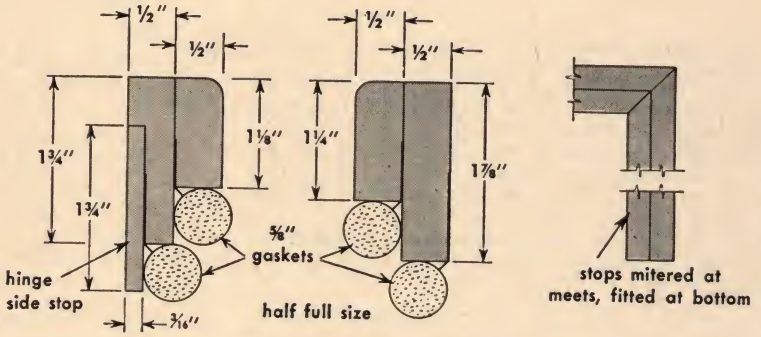
2⅝-inch doors scale: 3″=1′0″ (½ size details on request) note: *Kalamein clearance ⅛″



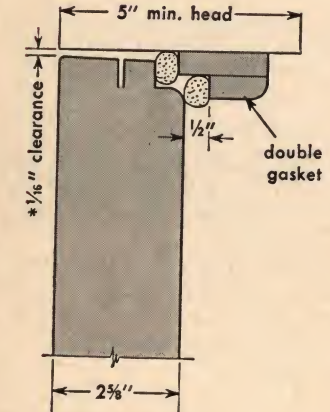
elevation

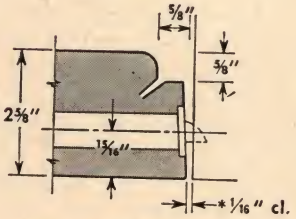


section A-A

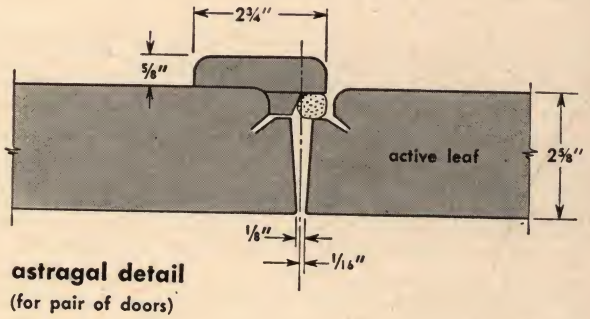


gasketed door stops

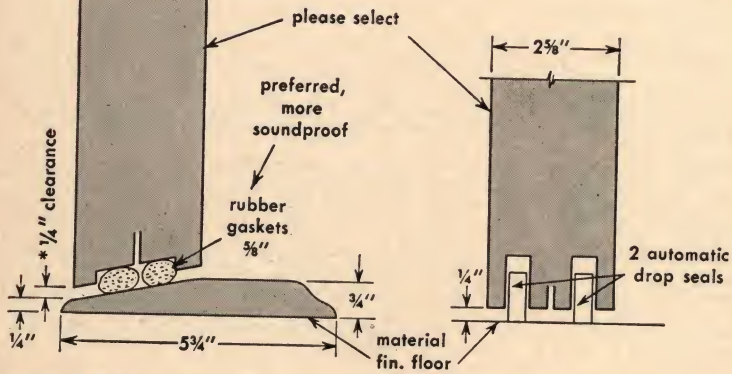




lock location
or as per hardware
manufacturer's template

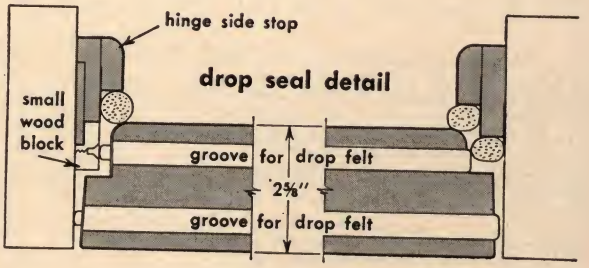


astragal detail
(for pair of doors)



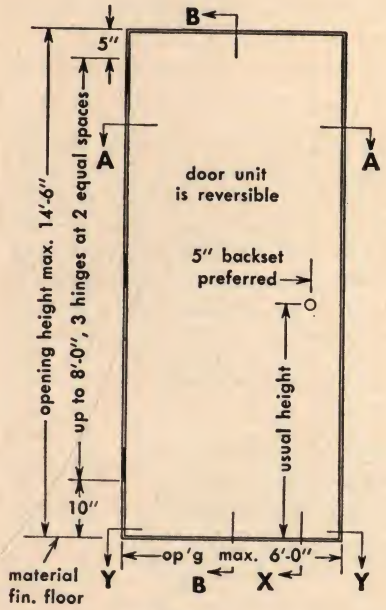
section B-B
slope bottom and oak saddle (by us), or
metal saddle or small ramp (by others)

section X
for flat sill

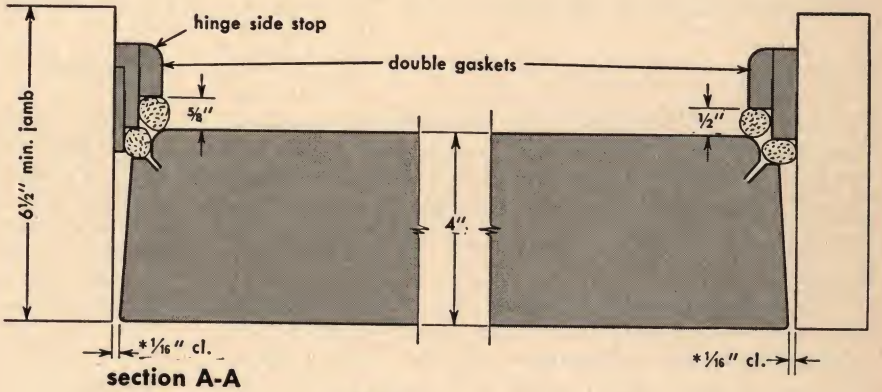


section Y-Y

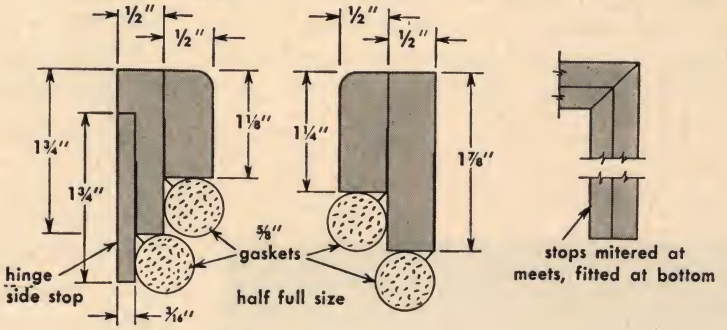
4-inch doors scale: 3″=1′0″ (½ size details on request) note: *Kalamein clearance ⅛″



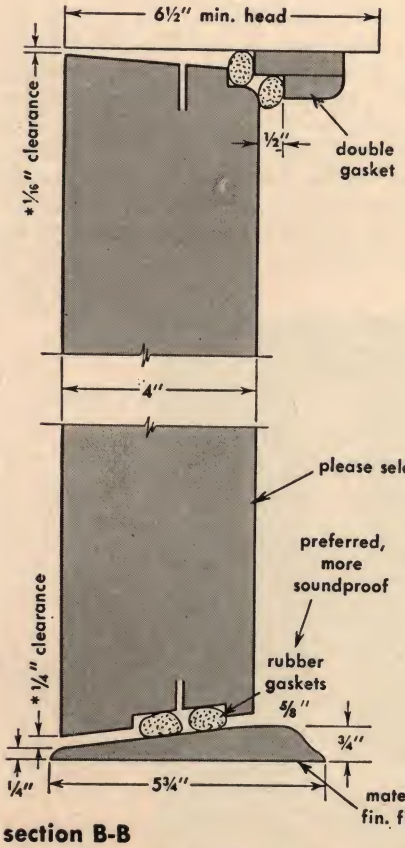
elevation



section A-A

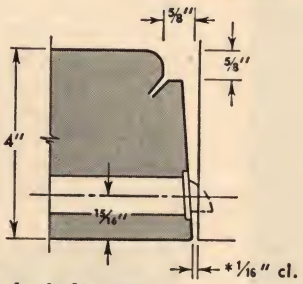


gasketed door stops



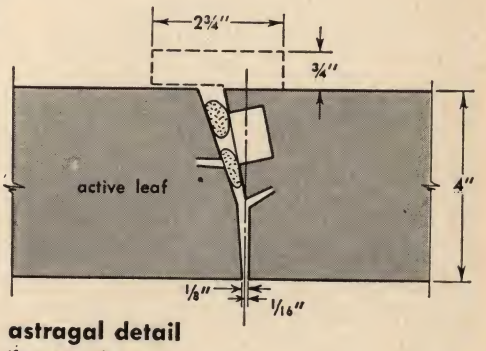
section B-B

slope bottom and oak saddle (by us), or metal saddle or small ramp (by others)



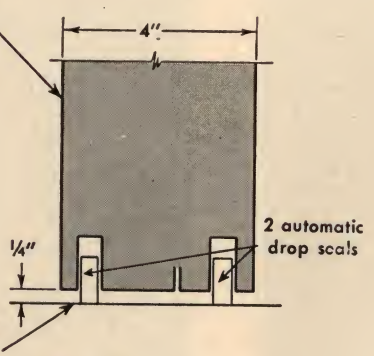
lock location

or as per hardware manufacturer's template



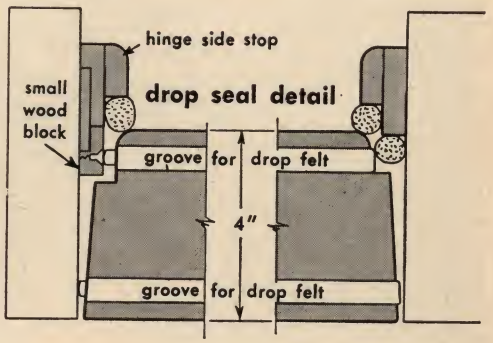
astragal detail

(for pair of doors)



section X

for flat sill



section Y-Y

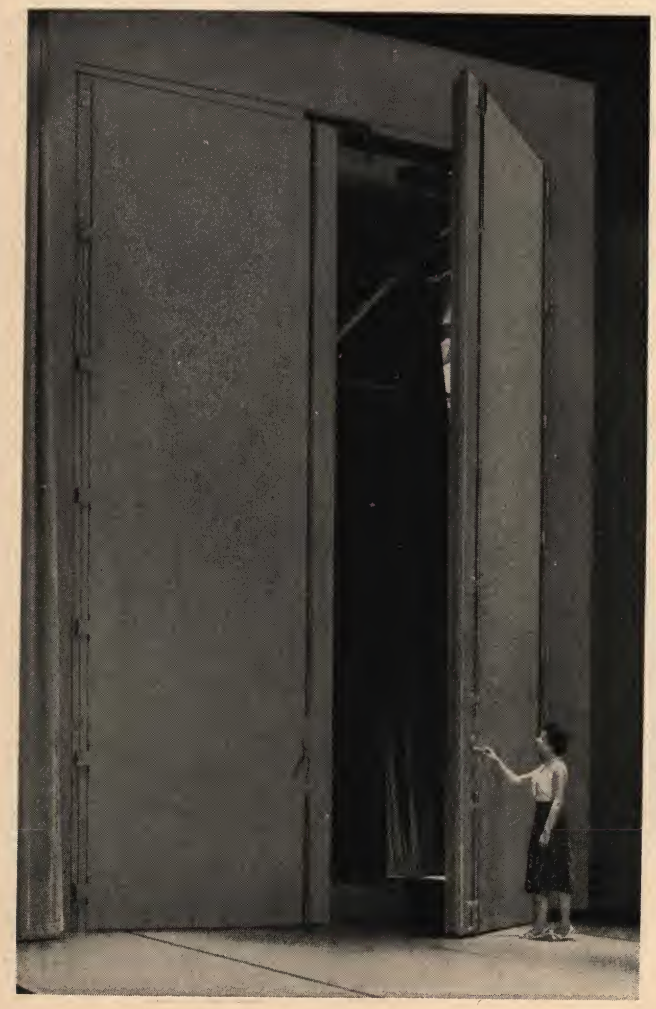
2 *Munchhausen*

SOUNDPROOF DOORS FOR EXTREME REQUIREMENTS

extra large

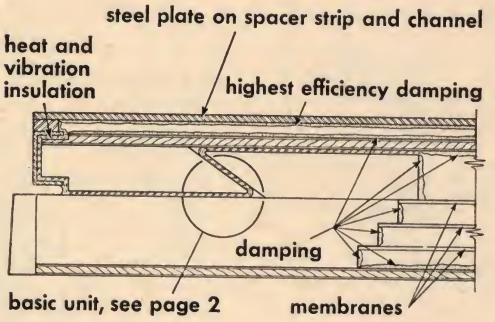
Unusually large *Munchhausen* doors are made for specific installations in all-wood or metal-clad construction. The acoustical performance of these doors is high, their unit weight low, their edge-sealing uniquely effective. Consequently, these extra large doors achieve superlative results and are surprisingly easy to operate.

Shown below is a pair of *Munchhausen* doors, 22′ high and 13′ wide, separating two theatre stages at Wellesley College. These doors permit both stages to operate simultaneously without interference: the sound transmission loss exceeds the guaranteed 45 db. The hinges (also our own design) permit operation of each 2000-pound door leaf with one finger.



extra thick

To attain a sound transmission loss of 50 db or better, *Munchhausen* doors are custom-made in thicknesses 6″ and over—in all-wood or metal-clad construction. These extra-thick doors are used on such installations as communicating doors between instrumental music rooms and similar high-sound-level applications. A blast-resistant maximum-soundproofness design in wood-and-steel construction is used for jet engine test cells and like applications; a section through its framing is shown below.



twins and opposites

In many cases having maximum requirements, two *Munchhausen* doors are used. A typical example is pictured below: the sound laboratories of RCA-Victor, Cherry Hill, N. J. The top-performance anechoic chambers (STL 70 db±) are entered through two *Munchhausen* doors: a 4″ door in the rigid shell; a 2⅜″ door in the floating inner shell. (See "The AF Anechoic Chambers at Cherry Hill" in IRE Transactions on Audio, vol. AU-4, No. 6, 1956.)

3 *Munchhausen*

SOUNDPROOF OPERATING PARTITIONS

Munchhausen operating partitions combine the three requisites for a truly successful installation: wide design adaptability, unmatched acoustical performance, and highly attractive woodworking beauty. Their component panels are fabricated to produce the desired amount of sound interception. Their panel interlocks, their top and bottom acoustical seals and their end securements are designed with great care and in strict adherence to Munchhausen acoustical concepts. And the degree of soundproofness of the finished installation is *guaranteed!*

Obviously, a partition composed of the most soundproof panels will be as soundproof as a wall only if sound leaks at the periphery have been virtually eliminated. This has been accomplished by the changer rack design (see diagrams)—the first basic advance in many years in the field of operating partitions.

Each panel is set in motion by a light push and upon reaching position its concealed 6″ riding wheels are *retracted*. Seating itself solidly on the narrow, inconspicuous track which is level with the floor, it locks its several acoustical seals both at the floor and in the ceiling guide track. This guide track is unbroken to prevent overhead by-pass leaks.

The changer rack stacks the panels side by side in a space-saving storage area which is usually adjacent, but can be located away (for instance on the other side of a hallway) or inside the room contour itself. Storage area is determined by width and number of panels.

These partitions use the *Munchhausen* 4″ door (48-db panel) as their basic unit. For maximum acoustical requirements, exceptional height, or sculptural effects such as reveals, the 6″ panel or other custom door designs are used. Panel widths can be from 3½′ to 8′. The total length of the partition has no limitation.

acoustical efficiency

Munchhausen operating partitions, because they intercept sound as efficiently as a wall, are in an entirely different class than commercial folding partitions made of wood doors or scissor-frame arrangements of plastic. (According to a recent study,• the sound reduction of such partitions, some of which claim to be "40 db panels," ranges from 7 to 22db.)

In fact, these *Munchhausen* operating partitions fulfill the basic function heretofore unattainable: they are actual walls which can be removed at will. Naturally they are more expensive than non-soundproof partitions—but they add space to the building at a fraction of the unit construction cost.

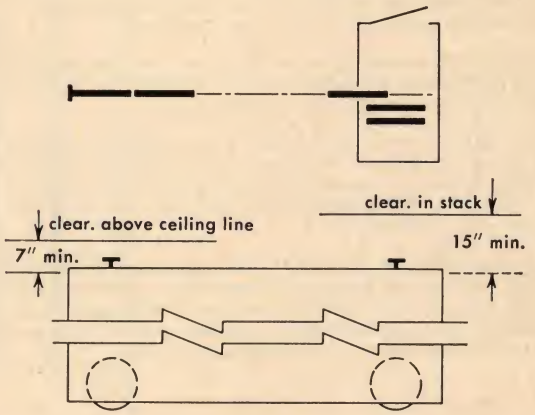
• *"Field Survey of the Noise Reduction of Folding Partitions" by Dr. Howard C. Hardy, at ASA meeting in Washington, D. C., May 1958.*

specification

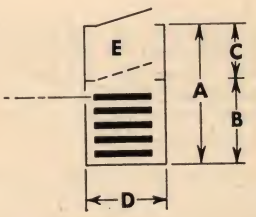
Operating partitions shall be changer rack partitions as manufactured by Munchhausen Soundproofing Company, Inc. Panels shall be 4″ thick *Munchhausen* panels.

Contractor shall guarantee that panels are made similar to sample tested at the National Bureau of Standards, and that the finished installation will have a sound transmission loss within three decibels of an operating door installation tested at said Bureau.

Contractor shall install floor, ceiling and storage hardware, and later the partition itself. Careful preparation of structure including floor, ceiling and storage area, ready to receive the hardware and partition, shall be done by others.



A = entire-rack area
B = loaded-rack area
C = empty-rack aera
D = panel-width-plus dimension
E = in some cases, this area not required. Details on request.



House of Seagram's, New York

toward better results in soundproof construction . . . by H. V. Munchhausen

The architect who designs for a high degree of soundproofness on a project usually finds his work fairly clear-cut where the masonry is concerned. Yet the finished job often falls short of its acoustical purpose because soundproof door performance does not measure up to the data on which the selection was based.

There are many reasons why this may occur: unrealistically high decibel figures may have been based on tests made while procedures were still quite inaccurate and exaggerations by ten or fifteen decibels were common, or the figures given were "sound reduction" values, which include the sound absorption of the room, instead of the acoustical performance of the test panel alone (known as "sound transmission loss"); the test door may have been sealed tight into the opening (thus being many decibels more soundproof than an operating door), or the test may have been made in a laboratory which customarily reports high figures.

Whatever the reason, "optimistic" ratings do not help the architect. He needs data as reliable as those which are available for conventional masonry walls. The Munchhausen figures meet this need. The facts presented are unadulterated. All our published figures are from the National Bureau of Standards—an agency created to serve the public interest. In the opinion of most experts there is no test nearly as reliable as that carried out under the Bureau's strict, exacting procedures. Not only the "panel value" of each door we make but also the "operating value" of each installation is guaranteed. This guarantee is possible because simple, foolproof installation methods for the field carpenter have been developed, and edge seals that are easy to fit and need no adjustments are used—and we have never "doctored" a test installation.

The architect and the acoustical expert are thus given a dependable design basis. The performance we announce can be trusted to be present in the finished installation, and will be a lasting feature.

Because of this realistic attitude toward their problem, some architects and many acoustical consultants now specify us exclusively. As one specification writer whose firm generally steers clear of closed specifications told us, "When our best protection is to be found in an exclusive specification, we write it that way."

Others prefer to specify our construction, demand that a laboratory test report from the National Bureau of Standards be submitted, and insist on a guarantee that each finished installation will produce the sound transmission loss promised. Either approach assures that the architect's stated requirement is uncompromisingly fulfilled.

warranty

Munchhausen Soundproofing Company, Inc. warrants that *Munchhausen* trademarked doors are equal to its specimens submitted to the National Bureau of Standards and tested by said Bureau as reported in the present catalog; and that if tested at said Bureau any such door will be found to have a sound transmission loss average equal within two decibels to that of the test specimen.

This company further warrants that any field installation of a *Munchhausen* trademarked door, being installed in accordance with our simple instructions as to erection and as to frame treatment, when tested in the field will be found to have a sound transmission loss average equal to that of the corresponding specimen installation tested at the National Bureau of Standards, within three decibels.

The above warranties are predicated upon reasonable treatment as set forth in the Standard Door Guarantee of the National Woodwork Manufacturers Association having been accorded the doors. The woodworking qualities (material and workmanship) of our doors are warranted to equal or exceed those set forth in said Guarantee.

For any *Munchhausen* trademarked door which does not meet the warranties stated above, Munchhausen Soundproofing Company, Inc. will deliver a replacement door f.o.b. job site.

For doors of special design and for operating partitions, a special warranty stating the acoustical performance of the installation is given.

from the roster of installations

manufacturing plants: General Motors, Chrysler, Ford . . . RCA, General Electric . . . Brooklyn Union Gas

educational buildings: New York University, University of Michigan, University of Virginia, Louisiana State, Barnard College, Wellesley, Colgate, Shasta College, Orah Dee Clark (Alaska)

aircraft plants: Convair, Douglas, Marquardt, Curtiss-Wright, North American

hospitals: Walter Reed Hospital, National Institutes of Health, Veterans Administration, Beilinson Hospital (Tel Aviv), Institute for Crippled and Disabled (New York), Lighthouse for the Blind (New York)

armed forces: Hickam Field, Fort Shafter (Hawaii); Fleet Sonar School (Key West); Mather Field (California)

offices: J. Walter Thompson, Seagram, Revlon, Lederle Laboratories, IBM, CIT

radio stations: WABC and WMGM (New York), WXYZ and WJBK (Detroit), WGBI (Scranton, Pa.)

soundproof door specialists representing the Munchhausen organization

The specialists listed below and our New York staff will be happy to work closely with you and your acoustical consultant on your soundproof closure problems.

California, *south:* The Bus McNeil Co.
641 So. Atlantic Boulevard, Los Angeles 22

California, *north:* Larue J. Woodson
610 16th Street, Oakland 12

Colorado: Edward E. Dustin Co.
1050 South Jackson Street, Denver 9

Delaware: Delaware Suppliers, Inc.
3110 Lancaster Avenue, Wilmington

Florida, *north:* Builders Products Company
221 East 8th Street, Jacksonville

Florida, *south:* Acousti-Insulation, Inc.
244 Romano Avenue, Coral Gables

Hawaii: Lewers & Cooke, Ltd.
404 Piikoi Parkway, Honolulu 2

Illinois: Tri-State Co.
3044 N. Laramie Avenue, Chicago 34

Indiana: Building Specialties Company
1102 West 25th Street, Indianapolis 23

Massachusetts: J. A. O'Brien & Sons
1469A Washington Street, West Newton 65

Michigan: Wolverine Door Co., Inc.
2966 E. 7 Mile Road, Detroit 34

Minnesota: Straughan Hardware Co., Inc.
1115 Hennepin Avenue, Minneapolis 3

Ohio: The Myron Cornish Company
P.O. Box 63, Far Hills Station, Dayton 9

Tennessee: Folding Doors & Windows
632 Court Avenue, Memphis

Texas: Samuel A. Ellsberry Co.
3136 Routh Street, Dallas 22

Virginia: J. S. Archer Co.
328 West Cary Street
Richmond 20

Washington: Bradley-Zesbaugh Inc.
White-Henry-Stuart Building
Seattle 1

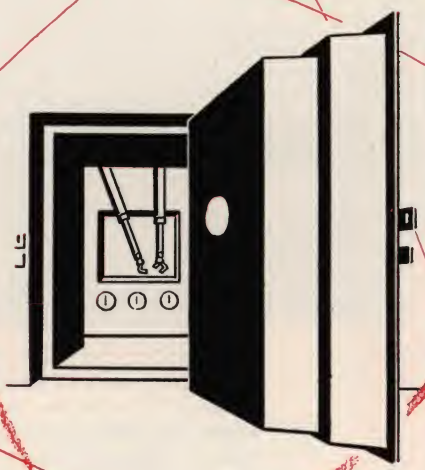
Munchhausen Soundproofing Company, Inc.
290 Riverside Drive, New York 25, N. Y. *RIverside 9-6400*

A.I.A. File No. 16-F

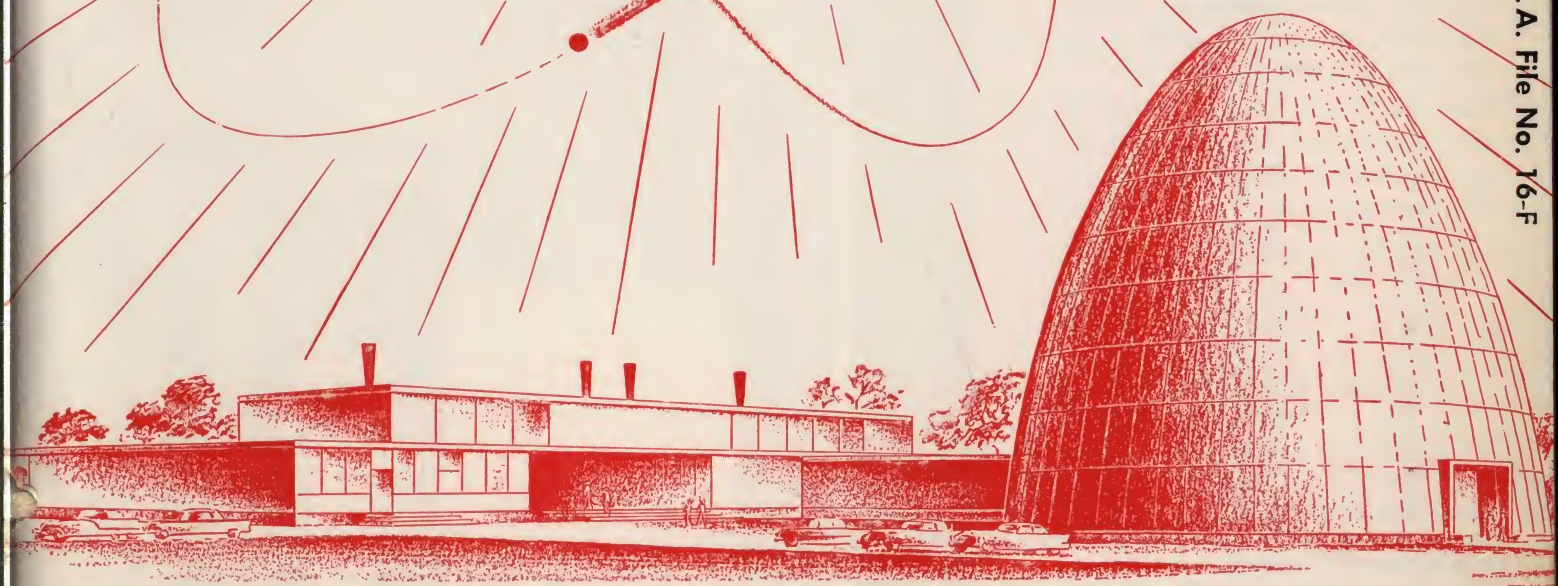
16m
Pee

PEELLE DOORS

for Nuclear Applications



A.I.A. File No. 16-F



INDUSTRIAL REACTOR LABORATORIES, INC., PLAINSBORO, NEW JERSEY
ARCHITECTS: SKIDMORE, OWINGS & MERRILL • GENERAL CONTRACTOR: TURNER CONSTRUCTION CO.

THE PEELLE COMPANY, 47 Stewart Avenue, Brooklyn 37, N. Y.

What it Takes to Supply Doors for Nuclear Structures

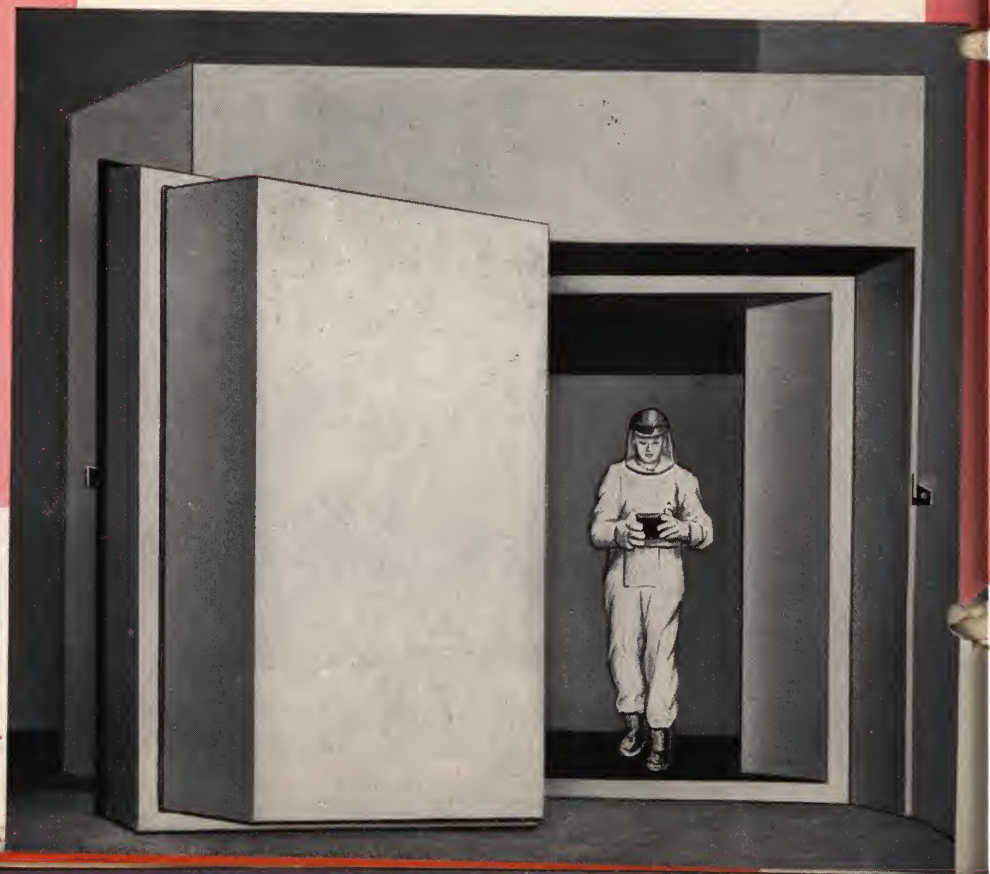
It's a far cry from the doors we encounter every day to those required for nuclear applications. The engineering and functional aspects of doors used in hot cells, reactors, irradiation chambers and other nuclear structures pose many unusual problems that most door fabricators never have to face.

Materials of great weight and density are used in nuclear shielding doors. Such doors may be made of lead, steel, concrete — sometimes heavy aggregate concrete — and often of a combination of these and other materials.

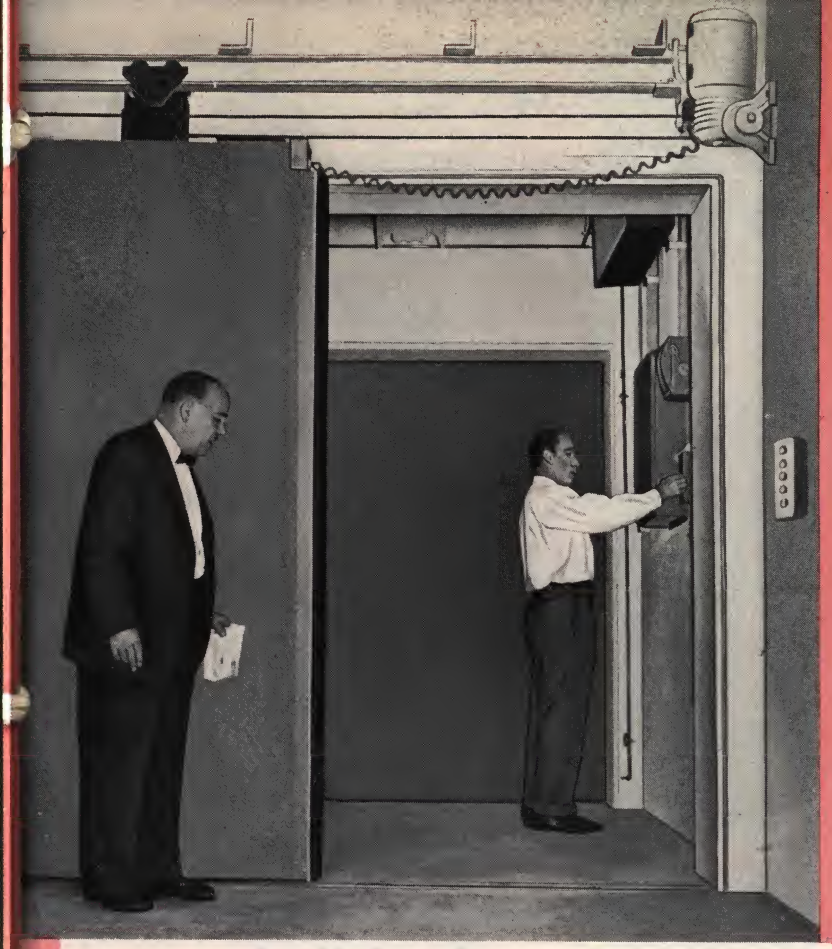
A great wealth of design and engineering experience, gained in furnishing doors for X-ray rooms, high frequency sound laboratories, for jet engine test cells and for some of the most prominent nuclear laboratories in the world places The Peelle Company in a strong position to engineer, fabricate and install the various types of doors required for nuclear facilities as indicated by the adjacent photos of doors installed in the Industrial Reactor Laboratories, Inc., at Plainsboro, N. J.

Your inquiries are invited.

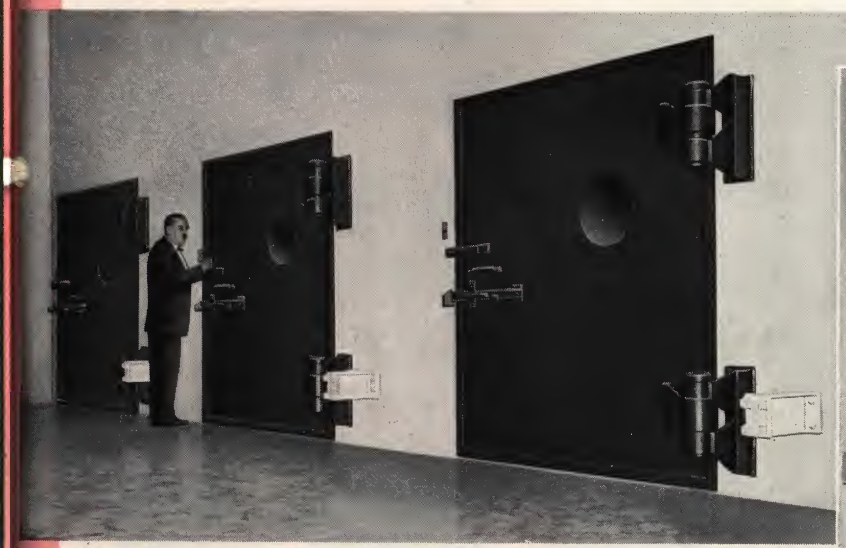
TRUCK ENTRANCE DOOR. This manually operated door is mechanically sealed by an offset tracking system and positive dogging devices at the jambs. The door and seal were designed to withstand and prevent air leakage under positive pressures of .5psi. The door frame, tracking system and door panel were all constructed of structural steel members, rolled to varying radii to conform to the paraboloidal configuration of the building.



A DRY IRRADIATION CHAMBER SHIELDING DOOR shown in the fully opened position. This door is 2'6" thick weighing 20 tons and is a steel shell filled with concrete. For ease of operation the door is supported on massive precision hinges which permit 180° rotation of the door to provide maximum passageway. The same door is shown closed in the background of the upper photo.



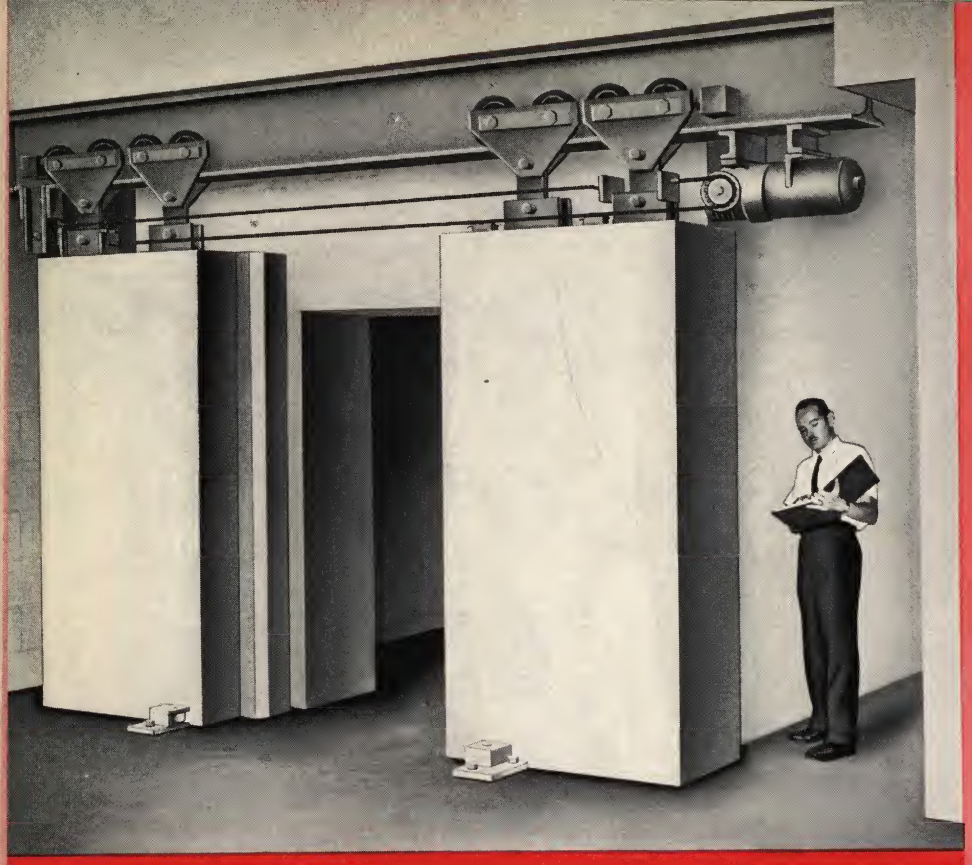
AIRLOCK DOORS. These doors permit frequent passage into and out of the reactor area, while the reactor is in operation. These insulated steel doors are equipped with inflatable gaskets to prevent the free flow of air around the door edges. Each airlock is equipped with two doors arranged with automatic electric interlocks to permit only one door to be opened at a time. Deflation or inflation of the gaskets and opening or closing of the doors are all accomplished automatically by pressure on the proper push button. While these doors were designed for a pressure of .5psi, Peelle has designed others for pressures up to 1psi, and can design doors for any specified pressure.



HOT CELL DOORS *(CLOSED)* The above photo shows a battery of hot cell doors, each of which is equipped with a transfer hole to permit placing small objects into the cell without opening the entire door. (See below for further details)

HOT CELL DOOR *(OPEN)*

Photo at right shows one of the above hot cell doors partially opened. The door weighs 26 tons and is a 3' thick steel shell filled with concrete hung on massive precision hinges of superior design.



HOT LAB DOOR in I. V. I. C. Reactor Building, Caracas, Venezuela. Frequency of operation made it necessary to motorize this center parting, horizontal sliding door. To provide extra hall space in front of the laboratory, the door panels were constructed of machined solid steel slabs 16" thick weighing 15 tons. The opening frame consists of heavy steel slabs to provide proper shielding and interlocking. The door panels are hung from precision tapered roller bearing trolleys rolling on an overhead I beam track thus leaving the floor free of tracks and guiding equipment. Single panel doors of this type can also be furnished.

ARCHITECTS-ENGINEERS:
SHAW, METZ & DOLIO.
CONSULTANTS:
GENERAL NUCLEAR ENGINEERS, INC.

●

SOME LOCATIONS OF PEELLE NUCLEAR DOOR INSTALLATIONS FOLLOW:

ARGONNE NATIONAL LABORATORY
Lemont, Illinois

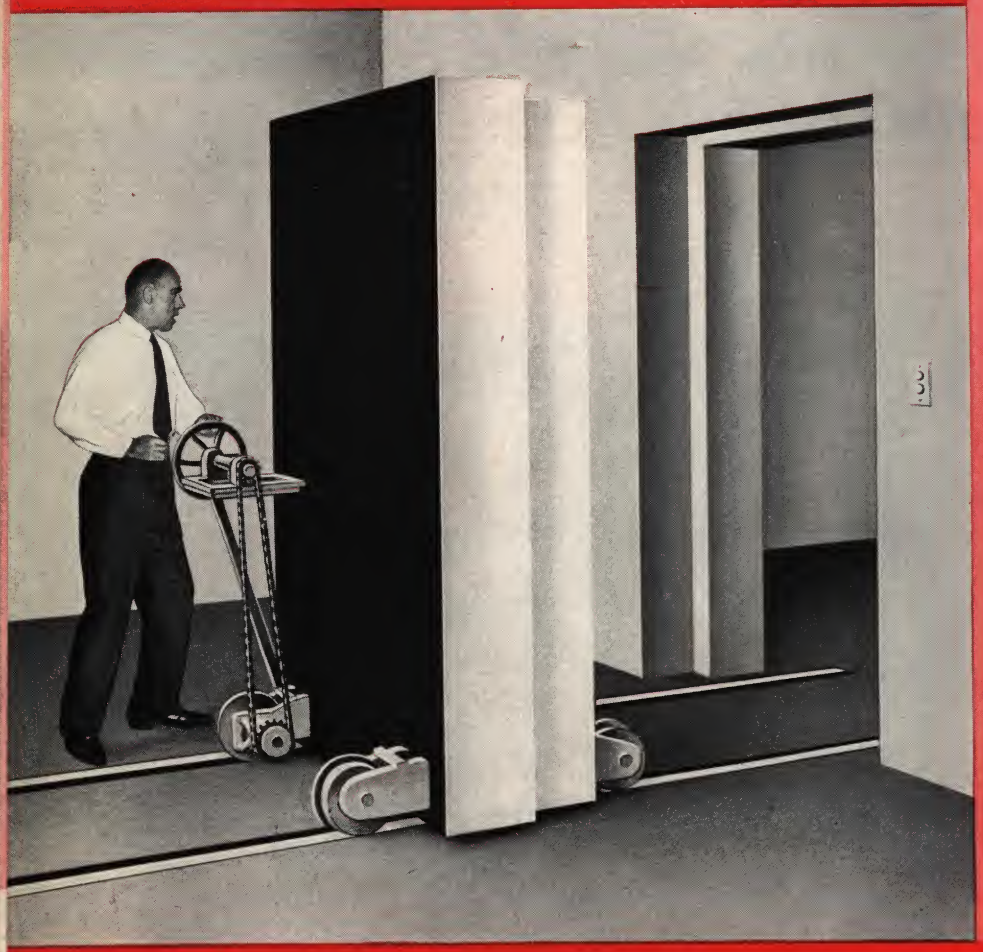
INDUSTRIAL REACTOR LABORATORIES, INC.
Plainsboro, New Jersey

GENERAL ELECTRIC CO.,
Nuclear Experimental Area
Lockland, Ohio

N.A.C.A.
Sandusky, Ohio

I.V.I.C.
Caracas, Venezuela

●



PLUG TYPE DOOR at the General Electric Company Nuclear Experiment Station, Lockland Ohio. This Peelle door is a 2' thick steel reinforced concrete panel, bottom supported by a four-wheel built-in truck assembly riding on tracks set flush with the floor. The panel is easily operated by hand crank wheel. Motorization of this type door can be provided if required.

ENGINEERED FOR THE BUILDING INDUSTRY
PEELLE-RICHMOND PRODUCTS

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Printed in U.S.A.

16m
Pi

PIONEER SOUNDPROOF* DOORS

PIONEER

FIREPROOF DOOR CORP. MOUNT VERNON, NEW YORK

*including the only soundproof louvre door made

SOUND INSULATING DOORS AS MANUFACTURED BY PIONEER FIREPROOF DOOR CORPORATION PROVIDE THE NECESSARY SOUND INSULATION OR ATTENUATION REQUIRED IN ARCHITECTURAL ACOUSTICAL WORK.

In the past, a certified sound insulating door meant a thick, cumbersome, unsightly door. Pioneer, calling upon its quarter of a century of experience, has perfected a hollow metal, 1¾" thick sound insulating door certified for 42 db. average attenuation. This new, highly efficient hollow metal sound insulating door is equal in architectural appearance to the hollow metal doors furnished by Pioneer in hundreds of outstanding projects, among which are the Air Force Academy in Denver, Colorado and the White House in Washington, D.C.

Pioneer sound insulating doors were tested in a nationally recognized laboratory in accordance with recommended practices of American Society of Testing Materials' E90-55. Pioneer sound insulating doors were tested as hung in a conventional door opening with normal clearances at top, sides and bottom. No precautions were taken to seal these joints except for features inherent in the door and stop design. This fact is important, for many doors are tested completely sealed in an opening; obviously this latter type of test is not conclusive for a door that has to be opened and closed.

Pioneer sound insulating door is an economical and practical answer to architectural sound transmission problems. These sound insulating doors achieve maximum sound attenuation at minimum cost. Pioneer sound insulating door can be used in Music Practice Rooms, Executive Offices, Conference Rooms, Medical and Hospital Areas, Control Rooms, Mechanical Equipment Rooms, etc.

SPECIFICATIONS: "Where indicated on drawings, furnish Pioneer's standard sound insulating door assemblies having certified sound transmission loss test from a recognized laboratory, indicating a minimum average sound transmission loss of 42.5 decibels. The transmission loss average shall consist of a simple arithmetic average of 11 discrete frequencies from 125 to 4000 cps and shall be based upon tests of the doors, using a simulated operating installation with normal clearances around the perimeter of the door. Written certification must be furnished."

SOUND INSULATING DOORS

The Pioneer sound insulating door is uniquely designed with opposite faces of the door isolated from each other by means of a non-structural separator. Specially selected dampening agents are inserted inside the door creating a sound barrier with negligible natural frequency effect over the audible range.

These 1¾" doors are supplied with specially made neoprene rubber gasketing around the opening perimeter. Gasketing is adjustable. Pioneer includes a self-activating adjustable sealing mechanism, which insures a pressure seal at the bottom of the door.

Pioneer sound insulating doors may be used to provide a sound barrier in partitions having sound transmission loss equivalent to a 6" masonry block wall.

Pioneer sound insulating doors are equal in every respect to the architectural hollow metal doors for which Pioneer Fireproof Door Corporation is known. Combined with the special sound reduction techniques, these doors embody such quality construction features as continuous automatic heli-arc welding on the edges of the door. The face and edge of these doors are seamless.

FRAMES

All frames are fabricated in accordance with Pioneer's specifications for custom hollow metal work. All profiles as shown in Pioneer's Sweet's Catalog No. 16b/Pi are available for use with sound retardant doors.

Frames are formed of 12, 14 and 16 gauge prime quality cold rolled steel sheets. Profiles to be press brake formed, true and sharp.

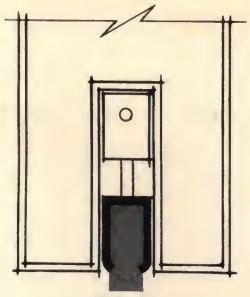
Head and jambs to be assembled with tongue and slot arrangements; mitres accurately fitted, fully welded and ground smooth.

Three anchors per jamb to suit wall conditions.

Frames to be accurately reinforced, mortised, drilled and tapped for template hardware. Reinforcements to be provided for surface hardware.

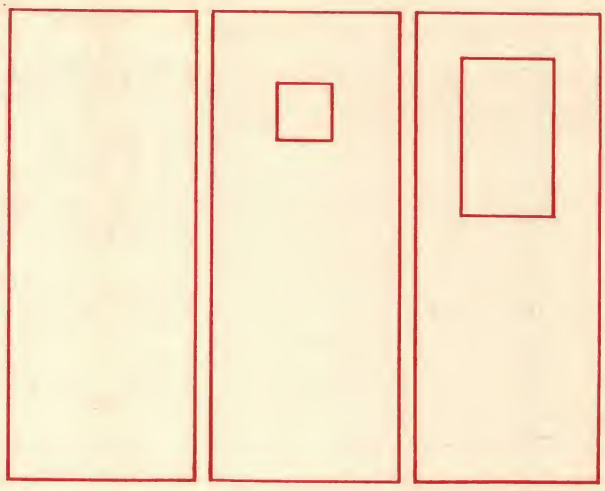
All frames to be given a prime coat of special Pioneer rust resistant metallic primer.

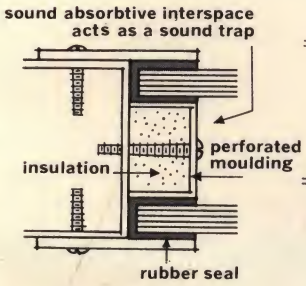
See the Pioneer insert, 16b/Pi, for specifications and details on their full line of hollow metal doors and frames.



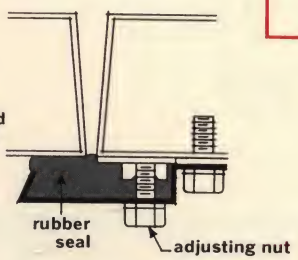
DS-1
Standard Automatic
Door Bottom

DS-2
Special Automatic
Door Bottom
with Kick Plate



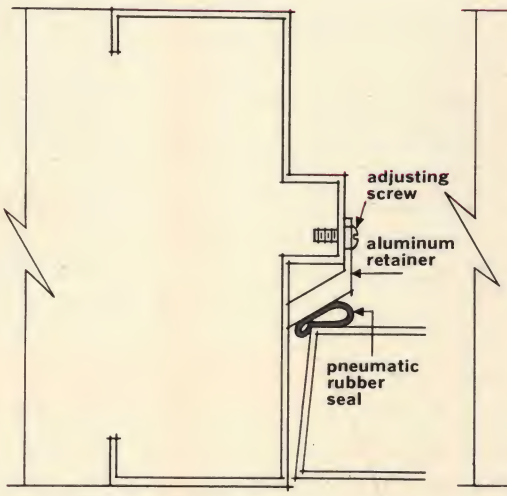


Section through
Glass Moulding

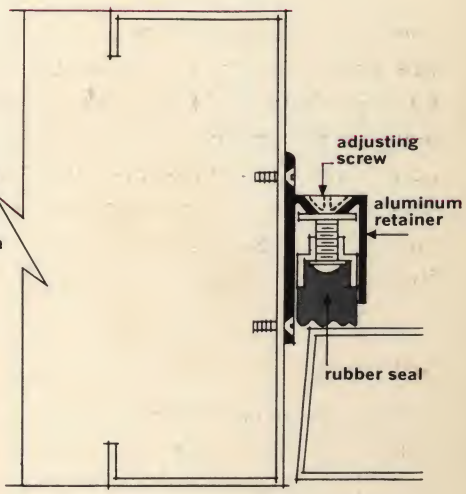


Section through
Adjustable Astragal

See Last Page
For Details on
Pioneer's
Exclusive
Soundproof
Louvre Door

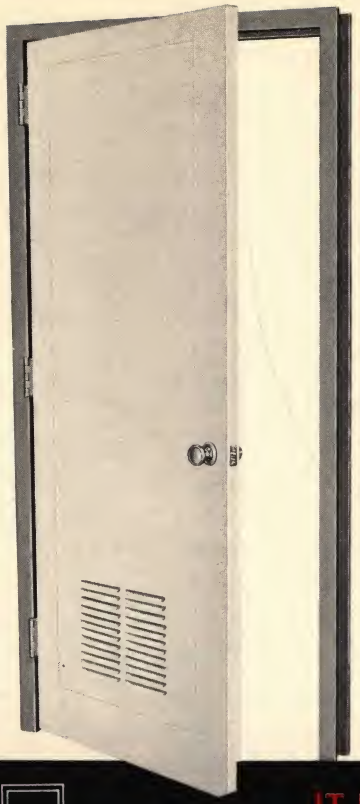


SR-A
Standard Economy Series



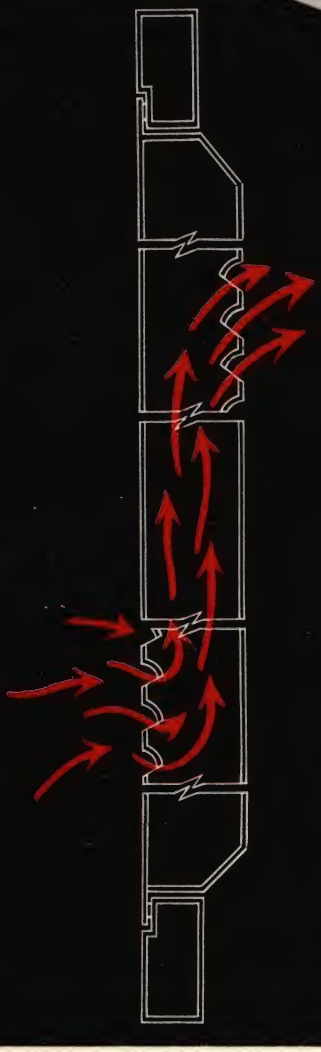
SR-B
Special Series

Pioneer Fireproof Door Corporation



PIONEER OFFERS THE ONLY EXCLUSIVE SOUNDPROOF* LOUVRE DOOR

The first truly sound insulating louvre door ever manufactured



IT IS NOW POSSIBLE TO MOVE AIR THROUGH A DOOR LOUVRE WITHOUT THE ANNOYING TRANSFER OF NOISE AND CRITICAL LOSS OF SPEECH PRIVACY.

For many years there has been a vital need for a door louvre which would have sound insulating qualities. Pioneer Fireproof Door Corporation is now producing the first and only rated sound insulating louvre door. The louvre is incorporated into Pioneer's custom high quality hollow metal doors. These doors are particularly suitable in air conditioned rooms, where privacy of speech and exclusion of noise is desirable while free air flow is essential. Pioneer's sound insulating louvre door eliminates the need for sound trapped transfer ducts or wall louvres, thereby eliminating both additional costs and broken wall surfaces.

This door was tested in a nationally recognized laboratory and has a certified sound transmission loss of 32 decibels.

SPECIFICATIONS: "Where indicated on drawings, furnish Pioneer's standard sound insulating louvre door assemblies having certified sound transmission loss test indicating a minimum average sound transmission loss of 32 decibels. Written certification from a recognized laboratory must be furnished."

*PATENT PENDING

Pressure Drop Data for Sound Insulating Louvre Door

AIRFLOW C.F.M.	PRESSURE DROP INCHES — WATER
1100	1.35
550	.34
275	.09
140	.02

PIONEER

FIREPROOF DOOR CORP. MOUNT VERNON, NEW YORK